

THE BUZZ ABOUT BEES: SERIOUS LEISURE AS A BENEFICIAL TOOL FOR
VETERANS TRANSITIONING INTO POST-SERVICE- A MIXED METHODS
STUDY

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Major Field: Doctorate of Philosophy in Health, Leisure, and Human Performance

Abstract: After retirement, veterans experience a loss of identity, support, and community (Duvall & Kaplan 2013; Duval & Kaplan, 2014; Caddick & Smith, 2014; Bennett et al., 2014). Some researchers have begun to look at how recreation can be used to help veterans transition into civilian life with potential promising results (Vella, Milligan & Bennett, 2013; Laskowski, 1991). However, more research needs to be done on how the potential benefits of SL, more specifically beekeeping as SL, for veterans can help with transitioning in retirement. This research was able to confirm that beekeeping through the Hives for Heroes Network can be a tool for veterans during the transition process. The quantitative strand of this research confirmed that participants were identifying with a SLP before beginning work as members of the Hives for Heroes Network and this identification was strengthened as their participation continued. Additionally, the qualitative strand showed that participants of the focus groups expressed positive changes in community, support, and identity. Finally, by integrating the data a more complete picture of the participant experience was created. This picture shows that veterans working through their transition may benefit from beekeeping as a serious leisure pursuit in developing a serious leisure pursuit.

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CHAPTER I

INTRODUCTION

Retirement is the final stage of a service member's career. Some veterans, will return to the civilian world for the first time in 20 or more years; for others they will be returning with newly acquired disabilities such as Traumatic Brain Injuries and amputations as well as new mental health challenges such as posttraumatic stress. Retirement for any individual can be a daunting experience. It can be a transition filled with excitement and concerns. Civilian individuals transitioning into retirement are presented with more free time to do the things they want but also the worries of health and preparing for the financial future. Additionally, those retiring from the military can be presented with the unique challenge of having to navigate a cultural and identity shift as well. Additionally, individuals leaving the military are often leaving at younger ages than their civilian counterparts, meaning that they are more likely to pursue other opportunities, including second careers (Keeling, Kintzle, & Castro; 2018).

The Home Coming Theory, which has been used to explain the difficult time service members have transitioning back home after deployments, can also be applied to retiring veterans and can give researchers insight into this phenomenon (Schütz, 1945). When applied to retiring veterans, researchers have found that after retirement, veterans often feel a lack of support, struggle to find a new normal, and struggle to reconnect (Ahern et al., 2015).

Currently, there are programs in place to help prepare service members for retirement. One program is the Transition Assistance Program or TAP (Silva, 2011). This program helps

prepare service members by providing them with additional resources so that they can integrate into civilian jobs and/or start businesses of their own after retirement from the military. TAP provides workshops on how to translate the skills learned during their time in the military into skills that can serve them in the civilian workforce. However, when surveyed, veterans were asked whether or not they participated in TAP and what led them to that decision. Participants felt that TAP was not helpful when it came to job searching, interviewing skills, and resume-writing specifically (Silva, 2011).

One reason for this disconnect may be because the TAP program may be taking an approach that focuses on skills and labor instead of an approach that prepares veterans for a cultural and identity shift. TAP offers workshops that helps veterans build resumes, prepare for interviews, find jobs, and navigate their retirement and disability benefits. However, the TAP program does not help the veteran navigate cultural differences between the military workplace and the civilian workplace (Duvall & Kaplan, 2013; Duval & Kaplan, 2014; Caddick & Smith, 2014; Bennett et al., 2014; Keeling et al, 2018; Silva, 2011).

However, there are programs in place within and outside the military that may have a positive impact on veterans. Researchers have begun to look at how recreation can help veterans tackle these cultural and identity shifts (Duvall & Kaplan, 2013; Duval & Kaplan, 2014; Caddick & Smith, 2014; Bennett et al., 2014). These researchers found that recreation had a positive impact on veterans who have left service either with or without a newly acquired disability. Additionally, in many cases, the positive impacts lasted longer than the study. In a systematic literature review, Caddick and Smith (2014) looked at how sports and physical activity impacted the lives of combat veterans. Through their review, they found that sports and physical activities overall had a positive impact. In most cases, these activities are helping veterans reinvent an

identity outside of being a disabled vet (Caddick & Smith, 2014). If recreation can provide a transition assistance for veterans, then Serious Leisure (SL) may be an avenue to focus aid for veterans in transition.

There are similarities that can be drawn between the culture of the military and that of SL. First, even though the military is comprised of individual families that come from many backgrounds, the military itself has its own unique culture. Those within the military follow and identify with the structure, ethos, norms, and identity of the military culture (Atuel & Castro, 2018) . They are a part of the group and the group has its own set of structures and norms that separates them from others, in this case, civilians. Additionally, it is no secret that Soldiers, from the beginning, have to endure together and grow together for the common goal of the group. Similarly, some of these same traits can be seen in SL. Of the six defining characteristics of SL, three characteristics that may have the most benefits for veterans are as follows; creating a unique group ethos that revolves around the pursuit, identifying with the pursuit, and the ability to grow and persevere at the pursuit (Stebbins, 1982).

It is hypothesized then that the introduction of SL may be a useful tool for veterans who are transitioning into civilian world. As shown through the Homecoming Theory and research, retiring veterans transitioning into the civilian world are struggling to reconnect with their communities, and the culture and life of their military service is leaving a gap that could be filled through SL. When deciding what type of outdoor leisure activity should be introduced as a SL pursuit there is evidence to suggest that beekeeping is ideal (Campion, 2019).

Beekeeping as a transition tool for veterans was introduced as early as the end of WW1. Beekeeping was first introduced to returning service members as a way to help them cope with newly acquired disabilities, a means for income and an a way for them to be self-sufficient. This

was also a good tool as it provided an avenue for them to contribute to their communities.

Veterans who took on beekeeping were able to enjoy intrinsic and extrinsic benefits as well as find a community within the pursuit (Campion, 2019).

Today we see many organizations rediscovering beekeeping as an avenue for Veterans. Programs like Bees 4 Vets, Hives for Heroes, and a few veterans affairs hospital have been established to provided veterans with the resources and education to eventually become self-sufficient beekeepers. These programs have reported that members have seen positive outcomes as a result of their participation. This includes a decrease in PTSD symptoms, independence, and the ability to cut back on certain medications. However, programs like this do struggle to receive funding due to the lack of research into this specific phenomena.

In order to test this hypothesis, this research aims to utilize a mixed methods convergent parallel design to explore utilizing beekeeping as a potential SL pursuit that may aid veterans during the transition phase that retiring veterans experience. Both quantitative and qualitative data will be collected during this research so that the a more complete picture may be developed about the veteran experience.

This research will use a pragmatic worldview which is acceptable for this research because it recognizes that there can be multiple perspectives experienced among the participants, but it allows the researcher to focus on a specific problem as it is a research question guided methodology. (Creswell & Clark, 2017). A pragmatic worldview allows the researcher to utilize the tools most appropriate as well as accessible, all while keeping a focus on answering the research question. Additionally, this worldview is more suited to the subject and research participants by allowing a use of a mixed methods convergent parallel design (Patton, 2002). The researcher will be able to use both quantitative and qualitative methods in order to gain a better

understanding of the veteran experience during their transition as they utilize beekeeping as a potential SL pursuit.

Statement of the Problem

After retirement, veterans experience a loss of identity, support, and community (Duvall & Kaplan 2013; Duval & Kaplan, 2014; Caddick & Smith, 2014; Bennett et al., 2014). Some researchers have begun to look at how recreation can be used to help veterans transition into civilian life with potential promising results (Vella, Milligan & Bennett, 2013; Laskowski, 1991). However, more research needs to be done on how the potential benefits of SL, more specifically beekeeping as SL, for veterans can help with transitioning in retirement.

Purpose of the Study

This mixed methods study will address the difficulties veterans face as they transition into retirement. A convergent parallel mixed methods design will be used, and it is a type of design in which quantitative and qualitative data are collected in parallel, analyzed separately, and then merged (Creswell & Clark, 2017). In this study, the Serious Leisure Inventory and Measure (SLIM) will be used to test the theory of Serious Leisure (Gould et al., 2008) . The SLIM measures the six dimensions of SL including identity, group ethos, and ability to preserve through difficulty. It is hypothesized that the introduction of SL has had a positive influence on the identity development and community for veterans as a part of the Hives for Heroes Network. The qualitative data, semi-structured focus groups, will explore the participants perceptions of how the introduction of SL has impacted their identity and community before and after they perused beekeeping. The reason for collecting both quantitative and qualitative data is to

compare and validate the two forms of data to bring greater insight into the topic than might be obtained by either type of data separately.

Limitations

Limitations of this study may include the small sample size after grouping, the sampling method, and the sampling timeframe. The participants for this study are current members of the Hives for Heroes nonprofit beekeeping Network for veterans. Surveys will be distributed via their organization email and focus group participants will be recruited from this same pool of participants. Due to the global pandemic, Covid-19, it is anticipated that this may affect some of the participants ability to participate in the study and/or may affect their responses.

Assumptions

Several assumptions are made in relation to this study. First, it is assumed that the participants are participating in this study of their own free will and will let the researcher know immediately if they no longer want to participate. It is also assumed that the participants of this study are engaged with beekeeping. Finally, it is assumed that the participants of this study understood the questions of the survey and answered to the best of their ability.

Definition of Terms

- Veteran – An individual who has served for some period of time in the military and has since separated.

- Post-Military life/Retirement – Period of life that takes place after enlistment in the military has ended.
- Outdoor Recreation – ...we use the term *outdoor recreation* to encompass the organized free-time activities that are participated in for their own sake and where there is an interaction between the participant and an element of nature. (Ibrahim & Cordes, 1993, p. 4)
- Serious Leisure (SL) – “the systematic pursuit of an amateur, hobbyist or volunteer activity sufficiently substantial, interesting and fulfilling for the participant to find a (leisure) career there acquiring and expressing a combination of its special skills, knowledge and experience” (Elkington & Stebbins, 2014, p 4.)
- Hives For Heroes – “Hives for Heroes is a national military veteran non-profit organization focusing on honey bee conservation, suicide prevention, and a healthy transition from service” (“Hives for heroes: Nonprofit veteran beekeeping,” n.d.)
- Beekeeping – The occupation of owning and breeding bees for their honey.

Research Question

SL in the form of beekeeping a useful tool for veterans during the transition process of separating from the military by means of helping veterans develop a new identity, community, and support system outside of the military?

Hypothesis

H1- Participants of this study will identify with Serious Leisure according to the Serious Leisure Inventory and Measure by reporting a score of 4 or higher . (Quantitative Question)

H0- Participants of this study will not identify with Serious Leisure according to the Serious Leisure Inventory and Measure by reporting a score or 3.9 or lower.

H2- Participants of this study will express positive changes of identity from participating in the Hives for Heroes Network. (Qualitative Question)

H0- Participants of this study will not express positive changes of identity from participating in the Hives for Heroes Network.

H3- Participants of this study will express positive changes of community from participating in the Hives for Heroes Network. (Qualitative Question)

H0- Participants of this study will not express positive changes of community from participating in the Hives for Heroes Network.

H4- Participants of this study will express positive changes in support from participating in the Hives for Heroes Network. (Qualitative Question)

H0- Participants of this study will not express positive changes in support from participating in the Hives for Heroes Network.

H5- There is a connection between participants that do identify with Serious Leisure and participants that express positive changes of identity, community, and support from participating in the Hives for Heroes Network.

(Mixed Methods Question)

H0- There is no connection between participants that do identify with Serious Leisure and participants that express positive changes of identity, community, and support from participating in the Hives for Heroes Network.

CHAPTER II

LITERATURE REVIEW

Retirement

Retirement is the final stage of a service member's career, but that does not necessarily make it the easiest stage. There can be many obstacles to overcome. These challenges include newly acquired disabilities, changes of identities, loss of purposes, loss of support, and cultural difference (Ahern et al., 2015; Demers, 2011; & Morin, 2011). In the past, service members traditionally retired and then enjoyed retirement. Now veterans are retiring from the military younger and are instead looking for second careers (Keeling et al., 2018). As they are looking for second careers within the civilian workforce, they are presented with obstacles. According to an exploratory literature review Stern (2017) found that these obstacles include struggles with employment due to mental health disorders, identity conflicts between careers, workplace stigmas from potential employers, and the fear of losing their benefits if they do return to work full time. To best help veterans transitions into civilian life and second careers, additional understanding of their perspectives and obstacles are needed.

One of the first aspects of retirement that may be valuable to consider is the change in culture that veterans have adjusting from military to civilian life. In 2014, Koenig et al. interviewed 31 veterans in a qualitative study and identified three cultural domains that were impacted upon retirement; interpersonal, professional/educational, and intrapersonal. According to Koenig et al (2014)., there are several cultural aspects that contradict each other between the

military and civilian life. These contrasts included differences in the workforce and differences in their social circles. For veterans who separated and sought second careers, skills such as “being on guard and vigilant” that served them well in the military made transition difficult. Veterans were accustomed to a fast-paced and intense workday. However, upon entering the civilian workforce many struggled to adjust to the slower paced and less urgent atmosphere. Additionally, veterans had spent an entire career in a socially close and connected environment. Finally, many veterans expressed feeling out of sync with their family and friends at home after retiring or returning from a tour. This out of sync or disconnected feeling can lead to feelings of isolation from communities of support, making the transition into retirement all the more difficult (Keeling et al., 2014). A change in identity is another obstacle that veterans have to overcome. When joining the military, new members go through a training program that prepares them mentally and physically for their roles as a military service member. They emerge as someone different than who they were when they entered. This military identity carries them through their careers. However, once it is time for retirement, there is not a sufficient program in place that helps veterans reconfigure their identities for their new chapter in life as retirees (Demers, 2011). Instead, veterans are left to navigate this transition of identity on their own since programs like the TAP focus on transferring labor skills to the civilian realm (Silva, 2011).

