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Exploring the Impact of Racing4Vets on Well-Being, Quality of Life, Posttraumatic Growth, and Occupational Performance

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A capstone project submitted in partial fulfillment for the requirements of the Doctor of Occupational Therapy degree from the University of Indianapolis, School of Occupational Therapy.

Under the direction of the faculty capstone advisor:

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## A Capstone Project Entitled

Exploring the Impact of Racing4Vets on Well-Being, Quality of Life, Posttraumatic Growth, and Occupational Performance

Submitted to the School of Occupational Therapy at University of Indianapolis in partial fulfillment for the requirements of the Doctor of Occupational Therapy degree.

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### Abstract

Many veterans have difficulty with reintegration into civilian life due to factors including psychological health, social interaction, physical health, housing, finances, education, and/or legal matters (Elnitsky, Fisher, & Blevins, 2017). There is a need for services to enhance posttraumatic growth and quality of life for these veterans. The primary mission of the Racing4Vets organization is to help veterans with disabilities get involved in motorsports careers and amateur competitive racing. However, Racing4Vets efforts to promote community, healing, and career have not been analyzed for its impact on the veterans served. The purpose of this doctoral capstone experience was to perform a program evaluation of Racing4Vets and to explore the programs' influence on veteran well-being, quality of life, posttraumatic growth, and occupational performance. Participants completed an online survey measuring perceived competence, challenges with reintegration, and program influence on health, well-being, social support networks, and occupational performance. Semi-structured interviews were conducted to explore the lived experience and explore program influence on occupational performance. Participants reported slight to moderate perceived competence in mechanical skills, healing, health, community, and racing; little to some difficulty with their transition to civilian life; and small to moderate posttraumatic growth. The following themes emerged from the semi-structured interviews: reintegration, program involvement, supportive environment, life change, and learning. Overall, Racing4Vets facilitated social interaction, social support development, participation in meaningful occupations, and mental health.

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Exploring the Impact of Racing4Vets on Well-Being, Quality of Life, Posttraumatic Growth, and  
Occupational Performance

According to the Veteran Population Projection Model 2016, there will be an estimated 19,210,000 United States veterans in September 2019 (Department of Veterans Affairs, 2016). Unfortunately, the transition back to civilian life, known as reintegration, is often difficult for veterans as they cope with assimilating their military identity with the identity they had in civilian life (Koenig, Maguen, Monroy, Mayott, & Seal, 2014). During deployment, military personnel experience things that only other military personnel have experienced and military culture supports individuals through these traumatic situations through structure and a sense of connection that many consider a “family” (Ahern et al, 2015, p. 4). Following deployment, veterans may perceive a disconnect between military life and civilian life, perceive a lack of support from military institutions, struggle with a lack of structure, and experience a loss of meaning or purpose (Ahern et al., 2015). This may cause social, personal, emotional/cognitive, physical, and spiritual changes that leave many veterans searching for a “new normal” (Ahern et al., 2015, pp.7; Painter, Gray, McGinn, Mostoufi, & Hoerster, 2016).

According to Elnitsky, Fisher, and Blevins (2017), there are ten domains of reintegration including psychological health, family, social interaction, physical health, housing, finances, education, legal matters, spiritual matters, and non-specific. Many veterans struggle with mental health issues that influence reintegration. Of the 238,098 veterans from Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) served by the Veterans Association (VA) between 2002 and 2008, 35.7% were diagnosed with at least one new mental health condition post-deployment and the majority of veterans were diagnosed with two or more (Seal et al., 2010). Post traumatic stress disorder (PTSD) was the most common diagnosis (58.2%), followed

by depression (42.3%) and adjustment disorder (34.1%) (Seal et al., 2010). In a retrospective study, 11% of the 456,502 OEF/OIF veterans who first utilized the VA between 2001 and 2010 were diagnosed with at least one substance use disorder including alcohol abuse or dependence and drug abuse or dependence (Seal et al., 2011). Of the veterans in this study diagnosed with a substance use disorder, 82–93% had co-occurring mental health diagnoses with PTSD being the most common (Seal et al., 2011). One veteran noted:

It seemed like I had to drink to get a decent night's sleep. For one, having been on a completely different time schedule,... you're used to certain sleep schedules... then there's the emotional problems from being overseas... Not being able to sleep for several hours, just lying there and thinking about it. (Plach & Sells, 2013)

PTSD symptoms have been strongly correlated with drinking to cope and perceived stigma of seeking assistance, suggesting that veterans with more severe PTSD may be more likely to have substance use disorders and are unlikely to seek assistance for either the PTSD or the substance use (Miller, Pedersen, & Marshall, 2017).

Many veterans struggle with this type of stigma, which can further complicate the reintegration process. At the end of deployment, all service men and women complete the Post-Deployment Health Assessment; during the routine assessment of 3,502 United States Army soldiers from the infantry brigade combat teams in 2008, 4% of soldiers screened positive for PTSD or depression (Warner et al., 2011). However, an additional anonymous survey, completed by the same soldiers during their routine assessment, indicated 12% of soldiers screened positive for PTSD or depression and 20% of these soldiers reported being “uncomfortable answering honestly on the routine post-deployment screening” (Warner et al., 2011, pp.1068). Pride associated with self-reliance and image may serve as a barrier to seeking

needed mental health services (Vogt, 2011). In a survey of Iraq and Afghanistan veterans, 37% endorsed one or more stigma-related barriers to mental health treatment, such as “It would harm my career,” “Members of my unit might have less confidence in me,” “My unit leadership might treat me differently,” and “I would be seen as weak” (Hoerster et al., 2012, p. 381). According to Kulesza, Pedersen, Corrigan, and Marshall (2015), veterans in their study with a mental health diagnosis who also identified high perceived public stigma were significantly less likely to receive mental health services. A study of stigma perceived by caregivers of veterans with TBI indicated that 50% of the caregivers perceived stigma against the veteran, including being treated with less courtesy or respect than other people, others acting as if they are better than the individual, receiving poorer service than other people, and others acting as if they are afraid of the individual (Phelan et al., 2018). This perceived stigma was significantly associated with poorer community reintegration of the veteran (Phelan et al., 2018).

Many veterans also struggle with the social and familial aspects of reintegration due to the conflicting nature of military versus civilian culture, a lack of understanding from civilians of military experiences and resulting effects, and a disconnect with family and friends (Ahern et al., 2015). In a study of young OEF/OIF veterans, 77% reported social interaction and relationships as one of their top five reintegration difficulties within the first year back in civilian life (Plach & Sells, 2013). Some veterans suggest that the much needed social support of family is key to their successful reintegration (Tomar & Stoffel, 2014; Kukla, Rattray, & Salyers, 2015) However, many veterans have difficulty connecting with civilians including family members and medical personnel, because the civilians cannot grasp some of the concepts of military culture that have shaped the identity of the veteran (Libin et al., 2017). One veteran noted that some individuals like to keep their service experiences a secret or like to reveal certain aspects at certain times

(Tomar & Stoffel, 2014); this may further complicate the gap felt with civilians. Others noted that civilians just do not understand and that it is not possible to describe what you experienced or are feeling (Plach & Sells, 2013). A few veterans noted that they feel more comfortable and feel more like they belong when talking with other veterans once back in civilian life (Tomar & Stoffel, 2014). Another veteran noted a longing for the military's sense of camaraderie, community, and support that was not experienced in the transition back to civilian culture (Tomar & Stoffel, 2014). Mental health concerns that many veterans experience, such as depression, may make it more difficult for some veterans to get along with others (Plach & Sells, 2013). One veteran noted that everyone expects you to be full of complete joy to be home, but that there are times when all you want to do is go back to deployment (Tomar & Stoffel, 2014). The thoughts and feelings related to social interaction described above can further complicate the difficulties of reintegration post service.

Some veterans return with physical health problems including musculoskeletal injuries, amputations, spinal cord injuries, or traumatic brain injuries (TBI) that impact the roles that they can fulfill upon returning to civilian life (Taylor et al., 2012; Myaskovsky et al., 2017; Foote et al., 2015; Lew et al., 2009). In a study of combat-related wounds registered through the Joint Theater Trauma Registry during OIF and OEF from 2001 through 2005, 1,566 service men and women sustained 6,609 wounds with 54.1% of the wounds in the extremities, 29.4% in the head and neck region, 10.7% in the abdominal region, and 5.6% in the thoracic region (Owens et al., 2008). Approximately 61% of OEF, OIF, and Operation New Dawn (OND) veterans in 2015 were utilizing VA services for musculoskeletal or connective tissue conditions (Veterans Health Administration, 2015a). Musculoskeletal injuries can lead to chronic pain, with the most common being head and back pain, followed by shoulder, neck, and knee pain (Johnson et al.,

2013; Lew et al., 2009). Chronic pain may attribute to other difficulties such as functional disability, psychological distress, family discord and vocational issues (Lew et al., 2009).

A study of the Department of Defense Trauma Registry from 2005 to 2009 indicated that SCIs were more likely to occur in OEF/OIF than in previous wars with a prevalence of 4.0 out of 100,000 injuries (Schoenfeld et al., 2013). Veterans who have SCIs with greater physical impairment have lower occupational functioning, or ability to perform their roles independently (Myaskovsky et al., 2017). These veterans, with greater impairment, are more likely to have mental health disorders, and those with mental health disorders are likely to have less satisfaction in life (McDonald et al., 2017). The physical and psychological impact of a SCI discussed above would likely complicate the difficult process of reintegration from military service.

Between 2001 and 2015, 1,645 service men and women underwent major limb amputations as the result of service-related wounds or injuries in Operation Freedom's Sentinel (OFS), Operation Inherent Resolve (OIR), Operation New Dawn (OND), OIF, and OEF (Fischer, 2015). Most veterans with amputations reported overall good quality of life related to protective factors such as good jobs, meaningful long-term intimate relationships, having children/grandchildren, financial security, having hobbies, and engaging in community activities; however, they also expressed many frustrations related to their physical limitations (Foote et al., 2015). The physical and psychological symptoms of limb loss can cause significant disability through difficulty with everyday activities such as mobility, grooming and hygiene, employment, social participation, community activities, and physical activity or sport involvement (Foote et al., 2015; Armstrong et al., 2018; Johnson et al., 2013; Christensen, Ipsen, Doherty, & Langberg, 2016). Some of the main symptoms and comorbidities veterans who have amputations experience include arthritis, pain, cardiovascular disease, obesity, depression, and PTSD (Foote

et al., 2015). Arthritis and pain may be attributed to overuse injuries from compensation for the amputated limb (Farrokhi, Mazzone, Eskridge, Shannon, & Hill, 2018; Foote et al., 2015; Resnik, Ekerholm, Borgia, & Clark, 2019). One author reported the overall incidence of a musculoskeletal overuse injury as between 59% and 68% within the first year after lower limb amputation with the majority of injuries being in an upper extremity or the lumbar spine (Farrokhi et al., 2018). Whereas, the majority of veterans with upper limb amputations reported pain in the intact upper extremity and neck (Resnik et al., 2019). Pain in the residual limb may also occur and limit prosthetic use; this may further decrease the mobility or employment of veterans who have amputations (Armstrong et al., 2018; Foote et al., 2015; Hebert & Burger, 2016). Another major pain issue for veterans with upper or lower limb amputations is phantom limb pain (Resnik et al., 2019; Foote et al., 2015; Christensen et al., 2016). One veteran who had an amputations explained that pain related to the amputation could trigger his PTSD and that the PTSD symptoms resulted in decreased social participation and limited the number of close friends (Foote et al., 2015). Body image issues as well as depression may also create social and employment barriers for veterans who have amputations (Johnson et al., 2013, Foote et al., 2015; Hebert & Burger, 2016). Veterans who had upper extremity amputations self-reported a moderate level of physical impairment (Resnik et al., 2019). Physical impairment of amputations increases the difficulty for veterans to participate in physical activity and sport, which may increase the risk of cardiovascular disease and obesity commonly reported in this population (Christensen et al., 2016; Foote et al., 2015). The various symptoms and comorbidities related to amputations can further complicate aspects of reintegration into civilian life.

In a study of 327,388 OEF and OIF veterans who used VA services in 2009, 6.7% received a diagnosis of TBI (Taylor et al., 2012). Veterans who sustain a mild TBI may have more difficulty with reintegration due to health, cognitive, and psychosocial factors (Libin et al., 2017). TBI can be further complicated by other disorders; approximately half of the 6.7% of OEF/OIF veterans in the study mentioned above, also had PTSD and complaints of musculoskeletal pain that can further limit individual's participation (Taylor et al., 2012). Some veterans have a different struggle related to physical health; for some veterans, it may be difficult to stay in good physical shape due to a lack of routine or structure in relation to nutrition and physical activity upon their transition back to civilian life (Plach & Sells, 2013).

Finances and homelessness are other aspects of reintegration that can be difficult for some veterans. In 2015, an estimated 47,725 veterans were homeless; this accounted for approximately 8% of the overall homeless population (United States Department of Housing and Urban Development, 2015). Substance abuse, mental health conditions, and low income are the strongest risk factors for homelessness, followed by lack of social support, lack of employment, and misuse of money (Edens, Kaspro, Tsai, & Rosenheck, 2011; Tsai & Rosenheck, 2015; Twamley et al., 2019). Veterans may also have difficulty with housing due to combat-related conditions (Lowe & Dybicz, 2019). Some veterans may not be able to work due to their disability (Kukla et al., 2015). Many of these veterans receive VA disability compensation, which is considered a protective factor against homelessness (Edens et al., 2011); however, some veterans may have difficulty completing the appropriate documentation or navigating VA care and compensation processes (Albright et al., 2018). Veterans with mental health conditions, who may not receive any or enough VA compensation, may have difficulty participating in work or sustaining a job (Plach & Sells, 2013). Some veterans cannot sustain a job long-term due to

missing days, substance use, or conflict with coworkers or bosses (Stacy, Stefanovics, & Rosenheck, 2017; Kukla et al., 2015). One veteran who sustained a mild TBI noted how difficult it was to maintain a job due to the memory difficulties associated with the TBI; this veteran was very irritated with the reaction from co-workers when asking for help in relation to memory because they would get frustrated that the veteran could not remember (Libin et al., 2017). This veteran stated, "They expect us to be a normal person, but in actuality we can't" (Libin et al., 2017). Even veterans without confounding physical or psychological conditions may have difficulty finding work due to a lack of transferability of military skills to the civilian workforce (Lowe & Dybicz, 2019). One veteran reported:

Every job I've applied for they say I don't have enough experience, even though I had the same experience in the military. They don't consider that experience because it wasn't in the civilian sector so it's like I'm starting all over again from high school. I was a mechanic.... I was also a squad leader which gives me management skills...and that's not even counted either. (Kukla et al., 2015, p. 485)

Another veteran noted, "[I]t seemed like my only place was in the blue collar field...most jobs were temporaries....So I honestly believe during this time it was a factor of just me having a high school diploma wasn't good enough and me serving for my country didn't help any" (Kukla et al., 2015, p. 483). This lack of transferability of skills may result in veterans working low income jobs, resulting in financial difficulties and increased risk of homelessness (Tsai & Rosenheck, 2015).

Some veterans in the transition to civilian life seek new career paths by going to college, however, there are for veterans in this role as well (Kukla et al., 2015). In a study of 30 veterans who returned to college, 70% identified challenges with this transition (Plach & Sells, 2013).

Some veteran who transition into the student role have difficulty with general skills required for an academic setting such as concentration and relearning skills (Plach & Sells, 2013). The hypervigilance that was key to survival in the military may lead veterans in the student role to be too aware of their surroundings and limit the ability to focus on school work or lectures (Tomar & Stoffel, 2014). A few veterans noted that veterans do not want to seem “needy” and are not likely to ask for help; however, they need some help, which can be difficult for university personnel (Tomar & Stoffel, 2014). Veterans in the student role may feel isolated or like they do not belong due to difficulty interacting or connecting with classmates, professors, and other university personnel (Plach & Sells, 2013; Tomar & Stoffel, 2014). The difference in the culture of higher education and the military may make it difficult for veterans to interact or connect with classmates, leading to this sense of isolation and a lack of belonging (Gregg, Shordike, Howell, Kitzman, & Iwama, 2017; Plach & Sells, 2013; Tomar & Stoffel, 2014). One veteran noted that classmates were extremely stressed and frantic about upcoming finals, but for the veteran, finals were much less stressful than his experiences in the military (Tomar & Stoffel, 2014). Another potential difficult for student veteran is that some may have more advanced experience in the area that they are studying, whereas, their classmates are learning these skills for the first time (Plach & Sells, 2013).

Legal matters may further complicate the reintegration of some veterans. Legal matters affecting some veterans may include arrests, warrants, restraining orders, disciplinary actions, probation or parole, or driving under the influence of a substance (Larson & Norman, 2014). According to the Bureau of Justice Statistics, veterans comprized 8% of all state and federal inmates between 2011 and 2012 (Bronson, Carson, Noonan, & Berzofsky, 2015). Approximately 64% of veterans were incarcerated for violent offences, 20% for property

offences, and 18% for drug offences (Bronson et al., 2015). Approximately 50% of veterans who were incarcerated had been told they have a mental health condition (Bronson et al., 2015). Mental health conditions, such as PTSD, may cause symptoms of anger or irritability which results in a higher risk for arrest (Elbogen et al., 2012). Elements of Battlemind that suggest poor adaptation to civilian life, such as control, aggression, hypervigilance, need to be armed, anger, aggressive driving, and conflict, may also contribute to an increased risk of arrest (Walter Reed Army Institute of Research, 2005). Examples of one veteran's experience with these elements include physical aggression toward spouse, pulling a gun inappropriately in low stress situations, driving erratically as if attempting to avoid improvised explosive devices (IEDs), and eventually homicide (Sreenivasan et al., 2013). Veterans who have been incarcerated may further struggle with reintegration to civilian life due to possible personal, social, and economic tolls from incarceration including outstanding debts, such as child support, taxes, and fines; homelessness; need for mental health or substance use treatment; unemployment due to legal restrictions, employer stigma, and lack of job skills; lack of social skills; lack of family or community support; and recidivism, or increased risk to reoffend (McDonough, Blodgett, Midboe, Blonigen, 2015).

Many veterans return to civilian life and feel a loss of purpose or meaning in life (Ahern et al., 2015). Several veterans in one study expressed feelings of worthlessness during their transition because they felt that they were contributing to something meaningful through their military service (Kukla et al., 2015). Others noted a lack of purpose or meaning in civilian life due to the loss of working toward a common societal goal, which was intensified when veterans could not find work that was applicable to their skills or experiences in the military (Ahern et al., 2015). One veteran noted, "The submarine training takes so much of your life that turning it off

when you do not need it almost seems like giving up a part of yourself. As I move on in my civilian life I feel a loss and also emptiness without it” (Tomar & Stoffel, 2014, p. 434). For many service men and women, their military service and military culture become a part of their identity and this part of their identity is lost during the transition to civilian life, leading to further difficulty with reintegration (Kukla et al., 2015).

Nearly all of the factors of reintegration discussed above, if negative, may contribute to veteran suicide. Authors of one study indicated that the struggles of service men and women during the transition to civilian life, including chronic pain, emotional reactivity or distancing, change in physical functioning, combat guilt, discomfort in seeking care, and difficulty reintegrating into family and society, were similar to the potential attributes to suicide based on the interpersonal–psychological theory of suicide (Lusk et al., 2015). Mental health conditions such as depression, anxiety, PTSD, and substance use disorders are the most common risk factors for suicide (Magruder, Yeager, & Brawman-Mintze, 2012). However, one study indicated that the stress of reintegration including difficulty with maintaining military friendships, getting along with relatives, feelings of belonging in civilian society, and finding meaning/purpose in life increased suicidal ideations even when controlling for psychiatric conditions and substance misuse (Haller, Angkaw, Hendricks, & Norman, 2015). Suicide rates among veterans have decreased from 22 per day in 2012 to 20 per day in 2014, however, suicide remains a major concern for service men and women integrating into civilian life (United States Department of Veterans Affairs, 2016).

