

Animal-Assisted Crisis Response in Israel

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Dedication

To my family, my unconditional team of supporters:

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Abstract

Animals have been utilized in mental health settings to improve patient outcomes since the 18th century (Serpell, 2006). Trauma research has demonstrated that untreated trauma can result in higher vulnerability to stress and additional trauma exposures (MacFarlane, 2010). The closer the intervention is to the occurrence of trauma, the greater likelihood of preventing PTSD in both frequency and intensity (Rothbaum, Kearns, Price, Malcoun, Davis, Ressler, Lang & Houry, 2012). Research in animal companionship has shown reduction in physiological stress responses (Friedman, Katcher, Thomas, Lynch & Messent, 1983). Mental stabilization of trauma victims at the scene of traumatic incidents is often a difficult task to achieve. Animal-Assisted Crisis Response (AACR) is a beneficial intervention utilized at trauma scenes to achieve mental stabilization and prevent further complications such as Post-Trauma-Syndrome. AACR appears to augment standard interventions for trauma. The main research question of this study was: “How does AACR affect people present at a trauma scene?” The secondary question was, “How does AACR compare to other models of crisis response?” Twenty-one participants were interviewed about their experiences as crisis responders and AACR. Findings revealed the benefits this intervention provides trauma survivors, bystanders, and first responders at trauma scenes. Furthermore, it illuminated deeper nuances of the meaning of AACR for responders and survivors; as well as the benefits and challenges of its implementation. Finally, a deep desire for the growth of AACR in the trauma field is demonstrated. Future research should concentrate on providing more evidence-based research and a protocol for AACR in Israel.

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Animal-Assisted Crisis Response in Israel

Chapter One: The Study Overview

When crises and disasters occur, there tends to be more than physical damage. People who experience suffering during a disaster may experience trauma. For trauma victims to become survivors (Abreu et al., 2015), stress-reducing interventions may be beneficial. This study examined the contribution of Animal-Assisted Crisis Response (AACR) to people affected in the aftermath of trauma in Israel. The specific aims of this study were to explore how AACR affects the survivors, the bystanders, and the responders at the scene of a traumatic event. A secondary aim was to understand the individual experience of responders with AACR. I explored the crisis situations that may unfold in a traumatic event, including cultural and environmental aspects. The dissertation was a qualitative study using in-person interviews conducted with the mental health professionals who respond to traumatic events in Israel. The qualitative data were analyzed using Atlas.ti software.

The National Association of Social Workers [NASW] *Code of Ethics* describes the importance of providing the best help possible to those who have just experienced a trauma or a crisis. The following principles of NASW's *Code of Ethics* (NASW, 2021, para. 2) were relevant to this research: service and competence values. Social work is a profession that aims to empower vulnerable populations. As an intervention, AACR empowers these populations to find resilience and cope successfully with a traumatic event (Gil-Rivas et al. in Schulenberg et al., 2016). Social work practice involves understanding humans, their behavior, and their reactions to different events. This requires social workers to consider the specifics of other cultures. As

discussed below, cultural competence is integral for this project because the focus is on working with AACR in Israel.

AACR is an intervention whose purpose is to treat survivors of traumatic events. Traumatic events can include natural and man-made disasters. For the scope of this research, traumatic events addressed were limited to flooding, fires, earthquakes, wars, terrorist attacks such as bombings, shootings, stabbings, and other tragedies such as suicides, car accidents, and unexpected tragedies or deaths. After any one of these events, there is a crisis scene. These scenes may be collective or involve a sole individual or a group of people, such as a family or neighborhood. Disasters are overwhelming and traumatic, leaving behind survivors to handle the aftermath. Traumatic scenes disrupt the lives of trauma survivors, and those involved may experience multiple effects in their wake (Gil-Rivas et al. as cited in Schulenberg et al., 2016).

Over the last 20 years there has been an increased recognition that various sources of support for trauma victims increase survivors' capacities to be resilient and cope successfully with the event (Gil-Rivas et al. in Schulenberg et al., 2016). Herman, a pioneer in trauma research, describes how trauma overwhelms the victim, removing control, connection and meaning. Individuals suffering from trauma may display hyperarousal, intrusion and constriction to cope with their reality (1992). Van der Kolk's extensive research into trauma and its nature, discovered how traumatic experiences affect development of brain, mind and body awareness, and how these are intertwined and have a profound impact on the capacity of an individual to cope (2014). Van der Kolk's findings led to a new generation of disciplines in trauma research and treatment. My dissertation proposes another treatment modality.

A clear avenue of support for trauma survivors is Animal-Assisted Crisis Response (AACR). AACR is an important intervention because of its stabilizing impact on the responders

at the scene. In addition, AACR can enrich the physical and psychological well-being of survivors, and as such, is an important resource for the social work profession.

AACR is an appropriate intervention for all ages. This study explored the effectiveness of AACR with three distinct target populations. First, it examined AACR's impact on survivors, who benefit from AACR so to re-engage with their daily life and integrate back into community life without needing further intervention. The second population was the bystanders at the scene exposed to a difficult atmosphere full of tragedy. And finally, the third population included the other crisis responders. This included first responders, police, firefighters, and social workers. AACR provides these individuals with the support they need in order to continue their professional duties while simultaneously processing what they have just experienced.

AACR is a unique form of therapy because of the pairing between the therapist and the animal, which provides a noteworthy intervention for social work professionals. The trauma experienced by all three groups, survivors, bystanders, and crisis responders, was studied through interviews with crisis responders. Although it was preferable to survey all three groups directly, it was deemed unfeasible to pursue at the time. Retrospective access to survivors and bystanders was not possible, but there was direct contact with crisis responders.

In Israel, United Hatzalah's responders attend calls with animals according to certain protocols. This requires taking into consideration religious customs and community standards. For example, there are religious communities and communities of Holocaust survivors where dogs are either not allowed or trigger stress; therefore, it would cause more harm for a dog to attend a call. Other considerations include the types of traumatic events that occur. The events can range from a large-scale missile attack, or terrorist stabbing, to an individual's sudden death.

Therefore, as social workers, it is integral that cultural sensitivities inform relevant policies to provide an adequate intervention to survivors.

This study utilized the ground theory tradition of qualitative inquiry. Data were collected from 21 participants through structured surveys and in-depth one-to-one interviews. The sample included five AACR responders, six mental health crisis response supervisors, mental health crisis responders, and mental health practitioners who volunteer along with AACR responders and have witnessed the AACR intervention at the scene. Four mental health crisis responders and mental health practitioners, two mental health crisis response supervisors and crisis responders without a mental health background, and four mental health crisis responders without a mental health background were also included in the sample. As AACR in Israel is very new, not many professionals have witnessed AACR first-hand. Therefore, the sample size of 21 participants provided enough data to satisfy the requirements of a qualitative study.

The sample consisted primarily of volunteers of the United Hatzalah organization, the only organization in Israel offering AACR. A description of the study, its aims, and expected benefits were sent through e-mail to the identified participants. Consent forms were included, as per instructions from the university's Institutional Review Board (IRB). The majority of the interviews were carried out through a Zoom video call, depending on the comfort level and availability of the participants. Study participants not comfortable with video interviews opted for phone or online written responses to the study questions. The primary study limitations are that most of the participants belong to the same agency, as well as the personal history the participants have with the researcher by working and volunteering together. However, the data gained from this study offer valuable insight to researchers in other parts of the world for the therapeutic benefits of AACR.

The purpose of this study was to showcase the relevance this type of intervention has on the crisis response practice. New evidence conceptualizing the role of AACR in traumatic scenes was reviewed through the lens of professionals with different levels of exposure and interaction with AACR. Finally, the importance of the evolution of this field in Israel was analyzed to review the significance and develop a proposal for an AACR policy in Israel.

Chapter Two: The Study Problem

General Overview of Disasters and Traumatic Events

In order to understand the context for the importance of AACR as a therapeutic intervention, one must first define a crisis. Caplan, one of the first professionals in the crisis intervention field and the developer of crisis theory, defined crisis as "a temporary state of upset and disorganization, characterized chiefly by an individual's inability to cope with a particular situation using customary methods of problem-solving, and by the potential for a radically positive or negative outcome" (Caplan 1964, as cited in Cavaiola & Colford, 2014, p. 45). Graf (2002) defines crisis as a "predictable or unpredictable life event which an individual perceives as stressful to the extent that normal coping mechanisms are insufficient" (Graf 2002 as cited in Cavaiola & Colford, 2014, p.#2). Through these definitions, it is clear that the key is to provide survivors of a crisis with enough strength and ability to move on. Even more, they might need external support to find the resilience they desperately need at those moments. These definitions highlight the serious emotional effects trauma can have on a person's ability to think and react rationally and purposely.

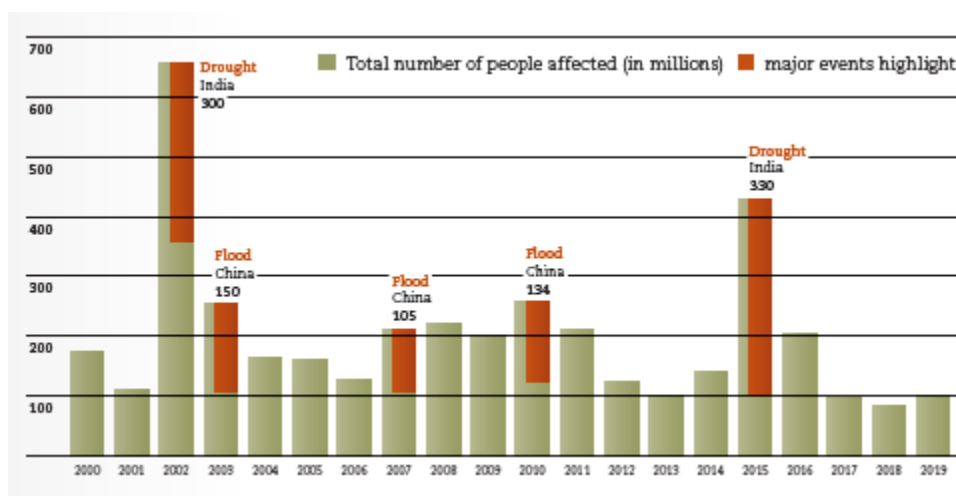
Characteristics of the problem

Traumatic events and crises are unpredictable, arrive suddenly, and may significantly affect one or more people. They all have an external event that affects the survivors directly or indirectly but impacts their lives (Cavaiola & Colford, 2014). There are different types of traumatic event crisis. Natural disasters include fires, earthquakes, flooding, and more. However, there are also man-made disasters. In Israel, these types of disasters present themselves generally as terrorist attacks including bombings, stabbings, rocket attacks, shootings, Molotov throwing, rock-throwing, vehicle ramming attacks, and homicides. Another type of scene is accidents; car

and motorcycle accidents are the most common accidents; and suicides. Finally, there are tragic deaths, such as overdose, sudden infant death syndrome (SIDS), unexpected deaths, and mass casualty events such as human stampedes and collapsing buildings.

Scope and Intensity

In the wake of these natural disasters, human-caused disasters, and traumatic and crisis situations, professionals have searched for the best way to assist survivors by providing support, mental stabilization, and resources. This is of the utmost importance because in the last twenty years, from 2000 to 2019, disasters have almost doubled in the world, growing from 4,212 to 7,348 per year with fatalities of 1.23 million people and affecting 4.03 billion people in total (Centre for Research on the Epidemiology of Disasters [CRED], 2020). In 2020 alone, globally, 416 natural disasters occurred (Statista, n.d.).



This table shows the total number of people affected per year (in millions), with significant events highlighted between the years 2000-2019. It focuses on how disasters have a profound impact on the global community (CRED, 2020).

People experiencing sudden loss are vulnerable to long-term emotional hardship (Substance Abuse and Mental Health Services Administration [SAMHSA], n.d.). A prime

example of the all-encompassing impact of a disaster that creates trauma is Hurricane Katrina in the United States. In 2005, Hurricane Katrina made landfall, "followed by Rita one month later; these were two of the most intense hurricanes ever recorded in the nation's history. More than 1.5 million people were directly affected, and more than 800,000 citizens were forced to live outside of their homes" (Mayfield, 2005, p.12). Even with an adequate military presence distributing food and water, evacuation of hurricane victims continued, with more than 850,000 homes destroyed or damaged (World Vision, n.d.). This level of destruction impacts both non-professionals and professional social workers; the traumatic effects of disaster manifest in enduring distress, insecure attachment, and lower levels of resilience (Tosone et al., 2015).

The devastation from natural disasters is intense and prolonged (Oxfam International, 2020). Furthermore, the trauma caused by casualties of terrorism has a significant impact on the Israeli population. For example, between 1993 and 2020, Palestinian terrorist attacks have claimed 1,662 Israeli lives (Jewish Virtual Library, n.d.).

A major player in handling the different traumatic events that occur in Israel is the United Hatzalah Organization. United Hatzalah is a non-profit crisis response organization. These response units attend an average of 1,800 calls per day (United Hatzalah, n.d.b.). Many of these calls require psychological first aid. The affected clients can be witnesses of the crisis, family members, bystanders, and the survivors of the crisis themselves (United Hatzalah, n.d.a.), as well as other first responders at the scene (Tosone et al., 2015). These populations undergo a crisis that often puts them under such stress they find it hard or impossible to cope and start the process of healing (United Hatzalah, n.d.a). These traumatic scenes might trap them in a turmoil of thoughts and fear; they might not be able to act and access the community's resources to get the support they need (Raphael & Maguire, 2012).

Each crisis is unique with its distinctive emergence and characteristics as well as how it affects the people experiencing the traumatic event and those who surround it. However, traumatic event crises are common everywhere. They arrive suddenly and have the ability to change the course of a person's life. Traumatic events may result in psychological distress, anxiety, vulnerability, confusion, repression of events, displacement of feelings, and even warrant the diagnosis of Acute Stress Disorder (American Psychiatric Association et al., 2013). Moreover, these events may develop Post Traumatic Stress Disorder (PTSD) in the future if not treated correctly (Cavaiola & Colford, 2014).

Connection to Social Work

Social workers often intervene in crises and disasters as part of their professional role (Eaton-Stull, 2014). Moreover, it has been found that most of the AACR responders are professional social workers (Graham, 2009) even though it is not a prerequisite for AACR training according to the AACR National Standards (Eaton-Stull et al., 2010). Therefore, AACR and social work are tied by their essence to help in the aftermath of a disaster.

Because every crisis situation is unique, the nature of the intervention must be customized according to the particular circumstances of the event. As a professional social worker, it is essential to consider cultural, ethnic, and religious backgrounds to better understand an individual's reaction to a trauma. Respect for diverse responses is critical in the social work profession. Cultural diversity may also affect how a crisis evolves. To accurately intervene in a crisis scene, the intervention must be sensitive and appropriate for the specific population.

Crisis interventions tend to be, in their nature, a psychological first aid that helps survivors find stabilization and coping skills to obtain needed support from their surrounding society and community. The intervention should address the trauma at hand. Some survivors find

it hard to open up to a professional stranger and accept their support in difficult personal times. Sometimes survivors find it challenging to connect to a “stranger”, who may pass judgment on the person by their reactions to the trauma, or who may need explanations to understand what is going through the survivor's mind.

However, opening up to an animal that doesn't judge but gives love and affection, a creature that looks for touch without asking for permission to approach, and that supports one with their presence, might be the perfect ice-breaker a professional needs in order to provide their expert intervention (Graham, 2009; Lackey et al., 2021; Stewart et al., 2016; Sypniewski, 2021). It is within this context that Animal-Assisted Crisis Response (AACR) flourishes, proving its necessity.

Background of AACR for Traumatic Events

The way AACR is implemented in Israel provides the ideal setting for it to have the highest probability of success. Animal Assisted Crisis Response (AACR) involves a therapy dog and its handler "focusing on providing comfort and support for trauma, crisis, and disaster survivors " (Fine, 2019, p. 5). According to the AACR Protocol (Eaton-Stull et al., 2010), the team would collaborate with mental health professionals at the scene, such as social workers. Research in trauma therapy has proven that untreated trauma can leave the person more vulnerable to stress and additional trauma exposures (MacFarlane, 2010). The closer the intervention is to the trauma occurrence, the more likely it is to prevent PTSD in both frequency and intensity (Rothbaum et al., 2012).

The presence of a therapy animal, as well as the accessibility to touch the animal, is likely to provide immediate physical benefits to most people. Mims and Waddell (2016) posit that "petting a therapy animal releases endorphins making people feel better, diminishing feelings of

pain, depression, and loneliness" (p. 456). In addition, research in animal companionship has provided evidence that the company of a dog reduces physiological stress responses such as elevated heart rate and blood pressure (Friedman et al., 1983). Animal companionship found a new horizon when the emergence of AACR arrived, and in Israel, it became part of the nationally spread emergency crisis response team.

History of AACR in Israel

In Israel, the history of AACR is embedded in United Hatzalah. It is part of the Psychotrauma & Crisis Response Unit within United Hatzalah. The founder of United Hatzalah is Eli Beer. Eli Beer was a volunteer in the "Magen David Adom" of Israel, which stands for the Red Cross. As a volunteer, he saw the importance of saving lives as a crucial part of his job (Beer, 2013). Beer realized that the ambulance would often arrive when it was too late to save the person. He then came up with a better approach. He founded a new organization, a private one, called "United Hatzalah" (United Rescue). He decided to train volunteers and provide them with the necessary equipment to save lives in their communities and immediate neighborhoods. Therefore, people undergoing medical emergencies wouldn't need to wait until an ambulance arrives to be stabilized, but the volunteers of their neighborhoods would come within an average of three minutes from the time the call was placed (Beer, 2013). In 2016 Beer chose to open a Psychotrauma Response Unit, using his innovative tools to arrive at the scene only minutes after a trauma's occurrence. The Psychotrauma & Crisis Response Unit addresses the emotional needs of family members, witnesses, and bystanders during and after traumatic situations. One year later (United Hatzalah, n.d.a.), the Psychotrauma Response Unit added a canine and social worker to the staff, beginning an AACR branch of United Hatzalah and the only AACR in use in Israel.

Prior to Israel, the United States developed its transition from animal companionship to animals as part of a systematic crisis response intervention as is most clearly documented in United States history.

History of AACR in the United States

Animal-Assisted Crisis Response (AACR) is an intervention with a rich history in the United States as part of the Animal Assisted Invention (AAI) field. As early as the mid 19th century, Florence Nightingale spoke about the benefits animals may bring to children and adults in psychiatric institutions (Nightingale, 1859 as cited in Dogs, 2018). In particular, Nightingale "observed that small pets reduced anxiety and stress levels in adult and youth psychiatric patients" (Dogs, 2018, p.1). The first documented use of animals as part of disaster invention is during World War II in a United States Army Air Corps Hospital. The animals were intended for those suffering from "operational fatigue" (Bustad and Hines, 1984). Today, this is called PTSD (Shubert, 2012). The transition from AAI in general to specifically a developed branch of AACR started for the first time in the United States in response to the Oklahoma Bombing in 1995. The Federal Emergency Management Agency (FEMA) utilized animals to comfort the survivors at the scene (Eaton-Stull et al., 2010; Shubert, 2012; Bua, 2013; Stewart, 2016; Lackey et al., 2021; and Sypniewski, 2021).

As a result of their work during the terrorist attack of September 11, 2001, Animal-Assisted Crisis Response became known to the world. The complexity of 9/11 in both physical scale and psychological trauma was unprecedented in the United States. The scope of emotional impact on the civilian population was comparable to Pearl Harbor. There was simultaneous co-existing uncertainty, suffering, stress, trauma, hopelessness, and hope. Anecdotes of AACR's tangible benefit in that situation can be found in innumerable articles, as well as in

documentaries (Greenbaum, 2006; Shubert, 2012; Bua, 2013; Eaton-Stull & Flynn, 2015; Stewart et al., 2016; Lackey et al., 2021; and Sypniewski, 2021). Through trauma survivors' experiences with AACR, it became clear that AACR makes life and trauma more bearable for all parties involved, including survivors, bystanders, and first responders. Prominent organizations now know to reach out to AACR teams when they need emotional assistance and stabilization on scene.