An additional factor that can make the transition after retirement difficult, may include adjusting to a newly acquired disability or the symptoms of an existing disability while transitioning into retirement. For veterans of the Afghanistan and Iraq wars, Traumatic Brain Injuries (TBI) and Post Traumatic Stress Disorders (PTSD) are the “signature” injuries (Burke et al, 2009; Warden, 2006). These injuries present unique challenges for veterans transitioning into retirement. Veterans with TBIs or PTSD may struggle with stigma and additional difficulty

reintegrating (Burke et al, 2009). Research has also shown that the process of retirement may also have a negative impact on treatment. For example, in a longitudinal study that researched 404 service men, Schnurr and colleagues (2005) found that after retirement physical and psychological symptoms of PTSD increased. During their study, Schnurr and colleagues collected data on veteran men who were categorized into one of three groups: no exposure to trauma, exposure to trauma only, and those who were diagnosed with PTSD as a result of exposure to trauma. Although all three groups saw a change in symptoms a result of trauma exposure and PTSD during the point of retirement, the group that was diagnosed with PTSD saw a greater increase in symptoms (Schnurr et al., 2005).

Homecoming Theory

The Homecoming Theory provides some understanding for why the transition process from military life to civilian life can be difficult. This theory was first discussed in 1945 by Schütz. It explained the disconnect experienced between service members and their families and communities once they returned from a tour or deployment. Services members who were away for an extended period of time leave their families and communities, and while these parties are separated from each other both parties grow and develop separately. Upon the veterans' returning home, both parties expect to find the same people and the same situations at the time of separation, but more often than not, they are instead confronted with a disconnect that they must navigate (Schütz, 1945). For example, a Soldier who leaves their family for a year-long deployment will not only return changed due to their experience during that deployment but also will return to a family that has had to adjust all of their daily routines to accommodate for the absence of the service member and has also change due to the experiences gathered in that

yearlong absence. Both parties will want to pick up where they left off, but this is not always an easy task or possible. Traditionally, this theory has been applied to service members returning from extend absences from their families and communities, but there is research to suggest that this theory can also be applied to the transition process that takes place during retirement (Ahern et al., 2015; Schütz, 1945).

Ahern et al (2015) studied the Homecoming Theory further and found three key themes further explaining how veterans experience the retirement transition process. The first theme is military as family. For many service members, the military is a family that took care of its members and the ranking system provided support and simplicity, especially during times of chaos. After retirement, the support system is lost and the clear cut ranking system is no longer there to define where your place is or anyone else's for that matter (Ahern et al., 2015). The next theme is normal is alien. This theme explains the feelings of veterans as they returned home or retired and associated civilian life with "normal" but then realizing that civilian life was not quite the "normal" they remember it being (Ahern et al., 2015). For example, the routines, traditions, and interaction with close ones that they remember before joining the military or leaving for deployment are different upon their return. The final theme is searching for a new normal. This theme explains the process of veterans searching and their perspectives on getting support as they transition. Tools that veterans used to help them during the transition process include finding a mentor that had gone through a similar experience, embracing the mentor role, and easing into new challenges with time (Ahern et al., 2015).

After retirement, veterans are experiencing a shift in their lives that can be difficult to navigate. Researchers have looked for outlets that may help veterans navigate this transitions.

Transition Assistance Programs

Established in 1991 the military Transition Assistance Program (TAP), was introduced to help prepare service members for their transition into civilian life. This program is designed to provide veterans with the tools and training necessary to have a smooth transition after separating from the military. This mission is executed throughout the program through a Goals, Plans, and Success (GPS) format. The components of GPS include developing Career Readiness Standards, counseling, classwork, and involvement that begins at the start of the individuals military career (Kamrack, 2017). This program has also been referred to as SFL-TAP (Soldier for Life Transition Assistance Program). This program focuses on translating the knowledge, skills, and abilities gained during an individuals' military service to the civilian world (Kirchner & Akdere, 2019). However, through a series of interviews, Kirchner and Akdere found three themes concerning newly transitioning veterans and SFL-TAP: difficulty articulating leadership knowledge, skills, and abilities, impactful leadership behaviors, and inadequate transition support (2019). Although this program aims to prepare new veterans for civilian positions, research on how best to do that still needs to be done.

Additionally, Keeling, Kintzle, and Castro (2018) found two overarching themes that suggest why veterans may have a difficult time with retirement and looking for a second career. The first theme focused on the lack of support from TAP and other services and having the feeling of starting over. The second theme focused on the individuals own ability to adjust to the cultural differences of the two work fields and feelings of being unprepared to face the new challenges that the civilian workplace presented (Keeling et al, 2018).

Since TAP was first introduced, the program has seen changes that are designed to better help new veterans transition. However, most of these changes still revolve around work skills and translating the military individual into the civilian worker (Stoneburg, 2021; Keeling et al, 2018; Kirchner & Akdere, 2019). Through additional research, it is becoming evident that in addition to translating work experience, there needs to be support on how to navigate a shift in culture and identity (Biniecki & Berg, 2020; Keeling et al, 2018; Silva, 2011).

Serious Leisure

When defining SL, it can be important to also have an understanding of the definitions of Leisure, Recreation, and Play. Although these terms may have varying definitions, understanding these terms can help set a foundation for SL. Additionally, understanding these terms can help distinguish SL from other forms of leisure.

Leisure today has many definitions but most revolve around the concept of freedom and choice. Leisure is a time for an individual to explore personal interests outside of constraints. It is time beyond daily obligations and give an individual the opportunity to rest, relax, recharge, and more. The activities or choices made during leisure time are intrinsically motivated and play a role in developing that person's identity. Leisure can take place in a variety of settings from a sports arena to an individual's back yard garden but a few characteristics should remain. Leisure experiences should involve perceived freedom, intrinsic motivation, perceived confidence, and positive affect (Kleiber, et al., 2011; Edgington, et al., 1998).

Recreation takes place during leisure time but is characterized by some form of an activity. Recreation is a purposeful pursuit participated in by an individual for its characteristics

of being restorative to the body, mind, and/or spirit. Recreation has intrinsic motivations and the activity is determined by the needs of the individual at the given time. Although the motivations for recreation are intrinsic, historically, recreation has been viewed as activities that renews individuals for work. This implies that recreation is an integral part of society (Edgington, et al., 1998; Torkildsen, 2005).

Play is a behavior that helps children learn how to navigate life, social interactions, and their environments. It allows them the opportunity to practice freedom, exercising choice, and to test boundaries. However, to the individual, when they are taking part in play they perceive no goals and it is simply done so for intrinsic purposes and for the pleasure of it all. Play is a casual activity with no rules except those created by the participant. Play is a key part in creating healthy individuals capable of navigating life. The skills learned from play are applied to future scenarios and carried throughout (Kleiber, et al., 2011; Edgington, et al., 1998; Torkildsen, 2005).

When comparing Leisure, Recreation, and Play they all have a common element of personal fulfillment. To the participant, goals may not be necessarily defined and how they choose to fulfil the needs of their Leisure, Recreation, and Play may change depending on the day. This is what makes Leisure, Recreation, and Play special; individuals are free of obligation and commitment and can pick it up and walk away when they choose. SL is unique in that the people who pursue SL do so systematically regardless of what they have to endure to do so. This is not to say that there are not elements of Leisure, Recreation, and Play involved with a SL, but rather there begins to be additional elements involved as well.

A SL is traditionally defined by six characteristics. The first characteristic, for example, the participant moves from participating in a recreational activity casually to participating even on the day they may have a headache. They make the choice to persevere through this activity even on days when they do not have the best experiences from the activity. Even though leisure is typically associated with positive feelings, in a SL there will be times where the participant will have to persevere through moments of unpleasantness. The goal is no longer what you can achieve from a single interaction with that activity but rather what you gain from a long term pursuit from that activity (Elkington & Stebbins, 2014; Kleiber, et al., 2011; Stebbins, 1982).

The second characteristic of SL is that participants are likely to participate in the pursuit for long periods of time, making progress at it or making a career out of it. For example, participants of SL pursue their leisure activity regularly over the course of their lifetime and have developed personal histories with that activity. This can include anyone from the birdwatcher who spends every weekend for the last four years watching and learning about new birds to the climber who spends every other day in the climbing gym working on new skills for the next climbing competition (Elkington & Stebbins, 2014; Kleiber, et al., 2011; Stebbins, 1982).

Third, participants of SL put in significant effort in order to participate. Participants work on developing skills, knowledge, and/or training in order to participate. By acquiring the unique and specialized skillset within their SL activity over time they set themselves apart from those who are not participating as SL (Elkington & Stebbins, 2014; Kleiber, et al., 2011; Stebbins, 1982).

The fourth characteristic Stebbins calls durable benefits. These benefits include aspects of recreation that are typically associated with leisure such as self-expression, recreation, and social interaction. These benefits help the participant continue with the SL activity and provide the

opportunity for restoration and fulfilment that is typically seen with other forms of leisure (Elkington & Stebbins, 2014; Kleiber, et al., 2011; Stebbins, 1982).

The fifth characteristic is the development of a unique ethos around the leisure pursuit. This involves members of the same pursuit adhering to a unique set of norms, structures, and values. They develop a culture within their chosen pursuit (Elkington & Stebbins, 2014; Kleiber, et al., 2011; Stebbins, 1982) For example, those who pursue the sport of outdoor climbing have developed an ethos that is similar to Leave No Trace. When climbing outdoors it is expected that you do not alter the climbing area and that altering it would fundamentally change the spirit of the climb .

Finally, participants of SL tend to identify with it. Their pursuit is not just an activity that they choose to do but rather it is a part of who they are. When meeting new people, their SL will be one of the ways that they introduce themselves and describe themselves. They are proud of their SL and the accomplishments they have achieved through it (Kleiber, et al., 2011; Stebbins, 1982).

In addition to the SL characteristics, SL has three categories: armatures, hobbyist, and career volunteering. Armatures are characterized by those who pursue their craft to a degree that they have been able to create a career out of it. They operate within the occupational world and participate in some form of monetary or organizational relationship. Hobbyists, like amateurs, are capable of making monetary value from their pursuits but any monetary value will always come second to the benefits gained from simply pursuing the activity itself. Those who would fall into this category can be identified as collectors, makers and tinkers, activity participants, and players when the activity they pursue is more competitive in nature. The final category of a SL is career volunteering. Those who fall into this category devote their time and energy into

developing skills and gaining knowledge that allows them to contribute to their communities.

They do not make money and volunteer solely for the durable benefits and for the conviction that they are needed (Elkington & Stebbins, 2014; Stebbins, 1982).

The potential for a SL to help with life transitions like retirement can also be seen in research literature. In a study by Lee and colleagues in 2020, they studied 13 older adults who were participating in a volunteer Korean folk music and dance group and found that their participation in a SL had an impact on successful aging. The benefits that resonated most with participants in this study were a development of a leisure career, commitment to the group, development of a sense of purpose, participation in the unique subculture, a development of a leisure-related identity, and a positive sense of self (Lee et al., 2020). When compared to the research on veterans transitioning after retirement and considering the Homecoming Theory, the benefits that SL adds to an individual's life appear to match the most common struggles that veterans face (Ahern et al., 2015; Schütz, 1945; Demers, 2011; & Morin, 2011).

Outdoor Recreation and Its Benefits

Outdoor recreations is recreation with a focus on being outside and having a connection to nature. The whole premise is that without the outdoors, this type of recreation would not be possible. For example, hiking, nature watching, rock climbing, and canoeing are all examples of outdoor recreation. However, baseball, basketball, and tennis are not examples of outdoor recreation because there is no emphases on the outdoors. The emphasis is instead on the activity.

In 2019, the Outdoor Industry Association reported that 153.6 million American participated in an outdoor recreation activity at least once during the year (Outdoor Industry Association, 2020). Another article written in 2008 by Cordell, Betz, and Green confirm that

even though there has been a slight decrease in outdoor recreation participation in the early 2000s, it seems to have stabilized and is on the rise again. They do mention that as generations come and go, preferences in recreation change as well (Cordell et al, 2008).

There has been overwhelming evidence proving that outdoor recreation has a benefit on mental health. One of the best-known benefits is reduced stress. According to Godbey in 2009, studies show that negative moods decrease and as well as decreases in anxiety and sadness when participating in outdoor recreation. Additionally, even though there are not many studies available on the physical impact of outdoor recreation, what is available does suggest that outdoor recreation also has the benefit of improving body health as well. In fact, people who live close to a park are more likely to engage in vigorous physical activity (Bedimo-Rung et al., 2005).

Many researchers are beginning to investigate outdoor recreation as a tool to help veterans who return home with some psychological disorder such as PTSD. For veterans, the benefits of outdoor recreation may be a key factor in a satisfying life after military service. In a study by Dunvall and Kaplan in 2014, 98 veterans participated in a 4–7-day wilderness experience that included rafting, fishing, backpacking and canoeing. They found that the veterans did experience multiple psychological benefits. Participants reported that feelings of tranquility and positive affect increased as well as improvement with social functioning and outlook on life. In another study it was reported that implementing 2-day 3-night group-based activity that focused on fly-fishing participants had an increase in attentiveness and improvement in depression symptoms and stress. These benefits were also observed in the veterans six weeks after the activity, suggesting that there may be long term benefits to be had (Vella, Milligan & Bennett, 2013).

These purposely planned activities are proving to help post military individuals move towards normalcy after suffering from symptom associated with psychological disorders.

For those returning with a newly acquired physical disability, adaptive outdoor recreation may be a useful tool as well. Some studies support the idea adaptive outdoor recreation can be used to empower individuals. For example, in 2009 Freudenberg and Arlinghaus found that adaptive fishing helped participants feel a sense of growth, self-esteem, and provided social benefits as well. In fact, the Anglers with Disabilities program found that participants with disabilities gained more from the experience than participants without disabilities. In another study by Laskowski in 1991, program leaders implemented and trained participants how to ski with adaptive equipment that worked with their disability. They used four-track skiing, sit-skiing, and mono-skiing. Additionally, they were able to find ways for participants with blindness to be able to ski. The results were that participants felt that it improved self-image and it gave participants something to look forward to doing. In interviews, participants expressed that they did not feel as though their disability was a reason to stop participating in an activity they enjoyed (Laskowski, 1991).

These outdoor recreational programs all have shown to have potential benefits for veterans. Even though these studies may have lasted for only a couple of days or weeks, research suggest that the benefits are lasting (Vella, Milligan & Bennett, 2013). If research is indicating that outdoor recreation has the potential for substantial benefits for veterans, than there may be the potential for even more substantive, long-term durable benefits if SL concepts are included.

