What mentally-ill adults gain from participating in outdoor community outreach programs delivered by Out Doors Inc.

by

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If you've managed to download this then you must know I have finished and have valued your input, offers, creativity and *especially* constructive criticism throughout this process.

To my Rooster, be careful what we wish for!

Abstract

Purpose

This thesis explores how spending time in nature is beneficial to human health, especially for individuals who have a mental illness. Ultimately, the catalyst for writing was to assist an Australian non-profit, Outdoors Inc. (ODI) in analyzing their data set of participant surveys. The results of this thesis will guide ODI in improving their outdoor programs in the future.

Background

The momentum of research recognizing links between the natural environment and human health has been increasing since the 1980s with the development of Wilson's biophilia hypothesis in 1984.

Methods

ODI's data set of anonymously filled participant surveys, collected from 2009 to 2012, was made available to the writer. Since ODI data included over 2,000 accumulated surveys, programs were analyzed for similarity; coding and transcription was done with Microsoft Excel. A literature review was subsequently conducted to review current therapeutic practices in the outdoors; a focus was given to adventure therapy (AT), as well as horticultural therapy (HT). The results of the literature review were then used as a basis for comparison with the ODI data set, enabling the selection of a sample of ODI's current programs for detailed analysis

Results

Overall it was concluded that individuals who participant in ODI's programs do benefit, as was demonstrated in both quantitative and qualitative data. The quantitative data indicated that participants were consistently satisfied overall with the program throughout the years. At the same time, evidence in the qualitative data presented examples of how participants felt they benefited from participating in ODI's programs, whether it was simply getting away from Melbourne or acquiring a new perspective on their health.

Conclusion

Participating in nature-based activities does benefit individuals, particularly those who have a mental illness. ODI provides a crucial service at a time when governments are practicing austerity measures and cutting back investments in health promotion initiatives. The relationship individuals cultivate with nature can be therapeutic, and this dynamic should continue to be studied as methods are developed to empirically analyze an individual's subjective experience.

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1.0 Introduction

This thesis reports on the analysis of an existing Australian data set to identify benefits arising from activity-based contact with nature for people experiencing mental illness. In recent decades the importance of nature affecting human health has gained research momentum beginning with Wilson's biophilia hypothesis in 1984 interlinking human health and wellness to nature (as cited in Wilson et al. 2008). In simple terms, contact with nature helps us to feel better (Burns 1999). The growing acknowledgement of nature's role in mental health and well-being has been gaining prominence as a shift towards holistic health is sought (Pryor et al. 2006). Drawing on this holistic perspective, the World Health Organization's (WHO) Ottawa Charter for Health Promotion 1986 can be interpreted as referring (in part) to the relationship between humans and the natural outdoor environment, as it advocates for the "inextricable links between people and their environment" as constituting "the basis for a socioecological approach to health" (WHO 1986, p.2). Despite the longstanding recognition of the Ottawa Charter as a critical document in the field of health promotion, its focus on the relationship between humans and the natural environment appears to have been often overlooked. Yet this relationship has been shown to have significance for the health and wellbeing of the population as a whole, including individuals experiencing mental illness (Pryor et al. 2006).

1.1 Definition and exploration of mental illness within Australia

The Australian government defines a person as having mental dysfunction or a mental illness when the person either is unable to make reasonable judgments or necessary actions regarding his or her own health or is likely to do serious harm to others (*Mental Health Act 1994*). At the same time, mental illness can be defined as a lifelong affliction with no cure despite interventions improving symptom management (Davidson et al. 2001a). This latter mental illness definition hints at the spectrum of psychiatric diagnoses, yet falls short in providing compelling examples of how individuals can address their mental illness aside from symptom management.

A common intervention for people with a mental illness is psychiatric treatment, which policy makers define as encompassing counselling, therapeutic, or rehabilitative programs or being admitted into a health facility (*Mental Health Act*). However, over the last 40 years in Australia, and similarly in Western Europe, North America and New Zealand, the paradigm of how to

resolve mental illness has gradually shifted under the process of deinstitutionalization to support individuals in their communities (Fakhoury & Preibe 2002; Wilding 2000).

1.2 Australian trends of mental illness

In 1996 the Australian government first highlighted mental health, specifically mental illness, as a National Health Priority Area (NHPA) (AIHW 2013). An NHPA is defined as a selection of diseases and conditions requiring focused attention by the Australian government, as they highly impact the Australian community in terms of illness burden and injury (AIHW 2013). Since 1996 various national surveys conducted at different times have provided a census data on mental health.

The Australian Institute of Health and Welfare (AIHW) strives to present relevant health data to provide a broad perspective of health and illness in its biennial publications, *Australia's Health Reports* (AIHW 2012a). Indeed these reports are a good starting point in analyzing the mental health trends of Australia. However since the AIHW seeks to be comprehensive in its reporting on specific data from cited surveys tends to be very condensed and selective. Therefore, individual surveys, which were mentioned in *Australia's Health Reports*, were independently analyzed after.

The most general survey is the National Health Survey (NHS), conducted every three years, to assist in obtaining and monitoring national information related to health (ABS 2008a).

The Australian Bureau of Statistics (ABS) has recently cited a limitation of the NHS being no differentiation was made between respondents who have been officially diagnosed by a health profession to those who were self-diagnosed (ABS 2002; ABS 2006). Undoubtedly, the data's validity for providing objective prevalence rates is diminished if participants are potentially subjectively self-diagnosing. Nevertheless, every year the NHS has consistently reported mental and behavioural problems, based on the majority of responses, as either being anxiety-related problems or mood (affective) problems (ABS 2002; ABS 2006).

While the NHS does provide a 'snapshot' of trends within a particular time frame it is difficult to have a comprehensive overview of how mental illness has presented in the community between 1995 and 2012. If surveying had been consistent and required respondents to have an official

diagnosis the gathered information may have been useful in providing insights to deinstitutionalization which was occurring at this time.

The second survey gathering cross-sectional mental health data is the National Survey of Mental Health and Well-Being (NSMHWB). Unfortunately, this survey has only been conducted twice, first in 1997 then 2007 (ABS 2010).

The NSMHWB is helpful in understanding national mental illness prevalence rates as it was an epidemiological survey using the DSM-IV and ICD-10 diagnostic criteria as an assessment guide (DoHA 2003). By no means do these diagnostic criteria replace a clinical diagnosis; however, it is more reliable than respondents self-reporting a diagnosis. Although collection methods differed between 1997 and 2007, the outcomes remain similar:

1) anxiety disorders had the highest prevalence rates followed by

2) affective disorders then

3) substance abuse disorders (DoHA 2003).

These results closely coincided with the outcomes of the NHS (ABS 2008a; AIHW 2012a; Andrews 2001). Despite the fact that the most recent NSMHWB was conducted over five years ago, its estimated mental illness prevalence rate of one in five Australians between the ages of 16-85 remains to be highly cited (ABS 2008b; AIHW 2012a). Unfortunately, a shortcoming of the NSMHWB is its inability to estimate prevalence rates of psychotic illness due to these illnesses being less common (AIHW 2012b).

Although psychotic illnesses, such as schizophrenia, have a smaller prevalence rate they are usually more severe than illnesses highlighted in the NSMHWB, and hence cannot be ignored (AIHW 2012b). Furthermore, specifically concerning this thesis, Out Doors Inc. (ODI) has a very high ratio of participants with schizophrenia as their primary psychiatric diagnosis (see page 13 or Appendix 1).

To discover trends of psychotic illness the government conducted the National Survey of People Living with Psychotic Illness (NSPLPI) in 1998 and repeated in 2010 (AIHW 2012b; Morgan et al. 2012).

The NSPLPI sheds new insight to the discussion of mental health because its methodology extended to interviewing participants, as well as calculating prevalence rates. Therefore, a detailed analysis of how Australians with a psychotic mental illness are coping in the community becomes apparent. A relevant conclusion of the most recent NSPLPI is that pharmacological interventions are beneficial but have optimal results when taken alongside psychosocial therapies, such as group therapies, which only a fraction of participants indicated they were doing (Morgan et al. 2012).

Further research outside of Australia has reached the same conclusion: psychosocial interventions in assisting rehabilitation are under-utilized their potential to offset an individual's feelings of social isolation, which is a symptom pharmacology cannot treat (Lefley 2009; McCormick et al. 2009; Perese & Wolf 2005). Psychosocial interventions are defined as any intervention emphasizing psychological or social factors as opposed to biological factors (Forsman, Nordmyr & Wahlbeck 2011). Specific examples found were peer-led activities, group therapy and social network interventions (Lefley 2009; McCormick et al. 2009; Perese & Wolf 2005).

Early in the earlier twentieth century, prior to the breakthrough of pharmacology, outdoor activities were the dominant school of therapeutic intervention thought to positively affect individuals (Söderback, Söderström & Schälander 2004). Currently the rehabilitation regime is focused on symptom management through pharmaceuticals, largely neglecting a holistic health focus that could address the complete needs of an individual within his or her unique life context (Brown, Cosgrove & DeSelm, 1997; Harvey et al. 2010; Hutchinson et al. 2006; Lefley 2009; Skrinar et al. 2005). Building on this holistic focus, the best form of rehabilitation would be one that embraced the positive utility of pharmaceuticals while adjunctively promoting outdoor activities, as one method of maintaining good mental health.

1.3 Deinstitutionalization

The debate of deinstitutionalization can be viewed from many different perspectives, which can sway judgement of its success. Overall, the general connotation is that people with mental health needs appear to be negatively affected by deinstitutionalization (Fakhoury & Preibe 2002). Deinstutionalization, through the lens of social activism, was a process to humanize care, as well

as to empower individuals experiencing a mental illness (Gerrand 2005; Fakhoury & Preibe 2002). Simultaneously, governments viewed deinstitutionalization as a cost-saving method aligning with their neo-liberal economically-conservative economic agendas (Chesters 2005; Henderson 2005).

Deinstitutionalisation is a complex process which may be perceived differently depending on perspective. In the federal context, the National Mental Health Strategy (NMHS) is the framework to cohesively guide mental health reforms between different Australian states (DoHA 2013). Regardless of the NMHS' relevance, there is no comprehensive account of deinstitutionalization as it unfolded on a national scale (Dossel et al. 2005).

The Australian government has been criticized for structuring the NMHS with economic and neo-liberal principles (Chesters 2005; Henderson 2005). For example, Henderson cites the government's rationale for deinstitutionalization was to substitute government services with non-government and private sources of care, thereby unleashing the neo-liberal market with minimal government intervention. Other critics of Australian deinstitutionalization take similar stances stating the government's priority has been to cut costs of financing large asylums and long-term inpatient care (Chesters 2005). As a general criticism towards deinstitutionalization, critics claim that if effective reforms are to occur governments must go beyond funding issues to address structural barriers in access to care, as well as effectively utilizing current resources and expertise (McCabe & Davis 2012; Roberts 2011; Rosen 2006).

In the government's defence, Australian public officials are cited as intending to re-invest the savings from the asylum closures into community services in order to create comprehensive and accessible services (Gerrand 2005; Gerrand et al. 2007). At the same time, social activists will argue that the Australian government's promise to re-invest this money to strengthen community-based services, as an adequate replacement for institutional care, has not materialized (Hickie & Groom 2004; Savy 2005).

It is beneficial to analyze deinstitutionalization within the state of Victoria as this was the first state to overhaul its mental health system, notably between the years 1994 to 1998 (Gerrand 2005). Consequently, all stand-alone asylums have been closed since 2000 in Victoria (Chesters 2005). The Victorian government has managed to transition from psychiatric institutions to

community-based mental health services, including inpatient and residential care relatively successfully (Gerrand 2005). Part of this success is attributed to endorsing the non-government sector in providing mental health services in the community (Gerrand 2005). At the same time, negative consequences of how the Victorian state underwent deinstitutionalization have revolved around its provision of community services (Gerrand et al. 2007). Notably, how an increased demand on services erodes its quality and comprehensiveness, as well as prioritizing which individuals should access these services first (Gerrand et al. 2007). This provision of service was often prioritized based on an individual's psychiatric diagnosis without accounting for severity, complexity and acuity of the illness (Gerrand et al. 2007). The following section will provide an example of a community service (non profit) that is accessed by Melburnians.

Upon hindsight, successful deinstitutionalization requires government funded community and hospital settings for the provision of specialized medical treatment, as well as therapeutic programs provided by non-governmental organizations (NGOs), which also assist in mental illness advocacy and health promotion (Gerrand 2005).

1.4 Out Doors Inc.

Founded in 1987, ODI is an organization catering to individuals older than 16 (with no upper age limit) diagnosed with a mental illness through programs that seek to safely challenge these individuals in natural outdoor environments in trips lasting a day, overnight or two to five days (ODI 2013). ODI utilizes an eclectic array of therapeutic interventions (see Appendix 2). Understandably ODI is reluctant to describe its programs as "therapy", as this word has negative connotations for individuals experiencing a mental illness (Roberts 1997). ODI intentionally keeps its mandate broad and general to using the "outdoor environment as the means of delivering a range of adventure, recreation and respite programs" (see Appendix 2), despite not all programs occurring in the outdoor environment.

The paradigm that ODI often employees in its outdoor recreation programs is often adventure therapy (AT), as its ultimate vision is to be "the pre-eminent provider of outdoor adventure programs" (ODI c.2013a) with the motto to "learn by doing" (ODI c.2013b), in other words experiential learning. At the same time, not all ODI programs involve AT, such as their sequential gardening program.

The primary contact at ODI was the Manager of Partnerships and Development, who was available to answer questions regarding the organization when information was lacking on the website. Of note ODI does not promote itself as offering treatment (see Appendix 2). At the same time, ODI realizes that if more people can be helped through the professionalization of accurately defining adventure *therapy* then this word will be embraced (Roberts 1997).

The most recent participant census of ODI indicates that schizophrenia has the highest prevalence (45.85%) followed by biopolar disorder (12.61%) then depression (12.16%) among its 222 current participants (see Appendix 1). Moreover, these illnesses are the primary diagnoses irrespective of an individual's potential co-morbidities (see Appendix 1). The screening process for a potential participant has multiple stages beginning with an initial intake and assessment gauging suitability of an individual followed by medical and support checks (see Appendix 3). In addition to the age and mental illness requirement, potential participants are screened for their potential ability and willingness to engage with the outdoors and possess sufficient determination to do so (see Appendix 2).