AACR Policies for Traumatic Events

The first AACR National Standards for the United States were published in 2010 (Eaton-Stull et al., 2010). This was a significant pivot for AACR as an intervention as it set quality assurance standards. For AACR to function according to the National Standards (Eaton-Stull et al., 2010), every AACR team must belong to an animal-assisted therapy organization such as Therapy Dogs International, Pet Partners, or HOPE. In addition, these organizations can only work as AACR in a disaster if they work in accordance and with permission from the first responders' organizations such as the Red Cross, Firefighters' Department, FEMA, NOVA, etc. (Greenbaum, 2006; Chandler, 2008; Graham, 2009; Eaton-Stull et al., 2010; Shubert, 2012; Bua, 2013; Stewart et al., 2016; Sypniewski, 2021). In essence, this makes AACR a collaboration between Animal Assisted Therapy and Critical Incident Stress Management fields (CISM) (Bua, 2013).

According to this policy, AACR is made up of a therapy dog and their handler. Although animal assisted therapy functions with an innumerable variety of animals, AACR is currently limited to the use of dogs as an intervention for crisis survivors. The handler must go through a training program together with the dog. The goal of this training is to approve the dog as a suitable animal for this type of work while at the same time teaching both the dog and the

handler important nuances they should know when attending an AACR disaster. The handler learns Psychological First Aid (PFA) and basic protocols for disaster management. The different Animal Therapy Organizations offer these training programs, collaborating in coalition with other Disaster First Response organizations. According to the AACR National Standards (Eaton-Stull et al., 2010), the AACR team should work as adjunct to a mental health professional, such as a social worker, who will manage the therapeutic intervention when at the scene.

AACR in Israel shares the same principles as AACR in the U.S. However, the criteria for working in AACR are not the same. To be part of the K-9 unit of the Psychotrauma Response Unit in Israel, one must have a background in a mental health profession such as social work.

Working for United Hatzalah in Israel, the handler undergoes four certifications. Three of them are regarding Psychological First Aid (PFA). The first is offered by the United Hatzalah Psychotrauma Response unit; it includes the PFA protocol (McCabe et al., 2014) and specific protocols relevant to Israel and the type of scenes the responders may encounter (such as terrorist attacks, bombings, etc.). The second part of the course consists of learning the Immediate Stabilization Procedure Protocol (ISP) developed by Dr. Quinn (Quinn, 2018). This protocol is based on the Eye Movement Desensitization and Reprocessing theory (EMDR) and is a very useful intervention when crises arise and therapists deal with people in shock (Quinn, 2018). Finally, the third certification is provided by Dr. Farchi et al. (2018), who established The SIX Cs model for Immediate Cognitive PFA. Farchi et al.(2018) developed a model that assists the victims through cognitive awakening during crisis. The fourth certification of the training includes the same training an AACR Handler receives according to the U.S. Protocol, such as the one offered by HOPE (Eaton-Stull et al., 2010).

Animal-Assisted Therapy (AAT) and AACR are both interventions assisted by animals. However, there are fundamental differences between the two interventions. First, AACR only consists of dogs and no other animals. Second, the deployments are not like a therapy session that may be time limited but rather it provides service for as long as necessary for those in need of an intervention at the scene. Third, instead of having routine scenarios for the intervention, as in AAT, in AACR, the environment is unpredictable, often chaotic, and crowded. For example, clients are often experiencing intense emotions of stress, trauma, and grief, and are not the usual type of clients as experienced in AAT (Eaton-Stull & Flynn, 2015).

Policy Implications in Israel

Although training is broad, extensive, and imperative, AACR in Israel must yet develop appropriate training for the handler to work with the therapy dog.

Due to the nature of the process, the AACR team in Israel doesn't need to be part of a larger AAT organization that collaborates with a response organization such as the Red Cross (Eaton-Stull et al. 2010) because it belongs to an organization, United Hatzalah. Therefore, there is no need to wait for broader approval from a second organization (Chandler, 2008) but AACR instantly gets clearance from inside the organization. Consequently, it works more effectively and efficiently.

Per protocol, psycho-trauma units respond to calls in pairs. As a result, when an AACR team arrives, it will include a second mental health professional. However, distinct from U.S policy, where the handler only needs to succeed in the AACR training course; in Israel, the handler is also a mental health professional, such as a social worker, and is certified to provide clinical interventions. The handler may approach the United Hatzalah's responder immediately to

obtain background information on the victim, collect details about the crisis at hand, and assess what is needed in the specific situation, and how to work with the survivors and their family.

Relationship to Social Work Values

As a therapeutic intervention with a core value of reducing the long-term effects of trauma, AACR aligns with social work values. A goal of both AACR and social work is to reach out to those who need professional support at difficult times and provide the best service using professional knowledge and skills to support those in need and provide them with the coping skills and resources they may need to rise from the traumatic experience and move on. Two discrete values from the *NASW Code of Ethics* that are interconnected are Service and Competency. First, social workers, such as crisis responders, place their profession above self-interest. With their knowledge, values, and skills, they aim to help people in need. Moreover, social workers are encouraged to volunteer their skills for people's benefit, such as by acting as crisis responders (NASW, 2021, para. 2).

Social work values merge into crisis response values when providing treatment to those who experienced a traumatic crisis or disaster and require professional support and service. Both AACR and social work benefit from the combination of knowledge and expertise. Trauma survivors who receive help in a crisis are likely to benefit most by receiving help from a customized mental health professional team that suits their needs at these specific moments. This research study attempts to highlight the need for AACR in a trauma scene and its palpable contribution to trauma scenes.

The Relationship Between Traumatic Events and the Research Question

This study explored two main research questions. The primary question was, “how does animal-assisted crisis response affect people present at a trauma scene?”. The second research

question was, “how does animal-assisted crisis response compare with other models of crisis response?” These questions explored the need for valuable and innovative interventions for traumatic events.

The research's objective was to contribute to the body of evidence that demonstrates outcomes of this intervention in Israel, the best practices for it, and the right target population for AACR. This intervention may help survivors stabilize, recover, cope, heal, and move on. By interviewing AACR responders and professionals, I analyzed the effects of AACR in a trauma scene and the experiences of the first responders intervening with this tool, the other professionals witnessing the use of this intervention, and discovered target populations that can benefit from AACR. By investigating the importance of the implementation and expansion of AACR in Israel with an actual policy based on social work values, I explored how AACR might benefit all populations affected by trauma and disasters. AACR is an area where evidence-based research is needed in order to count this intervention among empirically based interventions for crisis response in traumatic situations where there is a need for mental stabilization and a dog who can provide intangible relief and support.

In this chapter, I reviewed the problem's context and how Animal-Assisted Crisis Response could be helpful for the field of social work and disaster response. In the next chapter, I review the empirical knowledge supporting AACR and the AAT world at large, in the context of trauma, PTSD, and social work.

Chapter Three: Literature Review

In this literature review, I examine articles and research that provide a basis for AACR. Moreover, I analyze the importance and benefits of AACR and of AAT as a growing field with both physiological and psychological effects on individuals who have experienced some sort of trauma and need emotional stabilization. Finally, I review these same subjects with a social work lens and observe how this area developed according to social work practitioners and their values.

Methodology

The articles included in this literature review consisted of peer reviewed articles published between 2000 and 2020. The articles were found through 'YUfind', an EBSCOhost Discovery Service. The initial search included peer-reviewed articles and dissertations that included the keyword "Animal Assisted Crisis Response" in the abstract. Seven articles were recovered and four met the criteria for inclusion. A second search included the search terms "stress or psychological distress or psychological stress or anxiety" and "Animal Assisted Therapy" in the abstract. This search resulted in 201 articles, of which 14 met the criteria. Articles excluded were those relevant only to specific populations in specific settings as well as other specific animals or did not relate to the area of research on Animal Assisted Therapy as an intervention that could be compared to AACR, or duplicated articles found earlier.

A third search for "animal assisted therapy or pet therapy or animal therapy or animal intervention" AND "immediate intervention" AND "traumatic events or traumatic experience or trauma" in text recovered 283,692 articles. Only one was relevant to psychological stress-prevention and treatment of PTSD, and that article led to 13 other relevant sources. A fourth search for "animal assisted therapy disaster response" resulted in one relevant article out of nine.

The fifth search using the terms for “trauma” and “AAT” in the abstract yielded 43 articles, of which eight met inclusion criteria. The final search used the term “Critical Incident Stress Management” in the title. This resulted in 162 articles, of which nine met the criteria to be included.

In total, these searches included 283,952 articles, and 33 articles were included in this systematic literature review.

Findings

The review of these 33 articles found three significant themes. In the first theme, AACR, nine relevant articles were found that discuss case studies and theory regarding AACR and five relevant articles that discuss the empirical knowledge about the use of AACR. In the second theme, Animal Assisted Therapy and Trauma, twelve relevant articles examined the use of AAT within traumatic situations. Finally, the third theme, Animal Assisted Interventions and Social Work, five relevant articles showed a connection between AAI and the social work field.

The review of these 33 articles found six significant topics in the themes related to AACR. These first topics included the opportunity of connection, both between the victim and the intervention engagement as well as to the mental health or social worker professional. The second topic was the dog working as a bridge connecting the client and the therapist. The third topic included AACR’s provision of safety and secureness. Moreover, a fourth topic involved the dog’s provision of comfort. Better yet, the fifth topic incorporated the calmness a dog helps the victim find. Finally, the sixth topic referred to the physical contact between the dog and the survivor such as petting or hugging and its benefits.

In order to understand the depth of AACR benefits and basis in the literature, a review of the relevant literature analyzed AACR, as well as its trauma components and its connection to social work.

Animal Assisted Crisis Response

AACR's uniqueness of intervention is the combination of providing immediate stabilization after a crisis with a special bond through animals. This bond with animals is non-judgmental and may be much more natural than an encounter with a stranger human being. This bond provides hope and a smile while being surrounded in a scene of crisis and disaster. However, research is scarce on the subject. Due to the uniqueness of the intervention's techniques such as the immediacy without advanced preparation, the chaos of the situation, and ethical considerations toward the crisis survivors, it is difficult to research the intervention at the moment of its occurrence at the trauma scene.

Case studies of AACR. Understanding how AACR functions is not easy. It involves understanding its history, development, protocol, and policy. Different authors succeeded in approaching these subjects and clearly describing how AACR works and why it works. The first researcher to introduce Animal Assisted Crisis Response to Mental Health was Greenbaum in 2006. In her work, Greenbaum (2006) explained AACR as an intervention with a history in the AAT field that provides additional tools to help survivors of a crisis. Presenting the AACR intervention as a part of an overall organization, Greenbaum explained how AACR may help to "establish rapport, build therapeutic bridges, normalize the experience, and act as a calming agent or as catalyst for physical movement" (Greenbaum, 2006, p.1). Greenbaum continued focusing on the importance of collaboration between AACR and the Crisis Counselors. Greenbaum also considered the training requirements for AACR. Finally, within Greenbaum's

work the most significant limitation in the field of AACR research is the lack of a strong collection of empirical research studies despite the abundance of anecdotal accounts and reflection. While there is limited research with empirical evidence showcasing the benefits of AACR, within the literature that does exist, many important benefits are revealed.

One such article is the work by the director of the University of Texas (UNT) Center of AAT, Dr. Chandler. Dr. Chandler's work with AACR during Hurricane Katrina provided insight into disaster interventions with and without AACR at the same disaster with the same survivors. Chandler (2008) had the opportunity to compare AACR with Regular Crisis Response in treating Hurricane Katrina's survivors in 2005. Part of the protocol of AACR is to get approval to treat the survivors with animals and the trauma scene. For Chandler, this presented an opportunity because her work's first days were as regular Crisis Response. A few days later, she incorporated her dogs into the intervention, forming a team of AACR.

The importance of Chandler's research (2008) is the insight into the differences between the typical crisis intervention versus the inclusion of therapy animals. Chandler's research studied the same disaster scenario, comparing it with regular disaster intervention with AACR. When intervening as a counselor, as part of a crisis response team, responders found it difficult for the survivors to open up and share their stories. Survivors did not want to be approached. The situation was tense and stressful, and the mental health professionals were unsuccessful at engaging those present. But when Chandler arrived with her dogs, the survivors approached her. They asked questions about the dogs and continued to open up and share their stories. Often, the survivors would talk about dogs they had to leave behind. Once talking, the survivors also brought up their accounts and hardships on a larger scale. From this research the major argument for bringing Animal Assisted Crisis Response into standard practice as means of intervention is

clear. ACCR intervention acts as a presence for those survivors and enables social connections and the expression of emotions. The dog was a bridge once again, between the survivors and the professional. AACR promotes the therapy engagement by facilitating survivors sharing their stories and releasing emotions. This way the survivors could start their recovery process.

Within the limited research there is evidence that AACR thrives when handlers also have training in mental health. For example, Graham (2009) reflected on her experiences where AACR aided disaster victims. Having the dogs present as part of the intervention created a compassionate atmosphere that fostered the establishment of a relationship and a venue for the victim to open up. Once the dog functions as a bridge between the victim and the handler, the professional can start normalizing the situation and the trauma reactions for populations such as adults, children, and first responders.

Unlike most of the articles about AACR that recount the AACR responder's personal experiences, Graham also used common sense as a mental health worker to take the intervention one step further. The AACR team assumed the full role in the intervention, without the necessity of an external mental health professional, as the AACR protocol later required (Eaton-Stull et al., 2010). An essential point that Graham mentioned is the fact that most AACR handlers are indeed mental health professionals such as social workers, even though this is not a requirement to form an AACR team, which Bua (2013) found in her research as well. In Graham's narratives, one may see how she used her professional capacity to evolve the engagement therapy and transform it into a more profound intervention. Graham, functioning as the mental health professional, related directly to the client's stress source and helped them understand it and move on to recovery.

A significant benefit Graham brought up is the dog being a distraction for the victim. During crises, sometimes the survivors need a distraction from the occurrence in order to shake out the confusion the trauma may have produced and start the process of resilience and action towards a healthy reaction to the event (Farchi et al., 2018). The AACR team provides trust to the survivor through the non-judgmental characteristic the dog has, this is uniquely different from regular mental health professionals' interventions. Graham explained how petting the dogs brings the individuals a sense of security, comfort, and safety. This also helps the victim decrease their anxiety and relax. The dog works as well as a calming presence and opens the opportunity to express emotions. This way, the handler can continue through the intervention by normalizing the trauma reactions and providing psychoeducation to the survivors.

In conjunction with Graham's work other authors have provided insight into the many benefits of AACR. For example, AACR provides self-care to first responders such as FEMA personnel, police, and firefighters. AACR, provides the responders and survivors the opportunity to stop by to pet the dogs (Chandler, 2008; Greenbaum, 2006; Shubert, 2012; Stewart et al., 2016), gives the first responders a moment to gather themselves and a moment of distraction from all the pain and stress surrounding the scene (Bua, 2013; Eaton-Stull & Flynn., 2015; Lackey et al., 2021).

As more widespread use of AACR developed, there became some more widely available literature, showcasing the unique nature of AACR as a crisis intervention. For example, Shubert (2012) was the researcher who presented AACR through the Army journals. Shubert provided the historical overview of AACR exploring its development from animal assisted activities [AAA] to AAT up until this intervention received its own specialty of AACR. Shubert described AACR's first appearances and the creation of its organizations. Besides Greenbaum's (2006)

descriptions of AACR benefits, Shubert further reports how the survivors often use symbolism where the AACR dogs symbolized qualities that the survivors felt (such as afraid or helpless) or wished they had (such as strong or brave). Shubert also pointed out how the AACR teams served as protective shields, a source of strength for the disaster's victims' families (2012). Through Shubert's detailed descriptive anecdotes of different case reports, one can see how the AACR National Standards (Eaton-Stull et al., 2010), were developed and considered essential keys of the protocol. Shubert recognized the importance the AACR National Standards contributed to this intervention.

Over time more wide scale inclusion of AACR has provided additional clarity on the ways it excels as an intervention. For example, an observation conducted in 2014 by Major Smith-Forbes showed the benefits AACR provided for soldiers deployed to Iraq and Afghanistan. Smith-Forbes et al. (2015) researched the effect of occupational therapy for deployed soldiers between the years of 2008-2010 during the Operational Iraqi Freedom and Operation Enduring Freedom. AAT was part of the interventions the soldiers would get as a preventive measure. However, on-site, AAT became AACR when opportunities arose, and the soldiers needed immediate Psychotrauma intervention. Smith-Forbes et al. began by describing how the dogs' relationship with the soldiers was the bridge so the soldiers would open up to the dogs and their handlers. At the same time, the soldiers politely declined the services of other occupational therapists. Through this relationship, the soldiers pet the dogs and received comfort from them. AACR was able to help the soldiers remain mentally and physically strong during their deployment (Smith-Forbes et al., 2015).

Eaton-Stull and Flynn (2015) underscored Shubert's assertions in their chapter in the *Crisis intervention handbook*. They discussed how the AACR field is well-recognized and has a

growing future both technically and in the research field. The research, they explained, demonstrated AACR's benefits, as well as legitimized the evidence. Eaton-Stull and Flynn (2015) divided AACR's benefits by physical arousal and comfort and support. This chapter demonstrated the effectiveness of AACR as a useful intervention for crises. They commented on the different sites AACR may be useful at different types of scenarios such as Grief Camps, summer camps for children who have lost a loved one. The authors also shared the types of AACR intervention helpful for this type of site. Eaton-Stull and Flynn discussed suicides and shared the situations in which AACR could be useful. Natural disasters and mass shootings were also mentioned (2015).

The appropriateness of AACR was explored earlier by Graham (2009) who addressed the sites AACR would be appropriate for; these include natural disasters such as fires or hurricanes. Furthermore, human-made tragedies are also good opportunities for AACR to be beneficial, such as shootings (Graham, 2009; Sypniewski, 2021).

Roth and Rogers (2016) presented to the public how AACR works and its 'magical' benefits through a descriptive example. Their account described the dog's role in the intervention and brought up the importance of self-care of the dog by not exceeding his work hours and being attentive to their necessities.

Another book chapter dedicated to AACR can be found in an essential book about trauma and resilience through the human-animal connection (Lackey et al., 2021). These authors introduced what AACR is and present case studies as evidence that demonstrated AACR's benefits. The authors also explained the importance and the summary of the National Standards and went over the best practices. Lackey et al. (2021) concluded by explaining the importance of research needed in this field, research that contributes to case reports, and the scientific validity

that supports the inclusion of animals in Crisis Response. Despite the helpful nature of this work, the empirical research that bolsters the AACR's credibility as a standard practice is slowly being explored.

Finally, Eaton-Stull et al. (2020) wrote and edited the first book about AACR. The intervention is comprehensively explored through different perspectives. This way, the editor studied AACR at its fullness, providing what could be called evidence-based practice.

Empirical Research in AACR. The literature demonstrates that dogs are an extension of crisis counseling responders. In 2013 Bua performed the first empirical research about AACR. Bua investigated AACR's service delivery system and how it is beneficial to crisis intervention. Bua also explored the participants' opinions and experiences regarding their work with AACR dogs, explicitly considering their unique interaction in the field. The methodology was a qualitative approach that included interviewing 30 AACR dog handlers and crisis counselors that have worked with the AACR teams. Bua (2013) performed meticulous research on HOPE to add to AACR evidence-based strength. Bua's data collection were rich; it included interviews, observational field trips, pictures, a socio-demographic questionnaire, and the researcher's reflective journal. As a formative work, there are limitations to Bua's research, in particular the next steps are to check AACR's potential modality for crisis response work. My research begins to fill this gap by exploring the target population that benefits most from AACR as a crisis intervention.