However, recreation post-military service can be a difficult endeavor for some. For many returning from war or service, they return with a newly acquired physical disability and/or psychological disability (Lundberg, Bennet & Smith, 2011). This can have an effect on an

individual's recreation in many ways. The first obstacle to overcome is to learn how to navigate their new realities with newly acquired disabilities. According to Brittain and Green in 2012, living with a newly acquired disability includes dealing with social exclusion and discrimination as individuals deal with the perceptions that others now have of them. These assumptions include that those with disabilities are unable to cope, will upset others and clients, and are more accident prone. These assumptions can make it difficult to acquire a job as well as participate in social functions (Brittain & Green, 2012). Additionally, what is considered accessible may change. The homes that were once easy to navigate and access may have to be reorganized in order to account for the individual's new disability (Brittain & Green, 2012).

Another obstacle to overcome is perceived competence. Individuals with newly acquired disabilities may question and doubt their capabilities (Lundberg, Bennett & Smith, 2011). This is especially difficult to work through when the world a person lives in is not designed with them in mind. This can also be difficult if the sport or activity they have grown up with feels like it is no longer an option. For example, a marathon runner acquiring a disability that impacts the use of their legs may cause them to feel disconnected from running.

Psychological disability offers its own set of challenges to navigate when compared to physical disabilities. To start, psychological disabilities are not always visible. According to Flint in 2017, there is a social and self-stigma to having a mental health disability. The social stigma are the stereotypes associated with having a psychological disorder. Self-stigma is when individuals begin to internalize those stereotypes. Additionally, even though there has been growing support of veterans, stigmas about mental health disorders persist (Botero et al., 2020; Flint, 2012). Those with psychological disorders also have to navigate life with the symptoms of

their disability. For many, the symptoms can make social interactions difficult, which further isolation for the individuals (Kilbourne et al, 2007).

Beekeeping and Veterans

The SL pursuit that this research will be study is beekeeping. The idea of veterans beekeeping as way to cope with disabilities acquired through service is not a new idea. This idea has been around as early as 1919 after the first World War (Campion, 2019). Beekeeping was introduced as way to not only help veterans cope with newly acquired disabilities, but also as means of being self-sufficient within their communities. It provided an opportunity for veterans to begin a second career outside of the military as well as develop a sense of community (Campion, 2019; Rogers, n.a.).

The leisure benefits of beekeeping have been demonstrated through research (Duarte Alonso, et al., 2020). In a 2020 study of hobby beekeepers from three different countries, it was found that there are many motivations for participants to continue with their leisure pursuit, despite obstacles they may face. These motivations include both intrinsic and extrinsic in that they feel like they are being fulfilled through their pursuit as well as have the opportunity to give back to their community through beekeeping (Duarte Alonso, et al., 2020).

Although research in this area is still emerging, there is anecdotal evidence to suggest that beekeeping as SL may have a positive impact as well. In 2017, Robert Borkowski, a veteran, shared his story of how beekeeping provided an opportunity for him to connect with his community, learn new skills, develop a second career, and develop a deeper understanding of himself and his surroundings (Borkowski, 2017). According to Borkowski, beekeeping was key in helping him transition after retirement.

Additionally, there has been a growing demand among veterans to participate in organizations that help develop skills in beekeeping and provide opportunities to interact with local beekeepers. Groups like Bees 4 Vets, Heroes to Hives, Hives for Heroes, and a few Veterans Affairs hospitals have started programs that provide resources to veterans that allow them to learn the skill of beekeeping and eventually become self-sufficient beekeepers themselves (Schmidt, 2020). Through these programs, participants have reported positive outcomes as a result of pursuing a beekeeping hobby.

As mentioned, Hives for Heroes is one of the programs that has been established with a goal of helping veterans have a healthy transition after separation from the military through pursuing beekeeping. Hives for Heroes is a non-profit organization based out of Houston, Texas with hives located throughout the country. They were first established in 2018 and by 2021 they have grown to serve veterans in all 50 states. Hives for Heroes specifically works with veterans of the armed forces as well as first responders. Through an application process the organization pairs new members, also known as NewBEEs, with Mentors who have three or more years of beekeeping experience. Once paired, they work together to care for and maintain a hive. Ideally pairs are made of individuals with similar backgrounds and interests. Through the relationship between NewBEEs and Mentors NewBEEs find a community, support, purpose, and acquire the skills and education to eventually own their own hives and transition into Mentors (Hives for Heroes, n.d.).

In conclusion, it is hypothesized that through beekeeping as a SL pursuit veterans have a greater chance of having a healthy transition from service. Organizations like Hives for Heroes saw the obstacles and challenges that leaving the service may present during transition, as seen through the homecoming theory, and have been working to provide avenues to overcome them.

However, research into the success and impact that programs like Hives for Heroes has on participants have yet to be studied. This research aims to investigate this phenomena in order to provide a better understanding of the veteran experience as they participate in beekeeping during their transition so that programs like Hives for Heroes can continue to provide the resources and education necessary.

CHAPTER III

METHODOLOGIES

Based on the mixed methods convergent parallel design type, this research collected both quantitative and qualitative data. The goal of this study was to determine whether or not veterans a part of the Hives for Heroes non-profit organization identify with Serious Leisure (SL) according to the SLIM, and if participants of this research expressed changes in community, identity, and support from the introduction of SL in accordance to the SLIM (see appendix A), and finally if veterans can benefit from the introduction of SL during the transition process of retirement. SL is traditionally defined by six characteristics (Stebbins, 1982). This research will investigate these characteristics in terms of benefits for veterans as they transition into the civilian world. The first three characteristics discussed focus on the effort the participant puts into the leisure pursuit. The first characteristic is that it requires perseverance. Even though leisure is typically associated with positive feelings, in a SL pursuit there will be times where the participant will have to persevere through moments of unpleasantness or struggle. The second is that participants are likely to participate in the pursuit for long periods of time, making progress at it or making a career out of it. Third, participants of SL put in significant effort in order to participate. Participants work on developing skills, knowledge, and/or training in order to

participate (Stebbins, 1982). These three characteristics may align with a participant's ability to create a career and lifelong attachment to a leisure pursuit that may help them in their transition.

The final three characteristics of a SL pursuit the researcher hypothesizes may have the most benefit for veterans. The fourth characteristic Stebbins calls durable benefits. These benefits include aspects of recreation that are typically associated with leisure such as self-expression, recreation, and social interaction. The fifth characteristic is the development of a unique ethos around the leisure pursuit. This involves members of the same pursuit adhering to a unique set of norms, structures, and values. They develop a culture within their chosen pursuit. Finally, participants of a SL pursuit tend to identify with it. Their pursuit is not just an activity that they choose to do but rather it is a part of who they are (Stebbins, 1982). These characteristics of a leisure pursuit may align with helping participants develop and evolve their identities while aiding them in finding a new community during their transition.

Mixed Methods Rational

By utilizing a mixed methods approach, this research may benefit by gaining a deeper understanding of the participant experience and how SL may have an impact on veterans transition into the civilian world. A mixed methods approach for this research was also applicable due to the current research in the field and how the proposed quantitative instrumentation, the SLIM, was first developed.

Currently, research that investigates understanding the veterans experience tend to be studies that utilized either a qualitative design or a mixed methods design. For example, in 2018, authors Keeling and Castro explored the obstacles that veterans face when looking for employment after leaving the military. This study was achieved through focus groups. Through

these focus groups, they were able to find two overarching themes in their study: organizational and society barriers and personal barriers (Keeling & Castro, 2018). Another example of a qualitative study that has contributed to this field of research is a paper by Demers in 2011. Demers had active duty Soldiers and veterans participate in focus groups in order to gain a better understanding of the process Soldiers go through as they join the military and as they retire and how this impacts their identities as individuals (Demers, 2012). These qualitative studies provide a valuable foundation and the opportunity for this population to voice and express their concerns about this particular issue.

In 2020, researchers Forsyth and colleagues conducted a mixed methods study that researched veterans and current service members perceptions of stigma related to operational stress injuries, more specifically, those related to mental health. Through the use of a mixed methods design, they were able to use both qualitative and quantitative data to develop a better understanding (Forsyth et al., 2020). Another example of a mixed method article is of military service members' and operational stress injuries by Hawkins, Townsend, and Heath in 2018. The goal of the research was to gain a better understanding of how recreation-based military family camps helped families adjust after a deployment. This paper utilized a convergent mixed methods approach to collect data from families participating in the Family Warrior Weekend (FWW) camps. They used surveys for quantitative data and open questions for qualitative data. By merging the two data sets, they found that at certain points the two data sets agreed with each other, but at other points the data sets diverged. However, by collecting both and merging them together, the researchers were able to better understand the participant experience (Hawkins et al., 2018).

Finally, the quantitative instrument used in this research to use to collect data was originally, until 2008, considered as a qualitative idea (Gould et al., 2008). Research that studied SL typically did so through a qualitative research design. For example, in 2010, Dilley and Scranton used a qualitative approach to understand SL in female climbers. In 1999, Baldwin and Norris applied the idea of SL to the American Kennel Club and did so through a qualitative study (Dilley & Scranton, 2010; Baldwin & Norris, 1999). It was not until 2008 that a quantitative instrument was developed for the SLP, but it is often still used in conjunction with qualitative methods.

In conclusion, in order to gain the best and most thorough understanding of the participant experience with the given tools, a mixed methods design is used in this research. By collecting both quantitative and qualitative data, a more complete picture may be developed by utilizing the strengths of both data sets to investigate veterans and beekeeping as a SL pursuit.

Research Design

For this study, data was collected and analyzed utilizing the mixed methods convergent parallel design type. This design consists of four steps that allow for quantitative and qualitative data to be collected congruently and separately, data to be analyzed congruently and separately, results of both data sets to be merged, and finally merging the results during interpretation (see Figure 1) (Creswell & Clark, 2017). This design type was chosen for this research due to its efficiency as it allows the researcher to collect and analyze both quantitative and qualitative data at the same time from the research population. Even though the quantitative and the qualitative data are collected and analyzed separately, merging the results and interpretations could provide a

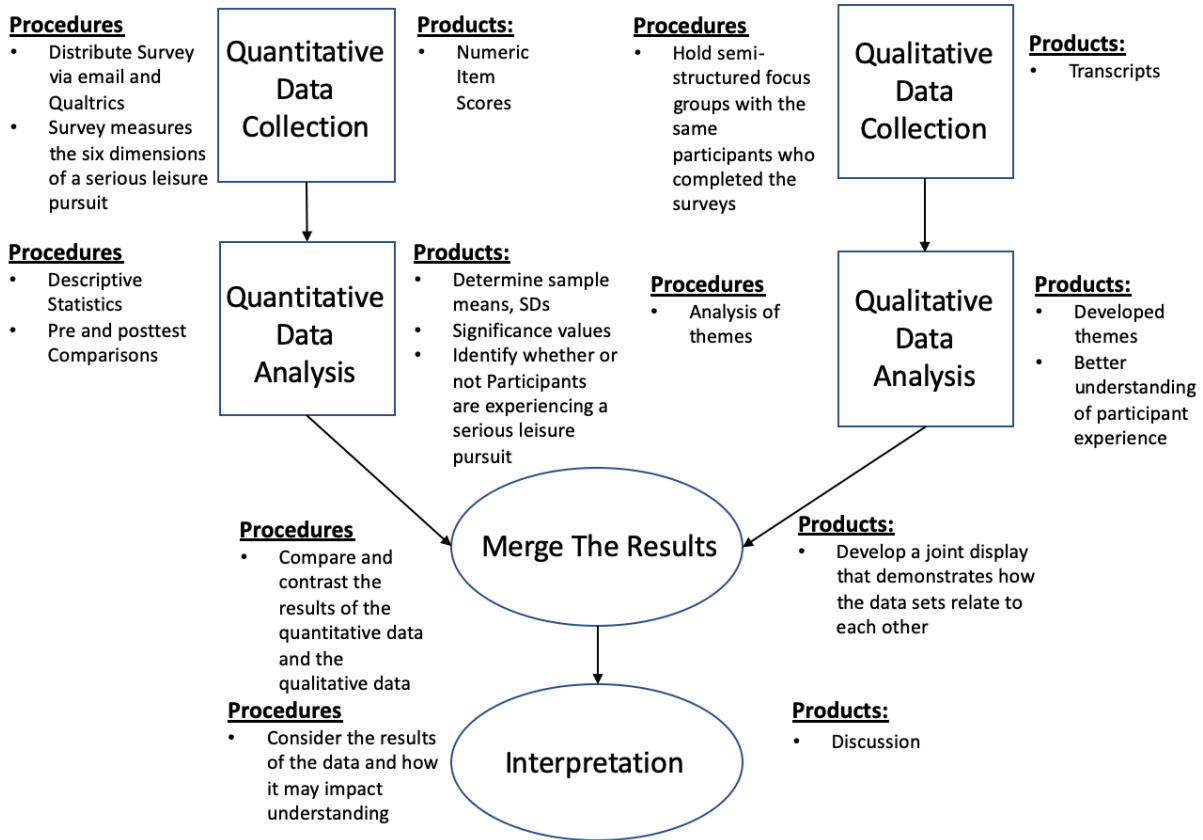
better insight into the participant experience during the study than only using quantitative or qualitative data collection.

Data for the quantitative strand was collected using the Serious Leisure Inventory and Measure (SLIM) short form (Gould et al. , 2008). Participants of the study completed the SLIM short form twice, once retrospectively to gather data about their transition experience before pursuing beekeeping and again with their current state of mind after pursuing beekeeping. This strand is designed to capture whether or not participants have developed a SL pursuit through beekeeping with the Hives for Heroes program. Data for the qualitative strand was collected shortly after the quantitative strand using semi-structured focus groups. Through these focus groups, participants were questioned about how their transition has been effected by pursuing beekeeping as a potential SL pursuit. The goal of this strand is to capture how beekeeping as a potential SL pursuit has impacted the participants transition and allow for a deeper understanding of the veteran experience. Once data from both strands were collected this research was able to determine whether or not participants are identifying with beekeeping as a SL pursuit and how this is specifically impacting their transition.