Minimum standards to be an activity leader at ODI are: Bachelor's degree in Outdoor Education, Community Development or a related field, coinciding with at least two certificates in a recognized outdoor activity, such as white water rafting, caving or surfing and at least five years relevant experience in the field (see Appendix 2). Based on this NGO's chosen name, employee standards, and vision statement, it is evident that this NGO is wholeheartedly embracing the evidence in the natural environment being beneficial to mental health.

2.0 Literature Review

2.1 Nature and mental health

The natural world is essential for human health, a link that has been formed by cumulating evidence from various disciplines ranging from architecture to anthropology to ecopsychology (Barton, Griffin & Pretty 2011; Burns 1999; Brymer, Cuddihy & Sharma-Brymer 2010; Ibbott 1999). However, mainstream therapeutic interventions often focus on changing an individual's inner psyche through introspection rather than through environmental factors, which is a common practice in traditional counselling psychology and education (Beringer 1999; Brymer et al. 2010; Burns 1999; Pryor et al. 2006). At the same time how nature links to human health is

slowly gaining recognition from established institutions, such as the Australian Psychological Association releasing a position statement in 2008 directly highlighting the relevance of natural ecosystems to human health and well-being (Reser as cited in Brymer et al. 2010).

Exactly how being in nature provides outcomes of positive mental health continues to be researched (Barton et al. 2011; Beringer 1999, 2004; Brymer et al. 2010; Frances 2006; Ibbott 1999; Richards, Carpenter & Harper 2011; Tucker & Rheingold 2010; Pretty et al. 2005). In the provision of outdoor activities for a clinical population, such as individuals experiencing a mental illness, the evidence suggests there are multiple therapeutic factors.

Despite research revealing a small number of primary empirical studies (see page 20) to analyze, it is evident that participating in an outdoor activity has therapeutic outcomes potentially derived from three variables (Burns, 1999):

1) the occurrence of experiential learning, encouraging participants to learn through doing (Crisp & O'Donnell 1998; Gass & Gillis 2010; Harper 2010; Lubans, Plotnikoff & Lubans 2012; Shanahan, McCallister & Curtin 2009; West & Crompton 2001).

2) social aspect of being in a group setting is speculated to also be therapeutic (Frances 2006; Pryor, Carpenter & Townsend 2005; Schell et al. 2012; Wilding 2000; Wilson et al. 2008).

3) being present in the natural outdoor environment would be the most definitive therapeutic variable as it has to date been the most researched (Barton et al. 2011; Crisp & O' Donnell 1998; Ibbott 1999; Itin 2001).

Most likely, all three variables have an effect on individuals; however it is difficult to discern due to the subjectivity of the therapeutic process. The desire for more empirical research to identify specific components of the natural world as therapeutic is evident (Brymer et al. 2010).

Moreover the aspect of participatory learning (or experiential education) is evident in outdoor activities that provide an adventure component that uniquely challenges individuals outside of their day-to-day lives (Dattilo, Kleiber & Williams 1998; Gass & Gillis 2010; Pryor et al. 2005; Shanahan et al. 2009; West & Crompton 2001). Experiential education is best described as achieving a desired learning and behaviour change through the direct experience of participating in an outdoor recreational activity (West & Crompton, 2001).

Outdoor activities refers to a broad spectrum of exercise in the natural environment, ranging from activities as simple as playing organized sports in an urban park (Pretty et al. 2005) to being in remote wilderness engaging in adventure recreation such as hiking (Russell 2001). However, for the purpose of this thesis, outdoor activities will be categorized as outdoor activities done on day trips involving an element of adventure, such as caving (in the Come and Try series), and longer sequential trips where participants engaged in a multitude of activities all occurring in the outdoors. A sequential camp of gardening was included in the data, justified by the fact it was an outdoor activity, and is categorized as exercise. Ultimately, this thesis seeks to explore the combination of the therapeutic effects gained from participating in outdoor activities in the natural environment.

2.2 Social networks, mental health and physical activity

Friendships are a crucial factor in promoting both mental and physical health (Andrews et al. 2003). Friends are associated with multiple positive effects, such as buffering stress, and promoting general feelings of well-being, as well as decreasing feelings of social isolation (Boydell, Gladstone & Crawford 2002; Chronister, Chou & Liao 2013; Daumit et al. 2005; Elisha, Castle & Hocking 2006; McCormick et al. 2009).

In the context of the mental illness, it is well researched that post-deinstutionalization individuals are living in the community with few social supports and rehabilitative programs to occupy their time with (Chronister et al. 2013; Erdner et al. 2002; Lefley 2009). Although some are employed, others cannot work, potentially increasing feelings of social isolation and loneliness as the time cannot be filled with purposeful and meaningful activities (Erdner et al. 2002, 2005; Leufstadius et al. 2008; Lloyd et al. 2001, 2007). Social isolation and loneliness are subjective perceptions, and vary between individuals (de Jong Gierveld 1998; Perese & Wolf 2005).

The concepts of loneliness and social isolation have been consolidated into a pioneering framework developed de Jong Gierveld (1998) constructing loneliness as a subjective experience of social isolation. Unfortunately, current mental illness treatments often overlook social network interventions because it is a non-clinical aspect of rehabilitation (Elisha, Castle & Hocking 2006; Lefley 2009; Perese & Wolf 2005). Regardless, individuals with a mental illness often have greater barriers to overcome in the process of establishing a social network in contrast to the

general population. For example, these barriers are associated with an inability to make and sustain friendships often related to a lack of opportunities to participate in social activities and general stigma associated with having a mental illness coupled with a community's lack of understanding (Boydell et al. 2002; Crosse 2003; Davidson et al. 2001b; Knifton 2012; Perese & Wolf 2005). At the same time, it has been argued that despite these individuals having insight, and awareness into their loneliness, they often lack initiative to actively seek out friendships (Erdner et al. 2002, 2005). Therefore, mental illness rehabilitation should broaden beyond its current regiment pharmaceutical symptom management to holistic care, encompassing social aspects that enable individuals to build social networks in their communities (Hutchinson et al. 2006).

An intervention as straightforward as a friendship club does not suffice in overcoming loneliness as it is not a natural meeting place based on mutual interests of lonely individuals (Stevens 2001). Instead an ideal intervention is a structured group activity that prioritizes fostering reciprocal relationships amongst participants who live in the same community as well as providing respite and relief from their daily turmoil (Davidson et al. 2001b; Lauder, Sharkey & Mummery 2004). Furthermore, the chosen activity must seek to fill an empty day with a sense of purpose, meaning, and ultimately, participant enjoyment (Crosse 2003; Davidson et al. 2001b). In the literature, these interventions are referred to as either 'community-based psychosocial rehabilitation programs' (Crosse 2003, p.77) or 'supported socialization' (Davidson, et al. 2001b, p. 275). The emphasis of these interventions is not on a cure, but is instead providing ongoing support for individuals with a mental illness to recover and comfortably re-integrate into the community (Crosse 2003; Davidson et al. 2001b; Elisha et al. 2006; Lauder et al. 2004; Perese & Wolf 2005).

Everybody deserves the right to have optimal health (Hutchinson et al. 2006). The difficulty is that health is contextual based on life circumstances. Generally, the available cross-sectional data of how individuals with a mental illness integrate themselves into the community is disheartening. The research predominately demonstrates that these individuals possess insight into their circumstances yet are lacking initiative to independently take opportunities that potentially provide an active life (Erdner et al. 2002; Faulkner et al. 2007; Faulkner & Sparkes 1999; Mayers 2000; Ussher et al. 2007). The observed barriers to pursing leisure activities are a

mix of financial and social factors in addition to symptoms of the illness (Erdner et al. 2002; Faulkner et al. 2007; Faulkner & Sparkes 1999; Mayers 2000; Ussher et al. 2007).

In a cross-sectional survey, it was noted that the majority of participants diagnosed with a severe mental illness are interested in becoming more active but the most frequently cited barriers were cost and being active alone (Faulkner et al. 2007). A proposed hypothesis as to why individuals are keen to exercise with company is because it provides a distraction while at the same time providing the benefits of exercise (Faulkner & Sparkes 1999). In fact social support can influence an individual's desire to exercise, especially when feeling sad or stressed (Ussher et al. 2007).

Friends are associated with multiple positive effects, such as buffering stress, and promoting general feelings of well-being, as well as decreasing feelings of social isolation (Boydell et al. 2002; Chronister et al. 2013; Daumit et al. 2005; Elisha et al. 2006; McCormick et al. 2009). The difficulty then becomes how to facilitate these positive factors associated with having friends into the lives of individuals with a mental illness, who despite wanting close relationships, do not actively nurture friendships or know what a friendship feels like (Erdner et al. 2002).

In the context of the mental illness, it is well researched that post-deinstutionalization individuals are living in the community with few social supports and rehabilitative programs to occupy their time with (Chronister et al. 2013; Erdner et al. 2002; Lefley 2009).

2.3 Examples of health promotion interventions benefiting mental health

Although health promotion is not viewed as an essential service by traditional psychiatric rehabilitation, the momentum is increasing for it to be used as an adjunctive treatment (Bjorklund 2000; Hutchinson et al. 2006; Jacobson & Greenley 2001; Moller & Murphy 1997). The greatest healthcare segment employing health-focused interventions, which have been researched through pilot studies with positive outcomes, are community mental health organizations providing health educational programs, exercise/fitness programs, a combination of both or peer outreach for recently discharged patients (Bjorklund 2000; Camann 2001; Ekpe 2001; Faulkner & Sparkes 1999; Moller & Murphy 1997; Skrinar et al. 2005). Likely these community organizations are not constrained by traditional biomedical regimens of psychiatric

rehabilitation common in hospitals (Elisha et al. 2006). These organizations therefore are able to explore, and potentially expand the current definition of rehabilitation and wellness.

The current research demonstrating benefits of physical activity as a potentially effective piece in overall rehabilitation of individuals revolves around basic aerobic exercises, the most accessible activity being walking (Ströhle 2008; Ussher et al. 2007). Two unconventional health promotion interventions steadily gaining attention as being therapeutic are: AT and horticultural therapy (HT).

2.4 Adventure therapy (AT)

AT is gaining prominence as a niche therapy in the sphere of therapeutic outdoor activities, especially since the first International Conference on Adventure Therapy (IATC) in 1997 in Perth, Australia (Richards et al. 2011). Similar conferences have been occurring every two years since (IATC 2012).

Focussing on the wilderness aspect of nature, research justifies AT by validating that being outdoors and experiencing adventure is strongly correlated with psychological well-being, and good mental health (Richards et al. 2011). However, AT is not a distinct profession or discipline in itself. Instead the practitioners who are involved with leading adventure activities in outdoor environments are derived from diverse backgrounds, ranging from psychology to education (Berman & Davis-Berman 2001, 2007; Newes 2001). Currently, the debate exists how to regulate practitioners who use AT through accreditation, and global standards (Berman & Davis-Berman 2001), as well as standardizing programs for easy replication while retaining program efficacy (Harper 2010). Creating a best-practice framework should be evidence-based, which stems from empirical data of research (Berman & Davis-Berman 2001; Harper 2010; Pryor et al. 2005). The major obstacle to this, as evidenced by this literature review, is that there are very few experimental studies providing this desired empirical evidence.

However, what is more important than creating universal standards for organizations offering outdoor activities is having these organizations regulate themselves in terms of operating from an evidence-based approach, utilizing best practice and being ethical in its approach and delivery of activities (Pryor et al. 2006). Understandably, it is very difficult to regulate these ideals

especially in the nongovernment realm when NGOs are not directly accountable to a universal agency promoting ethics or best practice.

2.5 Horticultural therapy (HT)

Complimenting nature's wilderness aspect in AT, HT perceives nature as a domesticated environment that is manicured and managed through gardening practices (Parr 2007). Of course, similar to any other nature-based intervention, HT seeks to be therapeutic through its unique process of working with plants and gardening resources (Smith 1998).

Coincidentally, similar to AT, the professionalization of HT is not derived from rigorous scientific research but according to Lewis from the mere observation that people-plant interactions produced therapeutic effects (as cited in Pfeffer, Deyton & Fly 2009). Historically, the use of HT has been documented as early as the eighteenth century in mental asylums in western countries (Perrins-Margalis et al. 2000). However, through the 1960s until the 1980s gardening as a therapeutic activity became more or less abandoned with the advent of pharmaceutical drugs being a viable therapeutic replacement (Söderback et al. 2004).

Today there is a renewed interest in HT, as the link between nature and humans is being extensively researched due to shortfalls in the traditional medicine to address common illnesses, such as stress-related anxiety and depression (Sahlin et al. 2012). Subsequently several qualitative studies exist demonstrating similar HT outcomes with various participant populations. These benefits can be thematically categorized as elements of the physical environment (related to being present in the garden), the sensory qualities (produced by the actual tending of plants), and the social experience (of interacting with other participants) (Barley, Robinson & Sikorski 2012; Gonzalez et al. 2011; Myers 1998; Parkinson, Lowe & Vecsey 2011; Perrins-Margalis et al. 2000; Smith 1998; Söderback et al. 2004). Coincidentally, no participant in any study reviewed commented on the value of gardening as exercise, which it is recognized as (Daumit et al. 2005; Page 2008).

Simply being present in the garden was also enough to have a calming effect as participants viewed the environment as safe and protective (Eriksson, Westerberg & Jonsson 2011). The therapeutic outcomes of being passively present in a garden is recognized by rehabilitation clinics, notably the Danderyd Hospital Rehabilitation Clinic in Sweden that constructed a garden

near to its perimeter to utilize HT as alternative and complimentary therapy (Söderback et al. 2004). As recently as 2010, a private Danish clinic developed garden grounds, referred to as Nacadia, to adjunctively treat individuals of stress-related illnesses while at the clinic (Corazon et al. 2010). The construction of what Söderback et al. (2004) refer to as a 'healing garden' (p.246) in a health clinic setting demonstrates that the inextricable link between human health and nature is slowly gaining momentum again as a means of mainstream health promotion.