The technical expansion of AACR within the United States has been explored in the literature. In 2014 Eaton-Stull analyzed how to expand AACR teams into un-occupied areas of the organization, where AACR is not available. AACR is of great benefit (Eaton-Stull, 2014), therefore there is a need to expand the number of AACR teams and the geographic areas in

where they are located. The researcher gathered the data by interviewing and performing focus groups with HOPE AACR members such as regional directors, elected board of directors, and certified volunteer team members. Eaton-Stull (2014) developed an action plan that includes an area targeted for expanding AACR and strategies to recruit and train new members. Moreover, this research aimed to document the process of creating the action plan for future necessities of expansion. Finally, by implementing the action plan, Eaton-Stull found a way to expand the AACR coverage and ultimately help survivors of crises and disasters in their recovery process.

Few articles examined the operational distinction between AAT and AACR. An important systematic review was published in 2016 by Stewart, Bruneau and Elliot. The conclusions from this work expressed two settings where AAI may be implemented, the first would be animal-assisted therapy counseling, and the second would be AACR. The researchers determined which intervention is most appropriate for a particular by citing evidence in the literature and provided examples and techniques suitable for each intervention.

Stewart et al. (2016) expressed how AACR is a growing field and reviewed its use and success through history. The team asserted that to expand AACR, protocols must be developed, training must be required, and the dog's well-being must be considered when using this type of intervention. By citing Greenbaum (2006), Chandler (2008), Graham (2009) and Rogers (2014), Stewart et al. built their case for the clinical implications AACR may have on trauma survivors. These included benefits such as functioning as an ice-breaker for the intervention to form and for the therapy to engage, creating social connections. The dog serves as a bridge between the professional and the victim. Sometimes, upon seeing the dog, the victim reaches out to the therapist first due to the dog's calming effect. Stewart et al. (2016) mentioned an important point by explaining how AACR can be beneficial at a trauma scene for the mental health professional

(Sypniewski, 2021). Finally, Stewart et al. (2016) noted the importance of research in the area of AACR beyond case descriptions. The aim of this study was to respond to these recommendations and close some gaps in the knowledge base in the literature.

In response to the limited empirical research, the first quantitative controlled study of AACR was performed by Lass-Hennemann et al in 2018. They investigated the effects of therapy dog intervention directly after a trauma event. The researchers assigned participants to one of three random groups, all of which were shown a traumatic film. The control group was instructed to relax, while the second group was shown a film clip on a person interacting with a dog. The experimental group received the therapy dog intervention. The research team examined differences between the control groups and the group that received therapy dog intervention. Results indicated that the dog reduced stress and anxiety levels for participants in the experimental group. They reported lower levels of anxiety, less negative affect, and a broader positive effect than the other two groups. Nonetheless, the physiological arousal decreased in both of the other groups. No differences were found between groups involving intrusion symptoms. In conclusion, this research demonstrated that AACR could be a beneficial intervention for individuals who just experienced trauma since it may reduce stress and anxiety symptoms. It is essential to consider that therapy dog intervention in Lass-Hennemann et al.'s research is similar to what an AACR team would do. However, no mental health professional or social worker leads and handles the intervention, but the focus is the dog.

From the limited literature it, AACR has been shown to be a beneficial intervention not only for survivors, but also first responders, including the AACR handler themselves. In 2021, Sarah Sypniewski published a collection of case reports where AACR teams of the Disaster Stress Relief Dogs Organization provided their services. Sypniewski (2021) included the

survivors' and responders' personal experiences at most of the sites where AACR contributed. The report cited clients' own words to describe the benefits of the intervention. Sypniewski explained how AACR teams were "the key that unlocks the door in which professionals can enter the world of people affected by disasters" (Sypniewski, 2021,n.p.). The report demonstrated the diverse traumatic settings that have employed AACR as an intervention and argued for the necessity of this type of intervention. Some examples were the Oklahoma city bombing in 1995, the terrorist attack of 9/11, the Tehachapi fire in California in 2010, Dallas tornadoes in Texas in 2012, Taft Union High School shootings in California, 2013, Dayton mass shooting in 2019, etc. The case report also included pictures that provided another level of impression to the reader of AACR's work benefits.

Descriptive cases and in-depth analyses have been used to illuminate the professional's viewpoint how AACR brings a unique tool into the crisis and disaster management, allowing the client to receive the most appropriate intervention and for the professional to be able to provide this intervention. Research showed how animals' inclusion in intervention after trauma is adequate and of utmost importance. However, more prominent research is urgently needed to provide to this intervention an evidence-based validity.

Animal Assisted Therapy and Trauma

AAT and trauma have a long but newly appreciated relationship. Through research both quantitative and qualitative, findings have suggested this relationship is extremely beneficial for people experiencing trauma and its derivatives such as stress, anxiety and more. Physiological and psychological benefits are questioned and explored in the next studies.

O'Haire, et al. (2015) examined subjective short-term benefits of AAI for trauma in their systematic review. O'Haire et al. (2015) reviewed ten studies under the PRISMA (Preferred

Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. All ten articles reportedly found reduced symptoms of depression, anxiety, and PTSD for survivors of trauma. More significant positive outcomes were found when dogs were incorporated into child and adolescents group therapy.

Similar subjective findings for anxiety and stress were reached in Lass-Hennemann et al.'s (2014) study. The researchers tested whether physiological stress response to an analog trauma could be reduced when exposed to a therapy dog. The sample constituted 80 healthy women who were randomly assigned to one out of four groups. All groups watched a 'traumatic' short video. A friendly dog accompanied the first group during the presentation of the video. The second group was paired up with a friendly human while the video was presented. The third group received a toy animal for the video presentation, and the fourth group, which was the control group, watched the video alone. The study measured stress and anxiety with STAI-S and PANAS and physiological stress measured by blood pressure, ECG, and cortisol levels. Demographic data measured by STAI-T and Pet Attitude Scale were recruited too. Although results showed that the physiological stress was the same in all four groups, the study found that the group paired up with a dog reported lower anxiety ratings than the third and fourth groups (the groups that received a toy and those that watched the video alone). According to this study, dogs could subjectively, reduce anxiety during a traumatic stress situation.

Mims and Waddell (2016) showed AAT to be extremely helpful in treatment of abused children, veterans and others. The researchers presented the importance of the presence of a dog to lower anxiety and increase trust building with trained dogs and their handlers. By only petting therapy animals, trauma survivors put aside negative feelings at the present time. Similar

findings were presented in Odendaal and Meintjes' (2003) research, where they demonstrated how the petting of a dog releases oxytocin, a hormone that increases trust and cooperation.

Ein et al. (2018) performed a meta-analysis to examine both the physiological and subjective response of stress and how Pet Therapy (PT) may produce a huge benefit when treating stress. Ein et al. (2018) found how petting a dog may reduce blood pressure and have a positive input on heart rate. Also, according to the research, PT may reduce subjective stress and anxiety. Findings suggested there were significant differences in heart rate, and subjective anxiety and stress levels after exposure with PT. However, blood pressure was not specifically affected. Similar findings were shown in Fleischman and Hunt (2019) where they saw the impact AAT may have on stress and anxiety on antepartum women, who are in a position of stress at those moments of intervention.

Tsai et al. (2010) observed children experiencing stress due to hospitalization. This stress affects the children both physiologically and psychologically. Tsai et al. also researched the cardiovascular responses, state of anxiety and medical fear in hospitalized children through a quasi-experimental repeated measures design. Similar to Ein et al. (2018) but differing from Fleishman and Hunt (2019), the research suggested that AAT provides cardiovascular benefits but does not vary the anxiety and medical fear levels. A disconfirming finding from other research analyzed in this literature review, the outcome of this study suggests that AAT provides physiological benefits but not psychological ones.

Eke and Mitchell (2019) performed a systematic review regarding AAT in cases of depression and anxiety. All studies reported improvement in depression or anxiety levels. Eight out of nine studies reported improvement in depression, all the studies reported improvement in anxiety levels.

Animal-Assisted Psychotherapy and Trauma (AAPT) programs decrease symptoms associated with trauma experiences and PTSD according to Germain et al. (2018). This meta-analysis addressed two main questions: Is AAPT efficacious for the treatment of trauma/PTSD? And what factors (bibliographic variables, sample characteristics, methodological characteristics, characteristics of the intervention) affect the effect size of AAPT for trauma/PTSD? (Germain et al. 2018). Eight quantitative studies were assessed for the treatment effects with involvement in AAPT. A random-effects model was used to aggregate each study into an overall effect size. Eight effect sizes were included in the pre- versus post-comparison analysis, and PRISMA guidelines were followed in this search as well. Germain et al. found a large effect for pre-intervention versus post-intervention comparisons for trauma, depression, anxiety measures and a moderate effect versus the control group comparisons. This particular study's reliability was high since the agreement between the studies of the meta-analysis was consistently positive across studies. Furthermore, Germain et al. (2018) used treatment groups versus control groups. Methodologically speaking, the conclusions drawn from a treatment group versus a control group were more likely to be accurate (Gravetter & Forzano, 2012) and gave rise to confidence in its conclusions.

Altschuler (2018) also found alleviation of anxiety in his study of case reports discussing AAT for PTSD in the media. Altschuler cited a media report where a veteran who worked with parrots experienced fewer nightmares and a reduction in his anxiety symptoms. O'Haire et al. (2015) similarly found that AAI was able to increase nightly sleep duration for the veterans suffering from PTSD. However, Altschuler's (2018) examination of media case reports carried inherent bias, as media reports are often profit-driven and tend to sensationalize stories.

Social skills, better communication, emotional well-being such as stability and relaxation, ability to be more active, and self-satisfaction are important outcomes and benefits derived from AAT seen in Schmitz et al. (2017). Using Mayring's model of inductive content analysis, the researchers gathered information about AAT in a palliative care center. For this study, they performed a retrospective analysis of dog handlers' protocols of AAT sessions. The study demonstrated that AAT has positive effects on patients in the palliative care center. AAPT may provide additional motivation for the participants to stay in therapy and may help the participants fight against their desire to avoid unpleasant properties of trauma therapy (Germain et al., 2018).

Crowe et al. (2018) continued to explore the connection between animals and veterans by researching how service dogs enhance the occupational performance of veterans suffering from PTSD or TBI (traumatic brain injury) in their homes. Through a qualitative study, the researchers interviewed six veterans. Four primary themes were explored: physical safety and state of mind, healthy behaviors, the service dog as a hero and friends and family relationships. Findings explored how service dogs improved the veteran's lives both in physical and emotional levels, as well as reinforced healthy behaviors.

Beetz et al. (2019) performed a pilot study of AAT as an extra treatment to 29 soldiers suffering from PTSD while the control group of 31 soldiers only received the regular treatment. Although the intervention endured only four weeks, an improvement of mental wellness, particularly joy, was expressed in the soldiers who received the intervention. There was no clear connection to the perceived stress levels, but there was an improvement in the relationship with the dog handler. Relationships are often damaged by the difficulty of trusting others when having PTSD (Beetz et al., 2019). Therefore, in this research AAT seemed to be helpful in mental

wellness and connections to others. However, no correlation between AAT and stress levels was found.

Research in AAT and trauma is still in the early stages. Consensus regarding terminology of interventions using animals (such as AAI, AAT, and PT) is yet to be achieved (O'Haire et al., 2015). Altschuler (2018) argued that formal research that focuses on the inclusion of different animals for therapy should be prioritized. Future studies should provide specific details about both animal and interventionist background, training, and experience with AAI as well as focusing on developing treatments for specific kinds of trauma (O'Haire et al. 2015).

Animal Assisted Interventions and Social Work

AAI and its benefits were explored through the social work field. Analyzing social work practitioners' wisdom, McLaughlin (2015) supported what other researchers have found of the uniqueness of the human-animal relation and how it affects both in healing and growth and trauma survivors. Through a snowball sampling, 18 practitioners who treat clients with trauma responded a survey in which the themes studied were: the non-judgmental nature of the human-animal bond; the richness of non-verbal communication; the benefits AAT may have in physical and emotional safety of the clients; and the experiential and individualized nature that animals contribute to the humans. McLaughlin found consistency in the literature with their findings where AAT proved to be a successful and unique intervention for dealing with trauma.

Thompson (2019) explored the perception of social workers and the AAT's effects on veterans. Through interviews, the researcher found value in the human-animal bond and how its integration into the treatment of veterans may improve their quality of life, including increase in social activity while decreasing social isolation, as well as decrease in substance use. Another important achievement of this research was the focus on the importance of educating social

workers in this field. For example, Thompson explained that broadening the population served with AAI interventions through social work professionals could assist the clients in reducing symptoms of their physical and or mental health disabilities and provide them a better quality of life.

Although service dog programs might differ in its actions from AAT, Whitworth et al. (2019) demonstrated the essence of the importance dogs have on the wellbeing of veterans experiencing PTSD. In this pre and post pilot investigation, and with the use of a control group the same size as the intervention group (sample of 15 in each group), the researchers found that the participants who completed the service dog training program measured a significant decrease in PTSD symptoms. Also, they responded better to intra/interpersonal difficulties related to psychological trauma and disabilities secondary to PTSD. Considering further controlled investigations, the addition of service dogs training programs appeared beneficial for veterans suffering from PTSD. For social workers this is a whole field of opportunity to add as complementary treatments for clients with PTSD, specifically, for clients who are having trouble engaging with traditional types of therapy (Whitworth et al., 2019).

Eaton-Stull et al. (2020) performed an exploratory survey asking social service professionals about the use of AAI in their different practice settings. The researchers found AAI is fairly common as well as the fact the professionals have received some type of training regarding AAI. A few of the most notable benefits of AAI were the increase of social interaction and the reduction of stress and depression for the people treated with AAI. The largest barrier for the implementation of AAI was liability concerns which could be alleviated with proper education and training (Eaton-Stull et al., 2020). Liability concerns are cited often in AAI

literature (Eaton-Stull et al., 2020). Once more, the importance of educating social workers with the proper training for provision of AAI was a prominent finding.

Finally, as responsible social workers, who respect and care for the other, Taylor et al. (2014) explored the ethical and practical considerations of AAT regarding both humans and animals. The research showed AAT benefits both humans and animals in a positive way by changing people's attitude regarding animals. This unique bond rests on the deep understanding that both parties are sentient beings with needs of their own. By providing mutual understanding, the benefits both parties may achieve are exceptional.

AAT demonstrates its contribution to standard interventions for humans, specifically regarding trauma and all that trauma involves. I wished to understand further how AAT converted into AACR adds to traditional trauma interventions and the exact methods to stabilize trauma clients.

Conclusion

The research examined in this literature review illuminates the uniqueness of AACR in the field of crisis response, as well as the benefits it may have on trauma survivors. The research also explored the effects AACR may have in both the handler and the dog, and how important it is to do self-care for them as well, as they are endangered of suffering vicarious trauma and satisfaction fatigue. However, research has not yet amassed enough empirical data that proves this field as a necessary intervention in the area of crisis response.

Understanding the psychological and physiological effect dogs have on trauma survivors, people under stress, or those suffering from anxiety, provides a field of hope. Nevertheless, the need for a wider basis that demonstrates the benefits of AAT with trauma survivors is confined in most articles. A need to make this intervention an evidence-based practice will benefit all people.

Clients and trauma survivors express how the dog companion brought them a sense of relief by reducing the fear and pain that some experience. These statements are supported by physical changes in hormones that petting a dog may awaken in the body such as oxytocin. Furthermore, dogs and their handlers provide a unique opportunity for trauma survivors to engage in therapy, to feel connectedness, to cope, to find rapport and resilience, to find strength and to heal so they can start moving on.

Finally, results from social work research highlighted that the use of AAT between social workers is extremely common. As social work professionals, many practitioners work with trauma survivors such as veterans suffering from PTSD and even children who have experienced abuse. AAT has shown to be a prominent intervention for these populations. The bond between animals and humans provides benefits for both parties. When all involved enjoy the relationship and opportunity to bond, all parties win, and they win bigger than they would on their own.

By examining existing literature, this study aimed to better understand the benefits of AACR by researching its effects on the people present at a trauma scene. While the benefits of AAT with trauma survivors have become widespread in the literature, most of the substantial contributions of literature regarding AACR are case studies' reflections, therefore empirical research that studies these benefits are few. I wanted to address this matter by gaining knowledge on the experiences of the AACR first responders while using this named intervention. Cultural sensitivity, race and ethnicity groups were not found in the literature review; this study discovered the target population that benefits most from AACR. Finally, an understanding of the contribution of AACR to a crisis scene compared with basic crisis response intervention is still needed from the literature. This research discovered what does the 'animal' adds to crisis response intervention by asking the following questions: First, how does animal assisted crisis

response affect the people present at a trauma scene? Second, how does animal assisted crisis response compare with other models of crisis response? Third, what are the experiences of AACR first responders using animal assisted crisis intervention? Fourth, what are the experiences of mental health professionals CR first responders working together with AACR? Fifth, how are the benefits and problems described when using AACR? Sixth, are there differences in the population that most benefits from AACR at a trauma scene? And finally, how would the sample rate the effectiveness of AACR? Through these questions, the investigation of this type of intervention and its success when applied in traumatic events was explored.

In the next chapter I discuss the theoretical framework used in this study to provide a full understanding of the theories that guided the research questions and the importance of its discoveries.

Chapter Four: Theoretical Framework

This section explores theories that are used as an establishment for the practice of AACR in this study. As Creswell et al. (2011) propose, "A theoretical framework advances an abstract and formalized set of assumptions to guide the design and conduct of the research" (p.131). For this study, the theories of Antonovsky and Wilson provide a framework through which to explore how animal interventions may aid humans under trauma and/or during crisis. By unifying these two theories together, this framework presents a unique mix of foundations that provide a deep understanding of AACR's purpose.

The following theories provided orientation to this study: resilience theory by Antonovsky (1979) and biophilia theory by Wilson (1984). Resilience theory, developed first by Antonovsky, guided the portion of this investigation that sought to understand the importance and benefits of finding resilience in the aftermath of a traumatic event. Through this theory, the reader may obtain a deeper understanding of the efforts a crisis team spends stabilizing victims. Practice based on resilience theory also includes providing survivors with the support and valuable resources they need. Biophilia showcases the distinctive bond between humans and animals and how this bond can have a tremendous benefit on trauma survivors in the aftermath of the disaster. The theory explains the innate process by which humans are drawn to living systems. Together resilience theory and biophilia provide an exclusive approach for the AACR teams to provide their support and enhance it with the dog's irreplaceable relation with the trauma survivors. This unique intervention helps survivors find resilience at times of crises.

Resilience theory

Van Breda (2001) explained, "resilience theory addresses the strengths that people and systems demonstrate that enable them to rise above adversity" (p. 14). Resilience theory was

developed in the 1960s and 1970s and was helpful in various fields (Aldunce et al., 2014). It was established from Antonovsky's seminal work on salutogenesis and its model of health as health promotion (Van Breda, 2001; Vinje et al., 2017). In his work, Antonovsky developed primary constructs such as stress and coherence (Vinje et al. 2017). Antonovsky researched holocaust survivors and realized that although his sample went through potentially disabling life-stress experiences, some people did not present negative health outcomes (Antonovsky, 1987).

Antonovsky's (1987) work explained the mediating variable in the formula of stress affecting health, was if a person's sense of coherence was disrupted. The other side of the formula, the ability to overcome the stress and the threat in the sense of coherence, would be called resilience. Half a century later, the use of these constructs started to develop into a theory for the disaster aftermath and pre-intervention for preparing individuals and communities for disasters (Greene et al., 2007; Norris et al., 2008).