For those who struggle with transition, there is a need for services that serve to enhance posttraumatic growth and enhance quality of life. Posttraumatic growth is the concept of positive personal growth in at least one area following a significant traumatic event that disrupts the basic

beliefs or schemas held by an individual (Tedeschi & Calhoun, 2004). Authors report that individuals who survive traumatic events tend to value their experience without intentionally seeking meaning or growth from the trauma, rather "posttraumatic growth is most likely a consequence of attempts at psychological survival, and it can coexist with the residual distress of the trauma" (Tedeschi & Calhoun, 2004, pp.5). Individuals experiencing posttraumatic growth as compared to individuals with normal developmental growth have increased numerical growth as well as a different meaning behind their growth, including extensive cognitive processing and affective engagement that contributed to their learning and adaptation (Tedeschi & Calhoun, 2004). Areas of possible growth include an increased appreciation for life, more meaningful interpersonal relationships, an increased sense of personal strength, changed priorities, and richer spiritual life (Tedeschi & Calhoun, 2004).

Occupational therapy is the practice of helping individuals, groups, or populations successfully participate in occupations. An occupation is anything that fills one's time including the activities that one wants, needs, and is expected to do. Within the Occupational Therapy Practice Framework (OTPF), occupations are categorized into activities of daily living (ADLs), instrumental activities of daily living (IADLs), rest and sleep, education, work, play, leisure, and social participation (American Occupational Therapy Association, 2017). ADLs are focused on the basic needs of an individual related to self-care including: bathing, toileting, dressing, swallowing/eating, feeding, functional mobility, personal device care, personal hygiene and grooming, and sexual activity (AOTA, 2017). IADLs are supplementary daily activities that allow an individual to participate within the home and community; IADLs include care of others, care of pets, child rearing, communication management, driving and community mobility, financial management, health management and maintenance, home establishment and

management, meal preparation and clean up, religious and spiritual activities and expression, safety and emergency maintenance, and shopping (AOTA, 2017).

Occupational therapists assist clients in fulfilling these occupations through evaluation of client factors, performance skills, performance patterns, and contexts and environments (AOTA, 2017). Client factors are aspects of the client that affect occupational performance including one's abilities, characteristics, and beliefs (AOTA, 2017, p. S7). Client factors are categorized into values, beliefs, and spirituality; body structures; and body functions (AOTA, 2017). Body structures are all the physical structures or anatomy of one's body (AOTA, 2017). Body functions are how the body structures work and encompass aspects of physical and mental capabilities such as thought, attention, memory, emotion, movement of bones and muscles, senses, function of organs, and production of voice and speech (AOTA, 2017). Performance skills are an integration of the body structures and body functions that create one's ability to perform a certain physical, mental, or social skill or action such as lifting an object, attending to a task, or expressing emotions (AOTA, 2017). Performance patterns refer to one's habits, routines, rituals, and roles (AOTA, 2017). Contexts include the cultural, personal, temporal, and virtual conditions within or around the client (AOTA, 2017, p. S28). Environments include the physical and social surroundings of the client (AOTA, 2017). All of these aspects are important factors to determine one's occupational performance.

Occupational therapists utilize occupation-based theories and models, integrated with the OTPF concepts, to structure evaluation and treatment. The Canadian Model of Occupational Performance (CMOP) is one example of these theories. According to the CMOP, occupational dysfunction occurs as the result of a change in any of the factors of the person, environment, or occupation due to the interconnectedness of these three aspects (Cole & Tufano, 2008;

Ramafikeng, 2010). The person factor consists of the human spirit at the core along with physical, cognitive, and affective aspects (Cole & Tufano, 2008). The human spirit is defined as the essence of one's identity and can be composed of an individual's motivation, well-being, and life meaning and satisfaction (Cole & Tufano, 2008; Ramafikeng, 2010). The person aspect of the CMOP includes the client factors, performance skills, and performance patterns described in the OTPF explained above. The CMOP delineates occupation into three categories including self-care, productivity, and leisure (Cole & Tufano, 2008). This is another way of categorizing occupations. In this model, self-care would include activities such as bathing, grooming, and dressing, which would be considered ADLs. Productivity includes activities such as jobs, careers, or volunteer work; this would include many IADLs in addition to work and education from the OTPF. Leisure includes any activity that someone chooses to do for pleasure. Environment within this model, including physical, social, cultural, and institutional aspects, is where individuals are presented with occupational opportunities (Cole & Tufano, 2008; Ramafikeng, 2010). Occupational therapists can utilize the concepts within the CMOP, along with the OTPF, to assess an individual's occupational performance based on the interaction of the various aspects of the person, environment, and occupation.

Within occupational therapy literature and documentation, the CMOP has been utilized as a framework to organize individual aspects of the person, environment, and occupation (Hurst, 2017); the CMOP will be utilized in this way for the current project. Another form of assessment based on the CMOP is the Canadian Occupational Performance Measure (COPM) (Law et al., 1990). This measure is a semi-structured interview that requires the client to identify areas of difficulties in performance within each of the occupational categories (self-care, productivity, and leisure) and then rated each area in importance on a scale of one to ten (Law et

al., 1990). The five areas with the highest importance to the client are then rated on perceived current performance and satisfaction with that performance on the one to ten scale. The performance and satisfaction scores are then multiplied by the importance score for each of the five identified areas to determine baseline scores between 1 and 100. The process is then repeated after the client has undergone several treatment sessions to determine progress made on each of the client-identified aspects (Law et al., 1990).

The COPM has been utilized with various populations in various practice settings including TBI, PTSD, stroke, chronic pain, diabetes, mental health, hand therapy, and pediatrics within primary care, outpatient, residential program, and inpatient rehabilitation (Donnelly, O'Neill, Bauer, & Letts, 2017; Doig, Fleming, Kuipers, & Cornwell, 2010; Speicher, Walter, & Chard, 2014; Hansen et al., 2016; Persson, Eklund, Lexell, & Rivano-Fischer, 2013; Marinho et al, 2016; Rouleau, Dion, Korner-Bitensky, 2015; Robinson, Brown, & O'Brien, 2016; Reidy, Naber, & Stashinko, 2018). Within all settings, the COPM is utilized to provide treatment plans that are collaborative, client-centered, measurable, and occupation-based (Law et al., 1990; Plach & Sells, 2013; Donnelly et al., 2017; Doig et al., 2010). Within the primary care and hand therapy settings, the COPM helps guide occupational therapy evaluation by keeping the assessment occupation and function focused rather than simply measuring medical symptoms (Donnelly et al., 2017; Robinson et al., 2016). Within the TBI population, the most significant use of the COPM was to ensure the evaluation was client-centered and also allowed for clients to report subjective changes which was a way to evaluate their insight (Doig et al., 2010). Clients within the stroke population appreciated the COPM as a tool to direct evaluation and treatment as they had greater perceptions that the goals that were most important to them were the goals that were being addressed (Hansen et al., 2016).

According to the Meaningful Activity and Life Meaning model (MALM), engagement in meaningful activity is directly and indirectly associated with meaning in life (Eakman, 2013). Within the model, meaningful activity may influence meaning in life through the fulfillment of basic psychological needs including autonomy, competence, and relatedness (Eakman, 2013). However, there is also a direct path between meaningful activity and meaning in life within this model that is significant, indicating that participation in meaningful activities may have an effect on meaning in life apart from fulfillment of basic psychological needs (Eakman, 2013). A longitudinal study utilizing the MALM model supported the idea of the direct and indirect pathway between meaningful activity and meaning in life within an 11 month period (Eakman, 2014). This research further supports the use of meaningful activities to enhance well-being and quality of life (Eakman, 2014).

The roots of the occupational therapy profession come from reconstruction aides in World War I (Gutman, 1995). The reconstruction aides, who became known as occupational therapists, strived to increase the morale of the soldiers who were injured through participation in productive activities which fostered a sense of accomplishment and achievement (Ford, 1921; Pettigrew, Robinson, & Moloney, 2016). As the profession grew, occupational therapy continued to work with service men and women as well as veterans, however, the focus has shifted from distraction from illness and injury to goal-directed treatments to enable individuals to perform their occupations (Veterans Health Administration, 2015b). The VA is now the single largest employer of occupational therapists (Veterans Health Administration, 2018). At the VA, occupational therapists work with multiple disabilities, disorders, and conditions including amputation, TBI, PTSD, spinal cord injury, stroke, neurological disorders, vision loss, and homelessness (VHA, 2018). Occupational therapists facilitate veterans' abilities to continue

or re-learn how to complete the activities they need and want to do (Duddy, 2015). Occupational therapists help veterans with physical components of these activities through pain management, work hardening, ergonomics, seating and mobility, home modifications, and assistive devices and technology (VHA, 2015b; VHA, 2018; AOTA, 2015). Occupational therapists assist veterans with cognitive and mental health impairments through coping strategies, trigger identification, problem solving and memory strategies, stress management, psycho-education, crisis intervention, and development of healthy habits and routines (VHA, 2015b; AOTA, 2015). Occupational therapists also address the functional needs of veterans such as self care tasks, social skills, role development, and community reintegration (VHA, 2015b). Thus far, occupational therapy has been effectively addressing the needs of veterans through interventions focused on increased identity and well-being, physical and psychological symptom management, community reintegration support, and increasing participation and performance in occupations (Walker, Bramstedt, Cleary, Greer, & Teague, 2018; Walker et al., n.d.).

The top six resources veterans seek for assistance with reintegration difficulties are recreational opportunities, access to health benefits, opportunities to connect with other military members and families, access to employment, physical health treatment, and volunteer opportunities (America's Warrior Partnership, 2017). Research on various sports programs indicates physical activity and sport effectively decreases PTSD and depression symptoms in veterans (Caddick & Smith, 2014; Bennett, Lundberg, Zabriskie, & Eggett, 2014; Ley, Rato Barrio, Koch, 2018; Lundburg, Bennet, & Smith, 2011; Rogers, Mallinson, Peppers, 2014; Rosenbaum et al., 2015). Physical activity and sport has motivational and restorative effects on veterans, leading to increased overall well-being and meaning in life (Ley et al., 2018). Specifically, physical activity and sport increases psychological well-being through growth and

development of determination, inner strength, identity/self-concept, social well-being, and achievement/accomplishment (Caddick & Smith, 2014). Due to the psychological benefits, authors suggest that sports activities are great adjunct interventions for individuals with mental illness such as PTSD and depression (Caddick & Smith, 2014).

Another program for veterans offered coffee socials in various towns and cities in order to create a sense of community among veterans and to better connect the veterans with the civilian community (Gorman, Scoglio, Smolinsky, Russo, & Drebing, 2018). The groups created a realistic way for veterans to gain emotional support and provided some veterans the opportunity to mentor some of the other veterans in a way that was rewarding to all (Gorman et al., 2018). The groups also assisted veterans struggling with social isolation and substance abuse to find an enjoyable, drug-free social activities to aid in recovery and reintegration (Gorman et al., 2018). Authors reported that other “informal social support interventions... could prove useful as a supplementary intervention to other mental health services or as a gateway to other services” (Gorman et al., 2018, pp.1195).

Researchers determined that open wheel racecar drivers expend slightly less energy than basketball and soccer players when measuring physical activity ratio, or “mets” (Beaune, Durand, & Mariot, 2010, pp.2927). The physicality of kart racing is also noted by a writer in Popular Mechanics magazine in his statement, “The hardest part of driving a kart well, however, is not mental, but physical. At first, your forearms and shoulders won't make it more than a few laps before they're surging with blood and drained of all their strength. And your lungs will feel like you just ran a marathon” (Oldham, 1996, pp.40). Even National Association of Stock Car Auto Racing (NASCAR) driver, Kevin Harvick, reported utilizing go-kart racing to keep him in shape during the offseason (2011).

Racing4Vets is a non-profit organization that utilizes the “power of the racing community” to get veterans who have service-related disabilities involved in motorsports careers and amateur racing (Racing4Vets, n.d.). The mission of Racing4Vets is to “give back to the men and women who have sacrificed and protected us as members of the U.S. Armed Forces, National Guard, Reserves, and Coast Guard” (Racing4Vets, n.d.). The two main goals of the organization are to create a motorsports career training and outreach program and to provide veterans who have injuries with the opportunity to compete in amateur racing (Racing4Vets, n.d.). The organization aims to accomplish these goals through the development of skills, knowledge, and job connections and by “obtaining safety equipment, vehicles, sponsorship, adapted controls, mechanical support and relationships with local organizers and racers” (Racing4Vets, n.d.). The amateur racing component of the organization is designed to give participants a safe opportunity to engage in exercise, healthy competition, camaraderie, and stimulating activities, while facilitating pride and self-belief in the participants and advocating for support from the community (Racing4Vets, n.d.).

The Racing4Vets organization consists of two chapters. The Cincinnati chapter in Cincinnati, Ohio hosts indoor and outdoor karting opportunities (Racing4Vets, n.d.). The Cincinnati chapter is partnered with the Cincinnati Veterans Administration Post Traumatic Stress Disorder and Traumatic Brain Injury Rehabilitation Program at Fort Thomas, Kentucky and Full Throttle Indoor Karting in Springdale, Ohio and Florence, Kentucky for veterans receiving rehabilitation to experience the benefits of karting and community on a monthly basis (Racing4Vets, n.d.). The monthly indoor karting opportunities are also attended by veterans receiving services at the Fort Thomas Veterans Association Domiciliary and Joseph House (Racing4Vets, n.d.). The Racing4Vets outdoor karting team offers veterans a team environment

to work together to gain sponsorships and build the team karts to compete during the outdoor racing season with the Ohio Valley Karting Association or the World Karting Association (Racing4Vets, n.d.).

The Tampa chapter in Tampa, Florida hosts an all-service-disabled veteran automotive motorsports education program (Racing4Vets, n.d.). This program offers veterans a hands-on team environment to learn mechanical skills, make industry connections, and pursue careers in motorsports (Racing4Vets, n.d.). Veterans learn through courses delivered by experts in the motorsports industry and R4V experienced veterans and civilian team leaders (Racing4Vets, n.d.). Topics include vehicle engineering/fabrication and maintenance, sponsorship and fundraising, logistics and transportation, event management, operations management, safety and skill development, business partnerships, financial budgeting, race shop management, and competition driving (Racing4Vets, n.d.). After the courses, veterans work as a team to build and maintain their own race vehicles and undergo driver training (Racing4Vets, n.d.). With demonstration of commitment and effort, team members earn the opportunity to participate in amateur autocross, track day, or endurance road races with the ChumpCar World Challenge, National Auto Sport Association, and Sports Car Club of America (Racing4Vets, n.d.).

Racing with Racing4Vets includes a team environment that promotes inclusion. The social aspect of this team may assist with the well-being and quality of life of veterans with mental health diagnoses. Along with social benefits, the physical aspects of racing can assist with mental health. The benefits of the Racing4Vets program may facilitate posttraumatic growth. Although Racing4Vets was designed to get veterans involved in motorsports careers and amateur racing, there is a need to understand the perception and experience of veteran

participants to determine how the program may influence occupational performance, posttraumatic growth, and quality of life.

### **Section III - Methods - Instrumentation**

Quality improvement (QI) is a problem-solving model that utilizes systems and population-based approaches and evidence to find the best solutions to increase the quality of a project or program (Bonnell & Smith, 2018). Steps in utilizing QI include determining the problem, completing a needs assessment, finding a possible solution, implementing the solution, evaluating the success of the solution, providing feedback, and monitoring continued outcomes (Bonnell & Smith, 2018). The problem was established through review of the applicable literature; the next step in the process is the needs assessment to determine the program needs. Questions addressed in the needs assessments should include the who, what, and how of the systems currently in place (Bonnell & Smith, 2018). This includes determining the organizational structures and systems in place, the primary stakeholders, the organizational missions or goals, and the main participants. Given that this doctoral capstone project focused on a program evaluation of the Racing4Vets program, it was determined that the project did not qualify as human subjects research (Appendix A).

#### **Instrumentation**

In order to gain better understanding of the who, what, and how of the organization and the problem, semi-structured interviews were completed with the national President/Tampa Regional Director and the Cincinnati Regional Director (Appendix B). The interviews began with 17 items related to the demographic information about the participants, mission of the organization, and logistics on how the organization is run to determine how and who is being

served. These questions were followed by six evidence-based items related to the impact of deployment and the benefits of Racing4Vets programs.

As stated above, literature indicates that the experience of war can have negative effects on an individual's well-being and may cause difficulty with the transition back to civilian life (Ahern et al., 2015; Painter et al., 2016). The overall physical, social, and psychological state of the individuals coming into the program is an important factor in understanding what needs the program should address (Scaffa, Reitz, & Pizzi, 2010); this is a portion of the “who” considered in the problem and needs assessment (Bonnel & Smith, 2018). Therefore, the Regional Directors were asked about their perceptions of how deployment affected the well-being and transition to civilian life of their participants.

In addition to having an idea of where the participants are currently in their well-being and transition, it is important for the organizers to know what potential their participants have for growth; this is a portion of the “what” considered in the problem and needs assessment (Bonnel & Smith, 2018). According to the research discussed above, individuals experiencing a significant traumatic event, such as some aspects of war, have the potential for posttraumatic growth (PTG) (Tedeschi & Calhoun, 2004). Based on this information, the Regional Directors were asked for their opinions on the potential for PTG in their participants.

The last aspect of a program that is important to be aware of is the potential benefit for the participants; this is the “how” considered in the problem and needs assessment. Based on the literature, the social support, involvement in meaningful activity, and possible psychological benefits of racing available through Racing4Vets may increase the well-being, transition to civilian life, and occupational performance of the participants (Gorman et al., 2018; Caddick & Smith, 2014; Eakman, 2014; Ramafikeng, 2010). Therefore, the Regional Directors were asked

how they believe the social interaction, meaningful activity, and possible psychological benefits experienced within the program may enhance the lives of their participants.

### **Findings of Needs Assessment**

Racing4Vets is a national non-profit organization with a board of directors including Co-Founders, President, Regional Directors, Webmaster/Social Media Manager, and a board member with marketing experience (Racing4Vets, n.d.). The Regional Directors are the primary individuals involved in organization and day-to-day operations. The Regional Director in Tampa, Florida is also a Co-Founder and President of the national organization and is the overseer of the other board members. The Regional Director in Cincinnati is the sole board member and organizer located in Ohio.

According to the Regional Director, there are typically 15-20 veterans and 5-6 active duty participants per month involved in the Tampa chapter (J. Vann, personal communication, February 7, 2019). Participants are mainly male (approximately 90%), married, from OIF/OEF, and employed at least part time. The participants span all branches of the military and range in type of disability from invisible disabilities such as PTSD, TBI, depression, and other mental illnesses to physical disabilities such as blindness, amputation, spinal cord injury, and musculoskeletal disorders. Participants typically have a disability rating of 30-60% and participate mainly on the weekends or have a disability rating of 100% and participate more frequently and during the week. Participants spend an average of 8-12 hours per month with the program, with some participants spending up to 25 hours per month. Participants average three to six months of involvement with the program with a few participants with four to five years of involvement. The majority of the participants are at a beginning level for knowledge of racing and mechanics upon entry into the program.

The Regional Director of the Cincinnati chapter reported that there are typically five veterans involved in the outdoor program per month (K. Banfield, personal communication, February 7, 2019). Participants are primarily white males between the ages of 30-50 years old who have full time employment outside of Racing4Vets. Approximately half of the veterans involved are married or have children. The participants span all branches of the military. The Regional Director was unsure how many years post-deployment the veterans were when getting involved with the program. Nearly all participants have some extent of PTSD with a span of other disabilities in addition to the PTSD, including TBI, musculoskeletal disorders, and other mental health diagnoses. The participants average an approximate 20% disability rating. Participants spend an average of 12-15 hours per month overall with the program, with an increase to at least 20 hours per month during the outdoor racing season. Currently, participants average two to three years of involvement with the outdoor Racing4Vets program. Most participants have a basic understanding of simple mechanics and little or no knowledge of kart racing upon entry to the program.

The Regional Director of the Cincinnati chapter also reported on the demographics of the veterans in the indoor Racing4Vets program. The program averages approximately 30 participants per month with mainly male participants (80-85%). Participants are primarily from the local Veterans Association (VA) PTSD and TBI inpatient programs, the local VA Domiciliary, and a local substance abuse recovery home. Typically, the participants attend two to three monthly indoor events overall, as the VA programs are 90 days and veterans come to these programs from all states. Other demographics on these participants are unknown.