Participants for this research were members of the Hives for Heroes non-profit organization who have volunteered to participate. The research participants are veterans who are working through their transition from the military service. Surveys were distributed to participants electronically using an email with a Qualtrics link. Participants were given the SLIM to complete in order to collect quantitative data. Additionally, to collect qualitative data, participants who volunteer to participate were separated into groups based on availability, and participated in a 45-60-minute-long semi-structured focus group.

Figure 1

Mixed-Methods Research Plan



Participants

Populations

The study population for this research were veterans who are a part of the Hives for Heroes non-profit organization. Veterans include individuals who are at least 18 years or older, have served in the United States military, and have since separated.

Sample

The sample for this study was a convenience sample of veterans a part of the Hives for Heroes non-profit organization that volunteered to participate in the study. The same sample of participants were used for both the quantitative and qualitative strands of this research.

Sample Demographics

Due to the various veteran backgrounds and different levels of participation within the Hives for Heroes program this research collected specific demographic information and divided the data sample into categories. Demographic information collected include: gender, sex, age, military rank, military branch, length of service commitment, reason for separation from the service, length of time that passed between separation and joining Hives for Heroes, how long they have been a participant of the Hives for Heroes program, and if they are a NewBEE or mentor with in the Hives for Heroes program. After data was collected responses from the qualitative and quantitative strand were divided into categories including rank, branch, time commitments, separation time, and participation level.

Quantitative Strand

Data Collection

Data collection took place October 1st through November 1st. Quantitative data was collected using Qualtrics and distributed to participants by email. Each participant Completed the Serious Leisure Inventory and Measure (SLIM) short form twice. The first time the participants completed the SLIM, for a retrospective pretest- posttest design. The second time they completed

the SLIM they were asked to do so with answers that reflect their current condition after having been a participant in the beekeeping programing. This resulted in a retrospective pretest and posttest. Retrospective pretest-posttest data collection has been shown to be as accurate, as traditional pretest and posttest data collecting, however this method has the added benefit of ensuring that the same participant who started a pretest also started a posttest (Little et al., 2020). Finally, according to Little et al, retrospective pretest-posttest data collection has shown to yield more accurate changes and reduce bias (Little et al., 2020). The sample size for this strand was expected to be at least 150 participants, which provides enough data points for a robust data set (Kim et al., 2010). Although 150 participants is considered adequate, this research will be grouping responses into categories in order to compare different veteran backgrounds and experiences. As a result, the sample sizes for each group may differ.

Instrumentation

For this research, the Serious Leisure Inventory and Measure (SLIM) was given to the participants twice to gather data on their experiences. The SLIM asks participants questions about their leisure pursuits and utilizes Likert scales to measure the extent of which a participant either agrees or disagrees with the statement. The first hypotheses of this research is as follows: Participants of this study will identify with Serious Leisure according to the SLIM by reporting a score of 4 or higher.

To process this data, a Kruskal-Wallis was ran and the averages of participant responses were compared. The following questions were grouped together based on the dimensions they measured. Questions 1-3 measured for perseverance, questions 4-6 measured effort, questions 7-9 measured career progress, questions 10-12 measured career contingencies, questions 13-15

measured personal enrichment, questions 16-18 measured self-actualizations, questions 19-21 measured self-expressed abilities, questions 22-24 measured self-expressed individual, questions 25-27 measured self-image, questions 28-30 measured self-grat-satisfaction, questions 31-33 measured self-grat-enjoy, questions 34-36 measured re-creation, questions 37-39 measured financial return, questions 40-42 measured group attraction, questions 43-45 measured group accomplishments, questions 46-48 measured group maintenance, questions 49-51 measured unique ethos, and questions 52-54 measured identity.

As mentioned, the SLIM (see appendix A) (Gould et al., 2008) was the instrument used to collect data for the quantitative strand of this research. The SLIM was developed in order to measure the six qualities of a SLP in an individual. The SLIM accomplishes this by measuring 18 dimensions within those qualities. The SLIM is comprised of Likert Scaled questions that range from 1-9, 1 being Completely Agree and 9 being Completely Disagree. There are two versions of the SLIM, a 72-item version and a short form that has 54 items. This research will be utilizing the short form with 54 items in an attempt to reduce survey fatigue. The SLIM Short Form has 3 questions for each dimension measures. When tested the SLIM was noted as having “strong support for the reliability and validity including a Confirmatory Factor Analysis (CFA) model used and indicated a good fit, “Overall, these indicators of construct validity demonstrate that ... (the) scale is quantifying distinct components of the serious leisure framework” (Gould et al., 2008, p. 62). In addition to construct validity, “Convergent validity was demonstrated by the strength of AVE values and loadings. Discriminant validity was evidenced by the number of significant differences from 1 among factor correlations” (Gould et al., 2008, p. 62).

Data Analysis

After data was collected, SPSS was used to run descriptive statistic in order to develop a profile of participants. Furthermore, this study then compared the pretest and posttest to determine to what degree, if any, development of a SLP among participants occurred. To determine whether or not participants are identifying with a SLP they will have had to respond with a 4 or higher to the questions on the SLIM. To identify any differences a Kruskal-Wallis was used and the averages of participant responses from the before group and after group we calculated and then compared. An Alpha of .95 was used.

Qualitative Strand

Data Collection

Qualitative data was collected using semi-structured focus groups. Data collection took place November 10th through November 15th. Participants of the qualitative strand came from the same sample as the quantitative strand. This means that in order to participate in the focus groups, participants needed to also complete the SLIM short form. An invitation to participate in the semi-structured focus groups was included in the same email that is distributed through the Hives for Heroes email lists calling for participants. The semi-structured focus groups were recorded using an audio recorder as well as notes taken by the researcher. Focus groups were conducted using a pragmatic interview approach. This interview approach utilizes questions that are designed to gather information about the specific problem in order to gain practical insight (Patton, 2002). The sample size for this strand was expected to be 10-25 participants. The semi-structured focus groups were expected to last between 40-60 minutes.

Instrumentation

The questions developed for the semi-structured Focus Groups were reviewed by a committee made up of professors and Hives for Heroes leaders to ensure that the questions were relevant to the participants experience as members of the Hives for Heroes Non-profit organization during their transition. Questions were formulated to gather information about how participants identity, community, and support systems may have been impacted by their participation in the Hives for Heroes program.

To begin the semi-structured focus groups ,questions were asked about how they were introduced to Hives for Heroes and their experiences so far. These questions include: How did you first learn about beekeeping? How did you get started after learning about beekeeping?

Questions that pertain to how the participants' identify has been impacted include the following: How would you define your identity? What type of leisure and recreation did you engage in before beekeeping? How has this (leisure and recreation) changed since engaging in beekeeping?

Questions that investigate how participating in Hives for Heroes has impacted the participants' community include the following: How have your relationships with the community changed since beekeeping? How long have you been a beekeeper?

To investigate how participating in Hives for Heroes has impacted the participants' support the following questions were used: What aspects do you enjoy most about beekeeping and why? What aspects do you find most challenging about beekeeping and why?

Finally, the following questions were used to inquire about how the participants believe their participation in the Hives for Heroes program has impacted their lives: How has beekeeping impacted your life? How has beekeeping impacted your transition from military service to civilian life?

Data Analysis

Once data was collected, audio recordings were transcribed and coded in order to identify and develop themes that may have occurred. Coding is the process of analyzing qualitative data. Through coding, labels are assigned to significant words and phrases in order to better organize and categorize key themes (Miles et al., 2014). During the coding process Grounded theory and methods were utilized. This theory allows the researcher to study and create theory from the data that was provided. Codes and themes are grounded in the data set (Saldaña, 2021). Once the data was coded and themes were identified, the themes were organized and compared against existing literature. Findings were summarized using a visual diagram.

The first step of analyzing the semi-structured transcripts was breaking the transcripts into sections during a pre-coding process. Each question asked represented a separate section of data collected. This allowed the researcher to individually review each section and prepare them for coding. During this step, significant phrases, words, and topics were highlighted and marked for further review.

During the second step or the first cycle of coding, the data was coded inductively. This means that the researcher did not have a predetermined list of codes but instead reviewed the data and developed a code as the data presents itself (Saldaña, 2021). Additionally, during this

step, a codebook was developed to begin organizing words and phrases and their respective codes. The codebook includes a description of the code and examples of what does and does not qualify data to merit the code (Saldaña, 2021). During the first cycle of coding, In Vivo coding will be utilized. In Vivo coding is ideal for researchers who are beginners at coding as well as has an emphasis on the participants voice. Through In Vivo coding participants true meanings and expressions are preserved ((Miles et al., 2014 & Saldaña, 2021).

During the second cycle of coding, Theoretical Coding will be used. In order to transition from In Vivo coding to Theoretical coding, codes developed from the first cycle were organized into categories. Once codes were placed into their perspective category, Theoretical coding was be used to identify the core category and establish how minor categories work within in the system to support or explain the core category (Saldaña, 2021). Once second cycle coding was complete, a visual diagram was used to display the core category and supporting categories.

Mixed Method

This research is using a convergent parallel mixed methods design. There are several validity threats that need to be considered when merging data. The first validity threat that should be considered is not working with parallel concepts between the quantitative and the qualitative strands. To ensure that that both strands of this research are testing for the same concepts, instruments and questions within each strand have been designed to address the specific hypotheses and research question of this research. This research utilized a joint display to confirm that the two data sets are working in parallel. Finally, when results from both strands of

data do not agree after merging, a process of data review will be implemented to locate the disconnect and address the points of diversion.

Potential Ethical Issues

The participants of this research may include disabled veterans. This means that this research is working with a special population. In order to ensure that this research did not cause any harm to the participants, this research was reviewed by the Oklahoma State University Institutional Review Board for approval. Additionally, this research needed to protect the identities of its participants. Any identifiable information that could be connected to the participants was removed. All surveys and interview materials were kept on computers that are secured with passwords and kept in offices with a locked door and in a desk with a lock.

Researchers Skills

To prepare for this study the researcher participated in several trainings. The researcher has completed the necessary Oklahoma State University IRB Modules for working with the population outlined in this study. Finally, because this research involved participants that are veterans with potential mental health disabilities, the researcher participated and completed a Mental Health First Aid certification with a focus in Veteran's needs. Additionally, the researcher developed qualitative and quantitative data collection and analysis skills through multiple research methods courses and review of literacy.

CHAPTER IV

FINDINGS

Overview

The goal of this research was to determine if Beekeeping as a Serious Leisure Pursuit could be used as a tool to help veterans transition into the civilian realm after separating from the military. To collect data, a mixed methods convergent parallel design type was used. A sample size of 37 respondents completed questionnaires for the quantitative strand and four focus group responses were collected for the qualitative strand. Statistics of central tendencies were used to develop a profile of the study respondents.

For the quantitative strand of this research, participants were asked to complete the Serious Leisure Inventory and Measure (SLIM) Short Form twice, retrospectively answering for their time before their participation with Hives for Heroes and then again with answers that align with their current state. This resulted in collecting two data groups for the qualitative strand. To compare these two groups, the averages of participant responses were compared.

To analyze the qualitative strand, the data collected was pre-coded and then went through two cycles of coding. To prepare the data for formal coding, the transcripts were divided into sections that connected to the questions. During that process, significant phrases and words were marked for further review. After the data was divided, In Vivo coding was used to develop a code book and identify key words and phrases. The final step of coding used is Theoretical Coding (Saldaña, 2021). The purpose of this coding was to identify the major and minor

categories that were developed from the data. To display the findings from this data, a visual diagram was created.

To integrate the two data sets, the qualitative data was compared to the quantitative data. This was accomplished by comparing to the themes of the qualitative data to the qualities of the quantitative data. A joint display was created to report the comparisons.

Demographics

Of the sample collected, 75.76% identified their gender as male, 21.21% identified female, and 3.03% identified as other. Similarly, 76.47% identified their sex as male, 20.59% identified as female, and 2.94% identified as other (see Table 1).

Table 1
Reported Gender and Sex of Respondents

Category	Gender	Sex
Male	75.76%	76.47%
Female	21.21%	20.59%
Other	3.03%	2.94%
N=37		

The reported ages of the sample are as followed: 0% reported being between the ages of 18 – 20, and 26 – 30; 2.86% reported being between the ages of 21 – 25; 5.71% reported being between the ages of 31 and 35, 11.43% reported being between the ages of 36 and 40; 2.85% fell between the ages of 41- 45; 11.43% fell between the ages 46 – 50; 17.14% fell between the ages of 51 – 55; 25.71% reported being between the ages of 56-60, and 22.86% reported being 61 or older (see Table 2).

Table 2
Reported Ages of Respondents

Age Range	Percentage
18-20	0.00%
21-25	2.86%
26-30	0.00%
31-35	5.71%
36-40	11.43%
41-45	2.86%
46-50	11.43%
51-55	17.14%
56-60	25.71%
61 <	22.86%
N=37	

When asked about ethnicity, 64.71% identified their ethnicity as European American, 14.81% as Native American, 8.82% as Hispanic or Latino American, and 0% as African American, Asian American, and Middle Eastern American, and 11.76% as other (see Table 3).

Table 3
Reported Ethnicities of Respondents

Ethnicity	Percentage
European American	64.71%
African American	0.00%
Asian American	0.00%
Native American	14.71%
Hispanic or Latino American	8.82%
Middle Eastern American	0.00%
Other	11.76%
N=37	

When asked about race, 82.35% identified as white; 11.76% identified as American Indian/ Alaskan Native; 0.00% identified as African American, Asian, Native Hawaiian or Pacific Islander; and 5.88% as others (see Table 4).

Table 4
Reported Race of Respondents

Race	Percentage
White	82.35%
African American	0.00%
American Indian / Alaskan Native	11.76%
Asian	0.00%
Native Hawaiian or Pacific Islander	0.00%
Other	5.88%
N=37	

Of the sample collected, respondents reported residing in each of the following states: Alabama, Arizona, Colorado, Connecticut, Illinois, Louisiana, Mississippi, New Mexico, New York, North Carolina, Oklahoma, Pennsylvania, and Wisconsin. Of the respondents, 5.71% reported residing in Alaska, Florida, Idaho, and Tennessee. Additionally, 8.57% of participants reported residing in Georgia and Virginia. Missouri and Texas had 11.43% of participants. Finally, each of the remaining states of the United States had 0.00% of participants reporting to reside in them (see Table 5).