Much like Antonovsky's (1987) findings on holocaust survivors and the differences of the health outcomes in his sample, Kobasa (1979) studied personality under stressful life events. One group fell ill after the stressful life event occurred. The second group did not. Participants in the second group exhibited more strength, meaning a more substantial commitment to self, a sense of meaningfulness, and internal control. The contribution of this study to resilience theory was that different people reacted differently to stressful life events, in part, due to resilience. This was the same conclusion Antonovsky (1987) found where resilience impacted the differences in the ways different people reacted to the same stressful experiences.

Years later Greene et al. (2007) supported Antonovsky's findings. Their research found that survivors of crisis respond differently and should be treated accordingly. Many people cope with crises through self-healing strategies and mutual support, while others need interventions

that 'normalize' their reactions to abnormal situations. Greene and Greene (2009) explained how resilience-enhancing strategies may contribute to healthy recovery and adaptation after a disaster. Greene (2007) has found that appropriate interventions have a remarkable capacity for helping people and communities to rebound after a crisis.

Lazarus and Folkman (1984) presented resilience theory as a process with three steps: determine the significance of the event for the specific person, select a coping strategy and explore the self-coping strategies of the person; and finally, carry out the strategies found, and evaluate the success of the selected coping strategies for the person.

According to Masten (1994), once basic human needs are restored, resilience can emerge. Hope is another important virtue that is part of the resilience process. AACR's purpose is to help the people that didn't find their inner strength naturally during a stressful life experience and aid them through this intervention to find resilience and hope.

Resilience theory may be applied both at macro and micro levels in crisis situations, as it can be applied to a personal crisis or an environmental one (Van Breda, 2001). Resilience theory at a macro-level intervention involves informing the community about crises and prepares the community for wellbeing right after a disaster. There is the effect of preparing the community to foster resilience before disasters occur. Nonetheless, the importance of resilience right after a crisis or disaster is recognized as an essential tool to help the targeted population recover from the disaster (Weems, 2019). Resilience theory at a micro-level involves personal care while minimizing the effects of adversity. This helps with individuals' effective recovery (Greene & Greene, 2009). The AACR responders work to stabilize the survivors of a disaster, build a connection between the survivors and community resources, and enhance coping skills at both

micro and macro levels. Combined this fosters resilience in the trauma survivors (Hobfoll et al., 2007; Norris et al., 2008; Trickett, 2005).

The social work profession melds well with resilience theory as its goal is to enhance personal and community wellbeing (Greene & Greene, 2009). As professionals, social workers might be dispatched to first responders of all types, such as AACR. They must provide a service that restores functioning in all possible systems of the affected individuals. Therefore, social workers aid at micro, mezzo, and macro levels (Zakour, 2019). This theory provides a unique opportunity for social workers to help trauma survivors reach resilience even though it may not come naturally for them. AACR presents itself as an evolutionary type of intervention for social workers to use at the time of a crisis to aid the survivors find resilience.

Although resilience theory began as a macro level framework and is widely used (Gil-Rivas & Kilmer, 2016; Zakour, 2019), it has evolved to function at a micro-level framework for individualized interventions (Greene et al., 2009; Sippel et al., 2015). According to Greene et al. (2009), resilience has macro-level and micro-level nested within it involving personal care and social services, and infrastructure. On a larger scale, its impact depends upon policy laws, legal codes, and political conditions, as well as their flexibility (Weems, 2019).

A subset of resilience theory is the application of resilience within an ecological framework. Within this framework, responders can recognize the elements and processes that trauma survivors experience concerning resilience and relative easiness or complexity of adaptation (Gil-Rivas & Kilmer, 2010; Weems et al., 2008). Bronfenbrenner's ecological perspective provided a framework for understanding the individual and their coping efforts, adaptation, and development within the dynamic interaction between the different systems of the individual, including family and community on a larger scale of social context (Bronfenbrenner

& Morris, 2006). In this case, responders using resilience theory can use Bronfenbrenner's systems to adequately intervene at the right level for the person and the community and provide coping strategies and connections between systems as needed in the specific crisis or disaster.

Animal Assisted Crisis Response (AACR) believes in coordinating different resources for the individual to help them find resilience in the aftermath of a crisis event. AACR promotes stabilization and wellbeing immediately after a disaster has occurred and provides necessary resources to the individual. Within the survivors' systems, they may find resilience and start a recovery process. AACR uses this approach as a holistic one based on the ecological perspective of the individual which considers the individual and the different systems that surround them to find the help needed within the community. One of AACR's goals is to connect the person to community resources to continue the process of healing and coping in a more natural path.

AACR Israel is unique regarding its approach to the community in which they intervene. Responders attend calls in their surrounding living area, attending calls in one's own community. The similarity in religion and customs, and culture, unites the responder and survivors and fosters a sense of belonging. It is worth noting that this holistic approach where the cultural similarities between the responder are respected is exclusively found in Israel. Moreover, this approach symbolizes the importance for the disaster response team to acknowledge the survivors within their context— including their social and communal norms, history, and culture— to address how these extraneous factors affect the person's ability to cope (Gil-Rivas & Kilmer, 2010; Norris et al., 2008).

Gil-Rivas and Kilmer (2016) also explored the human and social aspects of individuals that are invaluable vital resources in the aftermath of a crisis. AACR Israel's responders present a benefit to trauma survivors because they present an option of uniting the individual with the

necessary resources that they need to find resilience. Moreover, the community and social relations of the individual is a benefit that will aid the survivors find resilience in the aftermath of the disaster (Gil-Rivas & Kilmer, 2016).

AACR's purpose and mode of action is thoroughly analyzed. One of AACR's main goals is to elevate the resilience as close as possible to the disaster so the process of recovery of the survivors begins immediately. Zakour (2019) noted "increasing the chances of a resilient disaster recovery have shown preliminary evidence of reducing harm and the frequency of serious mental health problems" (p. 25). Hence, by using this theory as a basis for the AACR work, I assert that AACR may provide benefits not only in the aftermath of the crisis but also in the survivor's future.

Another goal of AACR is connecting survivors with community resources in the aftermath of a disaster. Perkins and Long (2002) made a noteworthy point by highlighting the essential role communities play in AACR teams' ability to provide individuals an enhanced capacity to cope with adversity and, therefore, be resilient.

Finally, Greene et al. (2003) made a connection between AACR's work and social work professionals by reiterating how with resilience theory, social workers may help trauma survivors overcome adversity and navigate life stressors as well as boosting their ability to survive. AACR responders may contribute to these goals with the aid of their dog companion during the intervention in the aftermath of a trauma scene. Moreover, Greene and Oliva (2009) stated that resilience at both macro and micro levels may reduce the effects of adversity and contribute to successful recovery and adaptation after a traumatic event.

Biophilia theory

The first time biophilia was used was by a German sociologist, social psychologist, and philosopher named Fromm (1964), when he described it as "the passionate love of life and of all that is alive" (p. 365). Edward O. Wilson (1984), an American biologist, naturalist, and writer, was the creator of the biophilia theory. Wilson defined biophilia as "the innate tendency to focus on life and lifelike processes" (p. 1) and stressed that "if we come to understand other organisms, we will place a greater value on them, and on ourselves" (p. 2). According to Wilson, humans have an instinct for searching for connections with other living systems. Wilson explained biophilia as a tendency of human beings to affiliate with nature and other life-forms. He added a genetic component into his theory and asserted that genetics play a role in the interaction between humans and nature. In his view, Wilson (1984) attributed importance to the cultural feature as well: "the unique operations of the brain are the result of natural selection operating through the filter of culture" (p.12). As I see it, there is a dynamic balance between all elements of nature and culture. All these elements play a beautiful role in the core of AAT and AACR specifically.

Wilson's theory clarifies how humans find keen interest in animals. Studies show a strong correlation between the provision of companionship and the tactile comfort of pets with better health and life expectancy of humans (Besthorn & Saleebey, 2003). For example, it is now known that affiliation to pets decreases feelings of loneliness and isolation and reduces physical arousal (Besthorn & Saleebey, 2003). For these reasons, biophilia works well with AACR. Humans possess an innate attraction to nature, which is palpable in a crisis scene where AACR teams arrive. Survivors need to search for a natural connection instantly. When an animal

promotes a safety signal of calmness, this endorses the same feelings of security and physiological relaxation in the human (Beetz, 2017).

Together with Wilson, Stephen Kellert, a social ecologist, helped pioneer the biophilia theory. Kellert worked all his life to understand the connection between humans and animals. In his book *Kinship to Mastery: biophilia in Human Evolution and Development*, Kellert (1997) explores the strong affection for wildlife and nature. Kellert reiterated the emphasis on 'companion animal,' which includes dogs as creatures who serve as sources of deep affection. According to Kellert, "few elements in life provide as dependable and seemingly unqualified affection as the companion animal" (p.109).

Gullone (2000) demonstrated how an innate affiliation with nature increases wellbeing. Moreover, Besthorn and Saleebey (2003) argued that benefits from the animal's alliances with humans enriches both physical and psychic wellbeing. Furthermore, the connection between humans and animals presents a critical factor in our improved adaptive skills, which humans benefit from, as described by resilience theory (Besthorn & Saleebey, 2003).

Besthorn and Saleebey (2003) remarked upon similarities between the biophilia theory and social work values. First, the value of dignity and justice is presented. Besthorn and Saleebey (2003) state that human-animal connections enrich people's lives. Regarding AACR, one can see that biophilia theory respects the interrelationship of life, which means that all living organisms present a value created and sustained in the context of their relationship with each other.

Social work values align with biophilia theory values. Social workers have explored and developed coping tools and interventions for both individuals and groups to alleviate emotional distress and social wellbeing while considering the biophilia theory and how nature plays an integral part in humans' wellbeing (Lysack, 2010). Some researchers focus on therapeutic

approaches for enhancing resilience (Landau & Saul, 2004), others insist on considering disaster therapy, the cultural understanding of mental health, and its clients' ethnic background (Arulampalam et al., 2005). The analysis of community, diversity, and inclusion presents another point where social work's values connect with biophilia theory (Besthorn & Saleebey, 2003). Referencing the emphasis on community seen in the resilience theory, Beck (2003) observed how important it is to consider the individual's cultural influences as well as biological ones. In Israel, where AACR incorporates a mix of cultures and beliefs, responders respect these environmental elements and do not attend situations where animals are unwanted.

Beetz (2017) researched human connections with other humans. Considering the genetic basis to biophilia theory, there is also what humans learn from their natural environment. This could potentially include negative experiences with humans (and animals, as Beck (2003) emphasizes). Learned norms about appropriate behavior may also play in the way humans relate to humans (Beetz, 2017). Therefore, humans could have a more natural relationship with animals, one that doesn't judge or asks for social norms of reactions and behaviors.

Besthorn and Saleebey (2003) explored how biophilic connections could enhance social work education and practice. Incorporating it can only benefit social work professionals and empower them by providing them with more stress reduction tools, promoting healing and coping strategies, and applying natural elements into their interventions. Finally, this acknowledgment of the benefits of AACR provides practitioners with different possible scenarios for helping diverse populations as explored in AACR Israel.

Conclusion

Using resilience theory, I illustrated a real benefit for crisis response in the aftermath of a disaster. Moreover, biophilia theory has demonstrated how the dog in the AACR may provide a unique connection to the trauma survivor to find resilience and bounce back.

Together, both theories guide this research as it searches for a sensitive intervention to approach trauma survivors in the aftermath of a crisis. The study's aim was to provide multiple examples to support these theories. Next, I present the study's research questions where the culmination of both theories may be encountered and emphasized.

Chapter Five: The Research Question

This study aimed to address the benefits AACR brings to a trauma scene and its survivors as an intervention to stabilize the survivors and provide them with social connections. Through this stabilization, the goal is to prevent the development of post-trauma in the future.

Through thorough interviews with AACR responders, mental health professionals, and supervisors of AACR, I found effects AACR has on people present at a trauma scene. Furthermore, through all the collected data, I explored the experiences of the first responders while using AACR as a crisis intervention at a trauma scene.

It is important to analyze what mental health professionals experience when working next to AACR responders and witnessing them use the intervention at a trauma scene to obtain a fuller picture of the intervention, what it encompasses, and its effect on a more profound level, considering all people present at the scene.

Through the research questions, I analyzed the target population AACR could be more appropriate for. Finally, a deep understanding of the addition of AACR to crisis response intervention in general was explored. The primary research question of this study was, “How does animal assisted crisis response affect the people present at a trauma scene?” To answer this question, first responders in Israel provided the data for this research. In order to provide a deeper understanding of the usefulness of this model, I included a secondary research question, “How does AACR compare with other models of crisis response?”

The development of these research questions was based on existing research on AACR, as well as on AAT and trauma, and the inclusion of social work. A rigorous literature review of case studies revealed how AACR may affect a trauma scene and its survivors. Still, a need for analyzing case studies and additional empirical studies is needed for this intervention to become

evidence-based. The aim of this study was to provide a more complete understanding of Animal Assisted Crisis Response and its benefits to communities that have just experienced a crisis.

Chapter Six: Methodology

Research Perspective

This dissertation used qualitative methods for data collection and analysis. The methods included interviews and surveys which sought to understand AACR as an intervention. The collected data were used to understand the meaning people give to the intervention (Denzin & Lincoln, 2005). This additional step is based on the research by Creswell and Plano Clark (2018), who proposed that "Qualitative research begins with assumptions and the use of interpretive/theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem" (p. 5).

Using surveys and interviews as data collection methods, I consolidated qualitative data to provide a fuller picture of the intervention and its benefits. The study's exploration was based on the data presented in this literature review. The data collected in this study added to the body of empirical knowledge of AACR. Through the combination of the data and different collection methods, the reader may obtain a complete picture of how the intervention works, how outside mental health professionals such as social workers that attend the scene perceive this intervention, and to whom it is pertinent in the trauma scene community.

Grounded Theory Design

The mental stabilization of victims at the scene of traumatic incidents is often a difficult task to achieve. AACR is an intervention that is significantly beneficial to acute trauma victims by helping to prevent PTSD and as a treatment for PTSD. To best analyze the data from the experiences of practitioners, I applied a grounded theory design. This provided the necessary insight into how and why animal-assisted therapy is an appropriate intervention for stabilizing trauma victims.

Grounded theory design works on the principle that the researcher builds the theory through the "emergence" of the data while abstaining from forcing theoretical concepts, using empirically observed phenomena to explain the theory (Bryant & Charmaz, 2015). AACR is innovative; therefore, refraining from forcing theoretical concepts is relatively easy. Finding the emerging theory from the data is what this research needs. However, there are a few other pieces of research already published about AACR (Eaton-Stull et al., 2018).

The goal was to move beyond the participants' descriptions and create a theory that explained the process of the intervention and how it affects them. This study provided a framework for future research on the modality of animal-assisted therapy as a crisis response intervention (Creswell, 2006).

A qualitative research method was most appropriate for this study because of the opportunity to build a theory about AACR that could be a platform for future research on the intervention. Analyzing professionals' work on a scene and through the interviews and understanding their experiences could show the benefits of this intervention. The weight of the professionals' voices mixed with the interpretations makes the research alive and illustrates this intervention in the best possible way to the reader. United, they provide the richness of this study.

Data & Participants

Analyzing the population treated with AACR would require approval from the IRB. Because of the extended time needed and the complicated process of getting the IRB approval, I decided to collect data from professionals in the field; this way, the participants would not experience the same risk as survivors.

The ideal would have been to interview AACR professionals who volunteer and get dispatched by the psycho-trauma unit to arrive at the scene of a crisis to treat trauma. However,

this field is relatively new, and there are not enough professionals to provide a complete set of data answering the research questions. Also, it could be said that presenting only the view of AACR responders may be biased by the fact that they practice this type of intervention, allegedly because they believe in it. Therefore, the second type of interview was deployed, focusing on the mental health professionals who volunteer and get dispatched by the psycho-trauma unit and have seen the work of AACR on trauma scenes. A component of this interview addressed questions as to how AACR professionals are treated in those scenes as well.

Finally, I included the AACR responders' supervisors; some of them also arrive at the trauma scene along with AACR responders. This third type of interview included elements regarding the AACR supervision, its decision to deploy AACR teams depending on the trauma scene, and the feedback they obtain from the field.

Twenty-one participants were chosen and offered the chance to participate in the study. The first five participants invited to join were AACR responders. Six supervisors from the psycho-trauma unit which are also mental health crisis responders and mental health practitioners were also interviewed. Four participants were mental health professionals who volunteer at the psycho-trauma unit without using AACR and who have worked next to the AACR professionals. Two mental health crisis response supervisors who volunteer next to the AACR responders and have witnessed the AACR intervention at the scene; however, they did not have a mental health professional background. And finally, the sample included four mental health crisis responders without a mental health background.

The participants were invited to participate voluntarily in the research through interviews. I explained the goal of the study and asked the participants for their time and cooperation. Anonymity and consent were the number one priority; for this reason, their names in this study

were disguised, and real names were not mentioned. Voluntary participation and the freedom to withdraw at any stage of the study was discussed. The participants were given a choice to be interviewed by phone or in a live meeting, an online interview was also available depending on what option was preferred by each participant. The importance of interviewing in a quiet private context was reviewed. A consent form was recorded at the beginning of the interview. All participants granted permission for the use of recording devices at the time of the interviews. I mentioned the possibility of follow-up questions in the future. I asked participants to complete a digital survey about their demographics.

All data were stored securely on a locked computer used only for this research. According to Creswell's (1998) suggestion of including a sample of 20-30 individuals to develop a "well-saturated theory" (p. 128) of an exploratory design with a grounded theory approach, the expected sample size was the desired sample size. I reached out to 24 individuals. Three couldn't participate so the final sample for this study was 21 participants, resulting in a sample size large enough to perform the study according to Creswell's standards.

Measures

As this was qualitative research, feasibility was essential to perform attainable research (Bowen, 2009). Therefore, I conducted a pilot study with a smaller sample and similar questions in the interviews. I modified the questions based on the pilot study experience. I utilized Bua's (2013) modality in structuring the questions in the interviews.

Since this study was a qualitative inquiry, it was crucial to consider trustworthiness instead of the terms of validity and reliability (Lincoln & Guba, 1985). In this case, my long engagement in the field of AACR also provided a triangulation of data, methods, and information that established credibility. This long-term relationship between the researcher (myself) and the

participants provided thick evidence that "validates" the study (Creswell, 2013). Moreover, since this is my doctoral research, no additional investigators took part in the study.

The data that emerged from this study guided the formation of the themes that were to be analyzed. Therefore, only after the data were collected and analyzed did I know the themes that formed the basis of the study results (Creswell, 2013).

The instruments developed for this study were a survey and three structured qualitative live interviews. The survey included questions about the participants and their demographics. The interviews consisted of 17 questions about the experience of AACR in the field, the target population to whom AACR is appropriate, and the analysis of the addition of AACR into a crisis scene.

Procedures

Data were collected through different technological means. The surveys were recorded at the beginning of the interviews. The interviews were recorded and transcribed with the permission of the participants.

Nine out of the 21 interviews were translated from Hebrew. All data were uploaded and coded through the ATLAS.ti program. The names of the participants mentioned in this study were changed to protect confidentiality.

Data collection took place in phases. First, I reached out to participants and asked for their cooperation. Only participants that accepted voluntarily were included in the sample. I then set an appointment for the interview and asked them to reserve ten more minutes to fill out the survey. After the interviews and surveys were collected, all necessary data were translated, transcribed, and uploaded to Atlas.ti. Simultaneously, I started analyzing the data collected.

Limitations of the Study

In this section, I explore the limitations of this study. The discussion focuses on the decisions made regarding the scope and boundaries of the study.

The scope of data collection is a significant limitation due to the complexity of obtaining IRB approval to research a sample that includes trauma survivors. Therefore, the data were collected from a sample of mental health professionals who have seen AACR on a trauma scene but have not undergone the intervention itself. I analyzed different aspects of AACR at a scene that enriches the study.