The Racing4Vets President discussed the foundation and mission of the organization in more detail than what is provided on the Racing4Vets website. As a veteran returning to civilian

life, the Racing4Vets President was involved in many veteran programs, mostly consisting of “*hero for a day*” programs, where there was no personal responsibility (J. Vann, personal communication, January 25, 2019). The president of Racing4Vets reported that there were a lot of programs out there, but it seemed like there was no way to have any sort of continuation of engagement. The Racing4Vets President stated:

*When you found something that you liked, you would ask if you could come back or volunteer in some way and they were like, “No, the grant ran out.” And then it was just done. The programs were not based in reality; you couldn’t do these things as an ongoing thing because you didn’t have the resources, there are no dolphins or horses in your backyard. So what was the value?* (J. Vann, personal communication, January 25, 2019)

The Racing4Vets President expressed that in founding Racing4Vets, they wanted to create a program that would require personal responsibility from the service men and women, something that would highlight the work that the participants put into it. The Racing4Vets President envisioned a program that allowed veterans to do what they love, racing, but in a way that made them earn the right to do it. As an organization, Racing4Vets would provide individuals with the tools and guidelines and then the participants do the work and make it what they want or need. The idea was to instill personal responsibility, self-confidence, and positive morale through thoughts such as “*if I can take care of a car or a booth at an event, I can take responsibility and care for myself*” (J. Vann, personal communication, February 7, 2019). Recently, the focus of Racing4Vets has shifted to three pillars including community, healing, and career. This shift was to help others see the importance of the process of the program rather than just focusing on the racing. The goal is to change the participants’ lifestyles and add value to their lives by giving

them opportunities to connect with veteran and civilian communities, help facilitate a focus on health and wellness related to the physical and mental aspects of racing, and increase skill sets and business connections for potential career opportunities. The Racing4Vets President stated, *“The cars and karts are our marketing. They are the symbol of the capabilities and hard work of the veterans, a way to show pride in what they have done and what they can do”* (J. Vann, personal communication, January 25, 2019).

Primarily, promotion of the program happens through word of mouth; there are also attempts made on the organization's website, social media, and booths at various shows in the community (K. Banfield, personal communication, February 7, 2019; J. Vann, personal communication, February 7, 2019). Fundraising typically occurs simultaneously with promotional opportunities. There is a donation tab on the website and there is a donation box and conversations with possible sponsors at the booths during shows. Racing4Vets also participates or volunteers with other organizations as fundraising opportunities. Currently, there are some attempted applications for grants, however, the organization has yet to receive any grant funding. According to the Regional Directors, there have been occasional attempts to have informal discussions with participants in order to gage their growth in the areas of community, healing, and career to utilize on the website for promotional and fundraising purposes; however, the benefits of the programs have not been formally assessed or tracked in any way.

In general, the regional directors believe that deployment has had a negative affect for the participants' well-being and transition into civilian life (K. Banfield, personal communication, February 7, 2019; J. Vann, personal communication, February 7, 2019). They believe that the participants continue to struggle with the physical and mental effects of war, that negatively impact well-being and the transition. Another difficulty noted in the transition is that the

participants may not have a “*buffer*” between military life and civilian life due to a lack of understanding of the toll and impact that deployment has on the bodies and minds of these participants (J. Vann, personal communication, February 7, 2019). Overall, the Regional Directors believed that the participants have the potential or have already experienced PTG (K. Banfield, personal communication, February 7, 2019; J. Vann, personal communication, February 7, 2019). One comment implied that a large factor in PTG is the amount of community engagement, and that programs that promote community involvement are vital to PTG (J. Vann, personal communication, February 7, 2019).

The Regional Directors believe that the program has a large impact on participants through the social, physical, mental/emotional, and meaningful activity aspects of the programs (K. Banfield, personal communication, February 7, 2019; J. Vann, personal communication, February 7, 2019). Both the indoor and outdoor programs facilitate social support and growth in community; however, indoor events are limited to service men and women. Based on observation, one of the Regional Directors noted that the participants in the indoor program tend to congregate around the individuals they are familiar with and there is little mingling across groups (K. Banfield, personal communication, February 7, 2019). However, in the outdoor programs, both Regional Directors commented on how the participants grow as a community themselves to create a sense of belonging and facilitate accountability, responsibility, and commitment (K. Banfield, personal communication, February 7, 2019; J. Vann, personal communication, February 7, 2019). They also noted how participants in the outdoor programs reach out and make friendships and connections at the racetracks with civilian competitors. This leads to social support among the participants as well as providing a way to connect to the broader community.

Both Regional Directors expressed that the physical act of racing is beneficial for the participants through adrenaline, release of endorphins, and expression or release of emotions (K. Banfield, personal communication, February 7, 2019; J. Vann, personal communication, February 7, 2019). It is also a way for the participants to feel excitement, control, and achievement. According to the Regional Directors, engagement in meaningful activities through Racing4Vets contributes to the well-being, quality of life, and growth of the participants in a similar way as the social and physical aspects of the program. With the outdoor programs, they note that it is clear that racing and the activities surrounding racing are important and meaningful in the lives of the participants. The main aspects they feel this meaning brings in the well-being of the participants is the creation of personal responsibility, motivation, and self-confidence.

The needs assessment revealed that the regional directors have a general idea of the demographics, the possible effects of war on well-being and the transition to civilian life, and the potential social, physical, and psychological benefits on the well-being and growth of the participants; however, specific data on these aspects of the program are unknown due to a lack of methods to measure these benefits. According to the QI process, after implementation of a program, an evaluation should be completed to determine the effectiveness of the program (Bonnell & Smith, 2018). Demonstration of the effectiveness is required to provide justification for continuation of the program (Scaffa et al., 2010). Due to a lack of appropriate evaluation, the Racing4Vets programs would benefit from a program evaluation based on the existing mission and goals of the organization. The program also has not been explored or evaluated for potential benefits beyond the mission and goals of the Racing4Vets organization. Based on relevant literature, Racing4Vets may increase well-being, quality of life, PTG, and occupational performance of the participants. Therefore, this doctoral capstone project will focus on

evaluating the current programming according to the Racing4Vets mission and goals and the exploration of additional potential benefits. Results of this project may be useful for further program development as well as promotional and fundraising opportunities.

#### **Section IV - Methods - Intervention**

Exploring and evaluating the benefits of the Racing4Vets programs was accomplished through the following inventories and evidence-based interview questions. Each inventory was modified to match the participants and scope of this project. The Tampa chapter and the outdoor Cincinnati participants completed 16-18 demographic questions, the Posttraumatic Growth Inventory, five perceived competence scales, the Military to Civilian Questionnaire, and nine evidence-based, open-ended questions through an electronic survey created via Qualtrics (Appendix C). The outdoor team members also completed semi-structured, one-on-one interviews in private rooms at the indoor go karting facility (Appendix D); interviews were video recorded for transcription and potential promotional purposes. The indoor Cincinnati participants completed a printed survey including six demographic questions, the Physical Activity Enjoyment Scale, and five evidence-based, open-ended questions (Appendix E).

#### **Instrumentation**

**Posttraumatic growth inventory.** The Posttraumatic Growth Inventory (PTGI) may be utilized to determine to what extent Racing4Vets facilitates PTG. The PTGI is a 21-item survey utilized to quantify an individual's personal growth since a traumatic experience (Tedeschi & Calhoun, 1996). The PTGI is scored in 5 separate categories including new possibilities, relating to others, personal strength, spiritual change, and appreciation of life. In tests of concurrent and discriminant validity, authors determined that there was a significant correlation between PTGI values and the personality traits of optimism and extroversion (Tedeschi & Calhoun, 1996). In

tests of construct validity, authors determined that women and individuals who have experienced extraordinary events correlated to higher PTGI values (Tedeschi & Calhoun, 1996). Overall testing for psychometric properties of the PTGI, indicated good internal consistency, acceptable test-retest reliability, and a relatively normal distribution (Tedeschi & Calhoun, 1996). The authors report, “the scale appears to have utility in determining how successful individuals, coping with the aftermath of trauma, are in reconstructing or strengthening their perceptions of self, others, and the meaning of events” (Tedeschi & Calhoun, 1996, pp.455).

The PTGI and the concept of PTG has been utilized with various populations, including veterans, in relation to sports and recreation. Veterans with combat-related PTSD or TBI participated in a 5-day recreation and sport camp for either watersports, fly fishing, or snow-sports; the camp was designed to teach the veterans recreational activities in hopes of continuation of the activities on their own after completion of the camp (Bennett, Townsend, Van Puymbroeck, & Gillette, 2014). The PTGI was one outcome measure utilized. Change in PTG from the beginning to the end of the five days approached significance (Bennett, Townsend, et al., 2014). Authors report that this result is unsurprising due to the short duration of the program and the long-term process of PTG, however, are hopeful of continued PTG with continuation of recreation after the camp due to the 7.2% increase in PTG within the 5 day period (Bennett, Townsend, et al., 2014). Based on qualitative interviews regarding PTG, individuals with spinal cord injuries and cancer noted increased PTG following recreation through opportunities to discover unique abilities and hidden potential, discover a sense of self, build companionship and meaningful relationships, make sense of traumatic experience and find meaning in everyday life, and generate positive emotions (Chun & Lee, 2010; Vercillo, 2014).

This evidence suggests that the PTGI and qualitative data gathering are appropriate measures to evaluate the benefits and extent of PTG facilitated by the Racing4Vets program.

**Perceived competence scales.** The Perceived Competence Scale (PCS) may be utilized to determine the individuals' self-perceptions of knowledge and skill in relation to the community, healing, career, and racing. In general, the PCS is a four-item self-report questionnaire rated on a seven point Likert-like scale; the scale is adapted for each use in order to match the topic in question (Choi, Mogami, & Medalia, 2010). Authors reported high internal consistency (Cronbach alphas between 0.80 and 0.94) and good construct validity for various versions of the PCS (Williams, Freedman, & Deci, 1998; Choi et al., 2010).

The PCS has been utilized to determine individuals' perceived competence in various topics including disease management, self-belief, learning of new techniques, and sports and recreation with various populations including veterans (Williams, Freedman, et al., 1998; Williams & Deci, 1996; Choi et al., 2010; Bennett, Townsend, et al., 2014). The authors of the article about the five-day sports and recreation camp for veterans with PTSD and TBI mentioned previously, utilized the PCS as a pre-test and post-test measure to determine if the veterans gained knowledge and skill related to the sport or recreational activity (Bennett, Townsend, et al., 2014). Within this study, there was a significant increase in perceived competence of the veterans (Bennett, Townsend, et al., 2014). This suggests that the PCS may be an appropriate outcome measure to assess the Racing4Vets participants' perceived competence in community, health, skills, and racing.

**Military to civilian questionnaire.** The Military to Civilian Questionnaire (M2C-Q) may be utilized to assess the level of difficulty with reintegration experienced by the participants of Racing4Vets. The M2C-Q is a 16 item self-report questionnaire measuring community

reintegration difficulty on a five-point Likert-like scale ranging from “No difficulty” to “Extreme difficulty” (Sayer et al., 2011). Items addressing relationship with spouse/partner, relationship with child/children, work, and school have the option of “Does not apply” (Sayer et al., 2011). The questionnaire addresses the main factors of community reintegration identified in research including interpersonal relationships with family, friends, and peers; productivity at work, in school, or at home; community participation; self-care; leisure; and perceived meaning in life (Sayer et al., 2011). The score can range from zero to four and is determined by the sum of the ratings divided by the number of items reported, with a higher score indicating greater difficulty with reintegration (Sayer et al., 2011). The questionnaire has strong internal consistency with a Cronbach’s alpha of .95 (Sayer et al., 2011). Initial construct validity was supported through correlation of M2C-Q scores with individual factors including overall mental health, probable PTSD, problematic substance use, and a rating on perceived overall difficulty with readjustment to civilian life (Sayer et al., 2011). The M2C-Q is the primary outcome measure utilized within a study protocol for research to determine the effects of exercise and social interaction on the community reintegration of veterans (Baird, Metts, Conroy, Rosenfield, & Smits, 2018). This indicates that the M2C-Q may be appropriate to determine the effects of the physical, mental, and social aspects of Racing4Vets on the community reintegration of the veteran participants.

**Physical activity enjoyment scale.** The Physical Activity Enjoyment Scale (PACES) may be utilized for the indoor Racing4Vets events to determine the extent that the veterans enjoy karting (Kendzierski & DeCarlo, 1991). The PACES is an 18 item self-report questionnaire with a seven-point bipolar scale (Kendzierski & DeCarlo, 1991). The PACES has high internal consistency with a Cronbach’s alpha of .93 (Kendzierski & DeCarlo, 1991). There is also preliminary evidence in the construct validity of the measure due to its significant negative

correlation with a boredom outcome measure (Kendzierski & DeCarlo, 1991). A variation of the PACES has been utilized with the veteran population (Padala et al., 2017). In a study of 27 veterans 60 years old or older that focused on the effect of Wii-Fit on balance, the PACES-8 was utilized to measure the enjoyment of the veterans during the activity (Padala et al., 2017). This suggests that the PACES may be an appropriate outcome measure to determine the extent of enjoyment of the physical aspect of karting with the indoor Racing4Vets program.

**Semi-structured interviews.** Semi-structured, evidence-based interviews were also utilized to collect more descriptive data. The regional directors had a general idea of participants' military experience and the relation to well-being, disability, and the transition to civilian life for their participants; however, they did not know specifics; therefore, questions on these topics were asked of participants as suggested by literature (Ahern et al., 2015; Painter et al., 2016). Questions also include aspects of knowledge and skills learned from the program to address the effectiveness of the Racing4Vets programs in the career pillar (J. Vann, personal communication, January 25, 2019). Based on evidence for the mental and physical aspects of racing, participants were asked to describe if and how they perceive these benefits (Caddick & Smith, 2014; Ley et al., 2018). Social aspects of the program are designed to facilitate support and community involvement (J. Vann, personal communication, January 25, 2019). Participants were asked how they perceived the social context and if they experienced any social or community growth. Research indicates that individuals may experience growth after trauma and the Racing4Vets programs are designed to facilitate growth in the personal, social, and purposeful aspects of the participants' lifestyles (Tedeschi & Calhoun, 2004; J. Vann, personal communication, January 25, 2019). Therefore, the interviewer asked participants about self-perceptions of growth in these areas. Participants were also asked to express the best aspects of

Racing4Vets and why others should become involved due to the lack of promotional content for the organization (K. Banfield, personal communication, February 7, 2019; J. Vann, personal communication, February 7, 2019).

## **Section V-Outcome and Discontinuation**

### **Cincinnati Outdoor Program**

**Participants.** Seven participants completed semi-structured interviews and the Cincinnati outdoor survey. One participant did not complete the demographic section. Participants were males between the ages of 30 and 51 years old with an average of 40 years old. The majority of participants have full-time employment outside of Racing4Vets, with one participant unemployed. Approximately half of the veterans involved are married and all but one participant have two or more children. The participants have various military experiences. Three participants have served in the United States Army, two in the United States Army National Guard, two in the United States Marine Corps, and two in United States Navy. Participants averaged approximately three years active duty, with the majority serving 4 years or more part time service in the Reserves or National Guard. Participants had up to 3 years of deployment with up to 3 deployments. From the date of data collection, participants average 18.5 years post service. The most common diagnoses are PTSD and depression, with some anxiety, substance use disorder, and minor physical injury. The average reported VA disability rating is 30%. Participants spend an average of approximately 21 hours per month with the program in the off season, with an increase to an average of approximately 44 hours per month during the outdoor racing season. Currently, participants average 2.3 years of involvement with the outdoor Racing4Vets program. Most participants had a basic understanding of simple mechanics and an interest in racing upon entry to the program.

**Military to civilian questionnaire.** The average combined score on the M2C-Q for the veterans in the outdoor Cincinnati program was 1.80 on a zero to four scale. According to the scale, this score indicates that the veterans in this group had between “a little” and “some” difficulty overall with their transition to civilian life. On average, the veterans in this group scored the highest, indicating more difficulty, on “confiding or sharing personal thoughts and feelings” (2.67) and “enjoying or making good use of free time” (2.5); both indicate participants rated these items between “some” and “a lot” of difficulty.

**Posttraumatic growth inventory.** The veterans in the outdoor Cincinnati program averaged a score of 2.82 on a scale of zero to 5. This score indicates that the veterans self-reported small to moderate growth overall. According to the PTGI scale, this group of veterans reported “moderate” (3.0) growth in two of the five categories including “Appreciation of Life” (3.22) and “New Possibilities” (3.16).

**Perceived competence scales.** The veterans scored the highest, indicating the most competence, for the Skills scale with an average score of 6.00 on a scale of zero to seven. This result indicated that participants “moderately agreed” (6.00) with having competence in their skills for working on the karts. The average self-reported competence of the veterans on the Community (5.79), Racing (5.46), and Healing (5.25) scales indicated that participants “slightly” (5.00) to “moderately” agree with having competence in connecting with others, competing in amateur motorsports, and maintaining positive well-being. Participants rated perceived competence the lowest for the Health scale with a 4.75, indicating participants were between “neutral” and “slight” agreement with their competence to maintain a healthy lifestyle.

**Semi-Structured Interviews.** Four main themes emerged from the Cincinnati outdoor interviews and qualitative survey questions including reintegration, supportive environment, life

change, learning, and program involvement. The theme reintegration encompassed the subthemes positive aspects of military experience, negative aspects of military experience, and differing culture. Most of the participants commented on how the military was a positive time in their life. One participant explained the hard work and dedication utilized during military service through the following statement:

*I, uh, did everything I could do on my own, gave it my all, and graduated first out of my accompany, uh and got meritoriously promoted, and was allowed to choose any ACE school in the Navy I wanted to, so, I said, hey I just wanna be a medic and they said, hey, sign the paper, kid, and, uh, so I did, so tacked on two more years to my career, but, uh, uh, that-that's great, I, uh, I had a great career, uh, in service. (Participant 3)*

Many noted the positive influence of the military through the skills they developed. One veteran stated, *"I would say the military experience has, uh, allowed me to have confidence in decision I make, whether it be in business or personal life"* (Participant 2). Another participant stated:

*I met a really good group of guys there, gained a lot of experience, and, um.... It was at that point in my life that I realized I, uh, I was a leader...the military, just helped me develop a good set of, uh, work hard ethics and taught me that, ya know, anything's possible under the worst cir-circumstances. So it's-, an-and helped me get to where I am today. (Participant 6)*

One veteran expressed that *"being in the military, it-it, uh, it actually gave me a little bit of direction. Ya know, um, gave me a little bit more discipline in my life. Ya know, because before the Marine Corp, ya know, I-I really didn't have much direction"* (Participant 4). Another participant noted both the good and the bad about the military experience. This participant reported, *"my military experience, uh, definitely helped develop me as a person, um, as a leader,*

*um. Definitely some of my fondest memories and, um darkest nightmares both have come from time in the military” (Participant 7). This idea leads to the next subtheme of negative effects of the military experience. Several participants reported negative effects of service on their mental health. Some discussed the conditions they have as a result of their service including PTSD and substance abuse. One veteran expressed the following:*

*I have PTSD. Um, just I lost 14 friends in a helicopter crash... ya know, I got-I got some good days and I got some bad days. Um, ya know, I-I suffered with it for a long time before bu--people really knew what PTSD was... I dealt with it for years and years and years... dealt with it pretty well for the most part... I ended up having a nervous breakdown... So, I lost my home; my marriage; um, my three kids; my job; everything-- all at one time. Um, and I was put out on the street, evicted from my home. Um--that was, that was tough... After 3 years of trying to see your kids, ya know, and you go from, ya know, 31 dollars an hour down to nine, ten bucks an hour... eventually I, ya know, I-I screwed up and I went to heroin because I just didn't care anymore, I, uh, I got addicted to drugs. Um, ya know, trying to deal with the PTSD, trying to deal with life, on life's terms, um; ya know, I did that for, ya know, off and on for, a couple years...I pretty much isolated myself away from my family. Um, I figured that's what I deserved... Um, it ended up, I guess, in-in the long run, I, the smallest amount that I ever did, um, killed me. And I woke up to the Cincinnati fire department, um, administering Narcan to me, which if I didn't have that drug, then, uh, I wouldn't be alive today. (Participant 3)*

Another participant also discussed problems related to PTSD:

*I currently go to PTSD therapy on a weekly basis, um, at one of the top two, um, trauma centers in the country... Just trying to figure yourself--who you are, anymore after it's all*

*gone. Um, a lot of things you found happiness isn't there anymore, um, ya know. For me, I emotionally disconnect to my fa--from my family while I was overseas, just 'cuz the mindset. Um, something I still struggle with now is emotional closeness to others...there's a lot of things I deal with on a daily basis, on, negatively impact my life... Trusting anybody, paranoia, um, I didn't leave my parent's house for the first 2 months I was home; let alone, uh, I used to s-, like, I wouldn't even leave my bedroom for awhile, as well...I did a lot of self-medicating for a few years when I came back home. Um, didn't know how else to sleep; um, probably, wasn't the easiest way to, um, get help psychologically. (Participant 5)*

One other veteran mentioned the effects of PTSD on the reintegration process through the statement:

*[C]oming home from a combat zone, uh...dealing with PTSD from just the stress of day-in, day-out not knowing what was gonna come from that day. Um, having friends get blown up, um, while overseas, that was very stressful. Unfortunately, in, in, uh, Afghanistan, where we were, you never knew where the--there was not front line, so we didn't know if-if today was the day that something was gonna happen. And, quite honestly, I didn't really have the effects, feel the effects much of the, of the combat, uh, environment until I got home and was able to kind of relax and unwind is really when it hit me. And, uh, nightmares, an-and, uh, the what ifs really, really started to play rec-, reek havoc on my, uh, psyche... dealing with, uh, uh, ya know, um, ya know, for me it was the what-what could have happened and-and what-what did happen to some of my friends that-that did, uh, get blown up, um, while we were overseas. Uh, dealing with*

*that, like psychologically was a lot more challenging than I thought-anticipated it would be. (Participant 7)*

Although another participant denied having a service-related condition, there were still difficulties according to the following discussion:

*I had a short service, due to some, uh, personal issues, uh that I had to come out and take care of things, with my family, uh, I felt that my career had uh run short...I had to come back home to raise my son...The one challenge I had was, not really regret, but, the, I-I guess, ya know, trying to, make peace that getting out was the right thing to do... And, uh, I-I know it was the right thing, but then there's the heart strings pulling the opposite direction ya know, 'cause I really loved what I did. (Participant 2)*

Many of these same participants also had difficulty reintegrating into everyday occupations in civilian life such as social participation with family and work. One participant mentioned the difficulty experienced with his role in family life through the following statement:

*[T]he biggest challenge was really tryin' to figure out, uh, get back into the swing of day-to-day life... not only are, as a serviceman were you deployed, but your-your spouse and your family and friends are deployed as well, uh, in essence; 'cause they learned to live without you. Um, coming back and trying to pick up right where you left off is a-kind of a fairytale, 'cause it's just not gonna happen. So figuring out how to try to work your way back into the family dynamics. (Participant 7)*

One participant had difficulties with work due to mental health. This participant reported:

*[W]hen I got out, I was an emotional wreck. I was not gonna stand in front of a new potential employer that I wanted to do that was related to my military job, um, because it wouldn't be an honest thing to say, "Hey, I'm the best employee you'll ever have." Ya*

*know, the typical things you do on an interview; I couldn't do it 'cause it wasn't from the heart--it wasn't directly honest, 'cause I know I was a mess. Um, and so I went back to my employer and I've been there for 25 years. (Participant 2)*

Another veteran struggled with work due to a lack of translation of experience into civilian culture. This veteran reported:

*Um, when I got out, unfortunately you have to have, uh, papers, i guess--apparently to do, uh, EMT stuff or, uh, to be a paramedic in the civilian world, so I had--I was pretty much a doctor in the military, and when I got out, I didn't have any certifications, so, I, uh, went back to UPS, driv--ya know, driving for them. (Participant 3)*

Other participants also expressed difficulty with the transition into the civilian workforce due to the change in culture. One of the participants stated:

*I would probably say the most challenging woulda been, uh, uh, ya know, when you're in the military, uh, ya know, everyone signed up for it. It wasn't like a-a job that you go and apply for; and you've got to work with people you don't like and you, ya know, in civilian life you can quit your job, you can leave. In the military, you can't. You're contracted to be there whether you like it or not... that's the one thing I had a hard time with in-in civilian life, was coming back, that, ya know, I was working with people who didn't really care and I'm thinking to myself, well then, why don't you leave? And they're there in their lives everyday being negative and I-I would have nothing to do with it. (Participant 2)*

The other participant discussed a similar issue through the following:

*[M]ost soldiers are fairly disciplined and when you're told to do something or you tell someone to do something, you expect actions. And, in a working environment, th-th-the*

*common workplace isn't just like that. So, trying to readjust and find different methods of gettin' something done or asking someone or telling someone to-o-do something is a completely different reprogram of how you get things done. Instead of just do it and it happens, it's-you gotta, just play psychological games and figure out how different people react an-and work best with instruction. (Participant 6)*

A veteran who did not report a service-related disability noted a different way that the shift in culture made the transition difficult. This veteran noted:

*[I]t is challenging, when-when ya go-, come off of active duty and go back into civilian life, due, due to the fact that, ya know, when you were in the Marine Corp, you had, you-, stable housing, and, uh, you didn't have to worry about your meals, ya know, because every-everything was pretty much given to you, and already taken outta your check. Ya know, you already paid for that pre., uh, up front, cuz it did come out of your check. So, when you come back to civilian life, you know, when you actually get a job, 'n you have to pay your own rent, 'n it's a lot more responsibility, ya know. (Participant 4)*

Supportive environment includes the four subthemes of connection to military, support, family, and camaraderie. Many of the veterans noted that Racing4Vets has allowed them to reconnect with the military, which has been missing since their service ended. One veteran noted:

*[T]he impact Racing4Vets has had on my life, again, kinda givin' me that, um, connection back to the military, havin', um, guys and gals that, um, that have served; that's always, ya know, kind of a unique, um, kinda considered the largest br-, uh, fraternity/sorority in the world is the military. Um, so, ya know, havin' that connection again is always good. (Participant 7)*

Another expressed, *“I have that brotherhood, again. Um, which is something that I dearly missed”* (Participant 5). One veteran reported:

*[I]t’s been a really fun experience as far as getting me socially connected with people who are like-minded, who, uh, ya know, uh have the same goals and have the same experiences in the military that other people wouldn’t understand, um, so it kind of got me reconnected to, uh, to doing what I loved* (Participant 2).

All participants mentioned the support given by the other team members. One veteran discussed this support via this statement:

*Whatever it is, a-a bad day, whatever it is a good day, it doesn’t matter, you can pick up the phone at any time, call any of these guys, and they’re gonna be there. So, it’s almost like the veteran crisis line, ya know, somebody’s gonna answer that phone. And somebody’s gonna be there, whether it’s good or bad, they don’t care, they’re not gonna judge.* (Participant 3)

Another participant reported, *“I feel that I-I can discuss pretty much anything with ‘em. Ya know, the good, the bad, ya know...Where you can discuss, ya know, if you’re having a bad day, you can, discuss it with ‘em, ‘n, they’ll do their best to help you”* (Participant 4). Yet another veterans stated, *“I think we’re, we’re a, a small, but cohesive group. Um, definitely the group is, looks out for one another, call-call one another just to check in from time to time. But, it’s good to have a battle buddy, um, that’s, that’s gonna look out for each other”* (Participant 7). The theme continues with another participant who expressed:

*[W]e support each other...We check in with each other on a regular basis, ya know. People who are struggling, they have good months and bad months and we’re always calling ‘em and checking up on ‘em. Do you need a hand? This and that, or get your*

*[butt] up, ya know, you're-you're messin' up, ya know. And we pull 'em back into line...we are an unconditional team; we will accept, take and help you any which way you can or want to. (Participant 6)*

Others also mentioned the support in ways suggesting that the team is always there. One veteran stated, “[W]hen you look back and you’ve, you see a teammate behind you racing, you know you’re okay, because they’ve got your back” (Participant 2). Yet another participant emphasized, “Worst comes to worst, at least you know that you’re not alone” (Participant 5). Another added to this idea stating;

*[W]hatever it is, if-if you’re in your head, if you’re traumatized, um, if your got something that triggers you, that, ya know, bad day, whether you’re gonna go drink or you’re gonna stick a needle in your arm, whatever it’s gonna be... This is a place, and an organization, where you can act like it’s AA or NA, ya know. (Participant 3).*

Many of the veterans in the Cincinnati outdoor program commented about how the other team members have become like family. One participant stated:

*They’re not gonna judge you, no matter what, they’re, um, they’re the best group of guys, ya know. They-they’re a father figure, ya know. Yeah, I can say the one, one is a mother figure, ya know. She really is. Um, I don’t know, it’s just family. It’s just family. If-if you’re a family person, that’s where ya need to be; this is where you need to be...you’ll find another family, and if you don’t have a family, or if you’re lost, ya know, you’ll be found...You’ll-you’ll feel at home, again. (Participant 3)*

Another veteran reported, “[I]t’s good to have that, like that family, again, outside of, ya know, my blood family. Just ‘cause, um, it’s relative lifestyles and situations we’ve been through” (Participant 5).

Nearly every veteran discussed the subtheme of camaraderie. One participant focused on this theme throughout the interview with the most clear statement being, *“Racing4Vets to me means camaraderie... Quick, easy, and simple”* (Participant 4). Another participant noted, *“[I]t’s all about camaraderie and I feel that, um, Racing4Vets has increased the camaraderie of the [racing] club from what I’ve seen and-and heard from prior”* (Participant 6). A few of the other veterans expressed their experience with the camaraderie. One stated, *“I like the camaraderie you get with, uh, hanging out with the, uh, veterans, ya know, it’s guys from different branches; you can kinda rip each other a little bit”* (Participant 1). Another explained, *“I really like gettin’ my hands dirty, um, wrenchin’, jokin’ around with the guys and gals”* (Participant 7).

Overall, these factors give Racing4Vets a positive, encouraging environment that fosters growth as explained by two of the participants. One expressed:

*[W]e wanna provide an environment of, of, uh, racing that’s something different than, ya know, going to a hospital and talking to people all the time, ‘cause ya kinda know driving to a hospital that... Ya know, ya gotta open yourself up now to talk and listen to other people all the time and, um, when you’re racing, you’re-you’re talking and listening to kinda the same thing, but you’re in a racing environment and it’s, it’s kinda fun, ya know.*

(Participant 2)

The other participant expressed how this environment has been a reality through the following quote:

*[Racing4Vets] got me outta my element, and recently, I mean, I-, sadly to say, like, my element was more like secluded, but, uh, luckily enough, like, I’ve at least felt comfortable enough in this environment to come back. Um, I know at least, in this situation, with me,*

*I see doctors at least 2, 3 times a week, um, at least it's something that, um, a positive aspect on my mental health that, um, I don't have to fill out any paperwork. (Participant 5)*

Another of the four main themes is life change; this theme includes increased mental health, meaningful activity, community, career, helping others, and personal growth. Several of the participants discussed how Racing4Vets has increased their mental health. One of the most powerful quotes to express this subtheme was:

*I try to make jokes of everything, 'cause laughter's the best medicine. Ya know, um, before, I wasn't; I would just be quiet, ya know, and I mea--I was in a dark spot in my head. They've pulled me out of that darkness and brought me to the light; they really have. Um, I mean, I-I can honestly say that Aaron Banfield, ya know, the-Full Throttle, and, ya know... all the guys, they've, pretty much saved my life. Honestly, I-I, I mean, if I was gonna really put it into terms like that, yeah, they-they've saved my life; this whole program has... They keep me happy. Ya know, happiness was something that was very hard to find for a long time and, uh, for the first time in a long time, as of recent, since I've been with these guys, it-it's back...it gets me outta my head. It-it makes me feel good because I know those guys are gonna be there; I can't say enough about how great this organization really is, um, and how blessed I am to even have it. (Participant 3)*

Another participant mentioned a similar idea when expressing that Racing4Vets helps with “gettin’ your head outside of what, um, kinda clear your head of what else is going on in your life. Um, give you an opportunity to kinda relax” (Participant 7). Another veteran expressed:

*I know for me personally, it was really hard for me to feel--anything, really... other than anger or irritability or shame or guilt for a long period of time and, um, it at least gave*

*me a brighter outlook. It gave me more, uh, optimistic outlook on things, just from helping others, really being around others when they experience--and you can just see, like--carefree. Sometimes, it's all someone needs. (Participant 5)*

Other participants noted a similar idea that helping others influenced their mental health. This is demonstrated through the following:

*I'd say definitely has helped with... mental health as far as, again, having the positive experience um, again, my, my biggest thing is making other people happy is makes, what makes me happy, um, to a fault sometimes, but, uh, that's definitely a-a different, uh, avenue to for me to help others. (Participant 7)*

One participant expressed how others have seen the change in mental health through the statement, *"my wife and my family, my kids, ya know, they-they've allowed me to do this because they know that it's made a difference in my life, it's made me a happier person, it's made me happier about myself and, and what I do"* (Participant 2).

One subtheme was that Racing4Vets provided participants with a meaningful activity. One veteran noted that the program provides a *"good opportunity to get outta the, get outta the day-to-day tasks or routines and do somethin' that's a lot of fun"* (Participant 7). Another participant added, *"it gives me somethin' to look forward to, ya know"* (Participant 4). Others expressed how vast the meaning of this program has been for them. One veteran stated:

*I would just go home and sit and isolate, and ya know, let my thoughts spin into a spider web, I don't do that anymore, ya know...it keeps me busy, keeps me focused, and it keeps me from doing other bad [stuff], so..., so, that's a... It does everything for me. It keeps me focused... I wish it was every weekend, I wish it was every day; I don't want to leave this place, ya know. It's like, ya know, when you leave here, ya know, you go back to life on*

*life's terms, which is fine, ya know, you-you gotta live that anyway, no-no matter what, but, uh, it's always fun when you have some competition. (Participant 3)*

Another participant expressed:

*[I]t's pulled all of these things in my life that have been kinda loose strands and kinda made it a rope. Ya know, it's actually starting to pull things together and um... it gives me purpose. Not that we don't have purpose before, we have our families and our kids to raise and ya know, we have our jobs...ya know, but, and then we have this definition called hobbies, ya know, well, Racing4Vets is, to me, more than a hobby. (Participant 2)*

One other veteran shared a similar experience as demonstrated by the following:

*I'm an artist, I'm an, an adrenaline junkie, and I'm, uh, I'm a leader, I'm and inventor, and it-it-it covers such a broad spectrum of what I need and want and crave, and, so, it satisfies me on that. It-it keeps me busy...there is always a challenge here. Whether it be mechanically or emotionally, it's, um, it-it, it's keep, keeps you busy...If I left [Racing4Vets] there would be a hole in my life. (Participant 6)*

Many of the participants also noted how Racing4Vets has impacted them in relation to community. Some expressed how the program increased their connection with the military as reported above, which increased their involvement in the veteran community, however, others expressed their inclusion into the racing community. One participant explained:

*I've met a whole bunch of people who share the same thing with karting ya know, it kinda goes way beyond karting, it goes toward the racing community and, uh, the village...when you hear about professional drivers talking about how the racing community is great, ya don't know it until you experience it. You can hear it and it ve just like another show, another advertisement or whatever, but until you're actually there...it's that type of*

*guineuine fun that everybody kinda seeks to get together, um, and ya know, Racing4Vets is, has been proud to be a part of that group, ya know...it's not only a community, it's kinda a way of life. (Participant 2)*

Another veteran described the racing community as follows:

*[T]he racing community... the OVKA [Ohio Valley Karting Association] community, it's a small club and you see a lot of cut throat action and animosity and like everybody just is, this is my stuff or whatever, but then at the same time, it's, um, there's a lot of good people that are just, will help you, no matter what. Ya know, i-if ya gotta give a guy a part to help him get along or give him some advice or whatever, at the-at your own expense, so be it. (Participant 6)*

In addition to the racing community and veteran community that they gain from Racing4Vets, some participants noted their increased involvement with the broader community. One veteran expressed:

*[T]his team would not run without the community, it wouldn't run without people who, who give to support us and it does, it wouldn't run without people who donate. Um, and for us to do that, we have to reach out...fortunately I've been, ya know, blessed to, uh, meet a lot of different people through our sponsors, um, and the negotiation is-is a partnership, it's a trust. (Participant 2)*

Through the connections made within the program, some of the participants have changed careers. One veteran noted:

*I'm part of Aaron's network of people...and it-it-it's been lots of good things. Um, I had a career change and, um, I landed, uh, I-I sold my business and went to work for...a friend of Aaron Banfield's and, um, the production manager there. And, instead of my*

*skills being used for seven or eight people, which, uh, worked with me, I now get to work with about 50 people and my, my skills are spread out amongst them. (Participant 6)*

One other participant expresses a similar situation due to his involvement in the program. This participant stated:

*I'm moving on to something else, a whole new career, so it's--and that wouldn't have happened unless I was connected with this team because a lot of the friends, people who see me from outside the box, are looking at me, and they, they know me well...They know if you're truly happy... a lot of them had said, man you need to move on, do something different 'cause you're this and you're that... that was part of my decision, is, hey, it's time to move on. (Participant 2)*

Every participant mentioned how Racing4Vets has impacted their life through helping others.

This aspect of the program is one of the most important according to one participant as expressed in the following quote:

*Racing4Vets, on a personal level, has meant the most to me because of my best friend... He has, uh, struggled with s-some issues through life, depression, this and that, and, after me being in Racing4Vets for awhile, I invited him into the group. And, it's been really good for him...[T]hat means a lot; to be able to help people, I-I, ya know, the most important thing in life is helping people. It-it's not, it's not how much money you make or how fast of lap time your turn, it's, it's what happens off the track; it's th-the nights we get to spend, on the overnights up there or the days, the waking up at five o'clock in the morning and picking, um, a veteran up, an-an-and, ya know, the hour and a half long trip out to the track, ya know, you discuss some racing, you discuss some personal life an-and, it's, i-it's... Racing4Vets is just a coagulant for that activity...So, it's a two way*

*street. Me helping people is also helping me because it's what I need and like to do. It's just, what's natural...meeting the guys on the team and meeting the people that come through here once a month, being able to help them, is, uh--this is my church. Uh, Racing4Vets is my church. Uh, I-I like being part of this congregation. (Participant 6)*

Many of the other veterans share a similar experience. Another participant expressed:

*I know we've got guys, uh, and girls that have been on this team that it's made a difference in their lives. It's allowed us to, connect, um more, I get calls in the middle of the night sometimes, "Hey, ya know, I'm having a hard time." "What's going on?" I'm in my truck and I'm out headed to their house. It's "Hey, what's going on?" Talk to them. Just to, just allows me to kind of give back, ya know...there's that guy or that girl that needs it, and so I know that, ya know, all this stuff pays off as I see the smiles on the face or the happiness and the people that show up, my friends that, ya know, maybe a couple drivers that show up that haven't been there for awhile and pop up out of nowhere and it's like "Hey what's up?" Ya know, you know that they haven't forgot. Ya know, you know that you made a difference... in their life. (Participant 2)*

Some of the other participants discussed the indoor events and how they feel those events affect the other veterans and in turn increase their well-being. One participant reported:

*[T]he greatest feeling is usually leaving here on a Saturday after one of our indoor events and just seeing, ya know, one of the folks that may be struggling with something that's coming up from a different p-, one of the programs from the VA, just seeing them with a big smile on their face and feeling like you actually made an impact on somebody's life in a positive way. (Participant 7)*

Another veteran expressed:

*[I]t's fun to see guys that haven't had that exposure out there ya know kinda get out, have some fun. Uh you know, some of them are going through some issues here and there and uh, it's a chance for them to have some fun, hang out with some more veterans, and uh try to give 'em some pointers on how to go faster on the track...if you can help support some other guys get, you know, every now and then, you know, some vets do have some issues, you know, adapting back to, you know, civilian life and you know if I, if I can lend a hand there to kind of help a guy get, you know, uh better situated to the civilian life you know, I-I like being there for that. (Participant 1)*

Similar to the previous quote, another participant emphasized this overall mission when getting veterans involved with Racing4Vets in the statement:

*[O]ne of our main focuses is to try and get the veteran off the couch; try to get 'em so that they're not sticking, ya know, ways, they're not finding ways to end their lives, it's just, we're losing 22 a day. And, if we can get that down to 21 a day, if we can get that down to zero a day, would be a blessing. (Participant 3)*

Some of the veterans involved with the program expressed other ways that the program has promoted personal growth. One participant explained

*Racing4Vets has not only pulled me off the couch, and got me out, ya know, to be active again, it's kind of re-engaged me into a leadership traits, and , that I've, wasn't really able to fully get to while I was active duty...[I]t's allowed me, uh, to not only get reattached to leadership ability, physically, it's got me, uh, to where I'm more physically active, ya know, uh, losing weight is faster race times, so I've dropped about 25lbs right now and I've got another probably 20 to go. (Participant 2).*

Another veteran suggested that Racing4Vets has increased his awareness. This veteran stated:

*[Y]ou do get to interact with a lot of guys who have a varied uh military past and you knida, ya know for me not ever being in a combat situation, you get a little better understanding of uh, ya know what they're going through... I get the realization that there are a lot of guys out there dealing with uh, pretty deep issues that that you know we can reach out and help them uh you know just provide some ya know normal fun activities for these guys to take part in. (Participant 1)*

Similar to the previous subtheme, one of the major themes of the interviews was the overall learning of Racing4Vets participants. Two of the participants mentioned that there are too many things in too many aspects of the program to accurately capture or list. Through other participant responses, three subthemes emerged including racing/mechanical, social, and personal learning. One veteran expressed, *“What have I learned? Ya know... there's just, ya know, th-the experience with working on go karts, ya know I didn't know much about go karts”* (Participant 1). Another participant explained that *“there's always something to learn and there's always, um, challenges that you're gonna have to figure out how to overcome...there's always something you've got to figure out how to improve upon or, uh, a-a problem ya gotta tackle”* (Participant 7). One participant discussed the learning in detail in the following statement:

*Mechanical learning that I've learned, is phenomenal. With-with karting, it's, when I first started, someone said, “You have to move that seat up a quarter of an inch, that's all you probably need.” And I'm like, whatever, a quarter of an inch? Like that's gonna make a big difference? I'm 270lbs, whatever; but it's amazing, it, you shut up, be humble, and listen and you realize that that quarter inch does make a difference. Ya*

*know, add a seat strut here, adjust that camber this way, toe in this way, add a little more fuel for weight, move your weights around, uh, air the tire pressure up just right, move the axle in or out, I mean, people, I had no idea all this stuff was involved with karting.*

(Participant 2)

Some participants also discussed the social learning they experience through involvement with Racing4Vets. Mostly they commented on increases social skills, comfort with public speaking, and trust. One participant noted, *“I definitely wasn’t a people person, like I don’t like large crowds, I think bad things can happen in large crowds, um, they could tell me now, get up on a stage and do a speech and I’ll do the speech...I’ve learned some people skills”* (Participant 3).