3.0 Research Gaps

3.1 Common characteristics of AT and HT studies

In total 57 peer-reviewed English articles were examined for both AT and HT. Overwhelmingly 26 articles were theory-based or literature reviews. Overall a total of 19 articles were actual studies exploring the benefits of either AT or HT; all studies unanimously used qualitative methods.

AT and HT are two ways to actively engage experience in what Milligan, Gatrell and Bingley (2004) describe as the 'therapeutic landscape' (p.1782). Therefore, it is understood why qualitative is the preferred research method, as it allows participants to individually describe how their rehabilitation in nature is therapeutic. Also, qualitative has traditionally been the research method investigating the links between green space and health (Wilson et al. 2008). Both AT and HT researchers thoroughly acknowledge the need for more quantitative data (Annerstedt & Wahrborg 2011; Berman & Davis-Berman 2001, 2007; Corazon et al. 2010; Harper 2010; Parkinson et al. 2011; Pryor et al. 2005). AT specifically emphasizes this need as a means to standardize its programs based on evidence (Berman & Davis-Berman 2001; Harper 2010; Newes 2001; Pryor et al. 2006). Based on a survey of horticultural programs in Tennessee, it is also evident that HT does not have standardized programs with common identifiable goals (Pfeffer et al. 2009). Generalizing to the global presence of AT and HT, perhaps HT practitioners do not feel a push to standardize as strongly as their AT counterparts because HT has comparatively less overall risk as participants are confined to a garden space.

The targeted population for each therapy type are at opposite ends of the life spectrum. For example, AT research appears to target youth-at risk, a population appearing in nine articles versus three highlighting mental illness in adults. At the same time, HT research estimates that

HT primarily serves the elderly population in the United States and other developed countries (Larson, Greenseid & Meyer, 2010; Pfeffer et al. 2009), which makes it difficult to generalize HT outcomes to younger individuals.

4.0 Methodology

The primary objective of this thesis is to critically analyze how outdoor activities are beneficial to individuals experiencing a mental illness. The research began with a literature review exploring topics of how nature-based activities benefit individuals with a mental illness. Specific attention was given to AT and HT because these are two interventions ODI utilizes. The results of the literature review were then used as a basis for comparison to scrutinize the selected ODI data set with.

4.1 Search strategy and inclusion and exclusion criteria for the literature review

The literature review was a multi-staged approach involving separate searches for how nature generally benefits mental health then directing this knowledge to investigating how health promotion interventions involving nature benefit individuals with a mental illness. Lastly, specific nature-based interventions were reviewed notably AT and HT.

Initially, the search terms for nature-based therapies were very broad, simplified to 'outdoor activities' and 'mental illness' contextualized to Australia. The results of this original search for English peer-reviewed articles in EBSCO, CINAHL, PubMed, Informit, and Google Scholar databases yielded no results. Almost immediately the parameter of Australia was widened to include any country. Throughout the entire process of the literature review the same academic search engines were utilized through the Deakin University Library website. To retain consistency, all nouns describing therapeutic interventions involving nature were always paired with the term 'mental illness'.

Since AT is a recent discipline, the term AT is often used interchangeably with other terms. Identifying one collective term encapsulating the process and outcomes of AT is difficult because international practices and cultural contexts are very diverse (Richards et al. 2011; Russell 2001). AT can be contextually expanded to include: 'wilderness therapy' (Davis-Berman & Berman as cited in Richards et al. 2011, p.17), 'bush adventure therapy' (Carpenter & Pryor as

cited in Richards et al. 2011, p.17), 'nature-based therapy' (Burns 1999, p.9) or 'outdoor adventure therapy' (Richards et al. 2011, p.17). These terms, with the addition of 'outdoor wilderness program', were the chosen key words to describe AT and how it impacts individuals experiencing a mental illness.

HT similarly has interchangeable terms, as simple as 'gardening' (Frumkin 2001, p.236) to as descriptive as 'therapeutic horticulture' (Fieldhouse 2003, p.287; Gonzalez et al. 2011, p.120), 'social horticulture' (Gonzalez et al. 2011, p.120), 'outdoor occupational therapy' (Parr 2007, p. 544), and 'nature-assisted therapy' (Annerstedt & Wahrborg 2011, p.372). 'Ecotherapy' was also stated by Page (2008, p.2) to be a synonymous with HT. At the same time, Horowitz (2012) classified HT as being 'complementary and alternative medicine' (p.79). However, when this search term used it resulted in articles about herbal medicine. Concluding the HT search, the term 'healing garden' (Horowitz 2012, p.79; Söderback et al. 2004, p.246) was added to potentially increase the number of articles, however, yielded no results.

Pearl growing was a justifiable method of expanding the literature review, as nature being a therapeutic intervention is a relatively recent idea, dating back to the 1984 with Wilson's biophilia concept (as cited in Wilson et al. 2008). In recognition of this landmark theory, 1984 is a symbolic year to define the earliest time parameter when reviewing articles. However, 1996 serves as a more current year to represent the beginning of the time parameter because this is the year when the Australian government recognized mental illness as a NHPA.

Grey literature was reviewed from relevant non-profit organizations, specifically ODI itself as this was the organization providing the dataset.

4.2 Analysis of existing data set

ODI's dataset in its entirety was approximately 2, 000 individual surveys collected between 2009 and 2012. ODI issued these surveys as a method of assessing participant post-program satisfaction. Surveys used to collect the data were standardized to include the same questions regardless of program type. Each question was twofold: a Likert scale (a numeric interval scale ranging from "1 Disagree" to "5 Agree"), as well as space for qualitative remarks (see Appendix 4). The data was provided as scanned PDF surveys. No ethnical approval was required since the surveys were de-identified, and anonymously filled out.

Initially, it was conceived that the dataset in its entirety could easily be divided into four categories: adventure, wilderness, outdoor and other. ODI activities offer a diverse array of programs whereupon some, such as caving, contain wilderness as a crucial component while other programs remain adventurous but can be done in an urban setting, for example, indoor rock climbing. ODI also provides passive activities of simply being in the outdoors through organized picnics or park strolls without the challenges of performing complex tasks. Lastly, ODI initiates activities such as yoga or Tai Chi which are not necessarily associated with nature, but which were implemented on nature retreats. Ultimately, because of activity complexity the data was not classified into the desired four sphere rubric. Therefore, an alternative approach was adopted, choosing programs that ODI had already categorized.

This thesis' sample selection revolves around two distinct subsets of data: the Come and Try (C&T) series, offering adventure recreation at the introductory level, and sequential multi-day excursions, often themed with a particular outdoor activity.

The C&T series was chosen as it exemplifies ODI's mandate of enabling participants to experience the outdoors, while simultaneously being its own distinct data sub-set. All of the programs in the C&T repertoire (with exceptions of indoor climbing, and high ropes, which were not included in the data analysis for this thesis) involved the crucial component of physically being outdoors removed from urban boundaries. This program served as an introduction to the challenges of accomplishing an activity that one would consider to have elements of adventure and the outdoors. Each C&T activity occurred in the span of one day.

Multi-day excursions were selected as a basis for comparison because there was some activity overlap with the C&T series, for example bushwalking, cycling and rock climbing. Sequential day activities do not form a readily identifiable ODI data-subset therefore specific criteria were formulated to identify these programs.

The entire dataset was searched for dates longer than a day, involved being outdoors and/or including a program title with any combination of these keywords: 'adventure', 'camp', 'sequential', 'holiday' and 'journey'. Some program titles did not have these keywords yet did fulfill the time criteria of being longer than one day, and being outdoors. Two annual programs of sequential gardening were included because they satisfied criteria of containing key words

(‘camp’ and ‘sequential’) while being longer than one day and occurring in an outdoor garden. At the same time, ODI has run yoga retreats, which were omitted, primarily because the yoga sessions did not occur physically in a natural setting but rather indoors.

The general hypothesis was that participating in ODI activities are beneficial. The task was then to scrutinize which ODI programs were most beneficial and why. The assumption being participants are able to be more reflective and introspective after a multi-day activity as opposed to a one day activity, regardless of how challenging the participant perceived the activity to be.

Upon resolving to use the C&T Series (101 surveys), as well as the sequential day activities (730 surveys), both quantitative and qualitative data was entered into Microsoft Excel. Quantitative data was first analyzed by calculating response averages, which was beneficial when graphing trends over time. However, a number of the responses did not have numbers of the Likert scale circled but respondents had instead circled the “Agree” or “Disagree” on either end (see Appendix 4). Therefore, responses were stratified based on the proportion of respondents who were agreeable (who circled either 4 or 5 or who circled “Agree”) to the question, neutral (3) or disagreeable (who circled either 1 or 2 or who circled “Disagree”). Questions left blank were noted but removed from the overall calculations (see Appendix 5). Also, proportional calculations were chosen since it would overcome individual subjective variance between the scale’s numeric intervals (Stevenson, C, pers. comm., 15 May). Lastly, 95% confidence intervals were calculated in Excel to demonstrate the gap in agreeability between programs (see Figure 3 & 4 on pages 29-30). The datasets did not support a detailed quantitative analysis, therefore, qualitative data was also examined to verify and support trends in the quantitative data. Qualitative data was analyzed thematically based on respondent’s comments of: nature, being away from the city, a sense of achievement, social aspects of the being the group, wishing the program went longer and insights in their own mental health. Outlying comments were also flagged for further investigation.

5.0 Findings from data analysis

Comparing the qualitative responses in both data subsets, on average, participants of the sequential day activities appeared to be more receptive to writing comments than those of the C&T series (see Appendix 6). Proportionality, question 7 and 8, in either data set, had the fewest

words of the entire survey, as a percentage (see Appendix 6). Regardless which data type (quantitative or qualitative) was analyzed, it was evident that each activity was generally enjoyed by participants.

To improve survey analysis the questions were categorized into two sections: the organizational qualities of the program and participant satisfaction with the program. Each survey concluded with a section for Additional Comments, which were also analyzed because it also contributed to a deeper understanding of how participants reflected upon their respective programs.

Organizational quality	*Question*
q.1	Activity with date
q. 3	I was happy with how it was run
q. 4	The venue of the activity was appropriate
q. 5	Out Doors workers were supportive of me
q.6	This program can be improved
Participant satisfaction	
q.2	This program met my personal goals
q.7	I am satisfied with the overall services of Out Doors
q.8	I felt good at the start of this program
q.9	I felt good at the end of this program

Table 1: Deconstructed ODI survey, classified according to question type.

5.1 Quantitative trends in overall satisfaction with corresponding comments

Question 7 was chosen to retrospectively graph overall participant satisfaction throughout the dataset's years (Figure 1 and 2 on page 26). Each sub-data set was separately graphed to prevent overcrowding.

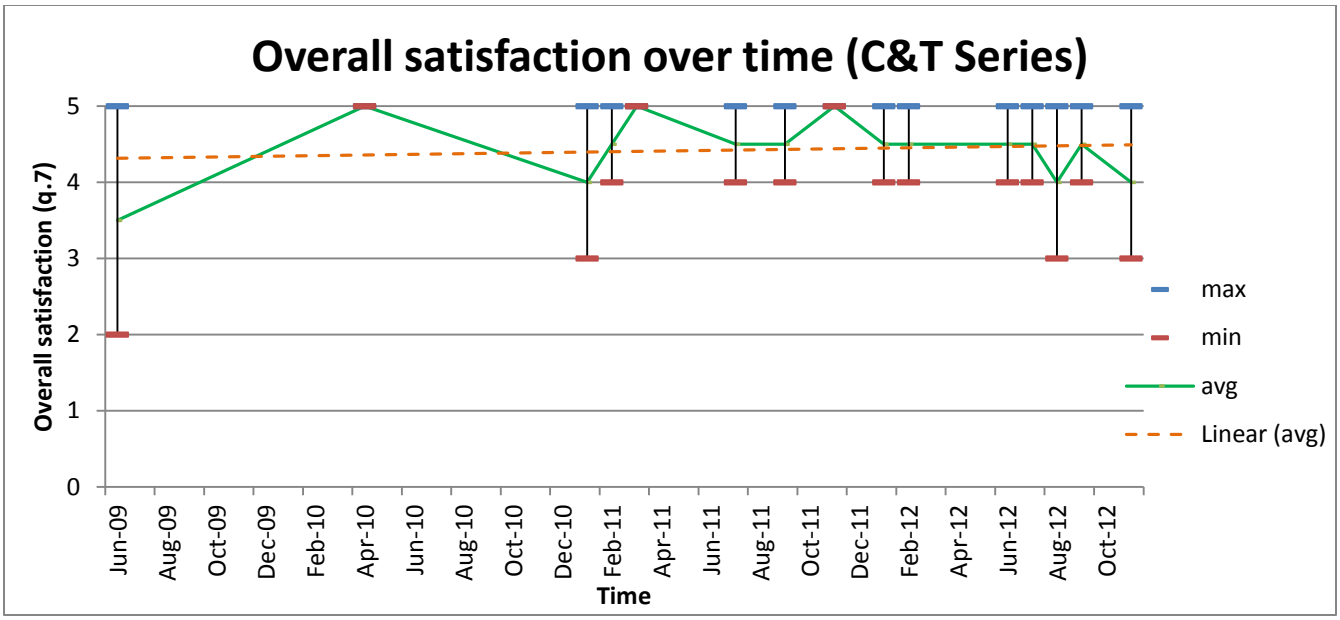


Figure 1: Overall participant satisfaction projected over time (2009-2012) for activities in the C&T series.