A limitation to the data analysis and building a theoretical approach is the sample size and recruitment strategy. This is predominantly due to the participants all belonging to the organization United Hatzalah. Being limited to a set of participants from one organization has the potential to affect the participants' ideological commitment and attitude toward AACR.

Finally, I myself am an Animal Assisted Crisis Responder. Although I tried to disconnect my personal opinions on the matter, I understand this individual connection to AACR may be interpreted as a bias to the reader or affect the interpretation of the data. However, being that this is a grounded theory study, the data that emerged guided the direction this research went.

Chapter Seven: Results

In this chapter, I report the results from the data of the interviews as they answer the main research question of this study: “How does AACR affect people present at a trauma scene?” The secondary question that guided this study was, “How does AACR compare to other models of crisis response?” I then examine the main themes that emerged from the data as they answer these two main questions.

Sample

Twenty-one individuals were interviewed for this study. Participants included mental health crisis responders, animal-assisted crisis responders, and supervisors of mental health crisis response. The variety of backgrounds of the participants present different voices and views. Grounded theory tradition of qualitative analysis was used to examine the data to arrive at a unifying theory. The table on the following page shows the professional certifications of each group of the sample.

Professional Certification	Number of participants in the group
Animal-Assisted Crisis Responders	5
Mental health crisis response supervisors, mental health crisis responders and mental health practitioners	6
Mental health crisis responders and mental health practitioners	4
Mental health crisis response supervisors and crisis responders without a mental health background	2
Mental health crisis responders without a mental health background	4

Methodology

This study utilized the grounded theory tradition of qualitative analysis. After conducting the interviews, I translated those conducted in Hebrew into English then transcribed and uploaded all of the interviews to the Atlas.ti software program. I read the transcriptions multiple times to analyze the data and assigned codes to each theme that emerged. I then grouped the codes of the analyzed data and developed main themes. The main themes were divided into two main sections depending on how they addressed the two research questions that guided this study: “How does AACR affect the people present at a trauma scene?” and “How does AACR compare to other models of crisis response?”. I present the emerging themes separately.

RQ1: How does AACR affect the people present at a trauma scene?*Perceptions of AACR by Professional Responders and Survivors*

Arrival at a scene. According to numerous participants, AACR has the power to change the perceptions of the people at a trauma scene. These perceptions may be regarding mental health crisis response, and they also may be regarding AACR's intervention for the crisis responders.

The arrival of an AACR team to a scene provides a different perception to the survivors than the arrival of a mental health crisis responder. A mental health professional may seem like one more responder in the sea of first responders that arrive at a trauma scene. They may not be initially identified as a mental health responder but when they are, sometimes people don't want the mental health responder to approach them, or they say they are not interested in talking. It is up to the survivor to accept the offer of assistance.

When an AACR team arrives at the scene of a traumatic event, the reception to their presence is different. It is not merely one more responder, but a dog and the responder. It looks different and therefore, perceived differently. It looks interesting and serious simultaneously. Often survivors approach AACR teams instantly. The team is not only welcomed, but people at the scene are happy to see them coming. Study participants share how for people at the scene of a traumatic event, looking at an AACR provides a different experience.

Ava, an animal-assisted crisis responder, said how the responders of the AACR team are perceived as "the good ones" when they arrive. In the AACR responders' opinion, their entrance to the scene goes smoother and they are perceived positively by both the first responders and survivors at a crisis scene.

The first responders, including police and firefighters, as well as other people at the scene, usually welcome the arrival of the AACR team and are glad they are part of the response. Susan, a mental health crisis responder and mental health practitioner, told how she perceived the reception of the therapy dog by the firefighters at the scene:

We saw a lot of firemen who, if you ask them how they are doing and they'd say "I'm fine" but then the therapy dog would come to the firemen, and they would be down on their hands and knees, and the next thing we knew, they were talking to the therapist about how tough it was for them, and they were able to open up verbally.

According to the participants, this change in perception provides a unique opportunity for people at a trauma scene to open up and share their emotional pain.

Hesitation about AACR. Many mental health crisis responders initially felt hesitant about introducing AACR to a trauma scene and working next to the therapy dog and its handler. Their perceptions changed after working next to an AACR team. 16 study participants who are crisis responders that are not part of AACR teams reported being open to working with AACR teams in a trauma scene.

Ruby, a crisis response supervisor, crisis responder, and mental health practitioner shared her personal experience "I was quite wary of the idea, to begin with ... but I very quickly warmed up to the therapy dog because the therapy dog had a way of warming up to me." The actual exposure to the AACR team provided Ruby with a different opinion from what she thought about the idea of AACR.

For other crisis responders, there was no initial hesitation. For these study participants, they realized immediately how helpful and significant an AACR team may be at a trauma scene. Furthermore, the idea of an AACR team coming to work next to these mental health crisis

responders isn't a source of hesitation, but of happiness and security for the crisis responders themselves; as it provides them with an extra tool for their intervention, and a self-care tool for themselves. Emma, a mental health crisis responder shares her experience in a scene:

I was always excited when Lucy was coming because: one, I love dogs and two, if it could change the situation whereby, for instance, children... Not only were the boys happy but the mother became relaxed that her children were calmer ... the entire scene was changed in that scenario ...without the dog, it wouldn't have been the same.

Emma explained the unique feature the AACR team provided to the whole family by arriving at the trauma scene and interacting with the children on scene. The presence of the dog not only benefits the trauma scene and its population but the responders as well.

Animal-Assisted Crisis Response as a Catalyst

The best definition for AACR's core contribution to a trauma scene is as a catalyst to help make a social connection; this is beautifully remarked by one of the participants, David, a mental health crisis responder, referred to AACR as a "catalyst for change for the better for a person to be able to get through an acute stress reaction or being caught by a loop unable to break through the walls of that."

AACR has been perceived as a catalyst to help since its arrival at a trauma scene, and its influence starts appearing when the team wants to target the trauma survivors most in need. Four participants reported that the dogs have a 'sixth sense', and they described how it helps in a trauma scene. According to these respondents, the mere presence of a dog at a trauma scene affects the environment and the dynamics at the scene. The dogs have a unique ability to motivate the survivors to reach out to crisis respondents instead of the team needing to work their way into reaching the survivors.

In keeping with the catalyst theme, three other participants reported that having a dog at the scene facilitated the process of identifying victims needing immediate attention. The dog's sixth sense, helps to locate the most vulnerable survivors by moving toward those most in need of comfort. In its own unique way, the dog understands who needs attention. Through this approach, the dog eases the approach of the first responder by helping to create a natural interaction with the survivor.

The AACR team facilitates the ability to assess the trauma scene to effectively approach it to begin the interventions. Six participants reported the therapy dog's ability to target the survivors in need of an intervention. Susan, a mental health crisis responder, and mental health practitioner observed her impression of an AACR dog who responded in an emergency, "...Somehow, the therapy dog is able to pick out of a crowd faster and easier in some cases, I think, than a human trauma therapist." Susan compared the benefits an AACR dog may have over a mental health responder.

Clients Approach the AACR team. Study participants emphasized how the dog's presence created an environment where individuals affected by the crisis approached the response team rather than the other way around. Clients may approach the team because they are interested in the dog or want to talk about their pets. Whatever the reason, this opportunity creates a natural engagement opportunity.

Crisis response supervisors shared the feedback they got from different responders and how everyone would reach out to them and ask for the dog at the trauma scenes. Participants shared how different it is to go to a scene where the AACR team is because the survivors approach the team instead of the mental health practitioners approaching the survivors. This provides not only a more natural opportunity to start the therapy process but also an opportunity

for the survivors to reach out for help instead of the crisis responders coming to offer their support. When survivors initiate engagement, the whole process changes. The interaction is more positive, and this increases the chances of success.

The Dog's Sixth Sense. Interviewers referred to the AACR dog as having a special sense where they feel the needs of the humans and attend to these needs by reaching out to them. When the therapy dog senses who needs help and reaches out to them, the mental health crisis responders obtain a mapping of the scene and the survivors that might need help. This exceptional quality the participants describe helps both the survivors of the trauma and the group of mental health crisis responders to do their job.

Many participants described times when they felt the dog's ability to sense the needs of trauma survivors was a real benefit to the team. According to the participants, the dog's sixth sense removes responsibility from the Psychotrauma Unite team leader, while targeting who needs the intervention, instead of the team leader looking for the survivors. The AACR team helps mapping the scene in order to intervene. The dog's special sense tells the AACR responder who is the survivor that needs help in a natural and non-invasive way. By wandering through those who need help, the dog brings a sense of order to a scene full of chaos. AACR responders shared how their dogs approach survivors and shove their head against them so the survivors pet the dogs. This illustration is a perfect example of how the dog senses the pain of the person, reaches out, and provides its support.

Effects on the Environment. By arriving at a trauma scene, the AACR team might affect the environment. The presence of the therapy dog changes the dynamics at the scene and may lighten the atmosphere as well. The dog can then be viewed as a 'scene changer' and facilitates a lighter mood. Usually, a trauma scene comes together with some chaos and tension in the air, but

by bringing an outside element to this environment, an element so different and unexpected that it calls the attention of those who just suffered a traumatic event or responders who are dealing with the survivors, the dog tends to provide a sense of lightness to this atmosphere. The dog changes the atmosphere of the scene into a different dynamic where people get to disconnect for a few second from the chaos they feel at that moment. By adding lightness to a heavy trauma scene, the AACR brings something different and special to the survivors of the trauma.

Even more, the AACR team creates a change in the dynamics of the scene, just as described beforehand, regarding the finding of survivors at the scene. But it is not only the personal dynamics of the scene that may change, but it is also the social dynamics of the survivors. Being proactive instead of passive, the AACR team comes into the scene, and merely by its arrival, changes the dynamics. Offering a change of scenery while still being exposed to the traumatic scene may provide significant relief for the survivors by allowing natural interactions and providing an opportunity to shake off the trauma and change the dynamics.

AACR's effect on Technique: "In a matter of minutes she was smiling and laughing"

AACR adds a unique component to the intervention in a traumatic scene. The arrival of the AACR team and especially the dog, creates an immediate effect. Fifteen participants speak about how this looks in a trauma scene, its benefits, and to the trauma survivors, and bring examples of it.

This section is divided into codes explaining and providing examples of AACR's Magic. The codes reported in this section are: Ice-breaker, Non-threatening, Bridge of Connection, Stress and Anxiety, Grounding, Compassionate Presence, Safety, Distraction, Unburdening, Projection, Psychoeducation, Normalization, Empowerment, and Restoring Functionality.

Ice breaker. One of the most significant perceived attributions of an AACR team in a trauma scene is the first connection. The first connection is one of the most crucial parts in the intervention as it decides the course of it, and the way the person will react to the interaction. Susan, a mental health crisis responder and mental health practitioner, among other participants, shared the importance she finds in AACR at the initial contact, the rapport building, and the stabilization at a trauma scene:

Animal-assisted crisis response can be the difference between being superfluous and unnecessary and actually providing care...Like that first day that we walked into Surfside and all of the families were sitting around, and there was a deluge of therapists there, and nobody wanted to speak to therapists, the therapy dog walked over to somebody who immediately started to play with her, and the therapist was invited to sit down and start talking when none of the rest of us were able to engage because they were burnt out.

This quote demonstrates how clients tend to reach out when they realize a dog is entering the scene. It could be they want to pet the dog or ask questions about the dog; the AACR team works as a fantastic ice-breaker to achieve therapy engagement. According to some responders, sometimes, this sole purpose of the first connection is enough reason to bring the AACR to a trauma scene.

Six participants emphasized how the therapy dog works as a fantastic ice-breaker when the contact between the crisis responder and the survivor begins. It brings an informal, easy attitude into the equation. According to some participants, the animal breaks the ice while creating a less formal connection and is more easy-going and comfortable. This may be a significant bonus for responders, who, according to them, sometimes have trouble approaching clients in such complex times.

Moreover, this ice-breaker also may hide the real intention of the interaction, for those who feel the need to cover up their desire for a mental health intervention. "You don't need to be flagged and tagged as a patient to get the animal-assisted therapy," said Joseph, a crisis response supervisor, and crisis responder. Six participants confirmed the importance of the dog being an ice-breaker for the intervention to take over.

The ice-breaker phenomenon also helps provide a much faster and deeper intervention. Participants explained how crisis responders' goal is to do the most they can in the shortest amount of time possible at a trauma scene. And the AACR team takes care of precisely that. It also provides an informal approach to the intervention and it deepens quickly into layers standard crisis response might not get to. Other participants added how the animal draws curiosity and offers a distraction, unique elements of this type of intervention. Being such a fast ice-breaker, the animal provides the opportunity for the AACR responder to get to deeper levels of the intervention and interaction in a quicker amount of time.

Non-threatening. Six participants spoke about the importance of the dog appearing as a non-threatening figure that is present at the trauma scene. This allows survivors to be more willing to engage. According to Susan, a mental health crisis responder and mental health practitioner, the non-threatening presence also allowed the survivors to be less guarded when approaching the AACR team. "When Lucy came over, it wasn't a person, it was an animal, so there was no reason to put up a wall". Susan continued explaining:

The families were not interested in interacting with anybody who wasn't going to give them hard information about their loved one. Lucy was able to work around that. Lucy is not threatening so, they were happy to engage with her...I noticed that people were less guarded when it came to Lucy.

Mental health crisis responders see a different reaction from what they obtain from the survivors when an AACR team approaches them. According to some participants, people on a trauma scene are more open and less on guard by interacting with the AACR dog, differently from feeling sometimes threatened by a mental health responder without the dog approaching them.

Bridge of Connection. An invaluable element of AACR found in 7 interviews, is the importance of this unique intervention when using the dog as a bridge of connection. This bridge establishes rapport between the survivor and the mental health professional. It is important to mention that one participant disagreed with this statement.

According to the participants, the facilitation of the animal to open this channel of communication between survivor and professional forwards the intervention to cognitive, verbal exchange. According to some participants, the animal is the 'key' that joins the survivor and the crisis responder. Others called the dog a "mediator" that opens the connection between the responder and the survivor.

One participant, Aaron, dissented this idea, arguing that sometimes AACR could have a negative effect on the channel of communication between therapist and trauma survivor. Aaron explained, "It is distracting from the direct interaction between the two people processing in a verbal way or processing in a practical way so it is a different level of emotional processing." Although Aaron interpreted the distraction as a potential negative one, most participants were convinced that the distraction provided from the AACR dog was a beneficial one for the survivor and the first responder at a trauma scene.

Stress and Anxiety. Some participants from the sample that are animal-assisted crisis responders shared their knowledge explaining how touching, petting, and hugging an animal decreases cortisol levels, making the person feel less anxious. It also increases oxytocin, a

hormone which encourages trust and emotional sharing, bringing the person into social engagement (Greenbaum, 2006; Shubert, 2012 & Lackey, et al., 2019). All these physiological changes affect both stress and anxiety. According to six participants, the touch and proximity of the animal subjectively lowered the level of stress on the survivor treated with AACR.

Ruby, a crisis response supervisor, crisis responder and mental health practitioner, shared “I have observed people who are locked up inside themselves ... the animal will bring the tears that can't come because of the person's state of anxiety...the tears are an indication that the person is present.”

Five of the interviewees spoke about how AACR helps the survivors at the scene and help the crisis responders to do their jobs at the trauma scene and how it helps them from being stuck in high anxiety levels. According to Susan, a mental health crisis responder and mental health practitioner, the therapy dog not only calms down and relaxes their clients but has the same effect on their handlers and the people surrounding them. This benefits not only the trauma survivors but the AACR responder and the other responders at the scene.

Furthermore, according to the participants' experiences, the act of petting may help the person calm down by relieving stress and anxiety. This may help many people present at a trauma scene that feel anxious and stressed about the occurrence. For children, petting the dog may present an opportunity to calm down.

Numerous participants explained AACR's contribution for the therapist and how petting the dog helps the therapists themselves by providing them with comfort and reassurance. Numerous AACR responders mentioned how they will pet the dog during an event when they feel the need to find comfort. An animal-assisted crisis responder, Ava, shared her feelings “If I

was ...in a fire or earthquake or accident and someone would come with a dog, all I would want to do would be 'just let me hug the dog'."

Touch and presence provide comfort. Noah, a crisis response supervisor, crisis responder, and mental health practitioner, found beautiful words for this, "When adults are unable to speak and want to feel held and wrapped without words." Noah described the comfort a dog can provide with their touch and something as simple as their presence.

Finally, a significant realization of the effect of touch on the person undergoing trauma and the considerable benefit of having an animal that can provide that touch is that one needs permission to approach a client physically as a mental health practitioner. However, the use of touch with an animal, if desired, is much more natural and less invasive. Ruby, a crisis response supervisor, crisis responder and mental health practitioner, explained "...In the world we live in today... human touch is so important but needs permission, animal touch doesn't." This is a significant element of AACR and its benefits.

Grounding. Five participants described their perceived benefit of an AACR team to help ground the survivors. According to them, touch not only helps a person with their parasympathetic nervous system, but it also provides comfort, a nurturing interaction, and, most importantly, grounding. By providing stimulation to the survivor's physical senses, such as touch, the responders are able to bring the person back to focus in the present, so they can receive the help available to them at the scene.

Nonetheless, some participants provided a different opinion, suggesting that sometimes, depending on the scene and on the emotional state of the survivor, an animal wouldn't be helpful for grounding.

Compassionate presence. The dog of the AACR team was popularly described as a compassionate presence; the sole importance of its presence could be magnificent, according to 8 of the participants. The participants shared what the presence of a dog could imply at a trauma scene. They explained how the mere presence of the dog helped survivors remain calm during the unfolding event. Moreover, the dog's presence also often helped the first responders do their jobs calmly and with more clarity at the trauma scene. This provides a huge benefit not only for survivors of the trauma, but also for the responder and the people present at a trauma scene.

Some participants explained how the interaction moves from being an intense focus on the tragedy or processing of emotions to a lighter release of emotions once the dog's calming is noticed. This helps both the survivors and the first responders to do their job. According to the participants, the simple presence of the animal adds value to the intervention at a trauma scene.

Furthermore, David, a mental health crisis responder, offered another perceived benefit of the dog's presence:

Something we saw in Surfside a lot was that people were tired of talking, and they felt that they didn't want to be approached by more people to talk all the time... And an animal didn't require that, the animal is just there, and people could just be with the animal. They didn't need to have that interaction... if they needed help, they were able to seek it out... it allowed them to notice that we were there as responders, on the other hand, it gave them that sense of comfort and safety that they didn't have to engage with us in a verbal format if they didn't want to.

David reiterated an interesting point of the presence being an option for the survivors to reach out if they wanted to. The presence of the dog is a reminder that someone is there to provide emotional support in case they choose to approach and seek it.

Safety. Eight of the participants focused on the importance of the animals in helping a survivor feel safe. Some participants spoke of how they felt safe by having the animal as a tool for their intervention. According to two participants, the AACR team can not only provide emotional safety for the survivor, but the therapy dog can represent a safe haven for them.

Some participants shared how animals may present a 'safe haven' for children. Moreover, the dog can not only help the children get out of the mental loop they are trapped in, but by adding playfulness to the situation, the children feel safer. Safety is a primary feeling mental health responders seek to provide to survivors at a traumatic event. Helping them feel safe is one of the main steps of the intervention in order to start the process of recovering from the trauma.

Distraction. A unique element that automatically appears by bringing an AACR dog to a trauma scene is the attention the animal gets. As explained by most participants, that attention can represent an integral part of the mental health crisis intervention by shifting the focus from the occurrence of the trauma, or the victims, to a playful cute dog. Fourteen participants discussed how having such a distraction at the trauma scene could be helpful for the bystanders, the children, and for the survivors themselves. Conversely, some participants perceived having the dog at the scene as a risk for a negative distraction from the treatment they intend to provide survivors.