Another veteran expressed improvement in social skills through the following statement:

*the thing that I don’t like to do that th-the team has kinda, being part of the team has kinda forced me to do is to figure out how to ask people for-for stuff. So, I-I really don’t like doing that; I’d rather just do it myself, or, um, pay for it myself as opposed to trying to go out and try to raise money. Despise doing it, and I’ve gotten maybe ever-so-slightly better at doing it, um, um, serving as the, ya know, volunteer, uh, treasurer for the chapter. Um, so, tryin’ to go out and find resources that-beyond my own means.*

(Participant 7)

A few of the other veterans mentioned how Racing4Vets has increased their trust in others. One veteran stated, *“I’ve learned, um, to a certain extent, to trust others, again. Um, it’s really--it’s hard for me to really, um, be comfortable around people in general. Um... It’s helped me get out more, be more sociable”* (Participant 5). Similarly, another veteran said, *“I was pretty much an introvert, really didn’t, really, I don’t trust a lot of people. I think that’s really one of the big things it’s done, is that it’s opened me up again to trust people”* (Participant 2).

Another type of learning that participants reported was personal including increased awareness and personality traits. One participant expressed, “*What I learned is, ya know, is-is, uh, is-is increased awareness and problem solving, uh, taking ownership of uh, of uh, issues that pop up and finding solutions right away*” (Participant 2). Another stated, “*I’ve learned that I’m more compassionate than I thought I was*” (Participant 6). One other participant expressed personal learning through the following:

*I learned that, there’s light in every dark situation; you just, have to want it, you have to look for it, and, um, ya know, I-I, I worry about the 22 a day. Ya know, how dark is it, ya know, I’ve been there. I’ve been there. And, um, it was a failed attempt, ya know, but, um,.... That was a dark day. Um, it’s there if you want it; it really is.* (Participant 3)

Program involvement was the final major theme from the which captured how participants got involved, the cost, time commitment, teamwork, growth, and raceday. Most veterans got involved in the Racing4Vets outdoor program through word of mouth via Full Throttle or a friend or through the VA domiciliary that attends the indoor events. One veteran, who was introduced to Racing4Vets through Full Throttle, explained:

*I came across [Full Throttle] and started racing here at lunch time... met Aaron Banfield, and, um, became good friends with him and, uh, he invited me out to Camden for, um, a free da-, free day of racing... during that day, he had found out I was a veteran and he’s like, I’ve got a spot for you here. And he introduced me to the vets and, um, they had a, a three-kart team and... I-it just went off from there. We, uh, we showed up 2 weeks later for the next race and... I won and it was my, uh, my first race, I, I won the race, um. So it got me kinda hook, line, and sinker. I don’t know if they paid everyone off*

*to rope me in, but, uh, anyway, it was a good day and it was the start of all this.*

(Participant 6)

Another veteran, who came to Racing4Vets through the VA domiciliary, stated:

*[T]hat's how I got to find Racing4Vets...they [VA domiciliary] had a thing, sign up, hey we're gonna go racing go karts on a Saturday morning and I said, Oh! What? Racing? So I came here to, uh, Full Throttle, and, uh, I raced a couple races and they're like, "Who are you? And we want you on our team." And I said, "Hey, I'll be glad to come, what're we doin'?" So, I've been here ever since. (Participant 3)*

One aspect of the program that the participants frequently discussed was that the program is free to veterans and seems too good to be true. One veteran explains this benefit of the program in the following statement:

*[T]he great thing is it's of no financial burden, which, anybody who pays their own way in racing knows that that can be substantial. Um, there's always a new tool or toy or somethin' that everybody's gotta have. But, the great thing with this program is that the, through the fundraising and sponsorships, we're able to provide that at no cost to the veterans, so ya know, it's not added stress from that aspect, which can be a very stressful part of one's life, um, finances. So I think that's a-a huge benefit to veterans. (Participant 7)*

Another veteran reported that a friend had called him and said he could race for free and his response was, *"For free? Are you serious? Like, no! That, that can't-- 'cause I know, 'cause racing can be expensive"* (Participant 2). One other participant commented, *"[I]f it sounds too good to be true, it usually is, well not in this case. This is, this is the truest it can be. So um, I'm grateful; I really am"* (Participant 3).

Although there is not financial cost for the veterans, many discussed the time commitment within their interviews. One participant explained:

*[I]t just you know gobbles up a little bit of time because you, you do have to make somewhat of a commitment to it if you decide that you are going to, you know, participate in the outdoor program, it's not close to where I live, um. You know, you have to be able to get yourself out there, and, uh, put in the time turning wrenches on some of these go karts...one thing about the outdoor program, is that it's uh, there's no bumpers on this stuff, you crash it, you bend it up, you have to fix it an-and, its uh, you can log in a lot of time turning wrenches on these karts. (Participant 1)*

The time commitment is vast, even in the winter when there are not any outdoor races taking place and can take a toll of one's family life. One veteran described this as follows:

*[I]t's been a double-sided coin as far as my family life goes. I've got two children, and being as involved as I am and trying to make Racing4Vets as successful as it is, it also does take a toll on the personal life. Um, my wife was like, yay, it's off season. But I think I've spent more time working on this stuff, working with this stuff and working with the people than during the season. At least during the seasons, it's wake up on Saturday morning at 5am and gettin' back at 10 o'clock at night and it's just one day. And in the off-season, it's a lot of preparation, so, it-it's kinda flip flopped as far as the term off-season goes. So, tryin' to balance what, um, my family life needs has been...somewhat of a challenge. But, ya-my-uh, at the same token, my-my wife, my family has complained about it a little bit, but then, also, they do see a-a change in my emotion and nature and stature in which I conduct myself, so it-it's double sided; it's, there's good and bad.*

(Participant 6)

However, another participant expresses how the hard work and time lead to a sense of accomplishment. This participant stated:

*[T]hat's our number 22, uh, racing for 22 a day--I'm proud of that--because that, that's more than just a race team, to me. That's hours and hours, weeks, and months of work. Ya know, driving late at night, helping somebody out, or, ya know, getting parts or, ya know, talking on the phone about what are we gonna do next, and what can we do to be better, what can we do to be faster?... [P]ainting a car is, ya know, 90% body work, 10% painting it. Um, the body work that goes on behind the scenes Monday-Friday, months before raceday even starts, um, ya know, all that work you put into, for every single race... during the weekend, it all pays off. (Participant 2)*

Some participants, who do not have service-connected conditions, discussed how the mission of Racing4Vets requires a team of veteran to help those who need the most help. One participant stated:

*I told them flat out, I said, "well I'm not combat-related" and they said, "well that's okay, you're a vet and you signed your name on the check, you signed the blank check for your life on the line and, uh, to serve your country and that's, uh, that's also what we're about...it's, it's a full encompassing veteran group. That's our focus is PTSD and combat injuries, but it takes a village to help." (Participant 2).*

This participant, as well as others, noted how Racing4Vets is a team effort as far as utilization of skills. One comment was, "*[I]n order to function, these things need to be in place, ya know, uh the public speaking, the-the marketing, the parts acquisition, um, ya kn-, the-the logistics, the-the sustaining of processes that are in place*" (Participant 2). Another veteran expressed:

*[I]t's got a lot of different aspects, you can-there's some people in our group that a-are good at, uh, ya know, they like t-the fundraising aspect of it and uh going to the fundraisers and..an, they don't necessarily like to race but they still like other aspects of the program, so eh-eh-as a group... I-it gives a lot of people different opportunities to use their strengths and, uh, ya know contribute to the group so, ya know, if you-you think you have something out there that, ya know-if you're thinking about getting into the program and maybe you're not the fastest go kart racer out there in the world, ya know, we don't really care, um, ya know, you might be uh, uh, super social guy and we're out at a fundraiser, you-uh-you excel there, so it's just kinda a group effort. (Participant 1)*

Most veterans involved in the interviews discussed how much the program has grown. One veteran said, *"we were able to take a team that, um, was kind of struggling, and through good networking and the integration of, uh, different veterans out of different aspects of life and different problems, we have built a-a strong team"* (Participant 6). Another veteran commented:

*[W]e've got some key people who genuinely want to see it succeed and, um, provide what it promised to provide and I beli-, I absolutely believe, we are taking the steps it takes to get, uh, get a solid foundation with this racing team, here in Cincinnati.... And I think, um, it-it's-it's gonna be always evolving, ya know, um, so as long as we're improving, then I'm happy. If it's small steps, it's still a step; it doesn't have to be big steps. You gotta make small steps consistent to win a race. (Participant 2)*

Similarly, another participant voiced, *"[A]s long as we're makin'...a difference on one person at a time, it's really what it's all about, but, uh, we'd love to see the program... continue to grow, 'n, we just gotta figure out how to, how to get the right, the right people in and get 'em, get 'em hooked"* (Participant 7). One other veteran noted, *"Being a part, and seeing it grow from what it*

*was originally, when I first started, like 2 years ago, to what it is now, um regardless we've only gotten, um, team-wise, we've only gotten so much larger, I feel like, um, our reach is a lot further"* (Participant 5).

Another large aspect of the program discussed by the veterans was raceday and the feeling of racing. Participants discussed aspects of raceday both on and off the track. One veteran expressed:

*I guess the thing that makes me the happiest is ya know, when race day comes, everybody's there, they're happy, um... and especially, uh, not only them, but the-the participants of the racing community see us there; that makes me happy. Uh, the gold star families, that show up. We have, uh, honor and remember, we're very blessed and-and happy that honor and remember has allowed us to be, um, ya know, able to recognize, the-uh, the gold star families, uh, those that lost their, their sons or daughters in combat. Uh, ya-we, we recognized them for every race. We, we recognize the families, um, we have a whole day for them racing at the track, we have-we put a picture of their son or daughter on the kart with us; they're racing with us...all the way to the finish... Ya know, and to see them come out, and be happy, knowing what they've lost. (Participant 2)*

Another of the veterans suggested a similar idea with the off-track aspect of raceday. This veteran stated:

*Number one, you would think, ya think number one would be the seat time, and it's a close second, but, honest to God, gettin' to the track, watching the sun come up, opening that door and saying this is raceday. Y-you smell the fuel, and the rubber and the grease and you're just like, you're unloading all that stuff. The best part i-i-, yeah, gettin' to the*

*track an-and startin', startin' that engine; just the engine of the day, the engine of the team--that's the best part. (Participant 6)*

Other participants mentioned the psychological aspect of racing. When asked what driving the felt like, the participant stated, "*Free. Mmm--it's hard to get that. Just free from thoughts, um, cares, worries*" (Participant 5). Another veteran expressed, "*You're allowed to come out here and just let your soul out onto the track. You're allowed to, uh, put everything that you got, ya-ya know*" (Participant 3). Yet another participant reported:

*It's awesome, 'cause, you forget about everything, I mean, you are in tune with the track, the drivers around you, and for that 8 minutes, 12 minutes of, of 65 miles per hour going around the track and making a turn without breaking...you get your body and mind in one, you just totally forget about everything... The smells of the fuel and the-the sound of the tires and the, the engines, um, all around you--you can hear if someone's coming up or you can, or the feeling of passing someone, fighting for that spot...it's cool, ya know, I mean it's... I like it. (Participant 2)*

One other participant commented on a similar aspect of racing the kart in the following statement:

*[I]t's so cliché to say, you're in control of what's out of control, but it's kinda true, and, ya know. Being able to go out on the track and just stick your, you know, we're basically running, ya know, almost open wheels and, to be driving that close on the edge with other people, ya know, it-there's a certain amount of trust, I guess, that you have to have-- there's a love-hate relationship with your opponents, ya know, do I stick it in there and go for the spot or do I leave it alone and just have a good day and get to the end of the*

*race, uh, it, it-it's adrenaline...it-it's--racing's awesome. I don't know how else to say that.* (Participant 6)

One veteran discussed a slightly different emotion related to karting. This veteran explained:

*It's a little bit scary. Um indoors, uh it's not scary, ya know, you have bumpers on the go karts, its uh, ya know I've got a lot of seat time in those so... I really don't have any, uh, butterflies or anything like that but when you get out on the, um, the outdoor track, especially when you're first starting out, it's a little bit faster, you're racing against a lot of people that have a lot of laps out there, and uh you're not gonna be at the top of the, uh you know, you're not gonna be the cream of the crop initially out there. So..that's always a bit nervous.* (Participant 1)

Finally, two of the participants commented on the psychical aspects of raceday and driving the kart. The first stated, *"It-it's very demanding, it-it's a demanding sport and it's not just for the 12, 15 minutes you're out on the track, it's um, it's-it's all the leg work in between, too. So, it, uh, it-it's a lot of physical activity in a-, during a race day"* (Participant 6). The other veteran expressed the physicality of the racing in more detail. This veteran explained:

*I tell you what, you're, you are fighting that, that kart with, ya know, three plus G's on a turn. Uh, and, ya know, you're crouched down there real tight and it's all forearms and- and legs and-and, uh, ya know, doing all that stuff, man, can, can, for 8, 12 minutes solid, non-stop, no one, ya know, like if you're working out and you get tired, hey but the barbell down, or ya just slow down on the treadmill; No--there's a green flag, and you're gonna go all the way until it turns checkered; you have no choice and you're fightin' it. We have some laps, or some races, that are like, ya know, 25 laps and, ya know, that,*

*that's a 15 plus minute race, or whatever, going full till, uh, it gets you in shape, you burn a lot of calories.* (Participant 2)

### **Cincinnati Indoor Program**

**Participants.** The demographics of the Cincinnati indoor program is ever-changing due to the flow of the patients at the VA domiciliary. The month of March, when data was collected, was held at the Florence, KY location of Full Throttle Indoor Karting. There were 12 participants total and 7 participants completed the survey. Based on personal observation, this was a small turn out with a lack of female participants compared to other months. The VA was also the only organization to participate this month. All participants were male with a variety of military experience. There was a larger number of participants who served in the United States Army than the other branches. Participants had 4-22 years of service with an average of approximately 10 years. Participants are 1-42 years post service, with an average of 19 years. The primary diagnoses were PTSD, depression, and substance abuse with other diagnoses including anxiety and TBI. The majority of the participants are from coastal states with only two local participants from Ohio or Kentucky.

**Physical activity enjoyment scale.** The average score for the veterans at the Cincinnati indoor event in March on the PACES was a 6.35 on a seven-point scale, with a higher score indicating greater enjoyment. All participants scored the items “I feel interested,” “It’s a lot of fun,” and “It makes me happy” as a 7.00. The lowest average score was for the item “It’s very pleasant” with a score of 5.28.

**Qualitative questions.** Five themes emerged from the short answer questions on the survey including Mental Health, Meaningful Activity, Social Interaction, Physical Activity, and Thankful. In relation to mental health participants used words and phrases such as “*super*

*pumped,*” “*lots of fun,*” “*adrenaline,*” “*relieving,*” “*much needed experience,*” “*feel good,*” and “*happy*” (Participant 1, 3, 5, & 6). One participant expressed that the indoor event was a meaningful activity because it got him “*out of the house*” (Participant 7). Several participants mentioned the social aspect through words and phrases such as “*being around new veterans,*” “*team,*” “*bonding,*” “*got us close,*” and “*easy socializing*” (Participant 1, 3, 5, 6, & 7). The participants responded to the physicality of racing by stating that it was a “*workout*” or that it “*hurt*” (Participant 3, 5, & 6). Finally, two participants reported that they were thankful for the opportunity (Participant 1 & 7).

### **Tampa Chapter**

**Participants.** Eleven participants completed the Tampa survey. Participants were males between the ages of 25 and 69 years old with an average of 37 years old. Half of participants have full time employment outside of Racing4Vets, with 30% of participant unemployed. Of the participants, 70% are married and 60% do not have children. The participants have various military experiences. The majority of participants have served in the United States Army or the United States Air Force; other participants served in the United States Marine Corps, the United States Navy, and the United States Army Reserve. Approximately 70% of the participants served 6 years or more as active duty, with other participants serving for 3-4 years. Of those who the completed part time service in the Reserves or National Guard, most served 1-3 years. The majority of participants were deployed for 1 year with 1-2 deployments. From the date of data collection, participants average 12 years post service. Of those who reported service-related disorders, the most common were depression and physical impairments. Other conditions noted PTSD, TBI, anxiety, and substance use disorder. Four participants reported their VA disability rating for an average of 80%. Participants spend an average of approximately 9 hours per month

with the program. The majority of participants have 2-3 years of involvement with the Racing4Vets program, with a few participants having over 3 years of involvement.

**Military to civilian questionnaire.** The average combined score on the M2C-Q for the veterans in the Tampa program was 1.42 on a zero to four scale. According to the M2C-Q scale, this score indicates that the veterans in this group had between “a little” and “some” difficulty overall with their transition to civilian life. On average, the veterans in this group scored the highest, indicating more difficulty, on “Keeping up friendships with people who have no military experience” (2.0) and “Confiding or sharing personal thoughts and feelings” (2.0); both indicate participants reported having “some” (2.0) difficulty.

**Posttraumatic growth inventory.** The veterans in the Tampa program averaged a score of 2.67 on a scale of zero to five. This score indicates that the veterans self-reported small to moderate growth overall. According to the PTGI scale, this group of veterans reported “small” (2.0) to “moderate” (3.0) growth in four of the five categories including “Appreciation of Life” (2.96), “Relating to Others” (2.79), “New Possibilities” (2.78), and “Personal Strength” (2.60).