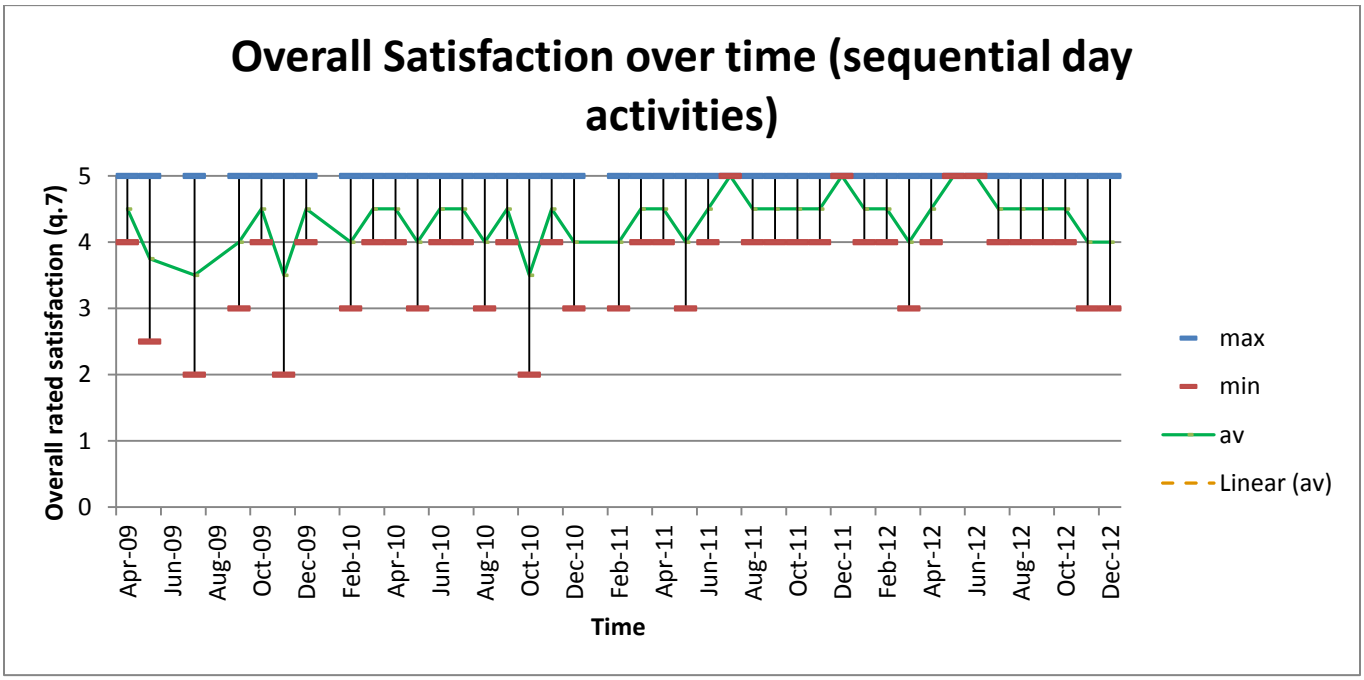


Figure 2: Overall participant satisfaction projected over time (2009-2012) for activities in sequential day programs.

Overall participant satisfaction was high throughout the years, regardless of program type. It was helpful to assess participant dissatisfaction with their remarks, if any were written, as a form of Likert scale justification. Furthermore, the participants' comments potentially offered constructive suggestions for future program improvement.

Beginning in sequential order in June 2009 a participant during a C&T cycling activity stated dissatisfaction with a 2. This particular participant defended her/his dissatisfaction by suggesting s/he wanted more of a challenge:

> *More adventerous [sic.] route, maybe. (C&T Cycling, 23/07/2009, no.2)*

Further along in the survey this participant defined adventure by the quantity of bumps:

> *More bumps next time. (C&T Cycling, 23/07/2009, no.2)*

The remaining C&T series had 3 as the lowest satisfaction rating. At the same time, the accompanying comments did not fully justify why participants were not overtly content. For example, fishing excursions (January 2011 and November 2012) received a neutral rating because of factors that were out of the staff's control, notably the difficulty in catching fish:

> *Very hard to catch the fish. (C&T Fishing, 20/11/2012, no. 8)*

> *The fish were difficult to catch. (C&T Fishing, 20/11/2012, no.9)*

On the other hand, factors staff can control are organizational elements, such as smoking on activities. On a C&T orienteering session, in August 2012, a participant regarded the activity as neutral because s/he was not impressed with smoking:

> *Would like to see staff and mentors not smoke on activity. (C&T Orienteering, 2/08/2012, no.5)*

As the data set was further analyzed, the issue of smoking became a repetitive theme, which is elaborated on again regarding ODI's organization structure on page 46.

Participants in the sequential day activities did not consistently leave a comment justifying why they were dissatisfied. Therefore, cases of participants' dissatisfaction are discussed only if it was accompanied by a comment. Coincidentally in the context of sequential day programs,

dissatisfying comments were equated to a 3 on the Likert scale with one exception, who justified her/his decision of a 2 with the following:

> *There is always room for improvement but this week was great. (Mt. Beauty Skiing, 13-17/07/ 2009, survey no.1)*

This comment counteracts with a Likert rating of 2 since the week was stated to be 'great' signifying satisfaction. Other accompanying comments justifying a participants' neutrality did not always elaborate on program aspects that could be improved for the future:

> *Not bad. (Tyabb Women's Retreat, 22-24/09/2009, survey no.4)*
>
> *Yes I am satisfied with Outdoors [sic.]. (Tyabb Adventure, 24-25/08/2010, survey no.1)*

Interpreting these comments alone, regardless of the accompanying Lickert scale, indicates that these participants were content enough with the program not to specify what elements could be improved for the future.

A subsequent comment specifically cited a source of disappointment:

> *Professionally run by immature staff. (Bushwalk Sequential Camp, 6-10/12/2010, survey no.1)*

Disappointment at the staff is forthrightly stated by the participant. The rationale for this participant's discontent was revealed in her/his response to question 5:

> *Staff didn't believe I was significantly injured & took it as an affront that I couldn't participate fully. (Bushwalk Sequential Camp, 6-10/12/2010, survey no.1)*

A subsequent comment written in 2012, justified neutrality through the suggestion of:

> *Maybe need a few more camps. (Mountain Escape Mount Buffalo, 19-23/11/2012, survey no.2)*

Once again, this comment is vague and unhelpful in providing ODI with ideas to increase program satisfaction in the future. The participant who responded with the most constructive written response was an individual in the Learn to Sail program, who

stated:

> *Need more challenge, minding/ability/NEEDS. Like Needs/Ability groups if possible? (Learn to Sail, 10-14/12/2012, survey no. 8)*

Once again the theme of wanting more challenge was highlighted, similar to the C&T cycling activity stated earlier. However, unlike the cycling excursion, which suggested more adventuresome elements, this sailing comment focused on individuals in the group having comparable abilities. The element of group cohesion, as well as the other written remarks of the Learn to Sail participants is further discussed on page 47.

5.2 Quantitative proportionality and question 8 focussed analysis

The use of proportional analysis (described on page 22) lumped participants into three categories: agreement, disagreement and neutrality according to each question (see Appendix 5). Since the majority of participants were agreeable to all questions, this was the factor used in gauging how ODI provided a useful service to its participants between 2009 and 2012. Confidence intervals of 95% were included to scientific validity of the proportionality of participants who agreed, further verifying this consensus was not due to chance.

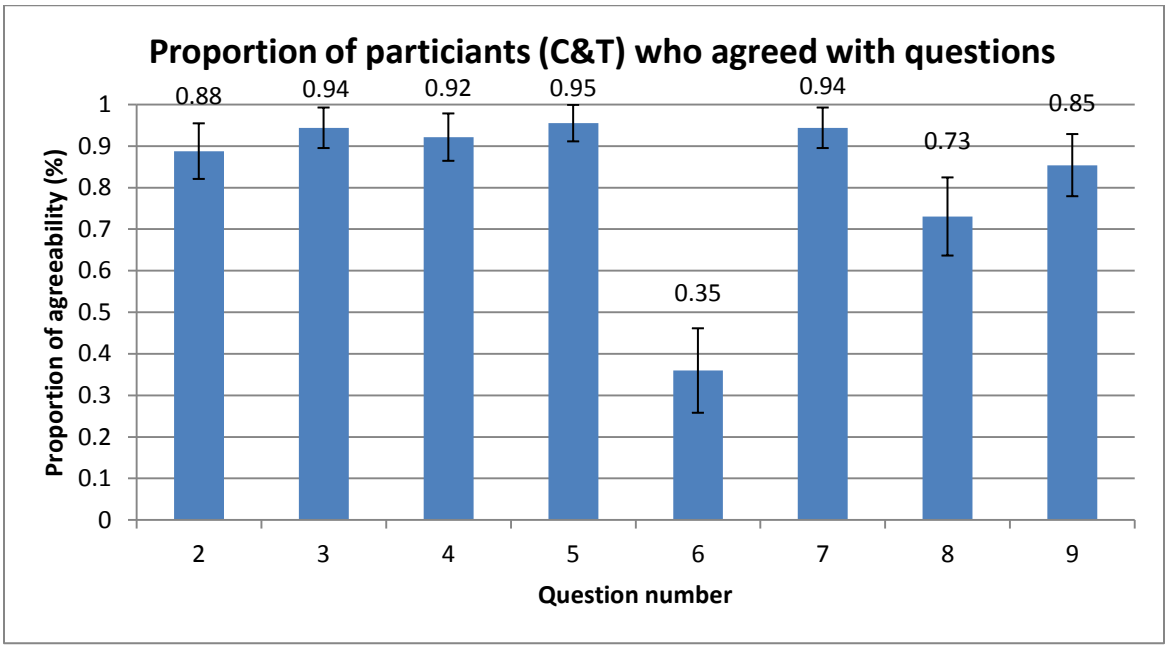


Figure 3: Proportion of participants in C&T series who agreed with survey questions (with confidence intervals).

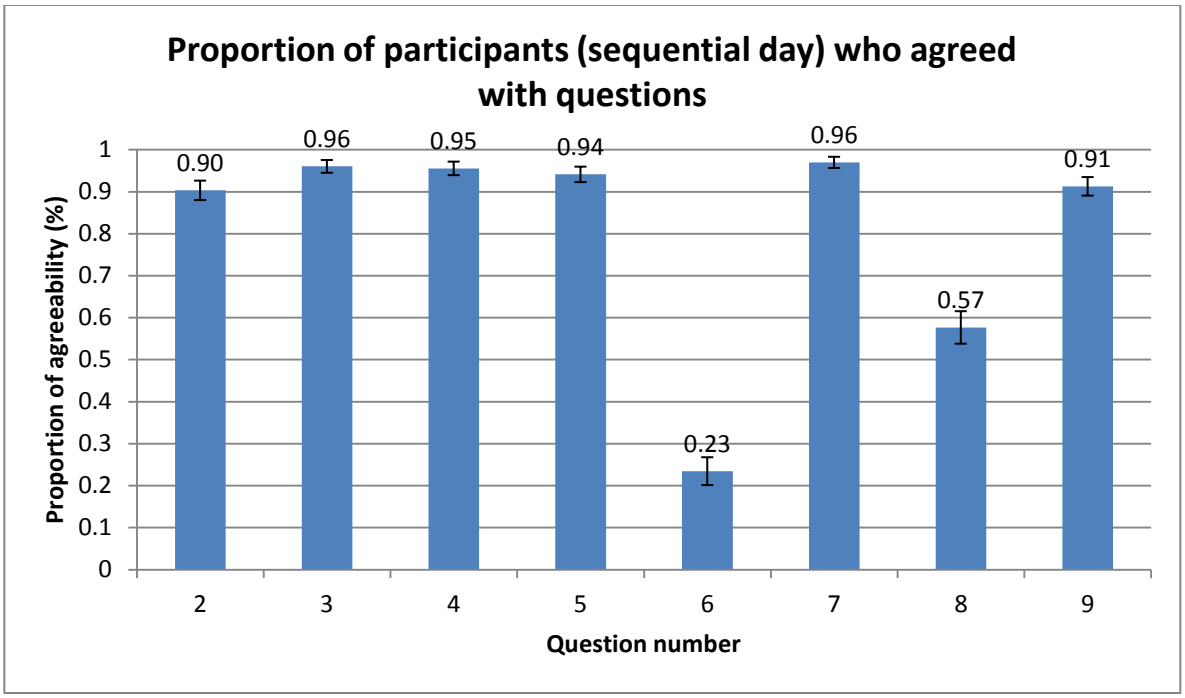


Figure 4: Proportion of participants in sequential day programs who agreed with survey questions (including confidence intervals).

As can be noted confidence intervals in the C&T series had a comparably larger width than in the sequential day programs. This is due to the analyzed survey quantity. Since the sequential day programs had a comparably higher number of surveys, and thus larger sample, this caused a reduction of a sampling error compared to the C&T series sample (Stevenson, C, pers. comm., 15 May).

As expected question 6 yielded the lowest proportion of agreeability in both data sets. If individuals were agreeable to every facet of ODI's organizational qualities then logically they disagreed to a question regarding program improvement, which was question 6. This question has one of the widest confidence intervals opposed to any other question because respondents were not consistently circling a 1 or a 2. Overall, most participants responded correctly to this question. At the same time, a trend was noted where some participants circled either a 4 or a 5 on the Likert scale with every question, including question 6. This indicates that perhaps these participants were not actively reading each question. Suggestions on how to correct this on outlined in the Recommendations section (see page 59).

Question 8 also followed the anticipated trend of having lower participant agreeability among all participants because it asked about general mood prior to the activity. This tendency of a lower mood prior to an activity was anticipated because individuals experiencing a mental illness are often socially stigmatized to the point of feeling powerless and experiencing lack of control (Hough & Paisely 2008).

However, unexpectedly question 8 confidence intervals were wide in both data subsets prompting a closer investigation of this question. Unlike question 6, question 8 required simultaneously scrutinizing the qualitative data with the quantitative data to better understand how participants interpreted this question.

In both data subsets, it was evident that participants defined the program's 'start' differently. The start of the program was defined in one of two ways: time directly before the activity the day of or the first few days during a sequential day program. Some participants even expanded the definition of 'start' to mean the preceding days leading up to the activity.

Taken literally, the start of the program would be the morning or afternoon directly prior to commencing the activity, as would be quite evident in the C&T series since these activities were less than a day long. Indeed it was the seemingly insignificant organizational things that ODI did, which prompted feeling positive prior to embarking on the activity, evoking unanimous Likert scale agreeability:

> *Good start with lunch. (Orienteering, 2/08/2012, survey no. 4)*
>
> *Because we had morning tea. (Rafting, 23/11/2011, survey no. 4)*

However the start could technically be expanded to include the first few days in a sequential day program:

> *I was feeling a little depressed at the start. (Canoe Journal male only, 28/03-1/04/2011, survey no.2)*
>
> *I was feeling very flat at the start. (Multi-Activity Sequential, 16/03- 08/04/2010, survey no.3)*

These participants did not definitively define the 'start' of their respective programs, unlike another participant who specified the start as being the very 'first day':

> *[Bicycle] riding was excellent on the first day. (Warburton Rail Trail, 19-21/09/2011, survey no. 6)*

Numerous participants in the sequential day series commented on their mood during the time leading up to the program's start. Consequently all noted comments corresponded to be agreeable on the Likert scale:

> *I had been depressed for a short while before the holiday. (Yarrawonga Mulwala, 23-27/11/2009, survey no.8)*

> *I had struggled with health issues in the prior weeks. (Goulburn River High Country Rail Trail, 30/07-2/08/2012, survey no. 5)*

> *I felt a little depressed before I was invited on this trip. (Warburton Rail Trail, 19-21/09/2011, survey no.2)*

Unexpectedly, question 8 also yielded participants' trip expectations. Undoubtedly prior to starting any program participants will have expectations either due to past participation in ODI programs or similar outdoor activities. The C&T series contained a wider array of activities that could be labeled as being an 'extreme-sports' (such as caving) than the sequential day trips. Nevertheless there were similar three distinct themes emerged: looking forward to the activity, as well as negative expectations, such as nervousness or anxiety and the program expectantly providing respite and relaxation.

Beginning with the C&T series, comments regarding positive expectations were generally coupled with Likert values of 3 or greater:

> *I was excited and looking forward to the day. (C&T Fishing, 20/11/2012, survey no.9)*

> *Excited about riding and now I love it! (C&T Mountain Biking, 13/11/2012, survey no. 2)*

> *The program helps to enjoy the day. (C&T Canoeing, 8/02/2011, survey no.1)*

This latter comment was the only instance where a participant had a preceding positive C&T program expectation asymmetrically linked to a 3. However, a response of mere satisfaction does not parallel to the enthusiasm of perceived enjoyment. This potential disparity between qualitative and quantitative is potentially accounted for in the subjective interpretation of the Likert scale.

Disparity between Likert scale agreeability and contravening comments stating anxious expectations were also evident:

> *Was a little nervous though. (C&T Caving, 27/04/2010, survey no. 4)*

> *A little bit nervous though. (C&T Caving, 24/01/2012, survey no. 1)*

Readers can be empathetic to the preceding nervousness of these participants because caving is a unique activity that few would have the opportunity to try. It was assumed these comments were written by separate individuals as latter survey from 2012 gave no indication that s/he had participated in a caving activity before.

Anxious expectations appeared to be related to the more extreme spectrum of outdoor sports offered through the C&T series. In one example it corresponded to the participant circling disagreement, which resembled her/his candid comment of being:

> *Nervous. (C&T Abseiling, 20/02/2012, survey no.5)*

This participant was the only exception in the C&T series when the Likert scale's numerical number aligned with written comments for question 8.

Similarly in the sequential day programs, the disparity between Likert scale and written comments was also noticed. For instance, the general theme of looking forward to the activity was directly evident in the comments yet disproportionately linked to neutrality:

> *Always looking forward to trip but always a bit nervous as well. (Bushwalking Camp, 16/06-18/06/2010, survey no.7)*

> *Nervous but anticipating a good trip. (Canoe Journey male only, 28/03-1/03/2011, survey no.3)*

Looking forward to it. Some apprehension. (Mt. Buffalo, 15/02-19/02/2010, survey no. 3)

These preceding comments demonstrated the excitement simultaneously with negativity, such as 'apprehension' or being 'nervous'. The dissonance between disclosed emotions and Likert scale was also associated with participants who acknowledged having negative expectations, yet again, responded with a quantitative 3:

Full of anxious expectations. (Wattle Point Men Only Camp, 11-15/10/2010, survey no. 5)

Felt a bit nervous & anxious. (Mornington Peninsula- NP, 5-6/07/2011, survey no. 1)

I felt a bit daunted by everything ahead. (Mt. Beauty Skiing, 13-17/07/2009, survey no.2)

Unfortunately, none of these responses elaborated on how or why these participants were feeling the way they stated. At the same time, they were 'nervous' and 'anxious' enough to circle a 3 instead of a 1 or a 2.

The misalignment between Likert scale and written comments was also noticed in participants of the sequential day series activities who numerically agreed with feeling well at the beginning of the activity, yet simultaneously elaborated on negative expectations:

High expectations bit anxious about group dynamics with bunch new folk. (Winter Alpine Adventure, 23-27/07/2012, survey no.7)

A tad nervous at 1st. Met nice people. (Yarrawonga Mulwala, 1-5/02/2010, survey no.8)

Bit tired from early start to the day apprehensive about mixing with other campers. (Fishing Holiday, 6-8/04/2009, survey no. 4)

As evidenced by these comments, social interactions with strangers were a valid source of anxiety for some participants. However, regardless of their doubts, these participants attended the program anyway. On a separate excursion, one participant admitted being very close to cancelling the trip:

Pretty stuffed, almost didn't come. (Rock Climbing Journey, 18-21/04/2011, survey no. 6)

Some participants did display insight into their current health as an explanation for feeling unwell at the start of the sequential day programs, and simultaneously disagreeing with the Likert scale:

> *Having personal and interactive problems. (Mt. Beauty, 12-16/11/2009, survey no. 3)*
>
> *Feel a little anxious - but not to do with Outdoors. (Wilsons Prom Female Only Camp, 15-19/11/ 2010, survey no.6)*

As expected, participants who quantitatively did not agree with question 8 simply lacked expectations because factors were preventing their potential ability to look forward to the trip:

> *I was feeling a little depressed at the start due to lonely. (Aquatic Camp, 31/01-4/02/2012, survey no.8)*
>
> *Emotionally very fragile at the start. (Wilsons Prom Female Only Camp, 15-19/11/2010, survey no.1)*
>
> *I had depression before coming. (Fishing Holiday, 6-8/04/2009, survey no. 1)*

Only the first comment identified a direct cause and effect relationship. Once again, the 'start' of the program is indeterminately alluded to.

The participants who expected respite and relaxation from the sequential day programs out rightly stated in Likert scale agreement, as well as comments:

> *I was looking forward to rewinding. (Mt Beauty, 12-16/10/2009, survey no.2)*
>
> *I needed a break + time to de stress. (Fishing Camp, 19-22/10/2010, survey no. 1)*
>
> *Only because I needed a brake [sic.] (An Overnight Trip NP, 16-17/11/2010, survey no. 5)*

Perhaps these participants intrinsically realized that spending time outdoors, away from their regular routine, was to be refreshing. This theme was further expanded to the few participants who specifically referred to these sequential day trips

as ‘holidays’:

> *I was looking forward to the adventurous holiday. (Autumn Adventure, 21-23/03/2011, survey no.5)*
>
> *I was excited about going on a holiday. (Canoe Journey, 20-24-02/2012, survey no.5)*
>
> *I really needed a break away from home and can't afford a holiday so thank you for this opportunity. (X Country Ski Camp, 27-31/07/2009, survey no. 7)*

ODI also labels their programs with titles that include the word ‘holiday’; for example ‘Autumn Holiday’ or ‘Costal Holiday’. However the authors of these preceding comments autonomously referred to an ODI excursion as a ‘holiday’ indicating they most likely do not regularly take time off. The last comment described financial obstacles as a reason for not regularly taking time off. Other participants indicated a financial barrier to taking time out from their daily environments, expressing their gratefulness as agreeable on the scale, as well as through the following comments:

> *Thanks for the opportunity to get away I could not do a trip like this on my own. (Winter Alpine Camp, 1-5/08/2011, survey no.3)*
>
> *Grateful to participate in a worthwhile escape from the city that I would have difficulty in affording to persue [sic.] on my own. (Grampians, 26-30/07/2010, survey no. 7)*

Evidently participants were looking forward to spend a few days outside of their daily routine, far from their familiar environments.

6.0 Thematic qualitative data analysis

In this section a focus is given to qualitative data whereupon comments were analyzed for generalized themes, irrespective of question numbers and Likert scale ratings. These themes revolved around: nature, reasons to leave Melbourne, social aspects of group participation, overcoming challenges, and introspective insights into health.

6.1 References to nature and a Melbourne getaway

Participants who commented on the opportunity to leave the city and explore nature were readily identifiable. As stated in the previous section referring to sequential day programs as 'holidays' was a theme. These programs serving as an alternative to participants' daily realities was evident:

> *I feel very relaxed, it was great compared to reality. (Airey's Inlet (Arafemi), 24-27/11/2009 survey no.2)*

ODI participants were not afraid to leave their daily environments and routines. Specific examples in both the sequential day and C&T series reflected participants' relief to leave Melbourne, from the simple statements:

> *Happy to leave Melbourne. (Goldfield's Bike Tour, 19-22/07/2011, survey no.3)*

> *Nice to take a break from Melbourne. (Mornington Peninsula NP, 19-20/07/2012, survey no.3)*

> *I was happy to go away from Melbourne for a few days. (Winter Holiday NP, 12-14/07/2011, survey no.2)*

To the more elaborate explanations that hinted at how participants perceived urban life in Melbourne:

> *I had a great time out of the cramped city. (Grampians Camp, 9-13/07/2012, survey no.5)*

> *Needed a good break from the winter blues in suburbia. (Cultural Creative, 25-29/06/2011, survey no.3)*

> *Nice for a break from the congestion and pressures of the city. (Wilsons Promontory Holiday, 8-12/02/ 2010, survey no.2)*

Vivid descriptions of Melbourne being 'cramped', inflicting 'winter blues' as well as 'congestion and pressures' hinted to urban life as a source of strain for participants. A distinct sub-theme in escaping Melbourne was a noted

urgency to leave:

> *Eager to get away from hectic Flemington for a break. (Grampians, 26-30/07/2010, survey no. 7)*
>
> *The city life tends to bring on aniexty [sic.] (Fishing Camp, 17-21/12/2012, survey no.5)*
>
> *I needed to see the back of Melbourne. (Grampians Camp, 21-24/08/2012, survey no.3)*

Once again, the participants portrayed the city negatively using 'hectic' to describe Flemington, a suburb of Melbourne, and identified feelings of 'anxiety' when in the city.

For some participants the city itself was not a direct reason to leave but their social life in the city:

> *Desperately needed break from family. (Mt. Beauty Journey, 9-13/05/2011, survey no.4)*
>
> *Good time away. I haven't been away from my supports in like 2 years. (Warburton Holiday NP, 22-23/11/2011 survey no. 3)*
>
> *Needed time away from family and especially all appts [sic.] coming up. Needed to give them a break from me. (Intro to Camping, 23-24/01/2012, survey no.1)*

A break from the city was synonymous with emotional distance from 'family', 'supports' and 'appointments'. Acquired distance, both in the physical and the emotional sense, further allowed participants to rationalize a break with ODI:

> *Nice break from daily city life, thinking time, personal time to relax, holiday... life priorities. (Grampians Songs and Stories, 30/11-4/12/2009, survey no.4)*
>
> *I needed time away from family & doctors as I am in ill health and it has helped me to feel much better despite it. (Mt. Beauty Journey, 9-13/05/2011, survey no. 3)*

One participant reflected that s/he and her/his family simultaneously benefited through her/his involvement in a skiing excursion:

> *Enjoyable trip.... time away from the city; provided respite for my family; greatly appreciated. (Mt. Beauty Skiing, 13-17/07/2009, survey no.3)*

As evidenced by the preceding comments, many sources of stress existed for these ODI participants, especially related to being in the city. Other factors for favoring an absence from Melbourne highlighted the mutual exclusivity of leaving the urban environment for exploration of natural surroundings:

> *A taste of Nature was what I really wanted after many months in a hospital. Got to experience a bit of winter. (Tyabb Adventure, 24-25/08/2010, survey no.2)*

> *A great break from the city and to experience nature in a fun way. (Rafting Camp, 27/09-1/10/2011, survey no.3)*

> *Escape the bustle of Melb ...the beautiful scenery + snow left a good impression on me. (Mt. Beauty, 12-16/10/09, survey no. 1)*

The outcome of being in nature (far removed from Melbourne) was a major reason for participation in an ODI activity. At the same time, it was not the only reason to leave Melbourne. An ODI excursion was an integrated experience providing the opportunity to leave the city, socialize with others in a safe environment guided by outdoor specialists:

> *The fact of being away from Melbourne doing things (out door activities) that I enjoy in the company of professional and 'easy-going' and supportive staff is an offer you can't refuse. (Goldfields Bike Tour, 19-22/07/2011, survey no. 2)*

6.2 Social aspects of ODI excursions

The social aspects of ODI excursions were not readily separated from the positive references to nature. A couple comments displayed synchronicity in participants enjoying the company of other participants, as well as being in nature:

> *Good to connect with nature. Good to have fun with other participants. (Mt. Beauty, 12-16/10/2009, survey no.6)*

> *Absolutely in contact with nature; managing difficulty with sleep; enjoying company of others; campfire. (Grampians Songs & Stories, 30/11-4/12-2009, survey no. 8)*

Other comments focussed primarily on the social cohesion of ODI trips:

> *Good outdoor activities... good social time, plenty of "headspace" other people gave me headspace. (Fishing Holiday, 12-16/04/2010, survey no. 4)*

> *I had my privacy but lots of group invovlement [sic.] (Grampians Camp, 1-5/03/2010, survey no.5)*

> *I love ODI because all the activities make me feel like I belong. (X Country Ski Camp, 27-31/07/2009, survey no. 3)*

As evidenced from the above comments, fellow participants and staff were instrumental in a holistic group experience that fostered inclusivity as well as individual privacy. This general atmosphere was a commentary theme, which highlighted how individuals came together and created memorable experiences:

> *Everyone was postive [sic] and happy. (Mt. Buffalo, 15-19/02/2010, survey no.4)*

> *The staff and participants were supportive and helpful. (Mornington Peninsula, 5-6/07/2011, survey no. 5)*

> *The company of participants was beautiful. (Warburton Camp, 27-29/08/2012, survey no.7)*

At the same time, not every participant identified with being readily comfortable in a group setting. Some participants hinted towards mild social anxiety within a group setting. However these following comments relay a positive outcome:

> *I am becoming a little more relaxed amongst a group + it feels good to part of the Rapid Babes Team. (Rafting Camp, 27/09- 01/10/2010, survey no. 7)*

> *Proved I can bond okay with a bunch of new guys. (Wattle Point Men Only Camp, 11-15/10/2010, survey no. 5)*

Relief can be read in these preceding comments as these participants were socially accepted amongst new acquaintances to form the ‘Rapid Babes Team’ or a sociable ‘bunch of new guys’. Other comments forthrightly identified participants’ personal goals to be

more participatory:

> *My personal goal was to be an active member in the group and I believe I achieved that. (Rafting Camp, 5-9/09/2011, survey no.4)*

> *My personal goal was to be an active member of the group and give everything a good go. And I did! (Warburton Rail Trail, 19-21/09/2011, survey no.2)*

Unfortunately, it was not known if these two preceding comments were written by the same individual due to a coincidence in sentence structure. Naturally, in order to reach any goal one must push beyond individual comfort levels. Another participant related to this process as:

> *I socialised, got out there and did things, got out of my comfort zone. (Airey's Inlet (Arafemi), 24-27/11/2009, survey no. 2)*

Even if participants did not out rightly claim victory in socializing, it appeared as though they still were able to enjoy facets of the excursion:

> *Tried to use my conversational skills, enjoyed cooking meal. (Postcards from Great Ocean Road, 6-10/08/2012, survey no.8)*

This participant did not follow-up on the survey, if her/his attempted conversation skills were successful. However, it can be inferred if s/he enjoyed a cooking meal then s/he integrated into the group well.

Most participants incorporated themselves well into the group, and even intrinsically benefitted from it:

> *One step closer to being socially at ease. (C&T Bushwalking, 6/07/2011, survey no.7)*

Or participants extrinsically benefited from being social and fostered friendships with other ODI participants:

> *ODI has changed my life and I have met great friends. (Mt. Baw Baw, 14-17/11/2011, survey no.8)*

Great friendship the best I have had. (An Overnight Trip NP, 16-17/11/2010, survey no.4)

Based on the above two comments, ODI was a social platform for participants to meet people. However, as will be discussed in the next section, group cohesion came with its distinct set of payoffs and challenges.

6.3 Impact of ODI's organizational structure

ODI staff members, who lead the activities, were instrumental in creating a safe environment for participants to relax, be themselves and enjoy the overall experience. In direct response to question five (whether ODI workers were supportive) many participants warmly regarded the staff:

Workers allowed us to do things & use our own initiative. (Fishing Holiday, 12-16/04/2010, survey no. 4)

Encouraging and not too pushy when it came to activities. (Bush Camp Journey, 9-13/05/2011, survey no.1)

It was also apparent that staff members played a crucial role in how participants socialized with each other, as one participant commented on directly role playing with the staff:

Listened to my needs and conversation attempts with courtesy & some feedback. (Wilsons Promontory Holiday, 8-12/02/2010, survey no. 2)

Another form of evidenced group interaction was teamwork. Teamwork was a commonly cited personal goal, as much as being social highlighted in the previous section:

I had a goal of having a good group that worked together as a team and we did!!! (Multi-activity sequential, 16-03- 08/04/2010, survey no. 3)

My goal was to participate and work with other participants and a tight knit team and we achieved that. (Aquatic Camp, 31/01-4/02/2012, survey no. 8)

Able to work as a group. Can converse with a group & feel comfortable. Stepped out of my comfort zone. (Yarrawonga Mulwala, 1-5/02/2010, survey no. 8)

In direct contrast to wanting to be a team player through increased participation, a participant commented on how s/he was proud of the fact that s/he restrained her/himself while on an ODI trip:

> *My goals about social relationships and respecting others without being bossy. (Canoe Journey, 20-24/02/2012, survey no.5)*

Apart from teamwork, participants drew on support from each other and staff members:

> *Was completely out of my comfort zone & trips abseiling for the first time in my life- heaps heaps of support including from all the participants. (Mountains Escape Mount Buffalo, 19-23/11/2012, survey no. 5)*

The benefits a cohesive team with supportive members were increased enjoyment for individual participants, as evidenced from above comment, as well as smooth running of the activities:

> *Always runs with everybody helping each other. (Wilsons Prom, 29/10-2/11/2012, survey no.6)*

> *Everybody worked as a team very well all of us got the opportunity to do map reading which I found interesting. (C&T Orienteering, 2/08/2012, survey no. 2)*

The latter comment attests to the difficulties of learning a new skill, such as map reading, in a group setting where many individuals were potentially vying for a chance to learn among the likelihood of limited supplies, and few staff members.

The notion of limited resources was also touched upon by another participant in the same C&T Orienteering session, who hinted at this particular session having too many participants:

> *Would like to go with two people. (C&T Orienteering, 2/08/2012, survey no.5)*

Group size was an issue on other ODI excursions:

> *Maybe smaller group sizes. (Autumn Adventure, 21-23/03/2011, survey no.1)*

> *Because there were so many of us hard to get individual support. (Grampians Camp, 24-28/10/2011, survey no. 4)*

> *Take small to medium groups, large ones could be overwhelming. (Fishing Holiday, 12-16/04/2010, survey no. 2)*

Having a consensus of how many individuals compile a 'small' group versus a 'medium' sized group was subjective. In the Autumn Adventure there were five participants; the Grampians Camp had six; nine were present on the Fishing Holiday.

At the same time, a smaller group size did not automatically correlate to increased group cohesion. For example, a single disruptive participant (Robert pseudonym) can ruin the entire ODI experience for others, as evidenced by multiple comments on different surveys regarding the Learn to Sail session:

> *Yes. The program would have been more relaxing & enjoyable without Robert wandering off all the time causing stress to staff & participants. (Learn to Sail, 10-14/12/2012, survey no. 4)*

> *ODI participants were incredibly supportive given some girefs [sic] & hiccups that occupied. But the group as a whole pulled through. (Learn to Sail, 10-14/12/2012, survey no.5)*

> *More careful selection of participants with like needs, capacity, abilities/disabilities. More enjoyment possible for all. (Learn to Sail, 10-14/12/2012, survey no.8)*

The participant who completed the eighth survey was the most frustrated amongst the Learn to Sail participants, as s/he acknowledged group cohesion would be maintained through respecting group rules:

> *Participants must abide by group rules (staff & mentor direction) RESPECT THIS or GO! (Learn to Sail, 10-14/12/2012, survey no. 8)*

This Learn to Sail program was the only instance where many participants simultaneously mentioned a single disruptive participant who detracted from their overall experience. At the same time, it was not overlooked that potentially disruptive participants were present on any ODI excursion, evidenced by this one individual who did not hide

her/his annoyance:

> *I think sometimes a person who is pretty damn difficult gets on a camp and makes thing pretty hard. (Mountains Escape Mount Buffalo, 19-23/11/2011, survey no.1)*

Other participants, who commented on the group dynamics, demonstrated that the real challenge is not the participant number per say, but having the right mix of individuals:

> *I struggled with the mix of people this trip. There appeared to be a very high % of participants who's [sic.] current state of illness rendered them incapble [sic.] of assisting or participating in any way. While we are all ill at some time the balance this trip seemed quite a strain. (Murray River Canoe Journey, 14-18/11/2011, survey no.6)*

The issue of smoking during ODI trips also caused a strain. In addition to the anti-smoking comment mentioned on page 28, another participant forthrightly acknowledged a similar perspective:

> *Stricter smoking/ non-smoking policies. (Alpine Adventure, 20-24/08/2012, survey no. 1)*

ODI's officially policy towards smoking coincides with current legislation that there is no smoking in vehicles or the offices (see Appendix 3). It was evident that while in transit to the to the activity's destination participants who were not smokers were aggravated by those who did smoke:

> *Only negative comment was that people were smoking into vehicles from just outside. (Bushwalking camp, 16-18/07/2010, survey no.3)*

> *Should fine out more clearly about peoples allergies. It is impossible to ask smokers to stop smoking if someone has an allergy to smokers and there is a second car then that car should be used. (Airey's Inlet (Arafemi), 24-27/11/2009, survey no.5)*

At the same time, ODI acknowledges that many participants are heavy smokers, and will often smoke in close proximity to non-smokers (see Appendix 3). This close proximity and exposure to second-hand smoke was also evident

during the activities:

> *No smoking on bush walks as this distracts from breathing local air and scenery. (NP Country Holiday, 17-18/03/2010, survey no. 5)*

> *No smokers, can't stand the smell, more active participants? (Autumn Adventure, 21-23/03/2011, survey no. 3)*

Coincidentally a smoker did feel stigmatized on a trip to Mount Beauty in 2011:

> *More tolerance towards smokers would be appreciated. (Mt. Beauty Journey, 9-13/05/2011, survey no. 4)*

The notion of having separate trips for smokers and non-smokers was resounding proposed solution from the participants' perspective:

> *The only improvement I can think of is having a separate trip for smokers + non-smokers. (Wilsons Promontory Holiday, 8-12/02/2010, survey no. 1)*

> *Perhaps have it as a non-smoker camp. I was feeling sick and it gave me a headache. (Warburton Holiday, 11-12/05/2010, survey no. 7)*

Smoking on ODI trips and excursions could potentially be corrected by establishing ground rules before embarking, and having them applicable to staff and participants.

6.4 A sense of achievement in meeting the challenges

There are many different challenging and overlapping aspects of ODI activities ranging from being in the natural environment to engaging in the social atmosphere. This section discusses how participants viewed the challenges, specific to the activity itself, such as surpassing physical limits and mental fears to complete the activity.

Paddle sports, such as rafting and canoeing, had the most comments related to feelings of accomplishment:

> *Feelings of accomplishment. (Canoe Journey (Male Only), 28/03-1/04/2011, survey no. 3)*

> *Always challenging. (Canoe Journey (Male Only), 28/03-1/04/2011, survey no.4)*

It was a challenge. (Murray River Canoe Journey, 14-18/11/2011, survey no.1)

Caving was another activity where participants collectively stated their sense of being challenged:

The caves while challenging were very good. (C&T Caving, 27/04/2010, survey no.4)

Great challenge. (C&T Caving, 24/01/2011, survey no.1)

Caving was a bit challenging. (Warburton Rail Trail, 19-21/09/2011, survey no.8)

Despite gardening not occurring in a quintessential wilderness setting, such as caving or rafting, a participant still found a sense of achievement at the end of the program:

Different sense of achievement to hiking/climbing but still a really good feeling at the end of the trip. (Spring Gardening Sequential, 7-11/11/2011, survey no.6)

Having an appropriate challenge level where all participants were empowered to feeling success was paramount. One participant described the level of challenge within the group context as:

The group was be challenged continously [sic.] but not let to ride to fast. (Goulburn River High Country Rail Trail, 30/07- 02/08/2012, survey no.3)

No matter how difficult the activity was a counterbalance of relaxation was important:

The balance of challenging walks & relaxation were great. (Grampians, 26-30/07/2010, survey no.9)

Beside activities not being too hard for the group, fun was an important underpinning aspect to overcoming a challenge:

I am buzzing I feel on top of the world great people good fun challenge. (Rock Climbing Mt. Arapiles, 10-14/12/2012, survey no.5)

If participants felt the activity was too challenging they wrote less positive comments suggesting methods to improve

subsequent programs:

> *More time & focus on building up beginnier's [sic.] skills. (X Country Ski Camp, 27-31/07/2009, survey no.2)*

> *It was a bit hard ski run. (Ski Trip, 9-12/08/2010, survey no.6)*

Physical fitness was a notable aspect of how participants perceived the activity, especially skiing or rafting, as one participant directly commented on:

> *It was fun, but I found it very tiring because I am not very fit. (C&T Rafting, 29/08/2012, survey no.1)*

Participants commented on the process of how their physical health improved from its baseline, which enabled them to safely engage in the activity:

> *I did and complete walks that I would not be able to do a couple of years ago so it was good. (Grampians Camp, 1-5/03/2010, survey no. 4)*

> *I wanted to test my limits & I was able to moderate activity when near these limits. (Bushwalk Sequential Camp, 6-10/12/2010, survey no. 1)*

Regardless of perceived fitness the overarching conclusion to surpassing any challenge was pushing beyond one's own capabilities, whether that was physical, mental or both:

> *There were just enough activities that I tried that I didn't think I could do but I did it. (Bushcamp Journey, 9-13/05/2011, survey no.1)*

Participants also cited overcoming mental obstacles, especially related to their illness:

> *My personal struggles with my illnesses were confronting at first on this holiday. I am now learning how to better manage myself by learning about myself, my experiences on this holiday have been a positive challenge that I know I needed. Thank you for this opportunity. (X Country, 27-31/07/2009, survey no.7)*

Mental obstacles were also direct phobias. Claustrophobia was a specific fear that a participant conquered during a C&T caving

session in 2012:

> *A bit of scared and claustrophic[sic.] at first but got used to it and had a great time. (C&T Caving, 24/01/2012, survey no.1)*

Other obstacles that participants experienced were less specific however; the general outcome of euphoria having accomplished a daunting task was evident:

> *Felt really good because during I overcame some of my fears. (C&T Mountain Biking, 13/09/2012, survey no.2)*

> *My goal for today was to challenge myself and a as a result overcame my paralyzing fears. (C&T Mountain Biking, 13/09/2012, survey no.2)*

Simply completing the activity provided participants with a sense of achievement:

> *McKenzie Falls Climb was challenging but it felt good to finish the walk successfully. (Grampians Camp, 24-28/10/2011, survey no.6)*

> *It was chalanging [sic.] but very rewarding to bike all that way. (Otways Camp, 21-24/02/2011, survey no.4)*

> *Completed 6km! With process! (Otways Camp, 21-24/02/2011, survey no.2)*

Sometimes the weather made the activities more difficult, but it did not seem to diminish enthusiasm:

> *Very challenging in the rain, but good. (C&T Mountain Biking, 13/09/2012, survey no.1)*

In the end, after successful completion of pushing past mental barriers, overcoming fears, and physical exertion, a participant remarked on how s/he gained confidence:

> *I didn't have any specific goals but I was satisfied I had overcome challenges as that arose feelings of confidence gained last a lot longer than just the trip. (Canoe Journey (Male only), 28/03-01/04/2011, survey no.3)*

This participant appears to insist that the effects of this Canoe Journey will be a lasting effect when he returns to his daily environment. At the same time, this cannot be measured as ODI

does not do longitudinal follow-up, an area of potential future research, discussed in the Limitations section (see page 57).

Another outcome of activity accomplishment was the realization of how important exercise was:

> *It has given me to focus of my physical & mental health to lose weight and go & do more walking. (Coastal Holiday, 12-13/09/2012, survey no.3)*

> *Best/most exercise since the start of the year -> I'm back on track again! (Goulburn River High Country Rail Trail, 30/07-2/08/2012, survey no.1)*

ODI participation was a catalyst for participants to find success where it lacked in their daily lives, as one participant displayed her/his gratitude toward ODI:

> *I confronted some personal goals (ie. hights [sic.]) & am grateful that I had the opportunity to experience them. (Multi-Activity Sequential 16/03- 08/04/2010, survey no. 6)*

In another multi-day program, a participant compared a ski camp to her/his regular life citing:

> *Challenged myself physically. To be open to & experience situations et cetera not usually considered "normal" pattern of life schedules. Ie: has been a while since I skiied [sic.] last. (X Country Ski Camp, 27-31/07/2009, survey no.8)*

The outlier notion of not having challenging activities was briefly discussed regarding overall satisfaction in direct response to question 7 on page 30. In the broader scope of the entire data set, the notion of participants who wanted more of a challenge presented itself in two subgroups: those who opted for increased quantity and those who wanted more time. This first cohort of participants who wanted to increase the challenge intensity was coincidentally on two separate C&T rafting sessions:

> *An area with more rapids. (C&T Rafting, 23/11/2011, survey no. 3)*

> *Maybe we could have more rapids. (C&T Rafting, 23/11/2011, survey no.4)*

> *Needs bigger rappids [sic.] (C&T Rafting, 29/08/2012, survey no.5)*

At the same time, rafting was not the only activity deemed lacking in challenge. In one C&T Abseiling session two separate participants astutely commented on this desire:

> *More challenging. (C&T Abseiling, 29/02/2012, survey no.2)*
>
> *Higher cliffs. (C&T Abseiling, 29/02/2012, survey no. 4)*

Juxtaposed with a quantified large challenge through 'more rapids' or 'higher cliffs' was the simply request to have more activity time:

> *More fishing time. (Fishing Holiday, 6-8/04/2009, survey no. 3)*
>
> *More surfing. (Autumn Holiday, 29/02- 2/03/2012, survey no.5)*
>
> *I would like to have longer rides. (C&T Cycling, 22/09/2011, survey no.5)*

To conclude this section, it is adequate to exemplify a participant who identified her/his resources that were utilized at overcoming ODI's challenges were transferable in addressing her/his challenges in Melbourne:

> *Feel much more ready to face the challenges in Melbourne. (Mt. Beauty, 12016/10/2009, survey no. 3)*

6.5 Participants' self-reflection into their own health

Participants commented on how ODI was a critical component in their pursuit of mental health. The aspects of how ODI contributed to mental health have been discussed in previous sections regarding presence in nature, social component and the sense of having achieved the seemingly unachievable. Underlying all these factors was how participants holistically addressed ODI as an integral piece of their recovery, whether holistically as an organization providing essential services or program specific.

The healing process from illness to health is not simplistic as one participant conveyed her/his own healing:

> *This camp was another step on my journey of recovery. I am on a long journey from illness into health and this camp will be another milestone in social awareness! I had quiet periods which I don't feel comfortable... I was glad other participants were friendly*

with me and helped support me. My main task was to get on top of any feelings of unsafety [sic.] and the camp helped with that. (Wilson's Promontory, 12-16/12/2011, survey no. 5)

Other participants directly commented how ODI improved their mental health:

ODI activities are excellent and have a positive impact on my mental illness. (Rafting Camp, 5-9/09/2011, survey no.4)

It has improved my mental state. (Winter Alpine Camp, 23-27/07/2012, survey no. 8)

In striving towards and maintaining good health participants commented on medication consumption. One treated her/his pharmaceutical regiment with disdain:

Eating drugs etc so feel shit. (Spring Gardening Sequential, 12-16/11/2012, survey no.7)

While another was more hopeful with a goal of tapering off her/his medication as this goal coincided with ODI involvement:

Helping me with my overall goal of coming off my medication by Christmas this year. (Alpine Adventure, 20-24/08/2012, survey no.1)

One participant linked ODI participation to wanting a decrease in medication:

I told my doctor that ODI is the only meds I want. (Spring Gardening Sequential, 12-16/11/2012, survey no.15)

This same participant laminated on how her/his involvement with ODI positively impacted her/him:

The services that ODI provide have changed my life. (Spring Gardening Sequential, 12-16/11/2012, survey no.15)

Another participant in the Spring Gardening Program of 2011 narrated how her/his mood usually fluctuates through the day, regarding medication then specified how s/he felt different during this

particular trip:

> *Sometimes I feel quite unwell & I reach for my medication at the end of the day. There are other times when I feel good & have been active that I have a moment when I realise that I had forgotten that I need medication at all. I haven't forgotten to take it, but it comes as a surprise to me that I need medication at all. This trip contained several of these moments. (Spring Gardening Sequential, 7-11/11/2011, survey no. 6)*

As stated in the Introduction, ODI does not endorse itself as providing psychiatric treatment or as a medication replacement. However, the opportunity to participate in ODI activities, offered individuals the ability to accept themselves as who they were:

> *I am a complete person who needs help with brain chemistry. (Grampians Camp, 1-5/03/2010, survey no.5)*

Self-acceptance emerged as another aspect of how participants directly confronted their mental illness:

> *I'm always learning new ways to accept myself & this gives me pleasure at the conclusion of any program. (Warburton Rail Trail, 19-21/09/2011, survey no. 3)*

Specifically referring to coping mechanisms, another participant commented:

> *I have learnt more about my strengths with coping skills with my mental illness and this has given me more confidence. Thank you. (Intro to Bush Survival, 20-22/04/2010, survey no.6)*

Evidence was also presented that group dynamics on ODI excursions played a role in having participants came to terms with their illness:

> *I feel akin to others suffering with a mental illness. (Winter Holiday NP, 12-14/07/2011, survey no.5)*

Group camaraderie and stigma reduction was further hinted at with this comment:

> *Great sharing experience with many in similar circumstances. (Postcards from the Great Ocean Road, 6-10/08/2012, survey no.1)*

Regardless of what participants derived from the ODI excursions, there was unanimous agreement that ODI was (and likely still is) an essential service:

> *The services of ODI are uniquely comprehensive for the huge scope of mental illness & mental wellness! (Warburton Rail Trail, 19-21/09/2011, survey no.3)*

Another participant described ODI as an agent of change in her/his life:

> *Great service which will enable my life to get back on track. (Alpine Adventure, 23-27/07/2012, survey no.1)*

For another participant, s/he felt in better spirits because ODI provided her/him with routine and structure:

> *This program helped with my goals, including waking up early (before 10 am), brush my teeth, do some physical activity each day. I am happy. :) (Spring Gardening Sequential, 7-11/11/2011, survey no. 6)*

One participant simply stated being grateful for the ODI experience while at the same time advocating for other individuals to participate:

> *Great service, really beneficial & enjoyable & necessary for people with mental illness issues. (Grampians Songs & Stories, 30/11-4/12/2009, survey no.4)*

At the same time, other participants stressed that ODI offered an experience complimentary to other forms of therapy, despite not directly mentioning what these concurrent forms were:

> *Excellent really worked in well with current therapy. (Learn to Sail, 10-14/12/2012, survey no.6)*

> *Very important aspect to assist with mental health. (Winter Alpine Camp, 1-5/08/2011, survey no.3)*

One participant even directly mentioned how ODI has been a consistent and positive presence in her/his life:

> *Been fantastic to me over the years- an integral part of my recovery. (Wilsons Prom Female Only Came, 15-19/11/2010, survey no.6)*

While the majority of participants are very grateful and appreciative towards ODI with optimistic overtones for the future, some participants were just beginning their process of recovery, as evidenced by this one who openly admitted that at the beginning of the program:

> *I have had chronic well being problems. (Mt. Beauty, 12-16/10/2009, survey no. 6)*

Subsequently this participant wrote in the next question in response to feeling good at the program's end:

> *To restore my well being will take a long time. (Mt. Beauty, 12-16/10/2009, survey no. 6)*

What was beneficial to the participant was that s/he realized that her/his recovery was not going to happen on a sequential day trip to Mount Beauty but will need to occur over a 'long time', however s/he defined that.

7.0 Discussion

To adequately summarize all the aspects touched upon in this thesis of ODI's impact on its participants:

> *I enjoyed the time out of Melbourne, the country environment & the opportunity to be able to also participate in an enjoyable challenging activity, over a course of time that provided for one to not only be expected to, but to "fine" tune ones skills, knowledge & confidence (hence level of enjoyment) in such activity. (X Country Ski Camp, 27-31/07/2009, survey no. 8)*

The activities provided as part of ODI's services reflect an electric approach incorporating elements from various disciplines and therapies, such as adventure therapy, strengths based-person centred therapy, outdoor education, Tai Chi, as well as many others (see Appendix 2). Despite ODI's mandate being the provision of recreation in the outdoors, it is evident they

provide a diverse array of programs and activities that cannot be solely linked to one type of theory, for example, adventure therapy. It has been acknowledged that none of ODI's utilized approaches are accredited (see Appendix 2), an issue that the literature has highlighted.

There is a current debate about whether outdoor activities achieve therapeutic benefits without linking them to structured psychotherapeutic interventions (Richards et al. 2011). Concern is also raised about whether these outdoor activities should be standardized regarding staff accreditation and safety standards (Berman & Davis-Berman 2001). However, the process of such accreditation is difficult because of differing cultural contexts and perceptions, and diverse understandings of which activities or elements are therapeutic (Newes 2001). It is evident in all ODI programs scrutinized at least one participant in the group did perceive a therapeutic value to the activity. The demand to standardize therapies, whether it is adventure recreation or gardening as complementary treatments for mental illness, becomes less pertinent in the context of community services applying these therapies when positive outcomes are evident. ODI is already utilizing evidence-based practice by attempting to engage individuals with the natural environment in efforts to improve general mental health, which has been an extensively researched health link since Wilson's biophila hypothesis in 1984 (Frumkin 2001; Sahlin et al. 2012; Söderback et al. 2004; Wilson et al. 2008)

ODI is also ethical in its delivery of its outdoor activities because it establishes a high safety standard. Safety is especially important with regard to wilderness programs. ODI does practice risk minimization through the keeping the participant to staff ratio low, as well as providing staff with training in Wilderness First Aid, and Certificate IV Mental Health (see Appendix 2). However, an exact participant to staff ratio is not specified, but is expected to differ according to the difficulty of the activity. It is unknown if raising the education standard for potential ODI employees would be more beneficial. It must be reiterated that the principle of ODI is to provide recreation not case management or traditional forms of therapy (see Appendix 2). According this may serve as a reason why the minimum educational requirement for staff is the bachelor's level, opposed to the master's or higher.

Several peer-reviewed articles, questioning how to legitimize outdoor activities as therapeutic, called for more research to be done to provide a baseline for evidence-based practice (Berman & Davis-Berman 2001; Harper 2010; Newes 2001). However, evidence-based practice is relative to

the implemented theory with the proposed target group. Although youth-at-risk and adults experiencing a mental illness do share overlapping characteristics, they remain very different groups based on age and life circumstances. Critical issues could include an assessment of whether or not these individuals are simultaneously accessing community outreach services by NGOs, as well as governmental mental health services. .

7.1 Limitations of the existing data set

The data set in its entirety, including 240 surveys, was too vast to thoroughly analyze within the given time constraints. However, notwithstanding that limitation, generic limitations of the data are presented below to showcase how data collection can be improved in the future.

There are several limitations of the data, which are highlighted to potentially improve future versions of ODI's questionnaire. The most obvious shortfall of the current questionnaire is the omission of demographic data. Currently, because no data has been collected on demographics, such as age, gender and place of residence, all that can be ascertained about the participants is that they met the basic requirements, which were having a mentally illness and being over the age of 18 (see Appendix 2).

Beyond demographic data, another strategic piece of information missing from the data is was participation frequency. Presence of such data would enable an identification of first-time participants. It is possible that participants who never had previous experience with ODI perceived the program slightly differently than those who were previous program participants, but the lack of this element within the data made this impossible to ascertain.

Regarding the intricacies of specific survey questions, many participants appeared to have interpreted the quantitative scale falsely in question 5 (see Appendix 5), regarding program improvement. The usual trend evident in the data was that participants circled a 4 or 5, implying that it could be improved (without leaving comments as to how), while at the same time being very agreeable as to how the program was run, and feeling supported by staff (questions 3 and 4 respectively). While it is possible that, in some cases, participants did feel that the program/s could be improved, despite also feeling highly satisfied and well supported, it was more feasible that this was an inadvertent response. The other survey variable that indicated interpretative differences by participants was question 7, asking if participants felt good at the start of this

program. The qualitative remarks written in response to this question hinted at a divergence between those who answered how they felt directly preceding the activity and those who relayed their emotional status in the days before the scheduled activity; greater question specificity could enhance the clarity of responses and comparability. The subsequent section discusses how recommendations on how these pitfalls can be avoided in future data collection.

Lastly, individual interpretation of the quantitative scale could vary between respondents. A participant could be very agreeable with the program, responding with many 5s, while fellow participants could be giving the same program a lower rating. It cannot be overlooked how an individual's demographics and past experiences affect program perception.

7.2 Recommendations

Recording demographic information as simple as participants' age, gender, and place of residence would benefit ODI immensely, as target groups can be constructed for comparative analysis. Thus, upon evaluating and comparing programs, justification can be specific to the opinions of specific target groups, rather than everybody. Also, recording this information may avoid double-counting individuals who participant in multiple programs.

To improve the reliability of participant responses, the position of question 5 could be changed from the mid-section to either the opening or concluding sections. Also, the wording of the question could be changed. For example, the question could be negated to align more with the presented scale.

It would be extremely beneficial to have ODI staff review the survey with participants prior to dispersing the survey. This may be useful for participants in interpreting the Likert scale, and subsequently responding in a method that is easily quantifiable for later research. Of course, ratings will remain subjective but perhaps fewer questions will be left blank and more questions answered appropriately.

With specific regard to this thesis, a major limitation was that the author was not affiliated with ODI. Although the Manager at Partnerships and Development did answer questions regarding ODI's structure and policies, some factors were assumed. For example, the survey response rate

equaling the number of participants in a program; it is feasible that participants may decline to fill out a survey, as it assumed to be optional.

Overall, only a margin of programs was analyzed from what was available. These programs were chosen for their similar structures pertaining to time and/or outdoor activities. Given more time, it may have been feasible to construct a rubric, in conjunction with the ODI liaison, to classify and sort each program.

Future areas of research, specific to ODI, could focus on retrospective longitudinal study designs, assessing whether an activity had an impact on the individual after a certain number of months or years. For example, assessing if previous participants were able to successfully integrate skills learned from ODI's outdoor activities into their everyday life. Of course if such a study were to be initiated it would ideally be qualitative with a focus on conducting one to one interviews or facilitating groups, which is costlier than simply analyzing post-program surveys, as was the case with this analysis. The benefit to conducting this longitudinal study would be to develop themes from participant's narratives as they take the time to reflect how ODI's activities have had an impact thereby creating a richer data base.

8.0 Conclusion

Nature will continue to be therapeutic source for all individuals regardless of experiencing a mental illness or not. The links between participating in outdoor activities and overall mental health have been well-researched, and is an area most likely to continue with research further investigating how these things are interconnected.

Despite theorists wanting to standardize and unify the definition of outdoor activities, and staff accreditation with implemented safety standards, when used as a therapeutic intervention, it remains that NGOs offering these programs are obtaining positive outcomes from the participant's perspective. ODI is one such NGO. From the analyzed ODI data, which is just a fraction of ODI's entire data set, it is evident that participants engaged in meaningful activities provided through ODI's service. Because ODI has been running for 26 years it would be interesting to conduct a longitudinal study investigating whether past participants are as grateful to ODI and their services as current participants are.

9.0 Appendices

Appendix 1: Meng, N, 2013, pers. comm., 25 March

Hi Mardie and Sakae

The breakdown of diagnosis of 222 of our current participants is as follows:

Diagnosis	Number of Participants	%
Schizophrenia	104	46.85
Bipolar Disorder	28	12.61
Depression	27	12.16
Anxiety	23	10.36
Personality Disorder	9	4.05
Post Natal	1	0.45
Schizo-affective	16	7.21
Other Psychiatric Diagnosis	8	3.60
Not Known	6	2.70
TOTAL PARTICIPANTS	**222**	100.00

Please note that many of these individuals will have more than one condition but we have only recorded the most severe. I would also like to make the comment that the classification of mental illness is not firmly grounded according to the rules of Systematics, eg an individual diagnosed with Schizophrenia may also have a history of depression, PTSD, anxiety, mood changes, etc,

With best wishes

Meng Ng, PhD
Manager Partnerships and Development

Appendix 2: Meng, N, 2013, pers. comm., 4 April

From: Meng Ng
Sent: Thursday, 4 April 2013
To: Sakae Alford
Cc: Mardie Townsend
Subject: Sakae's Questions for Meng regarding Outdoors Inc.

Hi Sakae

There may not be answers to all your questions but shall endeavour to do so! My response is in blue. Have attached two papers for your reading list. They may provide some background for the work at Out Doors. Do email me if you need more information. Good luck with your work.

With best wishes

meng

From: Sakae Alford
Sent: Thursday, 4 April 2013
To: Meng Ng
Cc: Mardie Townsend
Subject: Sakae's Questions for Meng regarding Outdoors Inc.

Hi Meng.

I've been meaning to e-mail for the last couple of weeks; instead have been quietly stockpiling my questions. This past week I've been reviewing theories revolving around adventure therapy. But let me start off really basic.

The major question is: what is the politically correct term for referring to those who have a psychiatric disability? Is mentally-ill ok to use? Yes, I understand that the programs also are directed to caregivers, as well. But, correct me if I'm wrong, the majority of participants do have a mental health issues/problems? It's really hard trying to politically correct and not read as patronizing.

Use the term "Mental Illness" or "mentally ill". You have raised a vexed issue here. Mental illness is not well understood even by psychiatrist who profess to be experts. There is a chasm between the social and biomedical perspectives on matters like causation or treatment. Regardless of this, there is disability which arises from behaviour of affected individuals, social response/stigmatisation and pharmaceutical treatment.

We support caregivers but in an indirect manner by providing them with respite when we take their adult children away on programs.

My personal perspective is informed by working closely with many of these folks for more than a decade. The common thread of their disclosure to me is one of "adverse childhood experiences": trauma arising from physical, emotional, verbal, psychological or sexual abuse, the most benign being

Appendix 2 con't.

neglect. I spoke with John Read of the Psychology Department at Uni of Auckland at a conference in 2005. His work confirmed my understanding of these conditions. (Read, J., Mosher, L.R. & Bentall, R.P. (2004). Models of Madness, Routledge, UK ISBN 1-58391-905-8 (hbk)).

The second question is: is there a basic theoretical framework guiding the programs? For example, self-empowerment? Or are these programs based on a conglomeration of tools and techniques that are assembled from various disciplines of education, psychology, counseling, etc? It's really hard reading about adventure therapy since as it stands it's not exactly a distinctly certifiable profession, but from my understanding, is a type of therapy, and therapeutic tools employed by other professions.

We apply an eclectic approach to the services we provide. This may incorporate elements from bush adventure therapy, bush art, strengths based –person centred, outdoor education, Tai Chi, etc, None of these are certifiable. We do not provide case management, counselling nor do we train our staff in those areas.

Leading to the next question: are the facilitators who run these programs trained? Certified? In both the skill of leading adventure and therapy. Furthermore, the ratio between facilitator and participants deliberately kept low (depending on the program) to facilitate the therapeutic processes?

Minimum standards for employment for program staff is a B. Outdoor Ed, Community Development or related field with at least 2 certificates in rock climbing/abseiling, white water rafting, canoeing, bushwalking, caving, surfing, snorkelling or snow skiing and 5 years' relevant experience in the field. Ratio of staff to participants is kept low for risk minimisation. Staff are also provided training in the Cert IV Mental Health and Wilderness First Aid.

Appendix 3: Meng, N, 2013, pers. comm., 25 September

From: Meng, Ng
Sent: Wednesday, 25 September 2013
To: Sakae Alford
Subject: Questions RE: ODI

Hi Sakae

Good luck with writing up!

The policy of OD is that there is no smoking within vehicles or the offices. This is consistent with current legislation. The issue with participants is that many are heavy smokers and demand frequent (say once every 30 minutes) stops on long trips or will smoke within close proximity of others. As you can imagine, this can cause angst among the non-smokers.

The intake procedure is multi-stage. It begins with intake and assessment to gauge suitability of an individual, followed by medical and support checks before a participant is considered acceptable to go on an activity. As you can imagine, complications can occur after this step. This can arise in several ways. Participants are unwell anyway. Their condition can deteriorate or worse can become unwell. An individual may require “time out” or to be by themselves. However, this has become rarer since we introduced more stringent checks.

Longer trips are preceded by a planning meeting to brief participants and to plan the activity. This includes planning menu of meals, personal gear required, gear supplied, hazards of an activity, risk mitigation, etc, Some participants may not be function well enough to remember details like footwear, etc, It also depends on the medication they are prescribed. Some simply prevent normal brain functions like recall from memory or processing of events, etc,

With our current load of participants, we are conscious of ensuring equity for access to our programs. This means that we try to allow everyone at least one activity per half year. Naturally, some will get less as they are unwell whilst others may get more.

Our recruitment criteria are:
Individual has a mental illness which may be depression, OCD, etc,
They are aged $\geq$16 years, with no upper limit.
Ability & willingness to engage with OD and sufficient determination to do so.

I hope that this information is useful. Let me know if I can be of help.

With best wishes

Meng Ng, PhD
Manager Partnerships and Development

Appendix 4: ODI survey sample

Participant Questionnaire

Thank you for doing this questionnaire. Your feedback will help Out Doors improve our programs. Please circle the number on the scale which best expresses your feeling. Please expand on your rating with comments and specific examples.

1. I participated in (program) _____on (dates)_____

2. This program met my personal goals DISAGREE 1 2 3 4 5 AGREE

Comments _____

_____

3. I was happy with how it was run DISAGREE 1 2 3 4 5 AGREE

Comments_____

_____

4. The venue of the activity was appropriate DISAGREE 1 2 3 4 5 AGREE

Comments _____

5. Out Doors workers were supportive of me DISAGREE 1 2 3 4 5 AGREE

Comments _____

_____

6. This program can be improved DISAGREE 1 2 3 4 5 AGREE

Comments _____

_____

7. I am satisfied with the overall services of Out Doors DISAGREE 1 2 3 4 5 AGREE

Comments _____

8. I felt good at the start of this program DISAGREE 1 2 3 4 5 AGREE

Comments _____

9. I felt good at the end of this program DISAGREE 1 2 3 4 5 AGREE

Comments_____

You may write more comments on the back of this page.

Appendix 5: Categorized total number of Likert scale responses

C&T Series (Total number of respondents: 101)

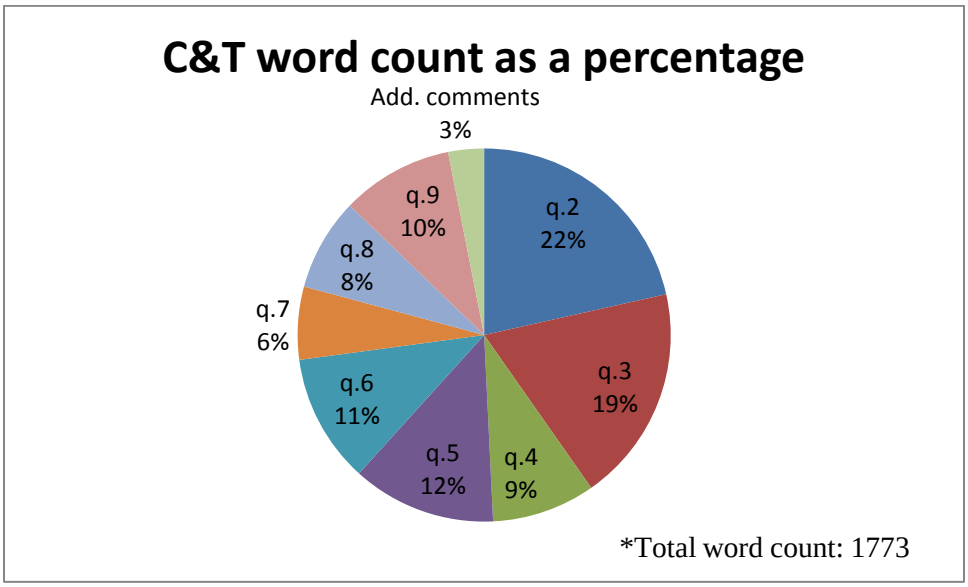
Question #	Agree	Neutral	Disagree	Blank	Total responses	Proportion (of Agreeability)
2	88	7	3	3	98	0.9
3	96	4	1	0	101	0.95
4	91	6	1	3	98	0.93
5	95	3	1	2	99	0.96
6	33	15	46	7	94	0.35
7	94	4	2	1	100	0.94
8	74	16	9	2	99	0.75
9	86	9	4	2	99	0.87

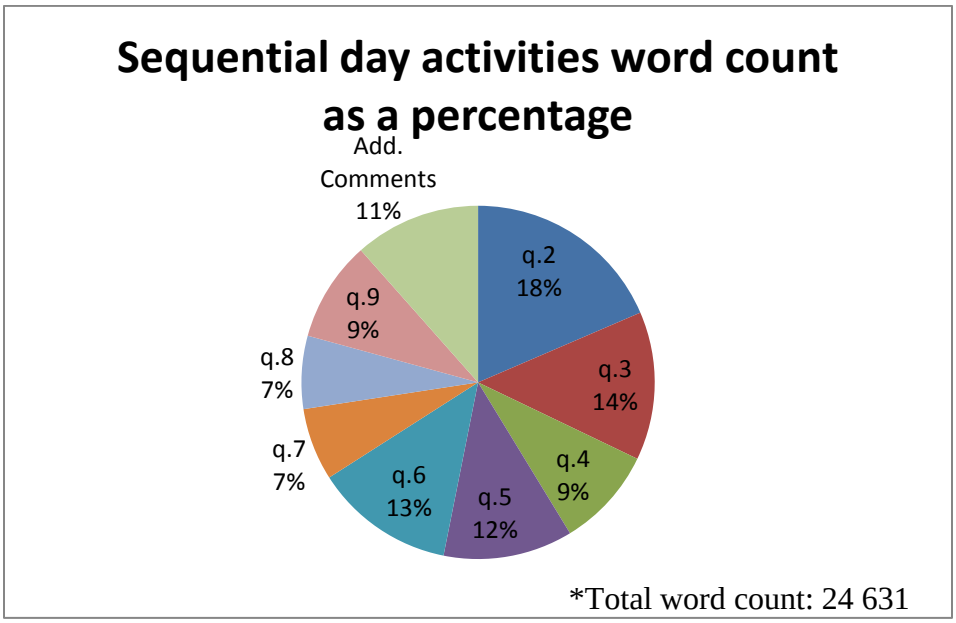
Sequential day trips: (Total number of respondents: 730)

Question #	Agree	Neutral	Disagree	Blank	Total responses	Proportion (of Agreeability)
2	634	57	8	31	699	0.9
3	695	17	12	6	724	0.96
4	691	24	7	8	722	0.96
5	680	33	7	10	720	0.94
6	165	133	378	54	676	0.24
7	703	15	6	6	724	0.97
8	424	146	149	11	719	0.59
9	649	41	24	16	714	0.91

*Note: blank responses were removed when calculating overall proportionality.

Appendix 6: Percentage of total word count divided by question number.





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