According to the participants, it is not only a shift of focus from the traumatic event to a short reprieve of playfulness, but it is also a significant element in the grounding of the person, in stabilizing him and getting out of the loop he might be trapped in. Joel, an animal-assisted crisis responder, observed the effect of this distraction "...When someone shows up with a dog, and the dog is wearing a 'medic' vest, the people in the area look at him...the brain says, 'what is that thing?' And this distracts from the traumatic event of the disaster." Joel provided a perfect

example of what the distraction can do and how it can break the negative loop thought at a traumatic event.

Mia, a crisis response supervisor, crisis responder, and mental health practitioner, explained how this element may be used both ways "[The therapy dog] helped us distract people and also helped us focus people. So, we were able to use the dog in whichever direction was appropriate, and I felt like that was really empowering to have that trick up our sleeve." The AACR dogs function as useful intervention tools that other mental health crisis responders don't have access to.

Two participants believed the presence of the dogs could disrupt the responders' attempts to create a direct connection with the survivor. For example, Aaron explained "It is distracting from the direct interaction between the two people processing in a verbal way or processing in a practical way so it is a different level of emotional processing." It is important to note that these participants are not animal-assisted crisis responders.

Unburdening. According to most participants, having an animal as part of the intervention provides an opportunity for trauma survivors both young and old to share how they feel, unburden, and vent. Some AACR responders use the animal's presence as an opportunity to explore with children their feelings both at the verbal and physiological levels, as well as providing them with a sense of control by enabling them to hold the dog's leash. This is a unique opportunity of not only unburdening but regaining a sense of control.

Projection. According to some animal-assisted crisis responders, the therapy dog allows survivors to project their own feelings and coping strategies on the animal. This is beneficial because it provides the AACR team information on how the survivor is dealing with the trauma and an opportunity for transference in the intervention. Ava, an AACR responder shared an

example about projection, “his father was very violent, and the child would imprison a goat I had, and the goat would cry out and he would ask me “who hurts more? The person who’s crying or the person making him cry?” All these questions he would project via the animals.

Psychoeducation. All AACR responders in this sample used the animal to provide psychoeducation to the survivors. Some AACR responders use behaviors seen in animals as a way to explain to survivors behaviors they might experience. For example, explaining symptoms of post-traumatic stress by demonstrating how animals shake when they are stressed and how a person may react to stress similarly may provide a vast realization for the survivors to feel 'normal'. The responders use the opportunity of showing normal behaviors in animals to explain how survivors are expected to react similarly.

Normalization. Normalization is a critical part of the intervention with AACR teams. According to five participants, the animal's presence brings something normal to a very abnormal situation. The dog’s presence reassures survivors that it is ok to feel and act the way they are.

Nathan, a crisis response supervisor, crisis responder, and mental health practitioner, explained, "...it brings the person back to normal in a place where there was chaos. I remember the therapist bringing [a dog] to [a crisis scene], and the first responders petting her, saying "she is so cute"... It's about sticking something into a very terrible situation and changing it a little bit, making it a little bit different, a little bit better by manipulating the environment and the situation." Interactions like this provide survivors the normalization of their reaction to an abnormal occurrence and help them to get out of the chaos and start feeling normal again.

Empowerment. Three participants explained the importance an AACR team represents in empowering trauma survivors. With the help and presence of the dog, the survivors are able to

find their inner strength and perceive an empowering force from within. Joseph, a crisis response supervisor, and crisis responder shared “What works is being present, almost passive... ‘the dog is there available to you’, and that is empowering... helps the person heal from within.”

Participants explained further how from a perspective of needing help, the survivors regain a sense of control. This empowerment to the survivors not only provides a feeling of the capability to recover but allows them to reclaim some control of the situation.

Numerous participants noted how empowerment allows a further step in the intervention, which is the reconnection to life, to the present—working as a grounding element and taking it further to a place of reconnection to 'being present'. Ava, an animal-assisted crisis responder, shared her personal experiences: “I can tell you... I went through tough losses...what brought me back to contact with life was that my animal needed me...”. When one starts working again and attending to life, one reconnects to life. This begins the process of recovery and healing.

According to three participants, this reconnection restores functionality for the survivor. Participants share how they can quickly see the way the dog helps the survivor calm down and start a process of regaining composure. This is a perfect example of reconnection and automatically the beginning of the recovery process.

RQ2: How does AACR compare with other models of crisis response?

AACR vs. Standard Crisis Response

A trauma scene with AACR present may look very different from a trauma scene without AACR. As discussed in earlier themes, AACR present at the scene of a crisis brings more elements to the scene. It changes the environment, the dynamics, and the approach of the intervention. Furthermore, the presence of an AACR team affects everyone present at the trauma scene, including survivors of the trauma, bystanders, and first responders.

Six participants perceived advantages of having AACR at a trauma scene instead of only crisis response teams. However, 2 participants didn't think comparing trauma scenes - with or without AACR presence, was appropriate.

Some AACR responders shared how the content that comes up during the intervention with AACR is usually more dramatic, and the ability to speak about the traumatic occurrence flows easier. According to the participants, the nature of the approach provides more opportunity for dialogue with the survivors of the trauma. Responders explained that the environment feels calmer, and things flow smoother and gentler when AACR is on the scene. With standard crisis responses, the verbal expression of pain and crying can make the atmosphere heavy. With an animal, the atmosphere is gentle and easier.

These participants referred to the way the intervention develops in a natural way. Not only does the framework of the intervention change, but the type of treatment is also different and enhanced. AACR takes mental health treatment to a broader perspective of intervention in emergency situations. It adds value and takes the intervention to a better place, according to the participants. AACR may transform a standard crisis intervention to a holistic intervention at trauma scenes.

Challenges of AACR

As positive and beneficial as AACR might appear from the findings of this research, it is essential to discuss the challenges of this type of intervention at a trauma scene. The challenges are experienced at the scene itself, with the survivors, the AACR responder, and the animal.

Challenges Related to the Trauma Scene. The dispatch and arrival to a crisis scene are more complex when referring to an AACR team. Deciding which calls are appropriate for an

AACR team dispatch, considering factors such as cultural sensitivity, and over exposure of the AACR team may present a challenge.

Many participants mentioned the challenge presented in the dispatch of the calls for AACR. Sometimes determining which calls are suitable for AACR or getting approval for the right calls can be a challenge. Due to the complexity of the intervention, an AACR dispatch requires more phases of approval than a regular mental health response dispatch,

Evaluation of the Trauma Scene. According to 11 participants, it is vital to investigate the scene of a crisis and make sure bringing an AACR team will not increase the stress of the situation. There needs to be an evaluation prior to the arrival to the scene and determine if the benefits outweigh the risks for both the people at the trauma scene, and the dog's wellbeing. According to some participants, this presents a challenge regarding using AAR in a wider format of the organization.

Moreover, hectic scenes do not need another complex component like an AACR team. As Evelyn, an animal-assisted crisis responder, summarized, "one can't bring an animal into every scene." This is an appropriate challenge when referring to trauma scenes.

Another challenge in a trauma scene might be Bureaucracy. Once at the scene, bureaucracy or the prohibition of providing access to animals in certain places where the traumatic scenes might take place, may hold back the intervention the AACR team is interested in providing. This sometimes cannot be solved, and in other instances, it takes time for the procedures to allow the entrance of the AACR into the perimeters of the trauma scene.

Challenges for the Trauma Survivors. Although the purpose of the AACR teams is to help trauma survivors of a crisis scene, sometimes this may be complex as AACR is not always a

good fit as an intervention for the survivors. This mainly depends on the survivors' personality and their relation to animals and dogs in particular.

Fear of Dogs. Twelve participants mentioned that bringing an AACR team to survivors who have a phobia or fear of dogs would be a risk. These individuals shouldn't be approached at a time of trauma and elevated stress with an animal. Four participants mentioned that there are survivors with zero exposure to dogs in their past, and therefore, meeting an AACR could increase their stress at the scene of a crisis.

Unholy Animals. Sixteen participants mentioned the importance of cultural sensitivity and the fact that there are a lot of cultures and religions that are not exposed to animals and hold no affinity for them. This is pertinent in places such as Israel where there is significant cultural diversity. For some cultures, a dog is an "unholy animal" (as mentioned by Aaron and Charlotte, mental health crisis responders and mental health practitioner) therefore it would be irresponsible to bring an AACR team to a trauma scene with people who hold such beliefs.

Cultural Considerations. Many participants shared their opinion on different trauma scenes where cultural sensitivity should be considered. According to these participants, sometimes the presence of the AACR team presented the survivors with an opportunity to get exposed to a dog and receive the unique benefits of this type of intervention.

Noah, a crisis response supervisor, mental health crisis responder, and mental health practitioner confirmed that special consideration must be taken regarding culture and the decision to send out an AACR team, "Considering the circumstances of the crisis, the AACR team could have made things better despite it being around Hasidim. (Hasidim refers to a type of religious Jews that are not exposed to animals, and some see them as unholy animals).

Challenges for the Animal. AACR responders reported animals love their work when they are a good fit for it. According to five participants, the animal mustn't only be a good fit, but trained meticulously for this type of intervention. However, even when the dog is suitable for the intervention and is trained, it is imperative to be attentive and respond to their wellbeing, safety, and stress levels. Four of the participants reiterated the importance of being attentive to the animal.

Animal's Safety and Wellbeing. Safety is the first rule in crisis response. This includes the AACR dog's safety. AACR responders shared that they often do not deploy a dog to a crisis response involving rockets because of the importance of ensuring the dog's safety and not being exposed to danger. The welfare of the animals and their comfort in the crisis situation is vital. Therefore, the appropriateness of AACR is considered not only for the survivors' sake but for the animals as well. It is important to be attentive to the dog's stress level and take breaks if necessary. Joel, an animal-assisted crisis responder, stressed the idea of being attentive to the AACR furry partner at all times and making sure they are not only safe but also not too stressed.

Challenges for the handler. One of the biggest challenges is to find the right balance of attending to crisis calls without suffering from burnout, compassion fatigue, or secondary trauma. Participants alluded to this when speaking about choosing which calls to dispatch an AACR team to in order to not overexpose them.

Multitasking. According to four participants, the dog presents a challenge for the handler as it is something else the handler must manage while working in an often-complex scene of trauma. The participants expressed how the handler must be a multitasker and be able to take care of the dog, the survivor, themselves, while being aware of the scene simultaneously. The participants reiterated the importance of being aware of all aspects of a trauma scene, especially

those the AACR brings with them. Caring for the dog and its well-being is a natural part of the job for the AACR responders.

Improvisation. Two participants mentioned how the handler must be able to assess the situation of specific trauma scenes and improvise accordingly to take the best care of all parties and help. According to the participants, the comfort level of the AACR responder and their ability to improvise and manage the different situations is part of the training the AACR responder should obtain. Likewise, the ability to determine whether to use the AACR intervention as a tool or as a distraction, depending on what they find at the scene is essential to the work.

Added Stress. The therapy dog is not only a therapeutic tool, it is also a living being and their handlers love them and care for them. Worrying about their dogs can add stress for the handlers that are intervening at a trauma scene, where there is already tension, and they must consider the dog's wellbeing as well. Although it can be stressful for the AACR responders to have their dogs at a traumatic scene, the dog's presence helps them personally throughout their work at the scene.

Types of Scenes for AACR

Different types of trauma scenes are more appropriate than others for AACR for the purposes of mental health interventions. Interestingly, the most striking finding is not regarding the type of emergency, but the target population. Eight participants spoke about the importance of bringing AACR to trauma scenes that involve children. Crisis scenarios involving the elderly and first responders are an essential consideration when dispatching an AACR team to a trauma scene.

Fires were the following type of site suitable for AACR, as mentioned by six participants. Traumatic scenes such as fires, earthquakes, hurricanes, tornados, and floods usually involve many bystanders. Bystanders generally don't need immediate medical attention but do need grounding and a distraction at the traumatic scene. More personalized traumatic scenes, such as sudden deaths, car accidents, SIDS, failed CPRs, suicides, and the disappearance of a family member, were also mentioned by participants.

An interesting finding is the idea of bringing AACR to emergencies in children's shelters and foster homes, which two participants mentioned.

Finally, given Israel's experience with mass casualties, seven participants noted the most crucial type of crisis site where AACR has been extremely useful is the different kinds of human-made mass casualties. These include terrorist attacks, such as bombings in buses and restaurants, synagogues massacres, as well as war zones which include bomb shelters and refugee camps.

For the next themes presented, target population, and the overall value of AACR, it is important to use the grounded theory approach. Target population was a prominent theme that emerged extensively in the interviews and contributed to sensitive consideration when using AACR. The Overall value of AACR demonstrates a synopsis of the participants' overall opinion on the value of AACR at trauma scenes.

Target Population

Participants discussed this issue in numerous interviews. Not all participants divided the target population by age, as expected, but numerous codes emerged with regard to deciding the right target population for AACR intervention. Participants mentioned various variables besides the person's affinity to dogs or lack thereof. These variables must be meticulously considered when an AACR team approaches a trauma scene and its people.

Age. Age is one of the variables that may indicate AACR intervention appropriateness. Some of the participants asserted there is no wrong age. However, other participants believed that some ages could be more appropriate for this intervention.

Six participants mentioned the appropriateness of AACR for children. According to the interviewees, children may be interested in dogs at a trauma scene, finding them distracting and interesting. Moreover, AACR may provide a unique opportunity to intervene in a non-verbal process which could be highly significant with less talkative kids. Finally, some children might find it difficult to trust strangers. The therapy dog provides a safe haven that children can connect with, so it functions as a bridge between the crisis responder and the child. Susan, a mental health crisis responder and mental health practitioner, explained how AACR works in a trauma scene with children:

Children often can't express themselves in disastrous scenarios or a crisis, so normally we would do play therapy with children. The therapy dog is a walking piece of play therapy for children in two ways: a. you can interact non-verbally with the dog, which is really what children need initially; and b. the therapy dog gives permission to just be a kid...like we saw... a 14 or 15-year-old who had been sobbing for days and holding onto her parents started rolling around on the floor with the therapy dog. Her mother said that this was the first time she was acting like a child. There was no way that anything but an animal would have had that effect on her.

This provided a great example of the interesting and unique connection a child may have with the AACR dog, and furthermore, the unique opportunities an AACR team may provide children who experienced trauma. According to numerous participants, the animal provides the children with a feeling of safety, being able to receive support without fear or concern. It has no strings

attached and it doesn't require a commitment or response; but establishes a sense of safety.

Sometimes, according to many participants, children have a problem trusting strangers, and find difficulty connecting and having a conversation with an adult or an outsider. But animals are not adults, and not outsiders, therefore they provide a calm feeling of safety, and children feel they can trust the dog.

Besides safety, trust is added to the equation of interventions with children. Participants cited multiple benefits children may obtain from the AACR team. For example, an approaching AACR dog grabs the child's attention immediately and therefore presents an advantage for the kids and also for the responder in order to provide the intervention.

According to four participants, AACR benefits children at a scene and the crisis responders themselves by knowing the AACR team is effective for children. For the responders it is comforting to know the animals can care for the children, calming them and providing them with distractions while the responders can focus on the adults, and those who need more of a verbal connection. This presents an interesting benefit separating the AACR team to attend different populations on a trauma scene.

Four participants mentioned their thoughts regarding AACR being appropriate for adolescents and young adults at the trauma scene. Five participants agree that AACR fits when treating adults. Two participants reported that AACR is primarily effective for adults at times of war.

Finally, six participants spoke of AACR and the elderly, citing similar reasons as the use of AACR for children, such as the fact some may not be comfortable communicating verbally or processing their realities. This is a unique element of approach for the AACR with these populations.

Mental Health. The mental health of the people at a scene is an important factor to consider regarding the intervention of an AACR team at a trauma scene.

Two participants referred to issues of attachment. Rosie, an animal-assisted crisis responder, explained how children suffering from avoidant attachment or disorganized attachment may find connecting with others easier through animals. Rosie shares her knowledge from her Master's thesis on therapeutic alliance "I found that children with avoidant attachment created a stronger and earlier therapeutic alliance in animal-assisted therapy as opposed to without animals." This is break-through information when referring to the elements an AACR team may bring to a trauma scene.

Youth at risk is another element that emerged from the interviews. According to three participants, youth at risk connect better and easier to the intervention through therapy animals.

Non-verbal Communication. Finally, the most critical variable regarding mental health is the non-verbal element in a person. According to 12 participants of the study, this is a significant factor when assessing the benefit of an AACR team at a trauma scene. The participants explained how this may be the most significant contribution of the AACR dog at a trauma scene. It provides room for expression without words. This is unique because most of the interventions at trauma scenes are verbal, according to the responders. In verbal communication, responses from the survivors is a regular expectation in the intervention. With AACR, animals have no expectations whatsoever, it is a unique way to enter the person's mental state and its expression without words. This idea brings back the grounding element combined with the non-verbal special connection to the AACR team.

Another interesting point is that by not expecting any response in return, the intervention doesn't require vulnerability. It is just a relief through different channels. The idea of not having

to put into words difficult and complex feelings at a traumatic event provides an opportunity to start the healing and recovery process without emotionally exposing oneself. The participants continue explaining its importance in grounding and when the non-verbal communication is supportive, loving, and caring, it helps the survivor come back to the present.

Culture. Culture is a critical variable when evaluating a trauma scene, its components, and the appropriateness of dispatching an AACR team to it. It is of utmost importance for dispatchers and AACR teams to have cultural competence and demonstrate sensitivity towards the people on a trauma scene. Fifteen participants spoke about cultural competence and its importance at a trauma scene. Many people do not relate to animals, have had no exposure to animals, or have no affinity to animals due to their cultural background and norms. Israel is a cross section of very different cultures. Within these different cultures, the level of religiosity and the specific affinity to one's culture present considerable influence over the person's relation towards animals and dogs specifically.

Culture also affects the belief people may have regarding animals. Often, due to culture, people can be sheltered from animals or not exposed to them, so they may feel uncomfortable in the presence of them. It can also be overwhelming. And when a person is under a traumatic occurrence, the responders do not want to bring something invasive or overwhelming for them. In this case, bringing an AACR team could present a threat to the trauma survivors, and a challenge that might not be worth taking.

Cultural competency is a challenge to consider when deciding to bring an AACR to a traumatic event. Crisis response supervisors spoke of dispatch decisions. For example, if the emergency call is in a neighborhood where dogs are not common or generally accepted, such as the Ultra-Orthodox Jews, then they wouldn't dispatch AACR teams to these neighborhoods.

Different considerations must be taken regarding the target population. Members of the most extremist branches of both Jewish and Arab cultures, are not accustomed to dogs. This would be a parameter to take in consideration. This is an example of the complexity and the personalized approach each community deserves.

On point, some participants, shared a significant cultural sensitivity toward holocaust survivors. Holocaust survivors might be extremely afraid of dogs due to past experience with them. And the AACR team must consider this when approaching the elderly in Israel. Bringing an AACR team to a Holocaust survivor could present a risk of added unnecessary stress.

Another central theme is the importance of being sensitive to these cultural norms and arriving at an appropriate scene for AACR and taking into consideration the cultural effects it may have. Participants spoke of the importance of cultural competency when approaching a scene with AACR and knowing when and where it is appropriate is a fine line that AACR teams may possess by educating themselves and their surroundings so they are culturally competent and aware of the population they are serving.

Some participants explained the importance of educating the AACR responders to be culturally sensitive and learn how to navigate different populations where dogs may not be as accepted as they are in other communities.

Finally, an important finding was that even though culture is an essential consideration, two participants shared how sometimes, even when it was deemed that AACR wouldn't be an appropriate intervention culturally, AACR was deployed and was significantly helpful.