**Perceived Competence Scales.** The veterans scored the highest, indicating the most competence, on the Healing, Career, and Racing scales with an average score of 5.63 on a scale of zero to seven. This result indicated that participants “slightly” (5.00) to “moderately” (6.00) agreed with having the competence to maintain positive well-being, work in a motorsports-related field, and compete in amateur motorsports. The average self-reported competence of the veterans on the Health (5.60) and Community (5.32) scales indicated that participants “slightly” (5.00) to “moderately” agree with having competence in maintaining a healthy lifestyle and connecting with others.

**Qualitative survey questions.** Six themes emerged from the short answer questions on the Tampa survey including Difficulty with Reintegration, Supportive Team, Interaction and Helping Veterans, Meaningful Activity, Community, and Program Growth. Two participants mentioned specific difficulties related to reintegration. One stated, *“I had issues finding a route as bad as it sounds. I had a ‘what now’ kinda feeling.”* The other participant expressed difficulty related to employment. This participant reported, *“No civilian jobs back home...aligned with the job I had in the military.”*

Several comments were made in relation to a team and teamwork. Some participants described that there are various roles that make up the team including mechanics/maintenance workers, drivers, teachers, mentors, and marketing personnel. One participant indicated that as a team, *“there is something for everyone to do.”* Other participants expressed the importance of *“being a part of a team”* and *“feeling...able to contribute to a cause with [one’s] skills.”* Another participant stated that *“being a part of a caring team and an important mission makes it feel like the same military family [he/she was] used to.”*

Another theme is the interacting with and helping other veterans. Some participants mentioned this theme through phrases such as *“getting to work with vets side by side,”* *“creat[ing] new friends that care and mentor,”* *“being able to come together with people that have been where you were and are able to confide in each other,”* and being in a *“safe environment with other veterans that understand [the] transition and can help them through it.”*

Some of the participants indicated that Racing4Vets provides a fun, meaningful activity. One participant explained, *“This is a great hobby to get into it helps you find purpose for something and to be the best at something other than what you think you could.”*

Another common theme was the connection to the community. One participant stated, *“Racing4Vets is a positive place...where you can better integrate with local community.”*

Another participant reported that the program has *“great connections in the local community and motorsports industry.”*

Growth of the program was also a common theme in the surveys. One participant stated, *“We[‘ve] come so far thanks to the community.”* Another participant expressed a desire for continued growth through the statement, *“I hope more sponsors get on board so Racing4Vets can become a national brand and help more veterans in more states.”* In agreement with the previous quote, another participant expressed, *“I’d love to see the team get bigger in all aspects.”*

## **Discussion**

The purpose of this DCE project was to complete a program evaluation based on the goals of the organization as well as to explore and evaluate the benefits of the Racing4Vets programs on the well-being, quality of life, PTG, and occupational performance of the participants. The main mission of the Racing4Vets organization is to get veterans involved in motorsports careers and amateur racing through the three pillars of community, healing, and career. Through these pillars, Racing4Vets strives to make a difference in the lives of veterans by providing opportunities to connect with veteran and civilian communities, facilitating increased mental and physical health through racing, and increasing skill sets and connections for potential career opportunities. According to the results of the perceived competence scales, the Cincinnati outdoor program participants slightly to moderately agree that they have overall competence in the core goals of the Racing4Vets program. Participants reported the highest competence in the development of mechanical skills to work on the go karts, closely followed by

their confidence in connecting with others. This indicates that these are the strongest factors that have been promoted through the Cincinnati program. The lowest competence was in healthy, specifically relating to maintaining a healthy lifestyle; many participants also denied a change in this aspect of their lives during the interviews. This suggests that the Cincinnati program may need to improve upon this area of the program if it remains a goal of the program.

According to the results of the perceived competence scales, the Tampa program participants also slightly to moderately agree that they have overall competence in the core goals of the Racing4Vets program. Participants reported nearly equal competence in healing, career, racing, and health, with community not very much lower, suggesting that the Tampa chapter has a good distribution of these five key aspects. However the participants reported only slight confidence in their abilities across all competency areas. This suggests that the Tampa program may need to improve upon the depth of each of the areas.

Participants of Racing4Vets reported posttraumatic growth and increased opportunities, mental health, social interaction, and participation in meaningful activity that may facilitate well-being, quality of life, and occupational performance. Overall, the veterans involved with Racing4Vets reported small to moderate post traumatic growth, with the most growth in appreciation of life. Racing4Vets may have contributed to this growth. Overall, the veterans had little to some difficulty with their transition to civilian life according to the results of the M2C-Q, with some of the most difficult aspects being sharing thoughts and emotions, making good use of free time, and maintaining friendships with individuals without military experience. Through the Racing4Vets program, these individuals were exposed to a supportive environment, given opportunities to participate in meaningful activities, and connected to the community that may have eased these difficulties. Participants often commented on the connection they had with

other team members and their willingness to discuss openly and that Racing4Vets gave them something to look forward to. The connection to the racing community allowed the veterans to create friendships outside of their comrades. These benefits along with the happiness the participants reported as a result of Racing4Vets may have facilitated the growth in appreciation of life.

Racing4Vets may enhance occupational performance of participants. Within the Canadian Model of Occupational Performance, a disruption of the person, environment, or occupation can cause occupational dysfunction. According to the concept of PTG, an individual who goes through a traumatic event, as one may experience during military service, has a disruption of their core beliefs (Tedeschi & Calhoun, 2004). This disruption is likely to affect the human spirit, the essence of one's identity or an individual's motivation, well-being, and life meaning and satisfaction. This is the core concept at the center of the CMOP. Upon return to civilian life, veterans likely experience a change in all other areas of the CMOP as well. Veterans are likely to have changes in physical or mental health, the tasks required in daily life, and the environment. The veterans involved in Racing4Vets rated the concept of appreciation of life as the area of most growth; this could also be described as the human spirit within the Canadian Model of Occupational Performance. Racing4Vets also provides support in other areas of the CMOP including improved mental health, participation in leisure, and a safe, unconditional environment. After having the drastic change from military life to civilian life, participation in Racing4Vets that restores some of the key aspects of the person, environment, and occupation may improve the overall occupational performance and therefore, reintegration of veterans.

### **Plan for Sustainability**

After completion of the project, continued quality improvement will be facilitated through access to documents, a promotional video, and member development. One of the key concepts behind Racing4Vets is to be completely self-sustained by the veterans; with this in mind, sustainability of this project will be accomplished by arming the veterans with resources to increase the effectiveness of the team members' abilities to advocate for and grow the Racing4Vets program. The regional directors and veteran leaders of the Racing4Vets were presented with the results of this project as well as all of the documents and resources created during the process. Previously, leadership of the team was not collecting or clearly measuring program outcomes. Findings from this program evaluation may also be used to improve the Racing4Vets program in the areas identified as less successful in achieving program goals. The implementation of the evidence-based program evaluation allowed the leaders to understand the importance of measuring the outcomes and benefits of their program. Once the desired changes have been incorporated into the program, the leadership team has access to the instruments utilized in the evaluation for use in the future. Findings from this project will also serve to provide Racing4Vets with the information needed to update their mission and goals to better reflect organizational efforts.

The relevant literature collected to form the program evaluation along with the outcomes of the program evaluation has equipped the members with enhanced vocabulary and phrasing for describing and promoting program outcomes to more scholarly or medically-based potential sponsors. A list of local veteran-owned businesses and local veteran organizations was also provided to enable Racing4Vets leadership to better advocate for their program in order to create more support for the program and a stronger connection to the community.

A promotional video was created to highlight the impact of the program on veteran well-being, quality of life, posttraumatic growth, and occupational performance. The video will serve as a program resource to share with other veterans, potential sponsors, and the community. The video has been posted online at <https://youtu.be/d5Q3UI5Bp7s>.

### **Needs of Society**

Many veterans struggle with reintegration into civilian life and some are unaware of the resources available to them. Seeking professional help can be intimidating and often carries stigma, however, Racing4Vets offers a safe, unconditional environment where veterans can seek social support, meaningful activity, and increased mental health. Racing4Vets is a small, non-profit organization that does not have room in the budget for promotional use. Utilizing this capstone project to experience and evaluate the Racing4Vets program and to create a video utilizing the powerful stories of the veterans who are currently involved will allow for the promotion of the program to get the word out to other veterans in the community. As more veterans become aware and become involved in this program, the local veteran community will have a resource to fight against some of the difficulties of reintegration through social interaction, connection to other military members, meaningful activity, and increased mental health.

## **Section VI - Overall Learning**

### **Advocacy and Communication**

Throughout the process of this capstone project, I utilized effective communication and advocacy skills. At the beginning of the project process, I utilized written and oral communication to advocate for my role in program evaluation when discussing with the regional director of Racing4Vets in Cincinnati and to advocate for the role of occupational therapy within

the Racing4Vets program to the Doctoral Capstone Coordinator. The majority of communication throughout this project was done via e-mail, text messaging, or phone call due to the majority of participants and leaders being off site on a daily basis. I adapted methods of communication to fit what was most effective for each person. I have gotten the opportunity to communicate in person with a few of the veterans' family members and express the purpose of the project and the benefits of the Racing4Vets program. Through attendance at one show/convention, I was also able to advocate for the Racing4Vets program by communicating the mission and impact of the Racing4Vets program to veterans and the general public in attendance.

### **Demonstration of Leadership**

The main leadership skills utilized to promote effective implementation of this doctoral capstone project included communication, organization, and problem solving. Leadership qualities such as determination, passion, flexibility, and collaboration were also important to promote effective implementation. The utilization of these leadership skills and qualities began in the planning phase of the project. I took charge of my project and led on with a strong vision and passion to combine occupational therapy and racing. There were many difficulties, including rejection from other organizations, however through determination, persistence, and flexibility I was able to locate, contact, and organize my doctoral capstone project to do just that with the Racing4Vets program. The last-minute changes to my project required me to be flexible and to communicate effectively and efficiently. Ambiguity going into the project required problem solving and collaboration to determine and lead the project in a specific direction. Upon arrival to my site I utilized problem-solving, organization, and planning to modify my environment and routine as needed in order to get tasks completed. The veterans work full-time

outside of Racing4Vets and meet late at night in the shop, so I modified my schedule to fit theirs. When meeting with the veterans, I further utilized my communication, planning, and organization skills as I scheduled interviews around personal and team schedules; I managed communication through multiple mediums due to the complicated schedules and situations of the veterans. One of the largest aspects that required leadership skills was collaboration with individuals with differing backgrounds and experiences. Many veterans in the Racing4Vets team reported having difficulty trusting others upon their return from service. One veteran stated, *“to win... it takes a leader...one that people respect--one that people trust”* (Participant 2, personal communication). In this environment and with the veteran population, I had to gain their trust and respect by showing them I was willing to work and get dirty working on karts in the shop. In this way, I demonstrated leadership through working alongside the team rather than strictly overseeing the team. My knowledge and experiences related to occupational therapy, program development, quality improvement, research, and racing allowed me to provide input and suggestions to improve upon existing methods or to create new processes in collaboration with other team members. I used my knowledge, experience, and problem-solving skills to determine the needs of the organization, analyze the program, and design a solution through an evidence-based program evaluation for the team to utilize for funding and promotional purposes to lead the program to a more evidence-based approach. Without the application of my leadership skills as discussed above, this project may not have been as effectively implemented.

## 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.
- Albright, D. L., McCormick, W. H., Carroll, T. D., Currier, J. M., Thomas, K. H., Hamner, K., ... & Deiss, J. (2018). Barriers and resources for veterans' post-military transitioning in south Alabama: A qualitative analysis. *Traumatology*, *24*(3), 236.  
<http://dx.doi.org/10.1037/trm0000147>
- America's Warrior Partnership. (2017). Community integration annual survey report 2017. Retrieved from <https://www.newswire.com/files/e1/98/8ef1fc32d2f26cffce3a043d8842.pdf>
- American Occupational Therapy Association. (2015). Occupational therapy's role with posttraumatic stress disorder. Retrieved from <https://www.aota.org/-/media/corporate/files/aboutot/professionals/whatisot/mh/facts/ptsd%20fact%20sheet.pdf>
- American Occupational Therapy Association. (2017). Occupational therapy practice framework: Domain and process (3rd Edition). *American Journal of Occupational Therapy*, *68*(Supplement\_1):S1-S48. doi: 10.5014/ajot.2014.682006.
- Armstrong, A. J., Hawley, C. E., Darter, B., Sima, A. P., DiNardoc, J., & Inge, K. J. (2018). Operation Enduring Freedom and Operation Iraqi Freedom Veterans with amputation: An exploration of resilience, employment and individual characteristics. *Journal of Vocational Rehabilitation* *48*, 167–175. doi:10.3233/JVR-180923
- Baird, S. O., Metts, C., Conroy, H. E., Rosenfield, D., & Smits, J. A. (2018). Physical Activity and Community Engagement (PACE) to facilitate community reintegration among

- returning veterans: Study protocol for a randomized controlled trial. *Contemporary Clinical Trials Communications*, 11, 136-141.  
<https://doi.org/10.1016/j.conctc.2018.07.005>
- Beaune, B., Durand, S., & Mariot, J. (2010). Open-wheel race car driving: Energy cost for pilots. *Journal of Strength and Conditioning Research*, 24(11), 2927-32. Retrieved from <https://search-proquest-com.ezproxy.uindy.edu/docview/815317852?accountid=28917>
- Bennett, J. L., Lundberg, N. R., Zabriskie, R., & Eggett, D. (2014). Addressing posttraumatic stress among Iraq and Afghanistan veterans and significant others: An intervention utilizing sport and recreation. *Therapeutic Recreation Journal*, 48(1), 74–93.
- Bennett, J. L., Townsend, J., Van Puymbroeck, M., & Gillette, B. (2014) Posttraumatic growth and reduced PTSD for veterans through recreation. Retrieved from <https://pdfs.semanticscholar.org/f6a0/f702bed95cb0f1303c170aad5adff2b4c427.pdf>
- Bonnel, W., & Smith, K. (2017). Clinical projects and quality improvement: Thinking big picture. In *Proposal writing for clinical nursing and DNP projects* (45-58). New York: Springer Publishing Company.
- Bronson, J., Carson, E. A., Noonan, M., & Berzofsky, M. (2015). Veterans in prison and jail, 2011–12. Retrieved from <https://www.bjs.gov/content/pub/pdf/vpj1112.pdf>
- Caddick, N., & Smith, B. (2014). The impact of sport and physical activity on the well-being of combat veterans: A systematic review. *Psychology of sport and exercise*, 15(1), 9-18.
- Choi, J., Mogami, T., Medalia, A. (2010). Intrinsic Motivation Inventory: An adapted measure for schizophrenia research. *Schizophrenia Bulletin*, 36(5), 966–976.  
<https://doi.org/10.1093/schbul/sbp030>

- Christensen, J., Ipsen, T., Doherty, P., & Langberg, H. (2016). Physical and social factors determining quality of life for veterans with lower-limb amputation(s): A systematic review. *Disability and Rehabilitation, 38*(24), 2345-2353.  
<https://doi.org/10.3109/09638288.2015.1129446>
- Chun, S., & Lee, Y. (2010). The role of leisure in the experience of posttraumatic growth for people with spinal cord injury. *Journal of Leisure Research, 42*(3), 393-415.
- Cole, M. B., & Tufano, R. (2008). *Applied theories in occupational therapy: A practical approach*. Thorofare, NJ: Slack Inc.
- Department of Veterans Affairs. (2016). The Veteran Population Projection Model 2016.  
Retrieved from [https://www.va.gov/vetdata/Veteran\\_Population.asp](https://www.va.gov/vetdata/Veteran_Population.asp)
- Doig, E., Fleming, J., Kuipers, P., & Cornwell, P. L. (2010). Clinical utility of the combined use of the Canadian Occupational Performance Measure and Goal Attainment Scaling. *American Journal of Occupational Therapy, 64*(6), 904-914.
- Donnelly, C., O'Neill, C., Bauer, M., & Letts, L. (2017). Canadian Occupational Performance Measure (COPM) in primary care: A profile of practice. *American Journal of Occupational Therapy, 71*(6), 7106265010p1-7106265010p8.
- Duddy, K. (2015). How occupational therapy works for you. Retrieved from <https://www.va.gov/health/newsfeatures/2015/april/how-occupational-therapy-works-for-you.asp>
- Eakman, A. M. (2013). Relationships between meaningful activity, basic psychological needs, and meaning in life: Test of the meaningful activity and life meaning model. *OTJR: Occupation, Participation and Health, 33*(2), 100-109.

- Eakman, A. M. (2014). A prospective longitudinal study testing relationships between meaningful activities, basic psychological needs fulfillment, and meaning in life. *OTJR: Occupation, Participation and Health*, 34(2), 93-105.
- Edens, E. L., Kaspro, W., Tsai, J., & Rosenheck, R. A. (2011). Association of substance use and VA service-connected disability benefits with risk of homelessness among veterans. *The American Journal on Addictions*, 20(5), 412-419. <https://doi.org/10.1111/j.1521-0391.2011.00166.x>
- Elbogen, E. B., Johnson, S. C., Newton, V. M., Straits-Troster, K., Vasterling, J. J., Wagner, H. R., & Beckham, J. C. (2012). Criminal justice involvement, trauma, and negative affect in Iraq and Afghanistan war era veterans. *Journal of consulting and clinical psychology*, 80(6), 1097-1102. doi: 10.1037/a0029967
- Elnitsky, C. A., Fisher, M. P., & Blevins, C. L. (2017). Military service member and veteran reintegration: a conceptual analysis, unified definition, and key domains. *Frontiers in Psychology*, 8, 369-382.
- Farrokhi, S., Mazzone, B., Eskridge, S., Shannon, K., & Hill, O. T. (2018). Incidence of overuse musculoskeletal injuries in military service members with traumatic lower limb amputation. *Archives of physical medicine and rehabilitation*, 99(2), 348-354. <https://doi.org/10.1016/j.apmr.2017.10.010>
- Fischer, H. (2015). A guide to U.S. military casualty statistics: Operation Freedom's Sentinel, Operation Inherent Resolve, Operation New Dawn, Operation Iraqi Freedom, and Operation Enduring Freedom. Retrieved from <https://fas.org/sgp/crs/natsec/RS22452.pdf>

- Foote, C. E., Kinnon, J. M., Robbins C., Pessagno, R., Portner, M. D. (2015). Long-term health and quality of life experiences of Vietnam veterans with combat-related limb loss. *Quality of Life Research, 24*, 2853–2861. doi: 10.1007/s11136-015-1029-0
- Ford, T. (1921). Ingenious work is done by wounded veterans. *The New York Herald*. Retrieved from <https://chroniclingamerica.loc.gov/lccn/sn83045774/1921-09-25/ed-1/seq-84/>
- Gorman, J. A., Scoglio, A. A., Smolinsky, J., Russo, A., & Drebing, C. E. (2018). Veteran coffee socials: A community-building strategy for enhancing community reintegration of veterans. *Community Mental Health Journal, 54*(8), 1189-1197.
- Gregg, B., Shordike, A., Howell, D., Kitzman, P. H., & Iwama, M. K. (2017). An exploration of transition experiences shaping student veteran life flow. *American Journal of Occupational Therapy, 71*(4\_Supplement\_1),1. doi: 10.5014/ajot.2017.71S1-PO3072.
- Gutman, S. A. (1995). Influence of the U.S. military and occupational therapy reconstruction aides in World War I on the development of occupational therapy. *American Journal of Occupational Therapy, 49*(3), 256-262. doi:10.5014/ajot.49.3.256
- Haller, M., Angkaw, A. C., Hendricks, B. A., & Norman, S. B. (2016). Does reintegration stress contribute to suicidal ideation among returning veterans seeking ptsd treatment?. *Suicide and Life-Threatening Behavior, 46*(2), 160-171. <https://doi.org/10.1111/sltb.12181>
- Hansen, P., Hammel, J., Magasi, S., Moore, J., & Heinemann, A. (2016). Innovative Knowledge Translation Strategies Used to Promote the Use of the COPM in Inpatient Stroke Rehabilitation. *American Journal of Occupational Therapy, 70*(4\_Supplement\_1), 7011500009p1-7011500009p1.
- Hebert J. S., & Burger H. (2016) Return to work following major limb loss. In *Handbook of Return to Work, 505-517*. [https://doi.org/10.1007/978-1-4899-7627-7\\_28](https://doi.org/10.1007/978-1-4899-7627-7_28)

Hoerster, K. D., Malte, C. A., Imel, Z. E., Ahmad, Z., Hunt, S. C., & Jakupcak, M. (2012).