Table 5
Reported State of residence of Respondents

State	Percentage (Per Listed State)
Alabama, Arizona, Colorado, Connecticut, Illinois, Louisiana, Mississippi, New Mexico, New York, North Carolina, Oklahoma, Pennsylvania, and Wisconsin	2.86%
Alaska, Florida, Idaho, and Tennessee	5.71%
Georgia and Virginia	8.57%
Missouri and Texas	11.43%
Remaining States	0.00%
N=37	

When asked about military background, the following data was collected. Of the sample collected, 47.06% reported serving in the Army, 8.82% in the Air Force, 26.47% in the Navy, 2.94% in the Coast Guard, and 14.71% in the Marines (see Table 6).

Table 6
Participants Reported Military Branch

Branch	Percentage
Army	47.06%
Air Force	8.82%
Navy	26.47%
Coast Guard	2.94%
Marines	14.71%
N=37	

The following answers were reported when asked about how long each participant served before separating from the military: a service of 5 years or less was reported by 35.29% of participants, a service of 6-10 years by 17.65%, a service of 11-15 years by 2.94%, a service of 16-20 years by 17.65%, and a service of 21 years or more by 26.47% of participants (see Table 7).

Table 7
Time Spent in the Military before Separating

Time Span	Percentage
> 5	35.29%
6-10	17.65%
11-15	2.94%
16-20	17.65%
21 <	26.47%
N=37	

As a whole, the average member of this population could be described as primarily male, over the age of 30, identifying as white, European Americans, living primarily in southern states,

primarily veterans of the Army and Navy, and having served either 5 or fewer years or 16+ years before separating from the military.

Quantitative Analysis

A Kruskal-Wallis test was ran to determine if there were any statistically significant differences between the pre and post group. This test revealed that there were not any statistically significant differences. However, for each question, the averages of responses for both the before and after group were above four, except for the dimension that measures financial return, which had an average of 3 or lower. According to the hypothesis, this indicates that participants were identifying with a SLP before participating in the Hives For Heroes network. However, the averages of responses do indicate that after participating, there was an increase in identification with a SLP.

The first grouping of questions measures the perseverance dimension. This dimension measures a person's commitment to leisure pursuit despite obstacles (Gould et al., 2008). Perseverance was measured through questions that asked the participants if they persisted with their leisure pursuit despite obstacles (Q1.1), adversity (Q1.2), and difficulties (Q1.3). According to the results of the SLIM, participants, on average, were already scoring above 4. However, for each question there was an increase in averages between the before and after responses. Question 1.1 had an increase from 7.82 to 8.33, question 1.2 had an increase from 7.24 to 8.00, and question 1.3 went from 7.69 to 7.77 (see Table 8). The second grouping of questions measures the effort that participants apply to their SLP (Gould et al., 2008). This dimension was measured through questions that asked the participants whether or not they tried hard (Q2.1), practiced (Q2.2), and exerted effort (Q2.3) for their leisure pursuit. This dimension

increased as well. Question 2.1 went from 8.29 to 8.50, question 2.2 went from 8.24 to 8.42, and question 2.3 increased from 8.18 to 8.50 (see Table 9). Although none of the questions showed a statistically significant difference, all of the questions had a higher post response average.

Table 8
Averages of Perseverance

Group	Q1.1	SD	Q1.2	SD	Q1.3	SD
Before	7.82	1.82	7.24	1.96	7.69	1.86
After	8.33	1.56	8.00	1.21	7.77	1.36
	+0.51		+0.58		+0.08	
N=37						

Table 9
Averages Effort Dimensions

Group	Q2.1	SD	Q2.2	SD	Q2.3	SD
Before	8.29	1.21	8.24	1.20	8.18	1.24
After	8.50	1.17	8.42	1.17	8.50	1.17
	+0.21		+0.18			-0.07
N=37						

The group of questions that measures a participant's development of skills for their SLP throughout their pursuit is known as career progress (Gould et al., 2008). This dimension was measured through questions that ask participants if they have improved (Q3.1, Q3.2) or made progress (Q3.3) at their leisure pursuit. Within this dimension question 3.1 increased from 7.41 to 8.33, question 3.2 increased from 7.94 to 8.33, and Question 3.3 increased from 7.88 to 8.33 (see Table 10). The dimension that measures a participant's stages of progress and awards is known as career contingencies (Gould et al., 2008). This dimension was measured through questions that asked the participants if certain events have influenced their involvement (Q4.1), if they had any defining moments (Q4.2), and if they had certain high and low points that defined their involvement (Q4.3). Within this dimension, question 4.1 increased from 6.71 to 7.75,

question 4.2 increased from 7.29 to 7.83, and question 4.3 increased from 7.18 to 7.58 (see Table 11). Although none of the questions showed a statistically significant difference, all of the questions had a higher post response average.

Table 10
Averages of Career Progress

Group	Q3.1	SD	Q3.2	SD	Q3.3	SD
Before	7.41	2.03	7.94	1.39	7.88	1.41
After	8.33	1.23	8.33	1.23	8.33	1.23
	+0.92		+0.39		+0.45	
N=37						

Table 11
Averages and Career Contingencies

Group	Q4.1	SD	Q4.2	SD	Q4.3	SD
Before	6.71	2.02	7.29	1.57	7.18	1.70
After	7.75	1.54	7.83	1.47	7.58	1.62
	+1.04		+0.54		+0.40	
N=37						

Personal Enrichment and Self-Actualization are the next two dimensions that the SLIM identifies, and they measure durable outcomes from a SLP (Gould et al., 2008). The personal enrichment dimension was measure through questions that asked participants if they had been enriched (Q5.1) and if they felt that riches was added to their lives (Q5.2, Q5.3). Within the personal enrichment, question 5.1 had an increase from 8.12 to 8.17, question 5.2 had an increase from 8.00 to 8.17, and question 5.3 increased from 8.06 to 8.17 (see Table 12). self-actualization dimension was measured through questions that asked the participant if they used their full talent (Q6.1), reached their full potential (Q6.2), and were able to realize their potentials (Q6.3). Within the self-actualization dimension, question 6.1 had an increase from 6.71 to 7.75, question 6.2 increased from 7.29 to 7.83, and question 6.3 increased from 7.18 to 7.58 (see Table 13).

Although none of the questions showed a statistically significant difference, all of the questions had a higher post response average.

Table 12
Averages of Personal Enrichment

Group	Q5.1	SD	Q5.2	SD	Q5.3	SD
Before	8.12	1.05	8.00	1.28	8.06	1.30
After	8.17	1.19	8.17	1.19	8.17	1.19
	+0.05		+0.17		+0.11	
N=37						

Table 13
Averages Self-Actualization

Group	Q6.1	SD	Q6.2	SD	Q6.3	SD
Before	6.71	1.66	7.29	2.50	7.18	2.03
After	7.75	1.17	7.83	1.80	7.58	1.44
	+1.04		+0.54		+0.40	
N=37						

The dimensions that measure self-expression are done through the questions that ask the participants if they could display their skills and abilities (Q7.1), if they could demonstrate their abilities (Q7.2), and if their knowledge was evident (Q7.3). The dimension that measures self-expression abilities had an increase. Question 7.1 increased from 7.59 to 7.58, question 7.1 increased from 7.47 to 7.58, and question 7.3 increased 7.12 to 7.58 (see Table 14). The dimension that measures how participants self-express as an individual was measured through questions that asked participants if they could express themselves through their leisure pursuit (Q8.1, Q8.2, Q8.3). This dimension showed both a decrease and increase in the averages. However, all three questions still reported averages above 4. Question 8.1 decreased from 7.41 to 6.92, question 8.2 decreased from 6.94 to 6.75, and question 8.3 decreased from 7.00 to 6.67 (see Table 15).

Table 14
Averages of Self-Express Abilities

Group	Q7.1	SD	Q7.2	SD	Q7.3	SD
Before	7.59	1.37	7.47	1.55	7.12	2.09
After	7.58	1.31	7.58	1.24	7.58	1.17
	-0.02		+0.11		+0.46	
N=37						

Table 15
Averages Self-Express Individual

Group	Q8.1	SD	Q8.2	SD	Q8.3	SD
Before	7.41	2.21	6.94	2.56	7.00	2.45
After	6.92	2.23	6.75	2.26	6.67	2.35
	-0.49		-0.19		-0.33	
N=37						

The self-image and self-grat-satisfaction dimensions are measured through questions 9 and 10 of the SLIM. The self-image dimension was measured through questions that asked the participants if their self-image had improved (Q9.1), enhanced (Q9.2), and if the way they thought of themselves had improved (Q9.3). Within the dimension self-image, all three questions showed a decrease from the before and after group. Question 9.1 decreased from 6.35 to 6.33, question 9.2 decreased from 6.53 to 6.33, and question 9.3 decreased from 6.41 to 6.33. Again, even though there was a decrease, both groups reported higher than an average of 4 (see Table 16). The self-grat-satisfaction dimension was measured through questions that asked of the participant received a profound sense of satisfaction (Q10.1), if their experiences were gratifying (Q10.2), and if their leisure pursuit was gratifying (Q10.3). Within the dimension, self-grat-satisfaction two of the question decreased and one question increased. Question 10.1 decreased from 7.94 to 7.92, question 10.2 increased from 7.76 to 7.92, and question 10.3 showed a decrease from 7.94 to 7.83 (see Table 17).

Table 16
Averages of Self-Image

Group	Q9.1	SD	Q9.2	SD	Q9.3	SD
Before	6.35	2.23	6.53	2.29	6.41	2.35
After	6.33	2.61	6.33	2.61	6.33	2.61
	-0.02		-0.2		-0.08	
N=37						

Table 17
Averages of Self-Grat-Satisfaction

Group	Q10.1	SD	Q10.2	SD	Q10.3	SD
Before	7.94	1.44	7.76	1.68	7.94	1.64
After	7.92	1.24	7.92	1.24	7.83	1.27
	-0.02		+0.16		-0.11	
N=37						

The dimensions Self-Grat-Enjoy and Re-Creation were measure with questions 11 and 12. These dimensions both reported averages above 4 however there were increases and decreases across individual questions. Self-grat-enjoy was measured through questions that asked the participant if their leisure pursuit was enjoyable (Q11.1, Q11.3) and fun (Q11.2). The re-creation dimension was measure through questions that asked the participant if they felt renewed (Q12.1), revitalized (Q12.2), and invigorated (Q12.3). Within self-grat-enjoy, question 11.1 increased from 8.29 to 8.33, question 11.2 showed a decrease from 8.41 to 8.33, and question 11.3 had a decrease from 8.41 to 8.25 (see Table 18). Within the dimension re-creation, question 12.1 had an increase from 7.41 to 7.42, question 12.2 had a decrease from 7.59 to 7.42, and question 12.3 showed a decrease from 7.82 to 7.58 (see Table 19).

Table 18
Averages of Self-Grat-Enjoy

Group	Q11.1	SD	Q11.2	SD	Q11.3	SD
Before	8.29	1.21	8.41	1.06	8.41	1.06
After	8.33	1.23	8.33	1.23	8.25	1.21
	+0.04		-0.08		-0.16	
N=37						

Table 19
Averages of Re-creation

Group	Q12.1	SD	Q12.2	SD	Q12.3	SD
Before	7.41	1.91	7.59	1.84	7.82	1.29
After	7.42	1.73	7.42	1.73	7.58	1.73
	+0.01		-0.17		-0.24	
N=37						

The dimension financial return measures the income that a participant makes from their SLP (Gould et al., 2008). This dimension was measured through questions that asked the participants if they have financially benefited (Q13.1), received payments (Q13.2), or monetary compensation (Q13.3). that This is the only dimension that reported an average that is below 4 for both the before and after group. Additionally, two of the three questions did observe an increase. Question 13.1 had an increase from 3.00 to 3.17, question 13.2 showed a decrease from 2.53 to 2.42, and question 13.3 had an increase from 2.24 to 2.42 (see Table 20).

Table 20
Averages of Financial Return

Group	Q13.1	SD	Q13.2	SD	Q13.3	SD
Before	3.00	1.87	2.53	2.10	2.24	1.89
After	3.17	2.17	2.42	2.23	2.42	2.23
	+0.17		-0.11		+0.18	
N=37						

The group attraction dimension was measured through questions that asked if participants enjoyed interacting with other enthusiasts (Q14.1), valued interacting with others (Q14.2), and preferred to associate with those of the same leisure pursuit (Q14.3). The dimension group attraction demonstrated an increase in averages however, the dimension group accomplishment had a decrease. Question 14.1 increased from 7.12 to 7.67, question 14.2 increased from 7.29 to 7.67, and question 14.3 had an increase in averages from 6.41 to 7.08 (see Table 21). The group accomplishment dimension was measured through questions that asked the participants if a sense of group accomplishment is important (Q15.1), if helping the group accomplish something makes them feel important (Q15.2), and if they feel important being a part of the groups accomplishments (Q15.3). Question 15.1 decreased from 6.53 to 6.50, question 15.2 decreased from 6.24 to 6.17, and question 15.3 decreased from 6.00 to 5.92 (see Table 22). Even though the averages fell both sets of averages are still above the threshold to be considered a SLP.

Table 21
Averages of Group Attraction

Group	Q14.1	SD	Q14.2	SD	Q14.3	SD
Before	7.12	2.06	7.29	1.96	6.41	2.18
After	7.67	1.56	7.67	1.56	7.08	1.78
	+0.55		+0.38		+0.67	
N=37						

Table 22
Averages of Group Accomplishments

Group	Q15.1	SD	Q15.2	SD	Q15.3	SD
Before	6.53	2.00	6.24	2.05	6.00	2.42
After	6.50	1.98	6.17	2.21	5.92	2.35
	-0.03		-0.07		-0.08	
N=37						

Group maintenance and unique ethos were measured with question 16 and 17. The group maintenance dimension was measured through questions that asked the participants if the development of their group was important (Q16.1), if they contribute to the unification of the group (Q16.2), and if they felt it was important to perform duties to unify the group (Q16.3). The unique ethos dimension was measured through questions that asked the participants if they shared sentiments with the group (Q17.1) and ideals (Q17.2, Q17.3). Question 16.1 decreased from 6.82 to 6.58, question 16.2 increased from 6.06 to 6.58, and question 16.3 increased from 6.18 to 6.60 (see Table 23). Additionally, question 17.1 increased from 6.88 to 6.92, question 17.2 increased from 6.76 to 6.92, and question 17.3 increased from 7.00 to 7.17 (see Table 24).

Table 23
Averages of Group Maintenance

Group	Q16.1	SD	Q16.2	SD	Q16.3	SD
Before	6.82	2.19	6.06	2.16	6.18	2.13
After	6.58	2.23	6.58	2.50	6.60	2.43
	-0.24		+0.52		+0.42	
N=37						

Table 24
Averages of Unique Ethos

Group	Q17.1	SD	Q17.2	SD	Q17.3	SD
Before	6.88	2.06	6.76	2.05	7.00	2.06
After	6.92	1.62	6.92	1.73	7.17	1.64
	+0.04		+0.16		+0.17	
N=37						

The final dimension measured with the SLIM is identity. The identity dimension was measured through questions that asked participants if others knew that their leisure pursuit was a part of who they were (Q18.1), if they were recognized by their leisure pursuit (Q18.2), and if others recognized that they identified with their leisure pursuit (Q18.3). This dimension is

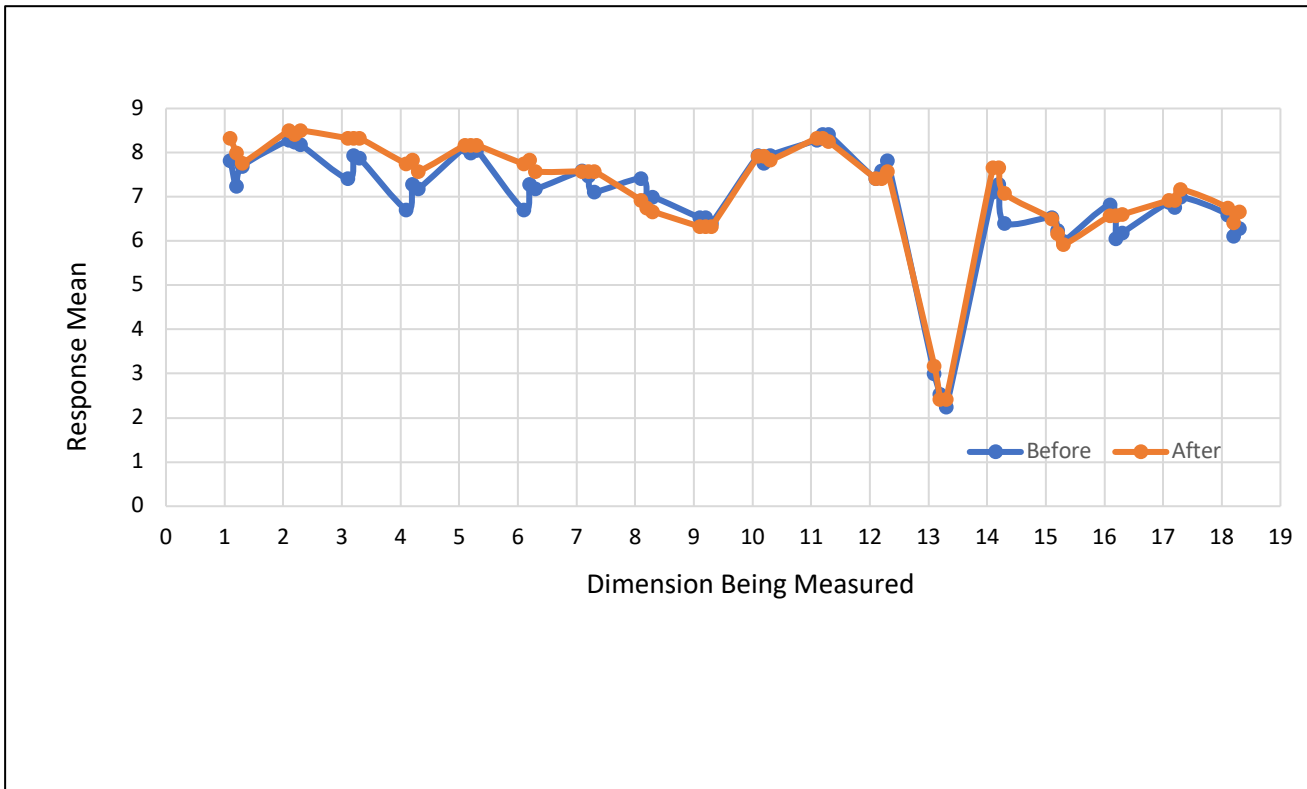
measured with question 18 and increased between the before group and after group. Question 18.1 increased from 6.59 to 6.75, question 18.2 increased from 6.12 to 6.42, and question 18.3 increased from 6.29 to 6.67 (see Table 25) Within the identity dimension, participants may have already had a SLP identity related to Hives for Heroes because of its connection to separated military, because they responded to the “before” as meaning after they were in the community but before caring for bees, because Hives for Heroes was introduced to them as a part of another group that was creating that identity, or a combination of one or more of these. However, all items showed an increase.

Table 25
Averages of Identity

Group	Q18.1	SD	Q18.2	SD	Q18.3	SD
Before	6.59	1.87	6.12	1.97	6.29	1.99
After	6.75	1.36	6.42	1.62	6.67	1.67
	+0.16		+0.30		+0.38	
N=37						

After comparing the means of the before and after groups a trend can be observed (see Figure 1). The hypotheses for the quantitative data state that participants of the research will identify with a SLP if they scored an average of 4 or higher on the question. As mentioned the SLIM is comprised of 54 questions that measure 18 dimensions of a SLP. Each question is a 9 point Likert scale with 1 representing completely disagree and 9 representing completely agree. On all but one dimension, financial return, the average response for the before group was 7.26 and the average response for the after group was 7.45 This indicates that before committing to the Hives For Heroes Network, participants were already identifying with a SLP and this identification strengthened after participation. In conclusion, this research rejects the null for the first hypothesis.

Figure 2
SLIM Response Means



Qualitative Analysis

To collect data for the qualitative strand, participants that had completed the SLIM were asked if they would participate in a focus group. Those who agreed to participate were contacted via their email and asked to participate again and given a zoom link. After all participants had signed on to the zoom, the focus group questions were asked and discussed. The focus group was recorded and then transcribed. Additionally, some participants choose to privately respond to questions via email and not with a group. Those responses were also compiled with the focus group responses. This has resulted in four respondents.

The first step in processing the qualitative data is pre-coding. During this step, data is divided into sections that aligned with the questions asked. During this process, any significant words or phrases were marked to be considered further. These words and phrases were compiled and set aside for the development of codes. At the end of the pre-coding step, 22 phrases were set aside for review (see Table 18).

The first cycle of coding used is In-Vivo coding. In-Vivo coding allows codes to be developed directly from the words used by the participants. This allows the for the true intentions of the participants to be preserved (Saldaña, 2021). The codes collected were compiled into a code book (see Table 18). In this process, 27 codes were identified. To transition into second coding, the 27 codes were put into alphabetical order and then put into groups. The process of putting the codes in alphabetical order allowed the researcher to look at the codes objectively and to form groupings that were related to the presented codes themselves and not the questions asked during the focus groups.

Table 26*First Cycle Coding*

Text	First Cycle In-Vivo Coding
Well I've been pretty inquisitive about a lot of things all my life, and outdoors things particularly interest me so that's why what piqued something in me to get going	Interests me
I think it really kind of taught a lot of patients and stuff	Taught a lot of patients
They're just angry and stuff like that but as long as you kind of go slow and have a plan, know what to do	Go slow and have a plan
You didn't have to worry about anything else	didn't have to worry
It appears to be a lot more complex than I thought it was going to be at first, but I'm still going to go ahead with it	More Complex, Still going to go ahead with it
It was a steep learning curve when I thought it was going to be very simple	Steep learning curve
So, kind of stuff like that is what I found, kind of the most challenging I guess I was amazed at the complexity	challenging, amazed at the complexity
A steep learning curve it is very complex like you. As before I was originally thinking that, but I love it, I mean, I don't know why I didn't do it sooner. It's been amazing this first year	Steep learning curve, love it
It's mostly social activities now lunches and things like that	Social Activities
I would say a little bit more social as well because every weekend	more social
We've had something every week weekend probably since I would say probably about June, and because she keeps bringing on additional veterans are they keep matching her and stuff. I've got to know like a few more people. She's very active kind of in the beekeeping community around here so she's taken us to different events I have helped her out	Community
She's introduced me to some of her friends I do beekeeping with	Introduced me to some of her friends
It's been a long time since I've learned much get a lot of learning back in the Air Force did quite well I think, and I'm really pleased with getting back into something that's education that involves education, learning something	been a long time since I've learned
I think it's just helped to meet a few new people and a few new veterans	meet a few new people
I think it's really kind of opened me up to a lot of things that I wouldn't have normally been exposed to at this time	opened me up
My bees are a passion - I have spent way too much money, time and energy to call it an interest or a business. I love my bees in the way I love my dog	My bees are my passion
I could see how this might be very useful to people that are initially transitioning to be one of the things that will help them get back to what they did before	very useful, initially transitioning, get back to what they did before
I do think it would be beneficial though if this was offered immediately after tended to get interested to do it	beneficial
In general, first so when you have a common interest like this, outside of the military. It's really been, it's been a good learning experience and being able to interact with other people so I think it's been good	common interest, interact with other people
I can learn for the people from whom I can learn more	learn from people
I think some of this is just kind of the who my mentor was and how involved she is and what she tries to bring for and what she wants us to do as well so she kind of really brings out a lot	mentor
Hopefully I mean it helps somebody else want to get involved and relaxes them or does whatever so I think it has greatly made me more social than I originally anticipated	greatly made me more social

The transition process between first and second cycle coding included grouping related codes into categories. These categories were developed based on the relationships that the codes presented. At the end of the transition process, 5 categories of codes were developed (see Table 19).

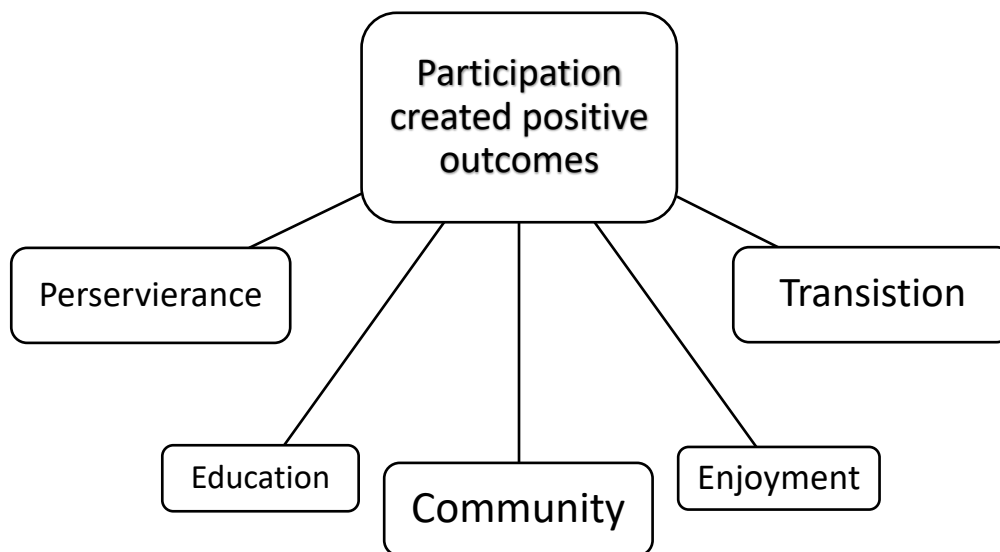
Table 27

Grouping of Codes

Codes	Categories
Interests me, common interest, love it, very useful, beneficial, Didn't have to worry, My bees are my passion, Opened me up	Enjoyment
Amazed at the complexity, been a long time since I've learned	Education
Challenging, Go slow and have a plan, More Complex, Still going to go ahead with it	Perseverance
Community, Greatly made me more social, Interact with other people, Introduced me to some of her friends, Meet a few new people, More social, Social Activities	Community
Get back to what they did before, Initially transitioning	Transition

The second cycle coding method that this research used was theoretical coding. Theoretical coding allows for categories to be compared in order to determine what themes brings them to together (Saldaña, 2021). This cycle of coding resulted in an overarching theme that better explains the experience of veterans who participate in beekeeping through the Hives for Heroes Network as well as supporting categories. The minor categories Perseverance, Education, Community, Enjoyment, and Transition represent codes that captured how beekeeping has helped veterans after separating from the military (see Figure 3). Research has shown that beekeeping has helped in developing a community, persevering in the face of obstacles, and other mental health benefits (Duarte Alonso, et al., 2020). This research supports the idea that beekeeping can be useful for transitioning veterans as well.

Figure 3
Theoretical Concept



The hypothesis for the qualitative strand states that participants of this study will express positive changes of identity, community, and/or support from participating in the Hives for Heroes network. According to the analyzed qualitative data, this research is able to reject the null of hypotheses 2, 3, and 4.

The coded data revealed evidence to support the hypothesis that veterans who participate in the Hives for Heroes Network will express positive changes in identity, community, and support. For example, a participant, when speaking about their mentor and the community she created stated:

“We've had something every weekend probably since I would say probably about June, and because she keeps bringing on additional veterans, they keep matching her and stuff, I've got to know like a few more people. She's very active kind of in the beekeeping community around here so she's taken us to different events I have helped her out”

Furthermore, a participant, when speaking about their ability to meet and find others who had similar interest, stated:

“When you have a common interest like this, outside of the military. It's really been, it's been a good learning experience and being able to interact with other people, so I think it's been good.”

When it comes to the hypotheses that veterans would be able to express positive changes on support, this research finds evidence to support this hypothesis as well. For example, a participant spoke on how they are able to learn and lean on others within the network.

“I can learn for the people from whom I can learn more.”

“I think some of this is just kind of the who my mentor was and how involved she is and what she tries to bring for and what she wants us to do as well so she kind of really brings out a lot.”

Finally, when this research looks at how participant identity may have been impacted by the Hives for Heroes Network, there is evidence to support positive changes. For example, a participant spoke about veterans getting back to who they were before the military and separating.

“I could see how this might be very useful to people that are initially transitioning to be one of the things that will help them get back to what they did before.”

In conclusion, when looking at the qualitative data, the participants of this study did express positive changes in support, community, and identity. This is also supported by the themes developed from the coding process of the qualitative data. The overarching theme of beekeeping being a transition tool for veterans also supports rejecting the null of these hypotheses.

Mixed Methods

To interpret the two data sets and integrate them, a joint display was developed. This joint display compares and contrasts the themes and patterns of both the qualitative and quantitative data against each other in order to piece together a more complete picture. The purpose of the quantitative strand of this research was to test whether participants of the Hives for Heroes Network identified with a SLP. Furthermore, the qualitative strand sought to investigate how Beekeeping through the Hives for Heroes Network may have impacted their transition from the military to the civilian world. The mixed methods hypotheses states that there is a connection between participants that do identify with a SLP and participants that express positive changes in identity, community, and support from participating in the Hives for Heroes Network. The research question of this research asked if SL in the form of beekeeping could be a

useful tool for veterans during the transition process of separating from the military by means of helping veterans develop a new identity, community, and support system outside of the military.

The results of the quantitative strand did indicate that participants were identifying with a SLP. In fact, participants were identifying with an SLP before they began their participation with the Hives for Heroes Network. The SLIM scores recorded for the before group was an average of 7.26. After their participation, their identification with an SLP increased to 7.46. Through the quantitative strand, it has been established that participants are experiencing SL. The qualitative strand revealed that participation in the Hives for Heroes Network had a positive impact on participants. This is supported in the 5 main categories, transition, perseverance, education, community, and enjoyment derived from In-Vivo and Theoretical coding. In order to integrate these two strands, this research investigated the qualities of a SLP and the themes of the qualitative responses.

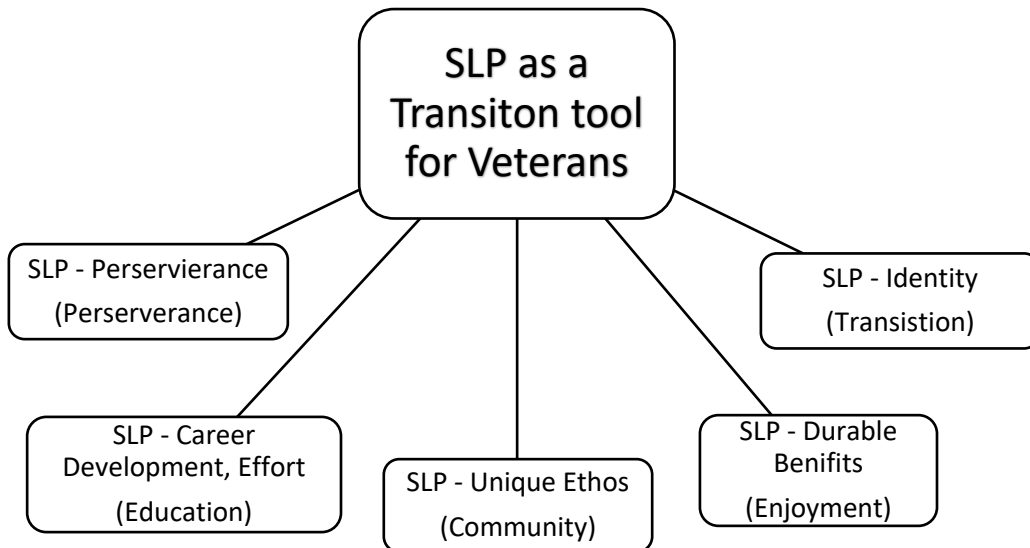
Literature indicates that veterans in the transition process struggle with support and cultural shifts (Keeling et al, 2018). The 6 characteristics of a SLP include perseverance, a leisure career development, effort, durable benefits, unique ethos, and identity (Kleiber, et al., 2011; Stebbins, 1982). These elements are measured with the 18 dimensions of the SLIM. In all but one dimension, financial return, the participants scores reported that they were identifying with a SLP Pursuit. These 6 characteristics were compared to the 5 supporting categories of the qualitative strand, transition, perseverance, education, community, and enjoyment, in order to determine if a SLP is a tool for transition (see Figure 4).

Figure 4
Joint Display

SLP Quality	QUAN Results	QUAL Results	Mix Methods
Perseverance	Before Group- Average of Q1 = 7.64 After Group Average of Q1 = 8.03	Perseverance <i>“It appears to be a lot more complex than I thought it was going to be at first, but I’m still going to go ahead with it”</i> <i>“So, kind of stuff like that is what I found, kind of the most challenging I guess I was amazed at the complexity”</i>	Convergence, participants of both data sets demonstrated the ability to preserve within the leisure Pursuit.
Leisure Career Development	Before Group- Average of Q3 and Q4 = 7.40 After Group Average of Q3 and Q4 = 8.03	Education <i>“It’s been a long time since I’ve learned much get a lot of learning back in the Air Force did quite well I think, and I’m really pleased with getting back into something that’s education that involves education, learning something”</i>	Convergence, Participants of both data sets demonstrated the ability and desire to improve
Effort	Before Group- Average of Q2 = 8.23 After Group Average of Q2 = 8.47	Education <i>“they’re just angry and stuff like that but as long as you kind of go slow and have a plan, know what to do”</i> <i>“I have spent way too much money, time and energy to call it an interest or a business. I love my bees in the way I love my dog”</i>	Convergence, Participants of both data sets demonstrated the ability and desire to improve
Durable Benefits	Before Group- Average of Q5-12 = 7.50 After Group Average of Q5-12 = 7.53	Enjoyment <i>“A steep learning curve it is very complex like you. As before I was originally thinking that, but I love it, I mean, I don’t know why I didn’t do it sooner. It’s been amazing this first year”</i>	Convergence, Participants of both data sets demonstrated positive benefits of participation
Unique Ethos	Before Group- Average of Q14-17 = 6.61 After Group Average of Q14-17 = 6.82	Community <i>“In general, first so when you have a common interest like this, outside of the military. It’s really been, it’s been a good learning experience and being able to interact with other people so I think it’s been good”</i>	Convergence, Participants of both data sets demonstrated the development of community and common interests
Identity	Before Group- Average of Q18 = 6.33 After Group Average of Q18 = 6.61	Transition <i>“I could see how this might be very useful to people that are initially transitioning to be one of the things that will help them get back to what they did before.”</i>	Convergence, Participants of both data sets demonstrated the ability and desire to improve

Within the joint display, questions on the SLIM were grouped together based on the SL quality they were measuring. These grouped questions were averaged to develop a picture of SL quality being measured. Additionally, the categories developed from the qualitative data results were compared to the SL qualities. After the quantitative and qualitative data was compared, mixed methods interpretation was made. According to the data, there was a convergence of data across all qualities. Finally, the results of the integrated data allow for a new theoretical concept to be developed (see Figure 5). Figure 5 demonstrates how the SL qualities and Qualitative categories work together to create a merged theory.

Figure 5
Mixed Methods Theoretical Concept



In conclusion, this research is able to reject the null of the mixed methods hypotheses, as there is a connection between participants that do identify with a SLP and participants that

express positive changes in identity, community, and support from participating in the Hives for Heroes Network. Additionally, the research question asked if SL in the form of beekeeping could be a useful tool for veterans during the transition process of separating from the military by means of helping veterans develop a new identity, community, and support system outside of the military. This research concludes that beekeeping as a SLP can be tool to help veterans transition.

CHAPTER V

DISCUSSION

Introduction

The purpose of this study was to determine if beekeeping through the Hives for Heroes network as a serious leisure pursuit could be used as a tool for veterans transitioning to civilian life after separating from the military. Quantitative data was collected using the SLIM and qualitative data was collected through focus groups. The results of the quantitative data did confirm that participants were identifying with a SLP and the qualitative data confirmed that the participants expressed positive changes in community, identity, and support through perusing beekeeping. Additionally, by merging the two data sets, this research can conclude that beekeeping, as a serious leisure pursuit, can be a transition tool for veterans.

These findings are congruent with the research that suggests that a SL pursuit may help veterans as they transition into retirement. The Homecoming Theory outlines how veterans transitioning into retirement may struggle with a loss of purpose, support, and identity (Ahern et al., 2015; Schütz, 1945). More importantly, the cultural shift from military to civilian can be difficult to navigate without the proper tools and support. A SL pursuit, however, has the potential to provide a new opportunity for veterans seeking to create leisure support systems, communities, and identities (Kleiber, et al., 2011; Stebbins, 1982).

Implications

The results of this research show that positive outcomes can come from using beekeeping through the Hives for Heroes network as a SLP as a transition tool for veterans. This may be useful for those preparing to separate from the military. This study may also be useful for programs designed to assist veterans during their transition. It may be beneficial for programs that currently exist to help veterans transition, such as TAP, to utilize these findings by introducing SL opportunities to those preparing to transition. Additionally, this research may help recreation providers by giving them insight into the struggles of newly retired veterans. This research may better inform recreation providers about how to best serve this population as they begin to seek out leisure opportunities within their communities.

Additionally, it should be noted that the results of the quantitative strand indicated that the participants were identifying with a SLP before their participation with Hives for Heroes. It could indicate the need to consider the phases of recreation. The five phases of recreation include anticipation, travel to, participation, travel from, and recollection (Clawson & Knetch, 2013). The SLIM was given to the participants twice, once retrospectively and once with their current state in mind. Participants of this study may have been responding to the first SLIM during the anticipation phase or the beginning of the participation phase. This may be significant because it could add to the literature on how long it may take for participants to begin identifying with a SLP and what factors contribute to that. This may be useful for recreation managers that are working with individuals to develop leisure careers.

Limitations

The limitations of this study include the sample size. This study had 37 survey responses and 4 focus group responses. This sample was collected from the Hives for Heroes current member email list. This findings of this research may only be applied to veterans who are currently pursuing beekeeping through the Hives for Heroes Network. The Hives for Heroes Network is based out of Texas but operates chapters throughout the united states and Australia.

At the time of this research, a global pandemic, Covid-19, was taking place. This may have had an impact on the participation level available to the sample, especially when considering that the Hives for Heroes Network operates on a mentor and mentee system. Even though some members are able to participate in beekeeping on their own, some may rely on others for access to beekeeping.

Finally, some participants of this study became members of the Hives for Heroes Network relatively soon after separating from the military and some did not become members until many years after. It should be remembered that the transition process may take longer or shorter depending on the individual and transition tool available and utilized.

Future Work

This research indicates that beekeeping through the Hives for Heroes network as a SLP may be a tool for veterans transitioning after separating from the military. This study could be modified to be applied to other forms of leisure pursuits or other populations that may be experiencing transitions in life. It may be beneficial to see how other leisure activities could serve as a SLP and the benefits they may offer. For future research however, it would be beneficial to have a larger sample size.

The results of this study indicated that participants were identifying with a SLP before becoming members of the Hives for Heroes Network. In the future, the phases of recreation should be taken into consideration. Additionally, establishing a research design that has a control group may give more insight into the transition process. To develop a better understanding of the time line of developing a SLP, a longer study should be considered to include the separation phase from the military and the first introduction of the leisure activity that is intended to become a SLP. It may be interesting to determine how effective beekeeping as a SLP as a tool for transiting when considering at what point the SLP was introduced during the transition.

Conclusion

In conclusion, this research was able to confirm that beekeeping through the Hives for Heroes Network can be a tool for veterans during the transition process. The quantitative strand of this research confirmed that participants were identifying with a SLP before beginning work as members of the Hives for Heroes Network and this identification was strengthened as their participation continued. Additionally, the qualitative strand showed that participants of the focus groups expressed positive changes in community, support, and identity. Finally, by integrating the data a more complete picture of the participant experience was created. This picture shows that veterans working through their transition may benefit from beekeeping as a serious leisure pursuit in developing a serious leisure pursuit.

References

- Ahern, J., Worthen, M., Masters, J., Lippman, S. A., Ozer, E. J., & Moos, R. (2015). The challenges of Afghanistan and Iraq veterans' transition from military to civilian life and approaches to reconnection. *PloS one*, *10*(7), e0128599.
- Atuel, H. R., & Castro, C. A. (2018). Military cultural competence. *Clinical Social Work Journal*, *46*(2), 74-82.
- Baldwin, C. K., & Norris, P. A. (1999). Exploring the dimensions of serious leisure: "Love me—love my dog!". *Journal of Leisure Research*, *31*(1), 1-17.
- Barbieri, C., & Sotomayor, S. (2013). Surf travel behavior and destination preferences: An application of the SL Inventory and Measure. *Tourism Management*, *35*, 111-121.
- Bedimo-Rung, A. L., Mowen, A. J., & Cohen, D. A. (2005). The significance of parks to physical activity and public health: a conceptual model. *American journal of preventive medicine*, *28*(2), 159-168.
- Biniecki, S. M. Y., & Berg, P. (2020). The Senior Military Officer as a Veteran in Transition: Opportunities for Adult Learning and Bridging the Military–Civilian Divide. *New Directions for Adult and Continuing Education*, *2020*(166), 25-36.
- Brittain, I., & Green, S. (2012). Disability sport is going back to its roots: Rehabilitation of military personnel receiving sudden traumatic disabilities in the twenty-first century. *Qualitative research in sport, exercise and health*, *4*(2), 244-264.

- Borkowski, R. (2017). Wounded warriors go back to bee school. *Bee World*, 94(4), 119-121.
- Botero Jr, G., Rivera, N. I., Calloway, S. C., Ortiz, P. L., Edwards, E., Chae, J., & Geraci, J. C. (2020). A lifeline in the dark: Breaking through the stigma of veteran mental health and treating America's combat veterans. *Journal of clinical psychology*, 76(5), 831-840.
- Burke, H. S., Degeneffe, C. E., & Olney, M. F. (2009). A New Disability for Rehabilitation Counselors: Iraq War Veterans with Traumatic Brain Injury and Post-Traumatic Stress Disorder. *Journal of Rehabilitation*, 75(3).
- Campion, C. (2019). Healing Hives: Honey Bees and the Rehabilitation of Veterans, 1919–2019. *Bee World*, 96(2), 55-59.
- Cordell, H. K., Betz, C., & Green, G. T. (2008). Nature-based outdoor recreation trends and wilderness. *International Journal of Wilderness*, August 2008, Volume 14, Number 2, Page 7-13.
- Cordell, H. Ken, et al. 2004. *Outdoor Recreation for 21st Century America*. State College, PA: Venture Publishing.
- Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.
- Demers, A. (2011). When veterans return: The role of community in reintegration. *Journal of Loss and Trauma*, 16(2), 160-179.
- Dilley, R. E., & Scraton, S. J. (2010). Women, climbing and serious leisure. *Leisure studies*, 29(2), 125-141.
- Duarte Alonso, A., Kok, S. K., & O'Shea, M. (2020). Perceived contributory leisure in the context of hobby beekeeping: a multi-country comparison. *Leisure Studies*, 1-18.

- Duvall, J., & Kaplan, R. (2014). Enhancing the well-being of veterans using extended group-based nature recreation experiences.
- Duvall, J., & Kaplan, R. (2013). Exploring the benefits of outdoor experiences on veterans. *Ann Arbor*, 1001, 48109-1041.
- Elkington, S., & Stebbins, R. A. (2014). *The SL perspective: An introduction*. Routledge.
- Flink, P. J. (2017). Invisible disabilities, stigma, and student veterans: Contextualizing the transition to higher education. *Journal of Veterans Studies*, 2(2), 110-120.
- Freudenberg, P., & Arlinghaus, R. (2009). Benefits and constraints of outdoor recreation for people with physical disabilities: inferences from recreational fishing. *Leisure Sciences*, 32(1), 55-71.
- Forsyth, A., Lysaght, R., Aiken, A., & Cramm, H. (2020). Wilderness Adventure Program May Help Combat Perceptions of Stigma among Veterans. *Ecopsychology*, 12(1), 8-18.
- Godbey, G. (2009). Outdoor recreation, health, and wellness: Understanding and enhancing the relationship.
- Gould, J., Moore, D., McGuire, F., & Stebbins, R. (2008). Development of the Serious leisure inventory and measure. *Journal of Leisure Research*, 40(1), 47-68.
- Hawkins, B. L., Townsend, J. A., & Heath, S. E. (2018). The preliminary effects of a recreation-based military family camp on family functioning. *American Journal of Recreation Therapy*, 17(3), 15-24.
- Heo, J., Stebbins, R. A., Kim, J., & Lee, I. (2013). Serious leisure, life satisfaction, and health of older adults. *Leisure Sciences*, 35(1), 16-32.

Hives for heroes: Nonprofit veteran beekeeping. (n.d.). Retrieved April 16, 2021, from

<https://www.hivesforheroes.com/>

Ibrahim, H., & Cordes, K. A. (1993). *Outdoor recreation*. Brown & Benchmark.

Kamarck, K. N. (2017, March). Military transition assistance program (TAP): An overview.

Library of Congress Washington.

Keeling, M., Kintzle, S., & Castro, C. A. (2018). Exploring US veterans' post-service employment experiences. *Military Psychology, 30*(1), 63-69.

Kilbourne, A. M., McCarthy, J. F., Post, E. P., Welsh, D., & Blow, F. C. (2007). Social support among veterans with serious mental illness. *Social psychiatry and psychiatric epidemiology, 42*(8), 639-646.

Kim, Y. G., Suh, B. W., & Eves, A. (2010). The relationships between food-related personality traits, satisfaction, and loyalty among visitors attending food events and festivals.

International Journal of Hospitality Management, 29(2), 216-226.

Kirchner, M., & Akdere, M. (2019). An empirical investigation of the acquisition of leadership KSAs in the US Army: Implications for veterans' career transitions. *Journal of Veterans Studies, 4*(1), 110-127.

Kleiber, D. A., & Linde, B. D. (2014). The case for leisure education in preparation for the retirement transition. *Journal of Park and Recreation Administration, 32*(1).

Koenig, C. J., Maguen, S., Monroy, J. D., Mayott, L., & Seal, K. H. (2014). Facilitating culture-centered communication between health care providers and veterans transitioning from military deployment to civilian life. *Patient Education and Counseling, 95*(3), 414-420.

- Laskowski, E. R. (1991, February). Snow skiing for the physically disabled. In Mayo Clinic Proceedings (Vol. 66, No. 2, pp. 160-172). Elsevier.
- Lee, S., Heo, J., Chun, S., & Lee, J. H. (2020). Voluntary dance performance as SLand successful ageing. *Leisure Studies*, 39(4), 585-599.
- Little, T. D., Chang, R., Gorrall, B. K., Waggenpack, L., Fukuda, E., Allen, P. J., & Noam, G. G. (2020). The retrospective pretest–posttest design redux: On its validity as an alternative to traditional pretest–posttest measurement. *International Journal of Behavioral Development*, 44(2), 175-183.
- Lundberg, N., Bennett, J., & Smith, S. (2011). Outcomes of adaptive sports and recreation participation among veterans returning from combat with acquired disability. *Therapeutic Recreation Journal*, 45(2), 105-120.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook*.
- Morin, R. (2011). *The difficult transition from military to civilian life*. Washington, DC: Pew Research Center.
- Outdoor Industry Association. 2020. *Outdoor participation report 2020*. Washington, DC: The Outdoor Foundation. 6 p.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, Cal.: Sage Publications, 4.
- Rogers, A. *Broken survivors: With them through hell*.
- Ross, J. E. (2001). *Water-Based Outdoor Recreation and Persons with Disabilities*.
- Saldaña, J. (2021). *The coding manual for qualitative researchers*. sage.

- Schmidt, S. N. (2020, October 22). *Beekeeping for U.S. Veterans; Healing and Therapy*.
Beekeeping Class for US Veterans. <https://www.cascadegirl.org/beekeeping-for-healing-and-therapy>.
- Schnurr, P. P., Lunney, C. A., Sengupta, A., & Spiro III, A. (2005). A longitudinal study of retirement in older male veterans. *Journal of Consulting and Clinical Psychology, 73*(3), 561.
- Schütz, A. (1945). The homecomer. *American Journal of Sociology, 50*(5), 369-376.
- Silva, E. (2011). Participation in the transition assistance program and job placement outcomes of US veterans.
- Stevenson, A. (Ed.). (2010). *Oxford dictionary of English*. Oxford University Press, USA.
- Stanhope, J., Carver, S., & Weinstein, P. (2017). Health outcomes of beekeeping: a systematic review. *Journal of Apicultural Research, 56*(2), 100-111.
- Stebbins, R. A. (1982). Serious leisure: A conceptual statement. *Pacific sociological review, 25*(2), 251-272.
- Stern, L. (2017). Post 9/11 veterans with service-connected disabilities and their transition to the civilian workforce: A review of the literature. *Advances in Developing Human Resources, 19*(1), 66-77.
- Stoneburg, A. T. (2021). *Improving How US Army Sergeant Major Veterans Communicate to Civilian Hiring Managers* (Doctoral dissertation, Trident University International).
- Vella, E. J., Milligan, B., & Bennett, J. L. (2013). Participation in outdoor recreation program predicts improved psychosocial well-being among veterans with post-traumatic stress disorder: A pilot study. *Military Medicine, 178*(3), 254-260.

Warden, D. (2006). Military TBI during the Iraq and Afghanistan wars. *The Journal of head trauma rehabilitation*, 21(5), 398-402.

Williams, R., Vogelsong, H., Green, G., & Cordell, K. (2004). Outdoor recreation participation of people with mobility disabilities: Selected results of the National Survey of Recreation and the Environment. *Journal of Park and Recreation Administration*, 2004, Volume 22, No. 2, 84-100.

Appendices

A. Quantitative Instrument

72 Item Serious Leisure Inventory and Measure (SLIM)

Dimension	Items
Perseverance	<ol style="list-style-type: none"> 1. If I encounter obstacles in _____, I persist until I overcome them. 2._{a,b} If I encounter a difficult task in _____, I will persevere until it is completed. 3. By persevering, I have overcome adversity in _____. 4. I overcome difficulties in _____ by being persistent.
Effort	<ol style="list-style-type: none"> 1._{a,b} I put forth substantial effort to improve my skills in _____. 2. I try hard to become more competent in _____. 3. I practice to improve my skills in _____. 4. I am willing to exert considerable effort to be more proficient at _____.
Career Progress	<ol style="list-style-type: none"> 1. I have improved at _____ since I began participating. 2. Since I began _____, I have improved. 3. I feel that I have made progress in _____. 4._{a,b} I have progressed in _____ since beginning.
Career Contingencies	<ol style="list-style-type: none"> 1._{a,b} I know of specific instances related to _____ which have shaped my involvement in it. 2. For me, there are certain _____ related events that have influenced my _____ involvement. 3. There are defining moments within _____ that have significantly shaped my involvement in it. 4. There have been certain high or low points for me in _____ that have defined how involved I am in _____.
Personal Enrichment	<ol style="list-style-type: none"> 1. I have been enriched by _____. 2. _____ has added richness to my life. 3._{a,b} Being involved in _____ has added richness to my life. 4._a My _____ experiences have added richness to my life.
Self-Actualization	<ol style="list-style-type: none"> 1. I make full use of my talent when _____. 2. I reach my potential in _____. 3. _____ has enabled me to realize my potentials. 4._b I am realizing my fullest potential in _____.
Self-Express Abilities	<ol style="list-style-type: none"> 1._b _____ allows me to express my knowledge and expertise. 2. _____ is a way to display my skills and abilities. 3. I demonstrate my skills and abilities when _____. 4. My knowledge of _____ is evident when participating.
Self-Express Individual	<ol style="list-style-type: none"> 1. _____ for me is an expression of myself. 2. My individuality is expressed in _____. 3._b Who I am is expressed through participation in _____. 4. _____ allows me to express who I am.
Self-Image	<ol style="list-style-type: none"> 1._b My view of myself has improved as a result of _____. 2. My image of self has improved since I began _____. 3. _____ has enhanced my self image. 4. _____ has improved how I think about myself.
Self-Grat-Satisfaction	<ol style="list-style-type: none"> 1. _____ provides me with a profound sense of satisfaction. 2. My _____ experiences are deeply gratifying. 3._b I find deep satisfaction in _____. 4. _____ is intensely gratifying to me.

Dimension	Items
Self-Grat-Enjoy	1. _b I find enjoyment in _____. 2. _____ is enjoyable to me. 3. _____ is fun to me. 4. _a I enjoy _____.
Re-creation	1. I feel renewed after _____ time. 2. I feel revitalized after _____ time. 3. _b I feel invigorated after participating in _____. 4. _a _____ is invigorating to me.
Financial Return	1. Financially, I have benefited from my _____ involvement. 2. I have received financial payment as a result of my _____ efforts. 3. _b I have been paid money as result of my skills and abilities in _____. 4. I have received monetary compensation for my _____ expertise.
Group Attraction	1. _b I associate with other people that are _____ participants. 2. I enjoy interacting with other _____ enthusiasts. 3. I value interacting with others that are also involved in _____. 4. I prefer associating with others that are devoted to _____.
Group Accomplishments	1. A sense of group accomplishment is important to me in _____. 2. _b My _____ group's accomplishments are very important to me. 3. Having helped my _____ group accomplish something makes me feel important. 4. I feel important when I am a part of my _____ group's accomplishments.
Group Maintenance	1. The development of my _____ group is important to me. 2. I contribute to the unification of my _____ group. 3. _b I find value in ensuring the cohesiveness of my _____ group. 4. It is important that I perform duties which unify my _____ group.
Unique Ethos	1. I share many of the sentiments of my fellow _____ devotees. 2. Other _____ enthusiasts and I share many of the same ideals. 3. I share many of my _____ group's ideals. 4. _{a,b} I share in the sentiments that are common among _____ enthusiasts.
Identity	1. Others that know me understand that _____ is a part of who I am. 2. I am often recognized as one devoted to _____. 3. _b Others identify me as one dedicated to _____. 4. Others recognize that I identify with _____.

^aItems not included in tests of equivalence.

^bItems not included in the 54 item short form.

B. Qualitative Questions

- 1.** How did you first learn about beekeeping?
- 2.** How did you get started after learning about beekeeping?
- 3.** How long have you been a beekeeper?
- 4.** What aspects do you enjoy most about beekeeping and why?
- 5.** What aspects do you find most challenging about beekeeping and why?
- 6.** What type of leisure and recreation did you engage in before beekeeping?
- 7.** How has this (leisure and recreation) changed since engaging in beekeeping?
- 8.** How has beekeeping impacted your life?
- 9.** How has beekeeping impacted your transition from military service to civilian life?
- 10.** How would you define your identity?
- 11.** How have your relationships with the community changed since beekeeping?

C. IRB Approval Page



Oklahoma State University Institutional Review Board

Date: 09/09/2021
Application Number: IRB-21-364
Proposal Title: THE BUZZ ABOUT BEES: SERIOUS LEISURE AS A BENEFICIAL TOOL FOR VETERANS TRANSITIONING INTO POST-SERVICE- A MIXED METHODS STUDY
Principal Investigator: Tiffany Brenner
Co-Investigator(s):
Faculty Adviser: Donna Lindenmeier
Project Coordinator:
Research Assistant(s):
Processed as: Exempt
Exempt Category:

Status Recommended by Reviewer(s): Approved

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in 45CFR46.

This study meets criteria in the Revised Common Rule, as well as, one or more of the circumstances for which continuing review is not required. As Principal Investigator of this research, you will be required to submit a status report to the IRB triennially.

The final versions of any recruitment, consent and assent documents bearing the IRB approval stamp are available for download from IRBManager. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be approved by the IRB. Protocol modifications requiring approval may include changes to the title, PI, adviser, other research personnel, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any unanticipated and/or adverse events to the IRB Office promptly.
4. Notify the IRB office when your research project is complete or when you are no longer affiliated with Oklahoma State University.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB Office at 405-744-3377 or irb@okstate.edu.

Sincerely,
Oklahoma State University IRB

VITA

T Brenner

Candidate for the Degree of

Doctor of Philosophy

Dissertation: THE BUZZ ABOUT BEES: SERIOUS LEISURE AS A BENEFICIAL TOOL FOR VETERANS TRANSITIONING INTO POST-SERVICE- A MIXED METHODS STUDY

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Completed the requirements for the Doctor of Philosophy in Health, Leisure, and Human Performance at Oklahoma State University, Stillwater, Oklahoma in July, 2022.

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National Recreation and Parks Association October 2020 – Present