Nevertheless, some participants shared how cultural norms may provide other unique opportunities. It is essential to state that different Arab cultures may possess different cultural norms regarding dogs. Moreover, for some people who are not exposed to dogs because of

culture, an AACR team intervention might actually benefit the survivor. For example, in the Arab community, some men are not encouraged to show emotion. But there have been times some participants have witnessed these men at the scene of a crisis take the opportunity to regulate their emotions through the AACR.

Furthermore, Noah, a crisis response supervisor, mental health crisis responder, and mental health practitioner, shared his thoughts about the unique opportunity AACR would have brought to a building collapse in Karline, Israel (2021):

I think that if she [a soldier helping with the children at the crisis scene] were to sit in that same corner, with her circle, with animals- it would have been fantastic. She did wonderful work, but I think that it could have been even better because...given the essence of the event and how it was there, [AACR] could have made things better despite it being around Hasidim.

Noah shared how the event was so complex and in such a need of a distraction, that even though dogs are not usually accepted in the community, he would have brought AACR to the scene.

People Present at the Trauma Scene. I have discussed how AACR represents an appropriate intervention to stabilize survivors of trauma. Oftentimes at crisis scenes, there are other people present who have not suffered directly from the traumatic event but still have experienced a stressful situation. The data from this study reveal that AACR provides benefits for a variety of groups as well.

Bystanders. Many participants explained how AACR is a unique tool that enables them to aid multiple people at the trauma scene. Not only is AACR another tool the responder has available at the scene, but it also offers an opportunity to intervene simultaneously with more

than one person providing the care they need. Mia, a crisis response supervisor, crisis responder, and mental health practitioner, retold a trauma scene she was present at:

The neighbors were very taken aback by [the event]. It was an elderly couple, and they were very unsettled and worried and apprehensive. We were able to give them not just the medical care and stabilization, but the supportive and comforting presence of the therapy dog. They absolutely felt it was like a tangible difference in the air by having her there. Afterwards, some medics spent time with the therapy dog and what she had to offer in terms of just comfort and calmness. It was another means of support that they felt was specifically delivered to them. I was able to appreciate that and feel the difference in that call because of AACR.

Mia as a crisis responder recognized how the addition of the AACR team to her intervention improved the development of the intervention in that scene.

First Responders. First responders may get emotionally exposed to challenging scenes. Firefighters, police, and medics are at a trauma scene to provide physical care. But inside, they are sensitive people with feelings. On scene, mental health crisis responders observed how AACR proves to be a non-invasive intervention for first responders who sometimes believe that they have to stand for the 'rough and tough' flag they wave and wouldn't be open to express their feelings freely or engage in 'therapy.'

Eight participants explained how first responders are not always open to receiving mental health interventions and how AACR plays an important role by providing them with the opportunity to open themselves and be vulnerable so that they can obtain the intervention they so desperately need. The participants mentioned not only the unique opportunity the AACR team presents to first responders, but also the chance the AACR dog provides for them to open up and

share their emotions with the AACR responder. Participants explained how first responders may be resistant to connecting with other humans but need the release of emotion. AACR provides them with the opportunity to be emotionally vulnerable in an acceptable way through the dog, even when socially or culturally an emotional release wouldn't be accepted. A participant described the first responders as tough cowboy medics having permission to be sweet and open because of the presence of the dog. The participant speaks about having permission to not be strong for a few moments. Such moments can present a significant difference for the aftermath of a traumatic event. Also, Alex, a crisis response supervisor and crisis responder, agreed:

Professionals are usually filled with macho ego, especially in the disaster scenes, and suddenly you see them all turn marshmallow-like when they see a little cute dog. And they won't even need to talk much; they'll just pet, hug, spend their few minutes with the animals, and get up and say thank you.

Once more, this example highlights the dissonance between being 'macho' and melting for a dog, an opportunity these professionals might only obtain through an AACR team. Another participant shared how she was having trouble reaching a fireman that was holding in his tears. When she saw another first responder petting the AACR dog, she suggested the fireman approach the AACR team and pet the dog too. He immediately did and was able to open up with the AACR responder. Even though first responders do get the opportunity to speak with mental health responders, the participants explained how it might be easier for the first responders to open up through the AACR dog.

Mental Health Crisis Responders. AACR has two particular ways to help mental health crisis responders. Sometimes, the help will come by boosting confidence when providing

treatment, other times it will present itself as a calming presence for the responder themselves.

As a crisis response supervisor, Mia, shared what she has heard:

When Lucy is at the scene it gives [clinicians] the time they need as professionals to be able to compose themselves and come up with the right strategy in dealing with the situation at hand. Because there was a dog and because there was a connection working for the individual, the providers had more time and more composure to be able to decide which route to go in terms of treatment. So, it's a win-win, really.

AACR might provide an opportunity for the mental health responders to take a break in order to plan their strategy and type of intervention. Participants shared the benefit the AACR provides the mental health first responders by being the 'team mascot' and even a 'team hero', this helps the responders stay stronger during the emergency call and get some comfort while petting the dog, a short reprieve during their response to the trauma scene. The participants related to the AACR dog as a 'blessing'.

AACR responders. AACR responders have a unique relationship with their therapy animals. They are work partners and rely on each other, especially at a trauma scene. This is a beautiful reciprocal dynamic. The AACR responders refer to the dogs of the AACR team as their partner, and through that, they don't feel alone in what they are going through. When responders may experience harsh feelings at a crisis scene, not feeling alone may provide a huge difference in how they cope with their work. Ava, an animal-assisted crisis responder, discussed her personal experience "Holding and petting the dog really helps me when the patient leaves and I'm left with a lot of tears". For Ava, the AACR dog is also a calming presence that supports her emotionally.

The Overall Perceived Value of AACR

Overall Question. For the final questions of the interview, I asked the participants about the overall value of AACR in a trauma scene. Although some participants mentioned the importance of knowing how to use this type of intervention, all participants reported on the great contribution AACR may have on a trauma scene. Mark, a mental health crisis responder and mental health practitioner, shared his opinion “I would have to say in one word, invaluable.” Susan, a mental health crisis responder and mental health practitioner, said about her experience “I was very skeptical initially but now I am a believer as I said it is an integral core part of a really professional top-notch crisis response team. That's my feeling after the five days in Surfside.” For Susan, being at a trauma scene with AACR response team changed her opinion on this intervention.

All six crisis response supervisors agreed the contribution of AACR to a trauma scene is overall positive. Some of them, however, stressed the idea of finding the appropriate situation for it.

Aaron, a mental health crisis responder and mental health practitioner, explained his thoughts “Overall, I think it’s a neat tool that we have and I think it can be beneficial in the right time and the right place with the right training on how to use it properly.” Aaron wisely presented the importance of the benefits of AACR when it is used in the right scenario.

Joseph, a crisis response supervisor and a crisis responder, said about the overall value of AACR “You're asking what I see as the value? A million dollars. And that is cheap compared to the value the animals add to the therapy...It’s a huge game changer. I can’t I can’t say enough about it.”

Participants shared how they would want an AACR team in every trauma scene. And the unique elements of non-verbal communication, nonjudgmental and acceptance, AACR provides as a crisis response intervention. Finally, Noah, a crisis response supervisor, crisis responder and mental health practitioner, explained extensively:

It's incredibly valuable... To use what the animals can give and what humans cannot. It is an advantage that they have and we don't. The communication that animals have, with no filters, with how their species processes things in their own way. It is very valuable. It can improve mental health-which is of uttermost value-for all religions, not just Jews. The use of animals is incredibly impactful. I can say that...not necessarily for an emergency, but the additional intervention of treating people with animals... I saw miracles...It has an incredible impact on mental health and each patient's personal journey. I see great value in it.

The overall value that AACR contributes as a unique intervention at a trauma scene was evident in participants' comments.

Scale question. A scale question was posed regarding AACR. Participants were asked to rate their opinion regarding the benefits AACR may bring to a trauma scene using a 0-5 point scale with 5 being the highest value in terms of benefits.

Eighteen out of the 21 participants responded to the question. Eight participants gave it a 5, the highest value for crisis response intervention. Four participants said the value was above 5. Three participants gave it a 4. Of these four, two explained their rationale for their score was because AACR is not always appropriate. The third participant that provided a 4, cited the hardship situation the handler is in when treating a trauma scene with AACR. Two participants explained that AACR receives a 5 when at an appropriate scene, and a zero when AACR is not a

good fit for the scene. One participant said he would put AACR right in the middle of the scale.

Three participants didn't provide a grade for the scale question.

The following table presents the results from the scale question:

Scale Grade	Number of participants
Above 5	4
5 as the highest grade	8
4	3
5 when AACR is appropriate and 0 when it isn't	2
Middle of the scale (2.5)	1

Demographics. Some results regarding the demographics chosen for this research should be mentioned. Something distinctive about the Psychotrauma team in Israel is the importance of mental health-certified responders. This provided a unique opportunity for all trauma responders to share in their responses, their knowledge, and their expertise in mental health at the traumatic scene. This includes AACR responders as well. Therefore, their responses to the interview questions demonstrated professional understanding of the effects the AACR may have at the trauma scene.

An important realization was that half of the participants were not accustomed to dogs before responding to crises next to AACR. Therefore, they were hesitant regarding this type of intervention. However, after responding next to AACR, all participants became aware of the benefits this intervention may imply during crises and disasters.

Conclusion

Using the analytical tradition of grounded theory, themes emerged from the data in response to the primary questions of this research. In order to answer the first research question: How does AACR affect the people present at a trauma scene? The themes that emerged were: Perceptions of AACR by Professional Responders and Survivors, Animal-Assisted Crisis Response as a Catalyst, and AACR's effect on technique “In a matter of minutes she was smiling and laughing”. For the second research question: How does AACR compare with other models of crisis response? The list of themes was: AACR vs. Standard Crisis Response, Challenges of AACR, Types of scenes for AACR, Target Population, and The overall perceived value of AACR. Through these themes, the data were explored and carefully analyzed.

Chapter Eight: Discussion

In this section, I analyze the overall findings of my research and how these results fit into the body of knowledge of AACR in Israel, the topic studied in this dissertation. I discuss the implications these results have on social work practice. Finally, I discuss this study's contributions to future research.

Research questions

Using the grounded theory tradition of qualitative inquiry, the two research questions that guided this dissertation were, “how does AACR affect the people present at a trauma scene?” and “how does AACR compare with other crisis response models?” Twenty-one individuals participated in this study, and their responses to these research questions were analyzed, and their “voices” gave meaning to the more prominent themes that emerged from the transcripts.

The findings provided a solid demonstration of how AACR affects people present in traumatic scenes—revealing the perceptions of the people present towards AACR and the effect AACR has when arriving at a traumatic scene and during its intervention, the meaningful benefits AACR provides as a crisis response intervention were meticulously analyzed.

Furthermore, the differences between AACR and standard crisis response were studied. Moreover, this study analyzed the types of scenes appropriate for AACR, the challenges AACR may present at a trauma scene, the target population that could benefit the most from this intervention, and the overall perceived value of AACR according to the participants.

Relationship Between Findings and Theory

Theoretical Framework

Two theories were included in the theoretical framework used for this study - resilience theory and biophilia theory. The theories provided a framework for this study and a basis to interpret its findings.

Resilience theory. Resilience theory demonstrated the importance of achieving resilience in the aftermath of a crisis. According to its founder, Antonovsky (1987) asserted that every person responds differently to a traumatic event due to their resilience. Concurring, Greene et al. (2007) found that individuals respond to trauma differently. While some may cope naturally, others will need interventions that 'normalize' their reactions to the abnormal situations. Therefore, the individual's response to trauma should be considered when developing interventions or treatment plans. Individualized interventions contribute to a healthy recovery after a disaster. The findings of this study and the themes that emerged illuminate benefits such as normalization and empowerment that AACR provides people at the scene of a traumatic event. One can see how the AACR team offers a significant difference in the recovery of the people present at the scene. Moreover, achieving resilience right after a crisis is essential to help the recovery process (Weems, 2019).

Resilience theory can also be applied in an ecological framework. The connection between the ecological systems of Bronfenbrenner's theory (Bronfenbrenner & Morris, 2006) at a trauma scene and the effect AACR presents in the different systems of the survivors are widely recognized by the participants' voices in this study. Finally, an essential contribution to the unique way AACR works in Israel is the relationship between the AACR teams and the communities they serve coupled with their knowledge about their communities and the different

cultures within them. This essential component empowers AACR teams to engage appropriately according to the communities' specific relevant systems. This demonstrates the importance of AACR's work to connect the survivors with different community resources they may have available.

Biophilia theory. Fromm (1964) explained how humans have an affinity to everything alive. Wilson (1984) claimed biophilia is an innate tendency to connect with other living organisms. According to Wilson, it is a genetic component, a physical attraction, between the human and living organisms that provides us a deeper understanding of the contribution of an AACR team to a crisis situation. It is not only innate but also physical, considering the calming of stress and anxiety in people present at the scene as cited in the literature (Besthorn & Saleebey, 2003; Chandler, 2008; Eaton-Stull et al., 2015 & Lackey et al., 2019) and observed in this study. Furthermore, according to Gullone (2000) and Besthorn et al. (2003), affiliation with animals provides physical and mental well-being. Results from this study supported this claim.

Reconnection to life was mentioned as an essential step for the recovery and well-being of the population at a trauma scene. Biophilia and AACR both attach infinite importance and benefits to the relationship between humans and nature, especially living organisms such as dogs. This study rigorously explored the relationship between trauma survivors and first responders and the AACR dogs. The relationship between the AACR handlers and their dogs was presented, and two participants shared the significance they assign to nature in terms of their well-being.

Finally, Beetz (2017) analyzed human connection with other human beings. Sometimes these connections are negative. Therefore, the critical contribution of having an AACR dog on a

trauma scene, a live being that doesn't judge, is not threatening, and people can easily trust, demonstrates the enhancement of this intervention.

AACR and the Theoretical Framework

Using resilience theory and biophilia theory, this study proposes new ways of proving these theories by examining the intervention process and the connections that occur when AACR is present in a traumatic scene. Further research can investigate the level at which AACR can reaffirm and shape these theories and their importance for the treatment in the aftermath of disasters.

Findings in the Research and its connection to the Literature

Perceptions of AACR by Professional Responders and Survivors

The participants widely remarked on the perceptions of the professional responders and survivors at a scene when an AACR team arrives. Overall, the AACR team is usually well-received by first responders, including police and firefighters, and other people at the scene. This concurred with what is known in the literature as described by Chandler (2008), Graham (2009), and Bua (2013).

Animal-Assisted Crisis Response as a Catalyst. The way therapy animals can function as a catalyst for survivors of traumatic events to initiate healing is demonstrated in the literature (Greenbaum, 2006; Wells, 2009). Findings from this study supported this claim by explaining how survivors respond to a dog at the scene. Participants described how the AACR intervention helps the survivors make a connection with the animal that distracts them from the horror of the environment. The AACR team's arrival at the scene has a significant impact, especially by recognizing who needs the treatment at the scene (Greenbaum, 2006).

Chandler (2008) and Graham (2009) described how trauma survivors reach out to the AACR team instead of the mental health responder approaching them. Participants in this study echoed and emphasized this point, claiming that AACR provides a unique first connection and openness to the intervention.

The dog's sixth sense was a term found in the literature described by Greenbaum (2006), Bua (2013) & Stewart (2016). This same terminology appeared in this research numerous times when the participants explained AACR's value.

Ice-breaker. According to Graham (2009), "the dog serves as an entrée of establishment of a relationship and a venue for the affected individuals to talk" (p.76). It could be by wanting to pet the dog or asking questions about the dog (Stewart, 2016). The AACR team works as a fantastic ice-breaker in order to achieve therapy engagement. The natural start of the process helps provide a much efficient and deeper intervention, as described by Lackey et al. (2019). Six participants confirmed the importance of the dog being an ice-breaker for the intervention to take over.

Bridge of Connection. Greenbaum (2006) and Chandler (2008) found that therapy dog often acts as a bridge of connection between the trauma survivor and the responder as a means to establish rapport between the survivor and the mental health professional. This theme was evident in this study as well.

Stress and Anxiety. As demonstrated by Chandler (2008), Eaton-Stull et al. (2015), and Lackey et al. (2019), and according to six of the sample participants, the touch and proximity of the animal subjectively lower the level of stress on the survivor treated with AACR.

Grounding. Touch not only helps a person with their parasympathetic nervous system (Greenbaum, 2006; Shubert, 2012; Eaton-Stull, 2015 & Lackey et al., 2019), but it also provides

comfort, a nurturing interaction (Graham, 2009), and most importantly, grounding (Greenbaum, 2006 & Stewart, 2016). Five participants described their perceived benefit of an AACR team to help ground the survivors.

Compassionate Presence. The AACR dog has been described as a compassionate presence in the literature (Greenbaum, 2006; Graham, 2009 & Eaton-Stull et al., 2015). The sole importance of its presence could be magnificent, according to researchers (Greenbaum, 2006; Chandler, 2008; Graham, 2009; Bua, 2013 & Eaton-Stull et al., 2015) and eight of the participants.

Safety. An essential element in mental health crisis response is helping survivors realize they are no longer in danger (Porges, 2011; Farchi, 2018 & Quinn, 2018). The dog contributes to helping the survivor feel safe (Graham, 2009; Bua, 2013, Eaton-Stull, 2014; O'hair, 2015 & Stewart, 2016). Eight of the participants focused on the importance of the animals in helping a survivor feel safe.

Distraction. Graham (2009) explained how AACR responders tend to use the benefit the dog provides by distracting the survivors from the occurrence of the trauma. For example, Greenbaum (2006) used the opportunity of having a dog at the scene to remove the survivor from the scene. Fourteen participants of this study shared the same observation.

Psychoeducation. A finding stated by Greenbaum (2006), Graham (2009), Shubert (2012), Bua (2013), Stewart (2016) & Altschuler (2018) was how the dog of the AACR was often used as a symbol providing an opportunity for countertransference in the intervention. Similar results were mentioned in this study when participants described how survivors would project their feelings on the AACR dogs. Graham (2009) stated the benefit the AACR dog provides for psychoeducation purposes to the trauma survivor. Interestingly, all the AACR

responders in the sample agreed to this statement. Normalization is a critical part of the intervention with AACR teams (Greenbaum, 2006; Graham, 2009; Shubert, 2012; Eaton-Stull et al., 2015 & Stewart, 2016). Five participants concur with this idea. This allows a further step in the intervention, which is the reconnection to life (O'haire, 2015 & Altschuler, 2018). Three participants mentioned this statement as well.

AACR vs. Standard Crisis Response

Chandler compared AACR to standard crisis response (2008). She discussed the differences between interventions without animals and interventions with animals during the Hurricane Katrina crisis. Six participants agreed with Chandler on the unique benefits the AACR can provide to a traumatic scene and its survivors. However, some responders thought you couldn't compare different scenes with or without the AACR intervention.

Interestingly, there wasn't a clear distinction between those who were pro-AACR and believed AACR was better than standard crisis response and participants who thought otherwise. Some participants who were eager about AACR during their interviews didn't appreciate the comparison. Others who weren't especially keen on AACR still mentioned they saw an absolute difference between the interventions and their benefits.

Challenges of AACR

The need for potential therapy animals to be adequately and appropriately trained was discussed widely in the literature (Greenbaum, 2006; Graham, 2009; Shubert, 2012; Bua, 2013 & Lackey et al., 2019). Graham (2009) further stressed the importance of the handlers being attentive to the dog's stress level and taking breaks if necessary. The findings of this study support these claims. According to five participants, it is crucial that the animal is a good fit and trained meticulously for this type of intervention. However, even when the dog is suitable for the

intervention and is trained, it is imperative to be attentive and respond to their well-being, safety, and stress levels. Four of the participants reiterated the importance of being attentive to the animal. Another vital consideration brought up by Greenbaum (2006), and the AACR responders from the study were the importance of AACR teams' training and the evaluation of the scene to make sure this scene is appropriate for AACR.

Types of Scenes for AACR

An interesting finding for comparison between AACR in the U.S and AACR in Israel is the different types of scenes mentioned in the literature and the scenes mentioned in the participants' interviews. While the literature refers to trauma scenes and disasters as crises that affect a community or a large part of the population (Greenbaum, 2006; Chandler, 2008; Graham, 2009; Eaton-Stull, 2010; Shubert, 2012; Bua, 2013 & Lackey et al.,2019), the participants come with the experience of observing AACR's work in a variety of scenes, these including similar types of occurrence to the literature, but adding also smaller and more intimate scenes such as a small fire in an apartment, the sudden death of a family member, the disappearance of a family member, car accidents and intimate scenes that nonetheless present a traumatic risk to their surroundings and the people in it.

Target Population

The target population emerged in the literature and the interviews as an important consideration when approaching a scene with AACR. Greenbaum (2006), Chandler (2008), Shubert (2012), Stewart (2016), and Sypniewski (2021) described the benefits and usefulness of AACR teams with first responders on traumatic scenes. Eight participants shared their experience seeing first responders benefit from the intervention in the interviews. In Stewart's

(2016) writing, mental health professionals also emerged and the participants' view of populations benefiting from AACR.

Another recurring theme was the benefit of AACR on victims' families, mentioned by Greenbaum (2006), Shubert (2012), and Sypniewski (2021). In this study, these were referred to as bystanders, who didn't experience the immediate impact of the trauma but were witness to it, being that it is not always only those that had a direct impact at the trauma scenes which benefit from the intervention.

Greenbaum (2006) referenced AACR's impact on crisis survivors' mental health and stated, "People in crisis who cannot accept contact with another human being, are detached, isolated, or withdrawn may be very willing to pet or throw their arms around a big fluffy dog" (p.52). This study analyzed AACR's impact on mental health, and the findings concur with Greenbaum. Participants mentioned how AACR could benefit children, especially those with avoidance issues. Although the literature doesn't relate to the theme of "non-verbal" as a target population fit for AACR, in this study, 13 participants eagerly presented as a fantastic target population for AACR.

Interestingly, only Chandler (2008) mentioned age as a factor in the benefits of AACR and how the AACR dog especially attracted children. In the study, 8 of the participants referred to children.

Culture is another important subject to discuss; besides Greenbaum (2006), Stewart (2016) pointed out the importance of respecting the culture of the people present at a trauma scene and taking it under consideration when providing the intervention. This subject took an important place in this study, where culture was widely mentioned and discussed by 15 participants. Three of them, interestingly enough, said that while culture is an important

consideration, using therapy dogs offered a unique opportunity for exposure to dogs with populations that are not accustomed to them.

New Themes That Emerged in This Study

A unique consideration mentioned in this study and not found in the literature when considering the target population to receive AACR intervention is the previous exposure to dogs. Nine participants experienced this as an essential consideration when dispatching an emergency call for AACR. They observed it as a critical factor to consider for the success of the intervention.

A new theme emerged in this study that wasn't found in the literature: the affinity to dogs and how this plays an important parameter for the target population. Although Graham (2009) did not explicitly use the phrase *affinity*, she spoke of how dog owners are attracted to this type of intervention. She stated, "No matter if it were a child or adult, many were moved to speak about their dogs at home when they were with the crisis dogs" (p.8). In the literature, considerations regarding the phobia of dogs are mentioned. Greenbaum (2006) noted culture, referring specifically to people with superstitions against dogs, phobia, and the importance of ensuring the dog is suitable for the population at the scene; but no previous study discussed how an *affinity* towards dogs could influence the intervention.

Something unique to this study was the analysis of the benefits AACR brings to the AACR responders themselves. All the participants in the sample who are AACR responders discussed how they personally benefited from having their dog with them at traumatic scenes. However, two mentioned the potential stress they could experience by caring for their dog while in a traumatic scene. No such discussion regarding personal impact on AACR responders was found in the literature.

In this section, I have proposed new findings that didn't appear in past literature and therefore presented a significant development in the area of research regarding AACR and its nuances regarding the target population for the intervention.

The overall perceived value of AACR

All participants agreed that the overall value of AACR at a trauma scene could be immeasurable. Its benefits are unique to this intervention, and they provide an exceptional opportunity to help people at trauma scenes.

Twelve participants gave the highest grade of value to the intervention. Five participants showed a high value but presented the importance of bringing the intervention only to the appropriate trauma scenes, depending on the variables studied in this research. One participant believed the value of the intervention fits in the middle of the scale, being that sometimes the risks are not worth the value.

Implications and Contributions of the Study

The findings of this study lead to a theory that explained the experiences survivors have when AACR arrives at a trauma scene and how AACR assists as an intervention for different target populations affected by the aftermath of a disaster. It also described various ways AACR can provide emotional stabilization.

Implications for Social Work Practice

The addition of AACR's benefits to the standard intervention used at trauma scenes and the tools AACR can provide to the therapy process can be a breakthrough for the treatment of survivors during a crisis. Using AACR at trauma scenes as a new intervention helps trauma survivors at the occurrence of the trauma, potentially preventing complications such as PTSD in the future.

Moreover, practitioners using different forms of AAT could be encouraged to present their work at conferences and through publications through this research. This way, evidence can be gathered to create an evidence-informed basis for its use.

Finally, practitioners using AAT can benefit from learning about AACR and participate in AACR training to have it in their repertoire of therapeutic tools and use the intervention when needed.

Implications for Social Work Policy

The study proposes a foundation for AACR protocol in Israel that mimics the United States AACR protocol. In addition to benefiting Israel, the new enhancements of the protocol can help the United States AACR Protocol by emphasizing the importance of arriving at a scene just at the moment of the crisis and not only in its aftermath; as well as the importance of having a mental health professional as the handler of the AACR team. Through the development of this new protocol, the education of social workers who practice AACR can obtain a new level of expertise in crisis response.

Implications for Social Work Education

By practicing AACR as an intervention, social workers can develop new areas of knowledge, including the immediate intervention at a crisis scene and connection to nature, specifically dogs. Furthermore, social work may explore the benefit that human attachment to companion animals brings to a therapeutic intervention that includes engagement, processing, coping, finding resilience, and getting connected to the community resources to begin the process of healing and returning to a healthy daily routine.

More importantly, AACR and other forms of AAT can be added to the social work curriculum to provide these tools to social workers who could benefit from training for this intervention.

Furthermore, teaching about immediate trauma intervention requires an ability to work on relevant themes for social work and immediate response, such as cultural competency, sensitivity, and the ability to improvise while considering social work values and the welfare of the dogs.

Implications for Social Work Research

This study's goal is to open a new area of research in social work. It intends to investigate the benefits of AACR as an intervention for trauma survivors at the occurrence of the trauma. By analyzing the responders and mental health professionals as supervisors, this research represents only the beginning of a new exploratory world where the survivors themselves can ultimately testify to the effects of this intervention.

This research brings AACR one step forward to becoming an evidence-based intervention. Only research, together with the use and exploration of this intervention, can demonstrate AACR's place in the world of social work.

Recommendations for Future Research

A next step for research on AACR can be collecting data directly from trauma survivors and bystanders. Amplifying their voices and understanding their perspectives would mean discovering a deeper level of the effects AACR has on a traumatic scene and how it affects the person to cope and find resilience.

More studies are needed to investigate essential themes that could not be examined here, such as the experience of the AACR responders while providing this type of intervention at a trauma scene and how this intervention affects the animal itself for good or bad.

Furthermore, a deeper exploration into the new themes regarding the target population for AACR is also warranted. These themes include the balance between the culturally not accustomed to dogs and the risk and benefit AACR could present for them; the previous exposure to dogs as consideration for choosing the right target population for AACR intervention; the affinity for dogs people may have, and how AACR would benefit them. Moreover, the benefits AACR presents for the AACR responders themselves while responding to a traumatic event should also be further investigated. Finally, studying the effects of AACR as an intervention for special needs adults and children should be conducted. This would enable AACR responders to identify this population's unique needs when providing them with this intervention.

Another area of research can address the types of dogs and the type of training these dogs should acquire in order to successfully become a part of an AACR team. This could result in a fuller understanding of the qualities important in a dog that works as a crisis responder.

Limits of AACR at trauma scenes should be researched as well, including the cost and benefit of this intervention and the fact that AACR is not used in a controlled environment. A complex scene like a trauma scene may not be able to accommodate more complexities.

Another important subject to study can be the prejudices and negative perceptions victims could have towards animals. Bringing more tension to the scene could be a harmful trigger instead of a beneficial one.

An interesting area of research would be the analysis of the sample's demographics and how they connect to the participants' points of view regarding AACR. For example, their own personal affinity to dogs and their hesitation, if any, towards AACR.

Finally, more studies should explore the differences between a trauma scene equipped with AACR compared with trauma scenes that do not include AACR, specifically concerning the time of response, how long it takes to stabilize the victims, and financial cost versus the benefits of the whole process.

Conclusion

This research presented an overview of what AACR represents in Israel from the perspective of mental health professionals responding to traumatic events. Results have been predominantly positive, showing a keen interest in augmenting the presence of this type of intervention as a response to crises and disasters. A literature review indicated that research in this area needs to be further explored. Given the preliminary nature of the data, I conclude the AACR shows promise as an intervention for trauma scenes in Israel. Further research is needed to understand the experience of trauma survivors better when receiving AACR intervention, the risks and benefits of AACR, and the development of an AACR protocol for Israel.

This research presented the first step in building a protocol for AACR in Israel that can hopefully be adapted to other parts of the world with similar success. With a protocol in hand, the ethical use of this modality of response will expand further and enhance the treatment and response at traumatic scenes and disasters. By understanding the importance of this tool and the importance of its protocol, Israel will be able to adapt AACR into a much broader response for helping survivors of trauma and their first responders. Moreover, this can further develop into a unit training for AACR in Israel and therefore extend the growth of AACR in Israel.

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Appendix A

Definition of terms

AAA:	Animal Assisted Activities.
AAC:	Animal Assisted Coaching.
AACR:	Animal Assisted Crisis Response.
AAE:	Animal Assisted Education.
AAI:	Animal Assisted Interventions.
AAT:	Animal Assisted Therapy.
AAP:	Animal Assisted Psychotherapy.
CISM:	Critical Incident Stress Management.
EMDR:	Eye movement desensitization and reprocessing.
FEMA:	Federal Emergency Management Agency.
HOPE AACR:	Hope Animal Assisted Crisis Response.
IAHAIO:	International Association of Human-Animal Interaction Organizations.
ISP:	Immediate Stabilization Procedure.
K9:	Canine.
NOVA:	National Organization for Victim Assistance.
PT:	Pet Therapy.
PTSD:	Post-Traumatic Stress Disorder.
SW:	Social Work.

Appendix B

Interview Guides

Demographics for all the sample in separate online survey:

- Are you a licensed professional and if so, which?
- What is your role with Animal Assisted Crisis Response?
- (What is your role in the organization: AACR responder, Crisis Responder, Crisis Responder Supervisor)
- Gender
- Level religiosity/ religious practice: offer choices
- Do you come from a background where dogs are accepted?
- How long have you been doing Crisis Response work?
- How long have you been doing AACR?

Interview for AACR Responders

1. How long have you been involved with AACR?
2. Can you describe your training as an AACR Responder?
3. Can you describe the animal you are currently working with?
4. Do you also practice Crisis Response also without your therapy animal?
5. How does having a therapy animal affect your ability to do your job?

(What do you think happens differently when you have AACR on site in a crisis situation? For you? For the scene itself? What happens there?)

6. From your experiences, how would you compare the trauma scene using AACR from not using AACR? (Does it change the interaction? In what ways does it change the interactions? Please explain.)

6.5 When using AACR have you noticed differences in the interactions between the survivors and the professionals at the scene?

6.6 Have you noticed any other differences you have not already mentioned?

7. For the first therapeutic contact, does AACR make a difference in the first contact with clients? If yes, in what ways?

8. Have you observed changes happening to the clients when having AACR at the scene? (What changes?)

9. Have you observed differences in clients' responses to AACR in comparison to CR without AACR? Please explain.

10. Do you find there are specific challenges related to arriving with a crisis support animal at a crisis scene? Please explain.

10.5 In terms of your relationship with your animal, are there challenges?

(Example: Is it hard for the pet? Does the animal obey your commands? Does the animal stress? etc.)

10.6 In terms of the relationships with the other professionals and the Crisis Response team at the crisis scene, can you describe their/ your reactions, and its effect, positive and negative, if any?

11. What works and what doesn't work with AACR?

11.5 In your view, what are the most important benefits of AACR?

11.6 Can you describe any problems you have noticed that can be attributed to the use of AACR?

12. Does having AACR as part of crisis response change the way you feel towards Crisis Response? If yes, please describe how.

13. Have you observed any changes in the way you engage in a crisis intervention? If yes, can you please describe how?

For questions 14 and 14.5, please consider the population characteristics such as age, gender, culture, and any other characteristics you can think of that is relevant to the questions.

14. From your experiences, are there specific populations that you see as benefitting most from AACR?

14.5 Again from your experiences, are there groups that seem to benefit least from AACR?

15. Can you describe a crisis scene that having AACR resulted in a positive outcome?

16. Can you describe a crisis scene that having AACR may have contributed to problems at the crisis scene and your reactions?

17. Can you talk about a time that it would have been good to have AACR?

18. Overall, what is your view in the value of using AACR in a crisis scene?

19. On a scale from 1 to 5, when 1 is a terrible idea and 5 is an excellent idea, where would you put AACR?

Interview for mental health professionals Crisis Responders and work along AACR

1. How long have you been involved with AACR?

2. Tell me about your first experience with AACR?

3. How long have you been working along AACR?

4. How does it affect you in your job as Crisis Responder to work with AACR besides you?

5. From your experiences, how would you compare the trauma scene using AACR from not using AACR?

(Does it change the interaction? In what ways does it change the interactions? Please explain.)

5.5 When using AACR have you noticed differences in the interactions between the survivors and the professionals at the scene?

5.6 Have you noticed any other differences you have not already mentioned?

6. For the first therapeutic contact, does AACR make a difference in the first contact with clients? If yes, in what ways?

7. Have you observed changes happening to the clients when having AACR at the scene? (What changes?)

8. Have you observed differences in clients' responses to AACR in comparison to CR without AACR? Please explain.

9. Do you find there are specific challenges related to arriving with a crisis support animal at a crisis scene? Please explain.

9.5 In terms of the relationships with the other professionals and the Crisis Response team at the crisis scene, can you describe their/ your reactions, and its effect, positive and negative, if any?

10. What works and what doesn't work with AACR?

10.5 In your view, what are the most important benefits of AACR?

10.6 Can you describe any problems you have noticed that can be attributed to the use of AACR?

11. Does having AACR as part of crisis response change the way you feel towards Crisis Response? If yes, please describe how.

For questions 12 and 12.5, please consider the population characteristics such as age, gender, culture, and any other characteristics you can think of that is relevant to the questions.

12. From your experiences, are there specific populations that you see as benefitting most from AACR?

12.5 Again from your experiences, are there groups that seem to benefit least from AACR?

13. Can you describe a crisis scene that having AACR resulted in a positive outcome?
14. Can you describe a crisis scene that having AACR may have contributed to problems at the crisis scene and your reactions?
15. Can you talk about a time that it would have been good to have AACR?
16. Overall, what is your view in the value of using AACR in a crisis scene?
17. On a scale from 1 to 5, when 1 is a terrible idea and 5 is an excellent idea, where would you put AACR?

Interview for Supervisors of Mental health professionals Crisis Responders and AACR

1. How long have you been involved with AACR?
2. Tell me about your first experience with AACR?
3. How long have you been supervising AACR?
4. What criteria do you use to dispatch AACR to the scene?
5. From your experiences, how would you compare the trauma scene using AACR from not using AACR?

(Does it change the interaction? In what ways does it change the interactions? Please explain.)

- 5.5 When using AACR have you noticed differences in the interactions between the survivors and the professionals at the scene?
- 5.6 Have you noticed any other differences you have not already mentioned?
6. For the first therapeutic contact, does AACR make a difference in the first contact with clients? If yes, in what ways?
7. Have you observed changes happening to the clients when having AACR at the scene?
(What changes?)

8. Have you observed differences in clients' responses to AACR in comparison to CR without AACR? Please explain.

9. Do you find there are specific challenges related to arriving with a crisis support animal at a crisis scene? Please explain.

9.5 In terms of the relationships with the other professionals and the Crisis Response team at the crisis scene, can you describe their/ your reactions, and its effect, positive and negative, if any?

10. What works and what doesn't work with AACR?

10.5 In your view, what are the most important benefits of AACR?

10.6 Can you describe any problems you have noticed that can be attributed to the use of AACR?

11. Does having AACR as part of crisis response change the way you feel towards Crisis Response? If yes, please describe how.

For questions 12 and 12.5, please consider the population characteristics such as age, gender, culture, and any other characteristics you can think of that is relevant to the questions.

12. From your experiences, are there specific populations that you see as benefitting most from AACR?

12.5 Again from your experiences, are there groups that seem to benefit least from AACR?

13. Can you describe a crisis scene that having AACR resulted in a positive outcome?

14. Can you describe a crisis scene that having AACR may have contributed to problems at the crisis scene and your reactions?

15. Can you talk about a time that it would have been good to have AACR?

16. Overall, what is your view in the value of using AACR in a crisis scene?

17. On a scale from 1 to 5, when 1 is a terrible idea and 5 is an excellent idea, where would you put AACR?

Appendix C

11/11/2021

Dear Batya,

First, I would like to thank you for your work as the head of the K-9 Unit in the Psychotrauma team of United Hatzalah.

I would also like to congratulate you on your research on Animal-Assisted Crisis Response in Israel. I am delighted you will be using the United Hatzalah family in order to research this important field as it will present a milestone for the Israeli Animal-Assisted Crisis Response.

Warmly,

Eli Beer

Founder of United Hatzalah

Appendix D

November 9, 2021

Batya G. Jaffe, B.eD, AAT
Yeshiva University
Wurzweiler School of Social Work
2495 Amsterdam Avenue, Belfer Hall
New York, New York 10033

Dear Batya G. Jaffe:

SUBJECT: IRB EXEMPTION—REGULATORY OPINION
Investigator Contact: Batya G. Jaffe, B.eD, AAT
Protocol Title: Animal Assisted Crisis Response in Israel

This is in response to your request for an exempt status determination for the above-referenced protocol. WCG IRB's IRB Affairs Department reviewed the study under the Common Rule and applicable guidance.

We believe the study is exempt under 45 CFR § 46.104(d)(2), because the research only includes interactions involving educational tests, survey procedures, interview procedures, or observations of public behavior; and there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of data.

This exemption determination can apply to multiple sites, but it does not apply to any institution that has an institutional policy of requiring an entity other than WCG IRB (such as an internal IRB) to make exemption determinations. WCG IRB cannot provide an exemption that overrides the jurisdiction of a local IRB or other institutional mechanism for determining exemptions. You are responsible for ensuring that each site to which this exemption applies can and will accept WCG IRB's exemption decision.

WCG IRB's determination of an Exemption only applies to US regulations; it does not apply to regulations or determinations for research conducted outside of the US. Please discuss with the local IRB authorities in the country where this activity is taking place to determine if local IRB review is required.

Please note that any future changes to the project may affect its exempt status, and you may want to contact WCG IRB about the effect these changes may have on the exemption status before implementing them. WCG IRB does not impose an expiration date on its IRB exemption determinations.

If you have any questions, or if we can be of further assistance, please contact Marcus Burns, at 360-252-2441, or e-mail RegulatoryAffairs@wirb.com.

MVSB:ts

D2-Exemption-Jaffe (11-09-2021)

cc: Edward Berliner, Yeshiva University
Susan Mason, Yeshiva University
WCG IRB Accounting
WCG IRB Work Order # 1-1491812-1