Association of perceived barriers with prospective use of VA mental health care among Iraq and Afghanistan veterans. *Psychiatric Services, 63*(4), 380-382.

Hurst, H. (2017). Using the Canadian model of occupational performance in occupational therapy practice: A case study enquiry (Doctoral dissertation, University of the West of England).

Johnson, B. S., Boudiab, L. D., Freundl, M., Anthony, M., Gmerek, G. B., & Carter, J. (2013).

Enhancing veteran-centered care: A guide for nurses in non-VA settings. *American Journal of Nursing, 113*(7), 24-39. Retrieved from <https://nursing.ceconnection.com/ovidfiles/00000446-201307000-00027.pdf>

Kendzierski, D., & DeCarlo, K. J. (1991). Physical Activity Enjoyment Scale: Two Validation

Studies. *Journal of Sport & Exercise Psychology, 13*(1), 50–64. Retrieved from <https://ezproxy.uindy.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=20710083&site=ehost-live>

Kevin Harvick. (2011). Backyard go-kart racing a blast. USA Today. Retrieved from

<https://ezproxy.uindy.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ulh&AN=JOE040246430711&site=ehost-live>

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.

Kukla, M., Rattray, N. A., & Salyers, M. P. (2015). Mixed methods study examining work

reintegration experiences from perspectives of Veterans with mental health disorders.

- Journal of Rehabilitation Research and Development, 52(4), 470-490.  
<http://dx.doi.org/10.1682/JRRD.2014.11.0289>
- Kulesza, M., Pedersen, E., Corrigan, P., & Marshall, G. (2015). Help-seeking stigma and mental health treatment seeking among young adult veterans. *Military Behavioral Health, 3*(4), 230-239. doi: 10.1080/21635781.2015.1055866
- Larson, G. E. & Norman, S. B. (2014). Prospective prediction of functional difficulties among recently separated veterans. *Journal of Rehabilitation Research and Development, 51*(3), 415-428. <http://dx.doi.org/10.1682/JRRD.2013.06.0135>
- Law, M., Baptiste, S., McColl, M., Opzoomer, A., Polatajko, H., & Pollock, N. (1990). The Canadian occupational performance measure: an outcome measure for occupational therapy. *Canadian Journal of Occupational Therapy, 57*(2), 82-87.
- Lew, H. L., Otis, J. D., Tun, C., Kerns, R. D., Clark, M. E., & Cifu, D. X. (2009). Prevalence of chronic pain, posttraumatic stress disorder, and persistent postconcussive symptoms in OIF/OEF veterans: Polytrauma clinical triad. *Journal of Rehabilitation Research & Development, 46*(6), 697-703. doi:10.1682/JRRD.2009.01.0006
- Ley, C., Rato Barrio, M., & Koch, A. (2018). "In the sport I am here": Therapeutic processes and health effects of sport and exercise on PTSD. *Qualitative Health Research, 28*(3), 491-507.
- Libin, A. V., Schladen, M. M., Danford, E., Cichon, S., Bruner, D., Scholten, J., ... & Magruder, K. M. (2017). Perspectives of veterans with mild traumatic brain injury on community reintegration: Making sense of unplanned separation from service. *American Journal of Orthopsychiatry, 87*(2), 129-138. doi:10.1037/ort0000253

- Lowe, S., & Dybicz, P. (2019). Veteran Homelessness: Examining the Values of Social Justice Guiding Policy. *Journal of Veterans Studies*, 4(1). Retrieved from <https://journals.colostate.edu/index.php/jvs/article/viewFile/154/173>
- 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.
- Lusk, J., Brenner, L. A., Betthausen, L. M., Terrio, H., Scher, A. I., Schwab, K., & Poczwardowski, A. (2015). A qualitative study of potential suicide risk factors among Operation Iraqi Freedom/Operation Enduring Freedom soldiers returning to the continental United States (CONUS). *Journal of Clinical Psychology*, 71(9), 843-855. <https://doi.org/10.1002/jclp.22164>
- Magruder, K. M., Yeager, D., & Brawman-Mintzer, O. (2012). The role of pain, functioning, and mental health in suicidality among Veterans Affairs primary care patients. *American Journal of Public Health*, 102(S1), S118-S124. Retrieved from <https://ajph.aphapublications.org/doi/pdfplus/10.2105/AJPH.2011.300451>
- Marinho, F. S., Moram, C. B., Rodrigues, P. C., Franzoi, A. C., Salles, G. F., & Cardoso, C. R. (2016). Profile of disabilities and their associated factors in patients with type 2 diabetes evaluated by the Canadian Occupational Performance Measure: the Rio De Janeiro Type 2 Diabetes Cohort Study. *Disability and Rehabilitation*, 38(21), 2095-2101.
- McDonald, S. D., Mickens, M. N., Goldberg-Looney, L. D., Mutchler, B. J., Ellwood, M. S., & Castillo, T. A. (2017). Mental disorder prevalence among U.S. Department of Veterans Affairs outpatients with spinal cord injuries. *Journal of Spinal Cord Medicine*, 41(6), 691-702. <https://doi.org/10.1080/10790268.2017.1293868>

- McDonough DE, Blodgett JC, Midboe AM, Blonigen DM. Justice-involved veterans and employment: A systematic review of barriers and promising strategies and interventions. Menlo Park, CA: Center for Innovation to Implementation, VA Palo Alto Health Care System; 2015.
- Miller, S. M., Pedersen, E. R., & Marshall, G. N. (2017). Combat experience and problem drinking in veterans: Exploring the roles of PTSD, coping motives, and perceived stigma. *Addictive Behaviors*, *66*, 90-95. doi: 10.1016/j.addbeh.2016.11.011
- Myaskovsky, L., Gao, S., Hausmann, L., Bornemann, K. R., Burkitt, K. H., Switzer, G. E., Fine, M. J., Phillips, S. L., Gater, D., Spungen, A. M., ... Boninger, M. L. (2017). How are race, cultural, and psychosocial factors associated with outcomes in veterans with spinal cord Injury?. *Archives of Physical Medicine and Rehabilitation*, *98*(9), 1812-1820. doi: 10.1016/j.apmr.2016.12.015
- Oldham, S. (1996). Grass-roots racing. *Popular Mechanics*, *173*(10), 40. Retrieved from <https://ezproxy.uindy.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=crh&AN=9609181786&site=ehost-live>
- Owens, B. D., Kragh, J. F., Wenke, J. C., Macaitis, J., Wade, C. E., Holcomb, J. B. (2008). Combat wounds in Operation Iraqi Freedom and Operation Enduring Freedom. *Journal of Trauma: Injury, Infection, and Critical Care*, *64*(2), 295-299 doi: 10.1097/TA.0b013e318163b875
- Padala, K. P., Padala, P. R., Lensing, S. Y., Dennis, R. A., Bopp, M. M., Parkes, C. M., ... & Sullivan, D. H. (2017). Efficacy of Wii-Fit on static and dynamic balance in community dwelling older veterans: A randomized controlled pilot trial. *Journal of Aging Research*, *2017*. <https://doi.org/10.1155/2017/4653635>

- Painter, J. M., Gray, K., McGinn, M. M., Mostoufi, S., & Hoerster, K. D. (2016). The relationships of posttraumatic stress disorder and depression symptoms with health-related quality of life and the role of social support among Veterans. *Quality of Life Research, 25*(10), 2657–2667. <https://doi.org/10.1007/s11136-016-1295-5>
- Persson, E., Lexell, J., Rivano-Fischer, M., & Eklund, M. (2013). Everyday occupational problems perceived by participants in a pain rehabilitation programme. *Scandinavian Journal of Occupational Therapy, 20*(4), 306-314.
- Pettigrew, J., Robinson, K., & Moloney, S. (2016). The bluebirds: World War I soldiers' experiences of occupational therapy. *American Journal of Occupational Therapy, 71*(1), 1-9. doi: 10.5014/ajot.2017.023812
- Phelan, S. M., Bangerter, L. R., Friedemann-Sanchez, G., Lackore, K. A., Morris, M. A., Van Houtven, C. H., ... Griffin, J. M. (2018). The impact of stigma on community reintegration of veterans with traumatic brain injury and the well-being of their caregivers. *Archives of Physical Medicine and Rehabilitation, 99*(11), 2222–2229. <https://doi.org/10.1016/j.apmr.2018.04.007>
- Plach, H. L., & Sells, C. H. (2013). Occupational performance needs of young veterans. *American Journal of Occupational Therapy, 67*(1), 73-81. <http://dx.doi.org/10.5014/ajot.2013.003871>
- Racing4Vets. (n.d.). Motorsports for injured U.S. military veterans. Retrieved from <http://www.racing4vets.org>
- Ramafikeng, M. (2010). The Canadian Model of Occupational Performance and Engagement. Retrieved from <https://vula.uct.ac.za/access/content/group/9c29ba04-b1ee-49b9-8c85->

- 9a468b556ce2/Framework\_2/pdf/The%20Canadian%20Model%20of%20Occupational%20Performance%20and%20Engagement.pdf
- Reidy, T. G., Naber, E., & Stashinko, E. (2018). Participation is the goal: Canadian Occupational Performance Measure Changes after constraint-induced movement therapy. *Annals of International Occupational Therapy, 1*(1), 7-14.
- Resnik, L., Ekerholm, S., Borgia, M., Clark, M. A. (2019). A national study of veterans with major upper limb amputation: Survey methods, participants, and summary findings. *PLoS One 14*(3). <https://doi.org/10.1371/journal.pone.0213578>
- Robinson, L. S., Brown, T., & O'Brien, L. (2016). Embracing an occupational perspective: Occupation-based interventions in hand therapy practice. *Australian occupational therapy journal, 63*(4), 293-296.
- Rogers, C. M., Mallinson, T., & Peppers, D. (2014). High-intensity sports for posttraumatic stress disorder and depression: Feasibility study of Ocean Therapy with veterans of Operation Enduring Freedom and Operation Iraqi Freedom. *American Journal of Occupational Therapy, 68*(4), 395-404.
- Rosenbaum, S., Vancampfort, D., Steel, Z., Newby, J., Ward, P. B., & Stubbs, B. (2015). Physical activity in the treatment of post-traumatic stress disorder: A systematic review and meta-analysis. *Psychiatry Research, 230*(2), 130-136.
- Rouleau, S., Dion, K., & Korner-Bitensky, N. (2015). Assessment practices of Canadian occupational therapists working with adults with mental disorders. *Canadian Journal of Occupational Therapy, 82*(3), 181-193.
- Sayer, N. A., Frazier, P., Orazem, R. J., Murdoch, M., Gravely, A., Carlson, K. F., ... & Noorbaloochi, S. (2011). Military to civilian questionnaire: A measure of postdeployment

- community reintegration difficulty among veterans using Department of Veterans Affairs medical care. *Journal of Traumatic Stress*, 24(6), 660-670.
- Scaffa, M. E., Reitz, S. M., & Pizzi, M. A. (2010). *Occupational therapy in the promotion of health and wellness*. Philadelphia, PA: F.A. Davis Company.
- Schoenfeld, A. J., Laughlin, M. D., McCriskin, B. J., Bader, J. O., Waterman, B. R., & Belmont, P. J. (2013). Spinal injuries in United States military personnel deployed to Iraq and Afghanistan: An epidemiological investigation involving 7877 combat casualties from 2005 to 2009. *Spine*, 38(20), 1770–1778. doi: 10.1097/BRS.0b013e31829ef226
- Seal, K. H., Cohen, G., Waldrop, A., Cohen, B. E., Maguen, S., & Ren, L. (2011). Substance use disorders in Iraq and Afghanistan veterans in VA healthcare, 2001–2010: Implications for screening, diagnosis and treatment. *Drug and Alcohol Dependence*, 116(1-3), 93-101. doi:10.1016/j.drugalcdep.2010.11.027
- Seal, K. H., Maguen, S., Cohen, B., Gima, K. S., Metzler, T. J., Ren, L., ... & Marmar, C. R. (2010). VA mental health services utilization in Iraq and Afghanistan veterans in the first year of receiving new mental health diagnoses. *Journal of Traumatic Stress*, 23(1), 5-16.
- Speicher, S. M., Walter, K. H., & Chard, K. M. (2014). Interdisciplinary residential treatment of posttraumatic stress disorder and traumatic brain injury: Effects on symptom severity and occupational performance and satisfaction. *American Journal of Occupational Therapy*, 68(4), 412-421.
- Sreenivasan, S., Garrick, T., McGuire, J., Smee, D. E., Dow, D., & Woehl, D. (2013). Critical concerns in Iraq/Afghanistan war veteran-forensic interface: Combat-related postdeployment criminal violence. *Journal of the American Academy of Psychiatry and the Law Online*, 41(2), 263-273. Retrieved from

- [https://www.researchgate.net/profile/Daniel\\_Smee/publication/239077253\\_Critical\\_concerns\\_in\\_IraqAfghanistan\\_war\\_veteran-forensic\\_interface\\_Combat-related\\_postdeployment\\_criminal\\_violence/links/56263f9e08aeedae57dbcfba.pdf](https://www.researchgate.net/profile/Daniel_Smee/publication/239077253_Critical_concerns_in_IraqAfghanistan_war_veteran-forensic_interface_Combat-related_postdeployment_criminal_violence/links/56263f9e08aeedae57dbcfba.pdf)
- Stacy, M. A., Stefanovics, E., & Rosenheck, R. (2017). Reasons for job loss among homeless veterans in supported employment. *American Journal of Psychiatric Rehabilitation*, 20(1), 16-33. doi: 10.1080/15487768.2016.1267049
- Taylor, B. C., Hagel, E. M., Carlson, K. F., Cifu, D. X., Cutting, A., Bidelspach, D. E., & Sayer, N. A. (2012). Prevalence and costs of co-occurring traumatic brain injury with and without psychiatric disturbance and pain among Afghanistan and Iraq War Veteran VA users. *Medical care*, 342-346.
- Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9(3), 455-471.
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological inquiry*, 15(1), 1-18.
- Tomar, N. & Stoffel, V. (2014). Examining the lived experience and factors influencing education of two student veterans using photovoice methodology. *American Journal of Occupational Therapy*, 68(4), 430-438. doi:10.5014/ajot.2014.011163
- Tsai, J & Rosenheck, R. (2015). Risk factors for homelessness among U.S. veterans. *Epidemiologic Reviews*, 37, pp. 177–195. <https://doi.org/10.1093/epirev/mxu004>
- Twamley, E. W., Hays, C. C., Van Patten, R., Seewald, P. M., Orff, H. J., Depp, C. A., ... & Jak, A. J. (2019). Neurocognition, psychiatric symptoms, and lifetime homelessness among veterans with a history of traumatic brain injury. *Psychiatry Research*, 271, 167-170. <https://doi.org/10.1016/j.psychres.2018.11.049>

United States Department of Housing and Urban Development. (2015). Homeless veterans in the United States. Retrieved from <https://www.hudexchange.info/onecpd/assets/File/2015-AHAR-Part-2-Section-5.pdf>

United States Department of Veterans Affairs. (2016, July 7). VA conducts nation's largest analysis of veteran suicide. Retrieved from <http://www.va.gov/opa/pressrel/includes/viewPDF.cfm?id52801>

Vercillo, T. (2014). Leisure as a facilitator of posttraumatic growth in individuals living with cancer. Retrieved from [http://dr.library.brocku.ca/bitstream/handle/10464/6055/Brock\\_Vercillo\\_Tabitha\\_2014.pdf?sequence=1&isAllowed=y](http://dr.library.brocku.ca/bitstream/handle/10464/6055/Brock_Vercillo_Tabitha_2014.pdf?sequence=1&isAllowed=y)

Veterans Health Administration. (2015a). Analysis of VA health care utilization among Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND) Veterans. Retrieved from <https://www.publichealth.va.gov/docs/epidemiology/healthcare-utilization-report-fy2015-qtr1.pdf>

Veterans Health Administration. (2015b). Occupational therapy fact sheet: Mental health. Retrieved from <https://www.rehab.va.gov/PROSTHETICS/factsheet/OT-Mental-Health-FactSheet.pdf>

Veterans Health Administration. (2018). Occupational therapy fact sheet. Retrieved from <https://www.rehab.va.gov/PROSTHETICS/factsheet/OT-FactSheet.pdf>

Vogt, D. (2011). Mental health-related beliefs as a barrier to service use for military personnel and veterans: A review. *Psychiatric services*, 62(2), 135-142.

- Walker, B. A., Bramstedt, J., Cleary, K. J., Greer, S. T., Teague, D. A. (2018) *Reintegration and transition following active duty: Identifying the challenges for veterans returning from deployment in Afghanistan and Iraq*. Unpublished manuscript, School of Occupational Therapy, University of Indianapolis, Indianapolis, Indiana.
- Walker, B. A., Goard, N., Herd, A., Price, B., Teffera, W., & Tunstall, T. (n.d.) *Practice implications for occupational therapy with post-9/11 veterans with PTSD*. Unpublished manuscript, School of Occupational Therapy, University of Indianapolis, Indianapolis, Indiana.
- Walter Reed Army Institute of Research. (2005). Battlemind training II: Continuing the transition home. Retrieved from <http://www.networkofcare.org/library/Post-Deployment%20Battlemind%20Training%20for%20Soldiers2.pdf>
- Warner, C. H., Appenzeller, G. N., Grieger, T., Belenkiy, S., Breitbach, J., Parker, J., ... & Hoge, C. (2011). Importance of anonymity to encourage honest reporting in mental health screening after combat deployment. *Archives of General Psychiatry*, 68(10), 1065-1071.
- Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology*, 70(4), 767.
- Williams, G. C., Freedman, Z. R., & Deci, E. L. (1998). Supporting autonomy to motivate patients with diabetes for glucose control. *Diabetes Care*, 21(10), 1644-1651.

## Appendix A

**Human Research Protections  
Program (HRPP)**

1400 East Hanna Avenue  
Health Pavilion  
Indianapolis, IN 46227

317/781-5774  
800/232-8634 x5774  
hrpp@uindy.edu

Beth Ann Walker, Ph.D.  
School of Occupational  
Therapy University of  
Indianapolis  
1400 E. Hanna  
Avenue Indianapolis,  
IN 46227

January 8, 2019

**Re:** The Impact of Racing4Vets on Well-being of Veterans

Dear Dr. Walker,

Thank you for submitting a Human Subjects Research Determination application to the Human Research Protections Program (HRPP). The HRPP determined that the project you described in your application does not meet the definition of "human subjects research" as set forth by the federal regulations, 45 CFR 46.102. Because your project is not human subjects research, it does not require HRPP review and approval. Nevertheless, if you modify your project such that research activities more closely correspond to activities eligible for HRPP review and approval, you must submit a new HRPP Review Application through IRBManager.

Please retain this letter in your file for this project, as this letter serves as formal notification of HRPP action.

I invite you to contact the Office of HRPP (hrpp@uindy.edu) with questions about this letter or other HRPP matters.

Sincerely,

A handwritten signature in cursive script that reads "Elizabeth S. Moore".

Elizabeth S. Moore, Ph.D.  
Faculty Co-Chair, HRPP and  
IRB

Assistant Professor, Department of Interprofessional Health and Aging  
Studies College of Health Sciences  
University of Indianapolis

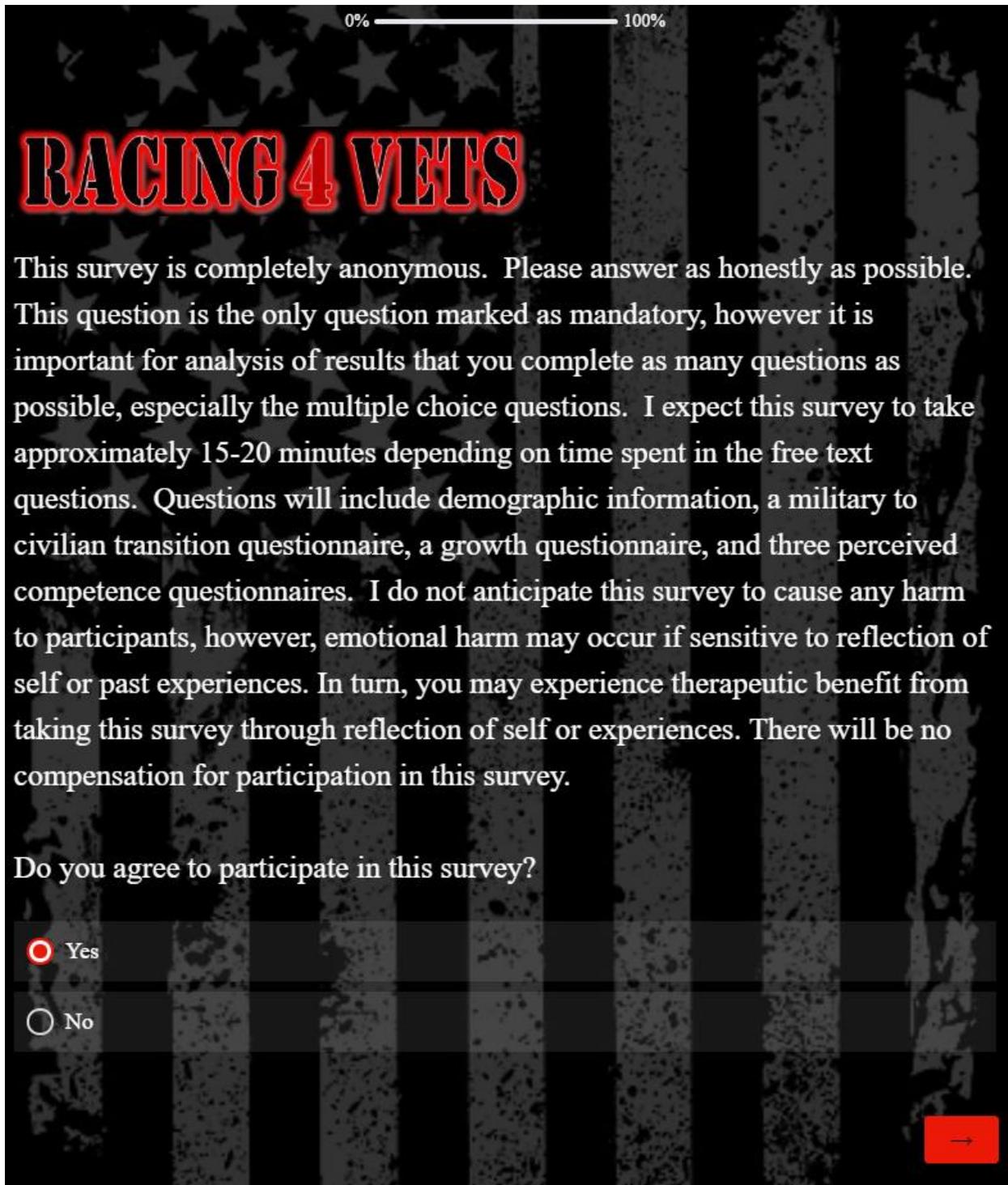
## Appendix B

## Needs Assessment Interview Guide

- Do you know the approximate demographics of your typical participants?
  - Typical number of participants
  - Sex
  - Branch of military
  - Years post-service/deployment
  - Type of disability
  - Disability status (extent of disability according to VA)
  - Employed, full or part time
  - Married or children
  - Average time spent with Racing4Vets
  - Involvement in other organizations
  - Prior knowledge of racing/mechanics
  - Length of involvement in Racing4Vets
  - How they heard about or got involved in Racing4Vets
  
- How are you fundraising?
- How are you promoting the program?
- How are you determining the benefits of the program?
- How do you know/measure the success of meeting your mission/goals?
  
- How do you think active duty impacted the well-being of the veterans in the program?
- How do you think active duty impacted the transition to civilian life for the vets in the program?
- What impact do you think active duty has on the vets potential for posttraumatic growth?
  
- How do you think providing the social interaction may help the vets?
- How do you think possible psychological benefits of racing may help the vets?
- How do you feel the engagement in meaningful activity might help the vets?

## Appendix C

## Qualtrics Survey



0% ————— 100%

# RACING 4 VETS

This survey is completely anonymous. Please answer as honestly as possible. This question is the only question marked as mandatory, however it is important for analysis of results that you complete as many questions as possible, especially the multiple choice questions. I expect this survey to take approximately 15-20 minutes depending on time spent in the free text questions. Questions will include demographic information, a military to civilian transition questionnaire, a growth questionnaire, and three perceived competence questionnaires. I do not anticipate this survey to cause any harm to participants, however, emotional harm may occur if sensitive to reflection of self or past experiences. In turn, you may experience therapeutic benefit from taking this survey through reflection of self or experiences. There will be no compensation for participation in this survey.

Do you agree to participate in this survey?

Yes

No

→

# RACING 4 VETS

Military Experience: (Check all that apply)

- Army
- Army Reserve
- Army National Guard
- Marine Corps
- Marine Corps Reserve
- Navy
- Navy Reserve
- Air Force
- Air Force Reserve
- Air National Guard
- Coast Guard
- Coast Guard Reserve

**Total Amount of Full Time Service (Active Duty):**

- <1 year
- 1 year
- 2 years
- 3 years
- 4 years
- 5 years
- 6+ years
- Not Applicable

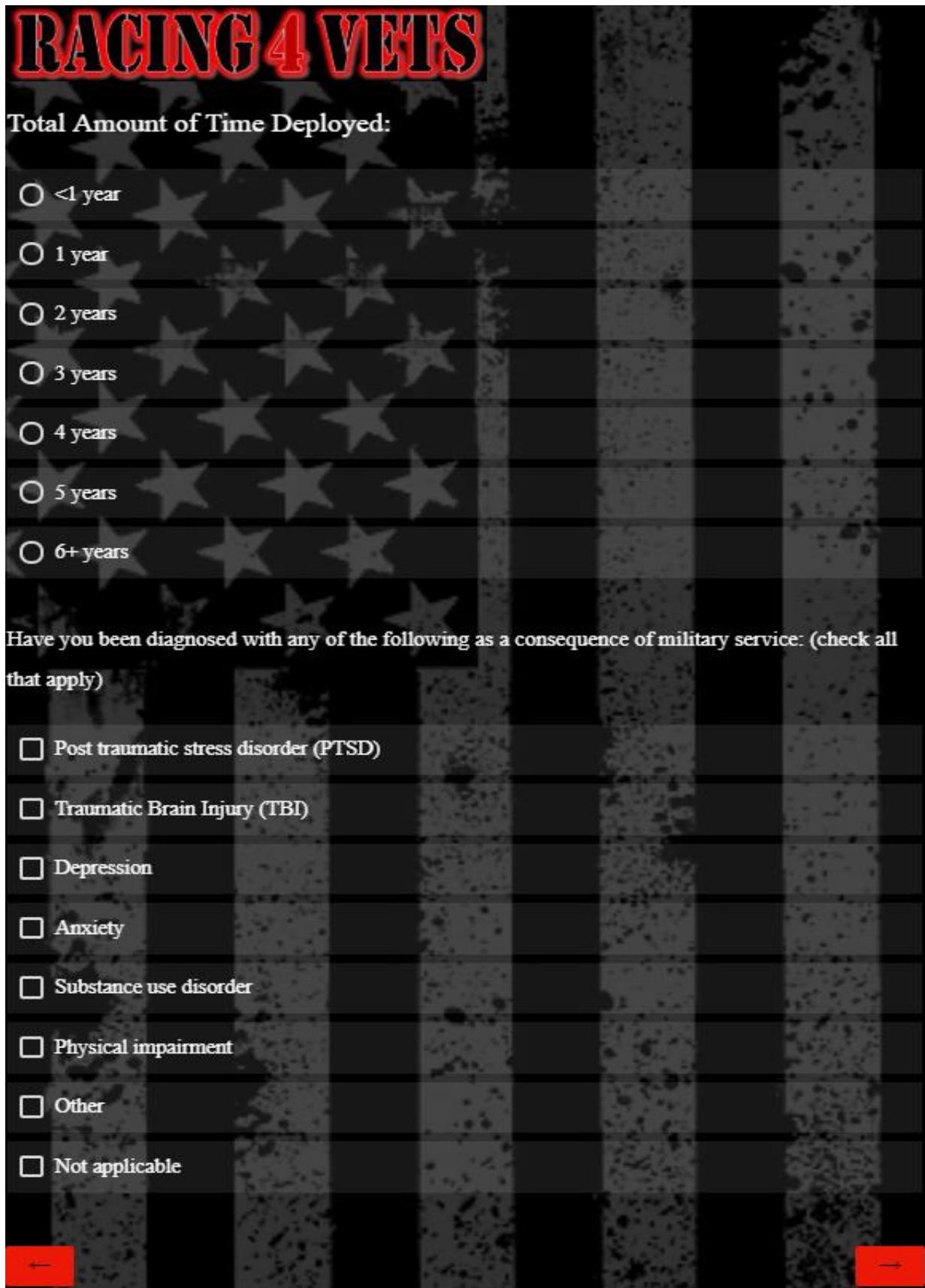
**Total Amount of Part Time Service (Reserve or National Guard):**

- <1 year
- 1 year
- 2 years
- 3 years
- 4 years
- 5 years
- 6+ years
- Not Applicable

**Number of Deployments:**

- 1
- 2
- 3
- 4+
- Not Applicable

← →

The image shows a survey form titled "RACING 4 VETS" with a background of a stylized American flag. The form contains two sections of questions. The first section asks for the total amount of time deployed, with radio button options for less than 1 year, 1 year, 2 years, 3 years, 4 years, 5 years, and 6+ years. The second section asks if the respondent has been diagnosed with any of the following conditions as a consequence of military service, with checkboxes for PTSD, TBI, Depression, Anxiety, Substance use disorder, Physical impairment, Other, and Not applicable. Red arrows at the bottom indicate navigation options.

# RACING 4 VETS

Total Amount of Time Deployed:

<1 year

1 year

2 years

3 years

4 years

5 years

6+ years

Have you been diagnosed with any of the following as a consequence of military service: (check all that apply)

Post traumatic stress disorder (PTSD)

Traumatic Brain Injury (TBI)

Depression

Anxiety

Substance use disorder

Physical impairment

Other

Not applicable

0% 100%

# RACING 4 VETS

**What is your disability rating according to the VA?**

**Number of years that you have been home since your most recent military service:**

**Age:**

**Sex:**

Male

Female

Prefer not to answer

**Current Employment Status:**

Unemployed

Part time job

Full time job

Full time disability

**Current Marital Status:**

- Single
- Married
- Separated
- Divorced
- Widowed
- Remarried

**Current Familial Status:**

- No children
- 1 child
- 2 children
- 3+ children

**Number of years involved with Racing4Vets *indoor* program:**

- <1 year
- 1 year
- 2 years
- 3 years
- 4 years
- 5+ years

**Number of years involved with Racing4Vets *outdoor* program:**

<1 year

1 year

2 years

3 years

4 years

5+ years

**Average amount of hours involved in Racing4Vets per month *in the off season:***

**Average amount of hours involved in Racing4Vets per month *during the outdoor season:***



	0 No difficulty	1 A little difficulty	2 Some difficulty	3 A lot of difficulty	4 Extreme difficulty	Not Applicable
Taking part in community events or celebrations (for example, festivals, PTA meetings, religious or other activities)	<input type="radio"/>					
Feeling like you belong in "civilian" society	<input type="radio"/>					
Confiding or sharing personal thoughts and feelings	<input type="radio"/>					
Finding meaning or purpose in life	<input type="radio"/>					

**Please describe any unique challenges you personally experienced during your initial return home following active duty:**

←→



I am better able to accept the way things work out.	<input type="radio"/>					
	0 None	1 Very Small	2 Small	3 Moderate	4 Great	5 Very Great
I can better appreciate each day.	<input type="radio"/>					
New opportunities are available which wouldn't have been otherwise.	<input type="radio"/>					
I have more compassion for others.	<input type="radio"/>					
I put more effort into my relationships.	<input type="radio"/>					
I am more likely to try to change things which need changing.	<input type="radio"/>					
I have a stronger religious faith.	<input type="radio"/>					
	0 None	1 Very Small	2 Small	3 Moderate	4 Great	5 Very Great
I discovered that I'm stronger than I thought I was.	<input type="radio"/>					
I learned a great deal about how wonderful people are.	<input type="radio"/>					
I better accept needing others.	<input type="radio"/>					
	0 None	1 Very Small	2 Small	3 Moderate	4 Great	5 Very Great

Please list other benefits you experience from Racing4Vets:

Please list benefits you hope to gain from Racing4Vets in the future:

Comments:



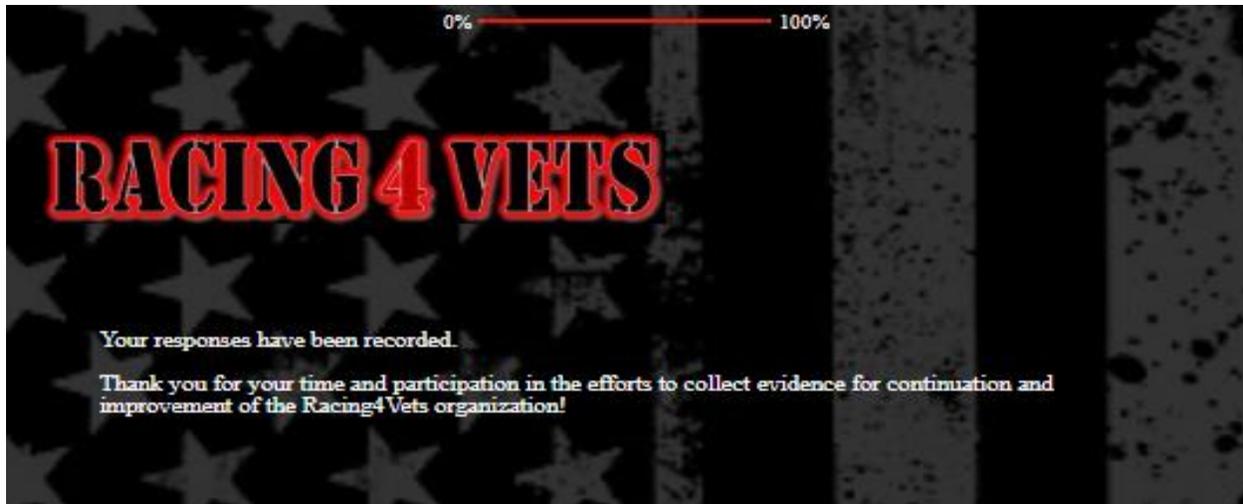
<b>Health</b>		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
I feel confident in my ability to maintain a healthy lifestyle.	<input type="radio"/>							
I feel capable of maintaining a healthy lifestyle now.	<input type="radio"/>							
I am able to maintain a healthy lifestyle now.	<input type="radio"/>							
I am able to meet the challenge of maintaining a healthy lifestyle.	<input type="radio"/>							
<b>Skills</b>		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
I feel confident in my ability to work on karts.	<input type="radio"/>							
I feel capable of working on karts now.	<input type="radio"/>							
I am able to work on karts now.	<input type="radio"/>							
I am able to meet the challenge of working on karts.	<input type="radio"/>							
<b>Racing</b>		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
I feel confident in my ability to compete in amateur motorsports.	<input type="radio"/>							
I feel capable of competing in amateur motorsports now.	<input type="radio"/>							
I am able to compete in amateur motorsports now.	<input type="radio"/>							
I am able to meet the challenge of competing in amateur motorsports.	<input type="radio"/>							
<b>Comments:</b>								

**What do you feel is your role and/or what skills do you bring to the Racing4Vets team?**

**If you could change anything about the Racing4Vets program, what would it be?**

**What would tell other veterans who are not sure what Racing4Vets is or worry they do not have the right skills to participate?**





## Appendix D

## Cincinnati Outdoor Interview Guide

Introductory Statement: Please know that the purpose of these questions is to get a better understanding of you, your experiences, and the Racing4Vets programs. You are not required to answer all of the questions I ask, just discuss what you feel comfortable sharing.

Describe your military background:

What was your military experience?

Describe how your military experience has impacted your well-being or your overall health and happiness?

Describe your personal experience with combat-related physical or psychological conditions, disorders, or disabilities.

What did you find the most challenging in your transition from active duty back to civilian life?

Describe the challenges you faced as you transitioned from active duty to life as a civilian.

How did you become involved with Racing4Vets?

What has Racing4Vets meant to you?

What have you learned from Racing4Vets?

What skills have you learned or further developed through participation in Racing4Vets?

What skills that you learned or developed through Racing4Vets has assisted you with a career?

How have you or could you apply this knowledge or skill to a career?

Describe the impact Racing4Vets has had on your life?

How has Racing4Vets influenced your outlook on life?

How has Racing4Vets influenced your social life?

How has Racing4Vets influenced your involvement in your community?

How has Racing4Vets affected your overall health and happiness?

What have you learned about yourself through your engagement in Racing4Vets?

What life lessons have you learned through participation in Racing4Vets?

How do you feel you have grown as a person through involvement with Racing4Vets?

What influence has participation in Racing4Vets had on your lifestyle in relation to health and wellness?

Describe the overall environment or feeling of the Racing4Vets program?

How does interaction with other members on the team make you feel?

How does the act of racing a kart make you feel?

Physically?

Mentally?

Emotionally?

In your opinion, what are the benefits of participating in the Racing4Vets program?

What do you look forward to the most when participating in Racing4Vets?

What motivates you to continue participating in Racing4Vets?

How does Racing4Vets compare/contrast to other veteran programs you have experienced?

How have you seen Racing4Vets impact others?

What would you like other veterans to know about the Racing4Vets program?

Why should others get involved in Racing4Vets?

If you could change anything about the Racing4Vets program what would it be?

Appendix E

Cincinnati Indoor Survey

**Demographics**

Number of years post service:\_\_\_\_\_ Branch of the Military:\_\_\_\_\_

Number of years of service:\_\_\_\_\_ State in which you live:\_\_\_\_\_

Sex (circle): Male Female Prefer not to answer

Have you been diagnosed with any of the following during or post service: (circle all that apply)

- Post Traumatic Stress Disorder (PTSD)
- Depression
- Anxiety
- Amputation
- Traumatic Brain Injury (TBI)
- Substance Use Disorder
- Other:

**Activity Enjoyment Scale**

Please rate how you feel *at the moment* about the **karting** portion of this experience.

- I enjoy it 2 3 4 5 6 7 I hate it
- I feel bored 2 3 4 5 6 7 I feel interested
- I dislike it 2 3 4 5 6 7 I like it
- I find it pleasurable 2 3 4 5 6 7 I find it unpleasurable
- I am very absorbed in this activity 2 3 4 5 6 7 I am not at all absorbed in this activity
- It's no fun at all 2 3 4 5 6 7 It's a lot of fun
- I find it energizing 2 3 4 5 6 7 I find it tiring

It makes me depressed	2	3	4	5	6	7	It makes me happy
It's very pleasant	2	3	4	5	6	7	It's very unpleasant
I feel good physically while doing it	2	3	4	5	6	7	I feel bad physically while doing it
I feel good psychologically while doing it	2	3	4	5	6	7	I feel bad psychologically while doing it
It's very invigorating	2	3	4	5	6	7	It's not at all invigorating
I am very frustrated by it	2	3	4	5	6	7	I am not at all frustrated by it
It's very gratifying	2	3	4	5	6	7	It's not at all gratifying
It's very exhilarating	2	3	4	5	6	7	It's not at all exhilarating
It's not at all stimulating	2	3	4	5	6	7	It's very stimulating
It gives me a strong sense of accomplishment	2	3	4	5	6	7	It does not give me any sense of accomplishment at all
It's very refreshing	2	3	4	5	6	7	It's not at all refreshing
I felt as though I would rather be doing something else	2	3	4	5	6	7	I felt as though there was nothing else I would rather be doing
I would definitely come again	2	3	4	5	6	7	I definitely would not come again
I would not recommend it to a friend	2	3	4	5	6	7	I would recommend it to a friend
I gained something from this activity	2	3	4	5	6	7	I did not gain anything from this activity

**Open-Ended Questions**

How was this activity meaningful to you?

How do you feel karting impacted you psychologically?

How do you feel karting impacted you physically?

What other benefits did you experience from this event?

Comments: