Domain Control as a Predictor of Life Satisfaction within

People with and without Physical Disabilities

by

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ABSTRACT

Life satisfaction in people with physical disabilities is on average lower than people without disabilities. This reduction in life satisfaction may be due to a reduction in domain control. This study examines how domain control predicts life satisfaction when added to a model of other salient life satisfaction predictors. Using email survey methodology, five separate scales where used on two separate populations; people with ($n= 44$) and without ($n= 43$) a physical disability to determine each groups life satisfaction. It was found that when domain control is added to the bottom-up theory of life satisfaction, the independent direct relationships of domain control, domain importance, positive affect, and negative affect are eliminated from a stepwise multiple regression equation with domain satisfaction being the only significant predictor ($\beta = 4.38, p< .001$ for people with a physical disabilities and $\beta = 5.48, p< .001$ for people without a physical disability) of life satisfaction. The study results demonstrate that life satisfaction is predicted the same way for people with and without disabilities.

TABLE OF CONTENTS

LIST OF TABLES

Introduction

There are many different ways a person can come to have a physical disability. A person can be born with a physically disabling conduction like spina bifida, be seriously injured in an automobile accident or in combat, or just by the effects of aging. There are numerous studies that have found that people with physical disabilities have lower levels of life satisfaction than people without disabilities (Brief, Butcher, George, & Link, 1993; Chase, Cornille, & English, 2000; Decker & Schulz, 1985; Neugarten, Havighurst, & Tobin, 1961; Nosek, Fuhrer, & Potter, 1995).

It is important to note that none of these studies have compared people with physical disabilities with a control group. These studies have only examined people with physical disabilities and compared them to cited life satisfaction scores from other research. Even though these studies have found that life satisfaction is lower in people with physical disabilities, they fall short of explaining why. In addition to these findings, several researchers have indicated that people with physical disabilities have a reduction in life satisfaction due to the decline in the amount of control they have over their life domains (Boschen, 1996; Chase et al. 2000; Salkever, 2000; Gooden-Ledbetter et al. 2007). Overall, these studies demonstrate that control over one's life domains has a positive relationship with life satisfaction. However, one can make the argument that there are fundamental problems with these studies.

The argument can be made that these studies have not examined control with other variables which have been shown to influence life satisfaction;

specifically positive affect, negative affect, domain satisfaction, and domain importance. There are studies that have used these other salient predictors of life satisfaction. Studies which have used the Disability Centrality Model are the only studies that use domain control with other life satisfaction variables. These studies examine domain satisfaction and domain importance but they exclude the positive affect and negative affect variables from their analysis. Other studies have only examined how specific life domains and one's control over those life domains affect life satisfaction.

Another flaw with past studies is the lack of a control group to compare the data. Research has supported the idea that control over your life does influence life satisfaction, but as of yet there is no baseline to compare their data. Are the past studies brining about a self-fulfilling prophecy by only examining the loss of control within one population? It is difficult to tell if domain control does actually have an effect on life satisfaction. The argument can be made that if domain control does truly influence life satisfaction in people with physical disabilities, it will also effect life satisfaction in people without physical disabilities.

Research has empirically and theoretically demonstrated that domain satisfaction and domain importance influence life satisfaction (Bishop, 2005; Frisch, 1999; Pavot & Diener, 1993). In this relationship, life satisfaction is predicted by one's satisfaction of important life domains. Although, satisfaction of salient life domains is not enough to determine life satisfaction, one's emotional response at the time of the domain will have an effect on life satisfaction. A person's emotional response can determine if the life domain is

viewed as satisfactory. In order to make any global determination of life satisfaction, an affective dimension is needed. This affective dimension is referred to as an emotional response to a situation, where the response of a life domain can be positive (positive affect) or negative (negative affect).

In order to better understand the effects of domain control on life satisfaction, domain control should be studied in a model with other salient predictors of life satisfaction; namely domain satisfaction, domain importance, positive affect and negative affect. Also to fill a void in research, domain control should be studied against two populations; people with and without physical disabilities.

Problem of the Study

The problem of this study is to analyze the effect of domain control on life satisfaction when tested in a model with positive affect, negative affect, domain satisfaction, and domain importance among people with and without physical disabilities.

Purpose of the Study

The purpose of this study is to expand our understanding of salient predictors of life satisfaction. By better understanding life satisfaction predictors within two different populations (i.e., people with and without physical disabilities) our comprehension of how life satisfaction is evaluated will be enhanced. If it is found that domain control does effect life satisfaction in people with physical disabilities and not in people without physical disabilities, it will provide a reason for why people with physical disabilities have a lower life

3

satisfaction. As a result of this study, leisure professionals and researchers will be able to better pinpoint why life satisfaction for people with physical disabilities has decreased and create better programs that will increase their life satisfaction.

Delimitations

The scope of the study was delimited to people with and without physical disabilities aged 18 and older that does not have a mental impairment and live in a major Southwest city in the United States.

Limitations

Since the sampling frame was not available it is difficult to know if the sample is representative of the population of people with physical disabilities. Purposive sampling was used, which limited generalizations of study results to the study population.

Assumptions

The first assumption of this study is that people with physical disabilities have a reduction in domain control; this reduction in domain control will cause a reduction in life satisfaction. The second assumption is that domain control is only reduced in people with physical disabilities causing a reduction in life satisfaction.

Hypotheses

H1: Domain Satisfaction will have a positive direct effect on Life Satisfaction

H2: Domain Importance will have a positive direct effect on Life Satisfaction

H3: Positive Affect will have a positive direct effect on Life Satisfaction

H4: Negative Affect will have a negative direct effect on Life Satisfaction

H5: Domain Control will have a positive direct effect on Life Satisfaction

H6: There is a difference in models between people with and without disabilities

Definition of Terms

1. Life Satisfaction: A global judgment of a person's life (Pavot & Diener, 1993).

2. Affect: An emotion or subjectively experienced feeling (Tomkins, 1962).

3. Domain Importance: Inner-person differences in perceived importance of life domains (Campbell, Converse, & Rogers, 1976).

4. Domain Satisfaction: Satisfaction with specific domains of one's life (Sirgy et al., 2006).

5. Domain Control: A person's self-assessment of the ability to exert control over his or her life domains (Bishop, Frain, & Tschopp, 2008).

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Literature Review

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The problem of this study is to analyze the effect of domain control on life satisfaction when tested in a model with positive affect, negative affect, domain satisfaction, and domain importance among people with and without physical disabilities. A review of quality of life and life satisfaction literature was reviewed from psychological, medical, economic, rehabilitation, and sociological journals. Additionally, the literature review focused on the following areas of interest: (1) Life Satisfaction, (2) Top-down versus Bottom-up theories, (3) Affect, (4) The

Relationship of Affect on Life Satisfaction, (5) Life Domains, (6) Domain

Satisfaction, (7) Domain Importance, (8) Domain Control, (9) People with

Physical Disabilities, and (10) Literature Review Summary.

Life Satisfaction

Subjective well-being has two different aspects, the cognitive dimension

and the affective dimension. The cognitive components of subjective well-being

are an overall evaluative belief of one's own life satisfaction (Schimmack, 2008).

The cognitive components are assessed by the relationship between domain

satisfaction and life satisfaction through the use of life domains. These domains

are chosen by each individual and that individual forms an opinion about their

satisfaction of each domain based on the domain's importance. The affective

dimension is the positive and negative response to one's emotions (Moore, 2007).

These subjective evaluations of one's current experiences are said to be rated by

the individual as positive or negative. The affective components are responses to

external factors and only last a short time; whereas the life satisfaction construct

responses are able to reveal one's long-term perspective (Pavot & Diener, 1993).

How the affective and cognitive dimensions interact with each other depends on

the theory used in the study.

Top-Down versus Bottom-Up Theories

There are two competing theories explaining the relationship of life

satisfaction and other important predictions; these views are the top-down and the

bottom-up theories. In the top-down theory life satisfaction is an independent

variable. Nothing can change or predict life satisfaction, it is constant. Top-down

theory states that life satisfaction determines the individual's satisfaction with important life domains (Lance, Lautenschlage, Sloan, & Varca, 1989).

In contrast, bottom-up theory suggests that an individual's perception of satisfaction of important life domains and their emotional response to life domains determines their life satisfaction (Lance et al., 1989). In the bottom-up theory, life satisfaction is a dependent variable. There are several predictors of life satisfaction, and it mostly constant throughout life, but can fluctuate at times (Brief et al., 1993). According to bottom-up theory, all predictor variables of life satisfaction will have an effect on life satisfaction. By using the bottom-up theory, it allows for a central role of one's control over the important life domains as a predictor of life satisfaction. It can be stated that more control over one's life domains predicts life satisfaction. This takes the position that one's life satisfaction can be assessed from the amount of control individual's posses in their life domains. In summary, life satisfaction is determined by the sum of satisfaction, importance, and control of life domains, and with the presence of positive affect and the absence of negative affect. While there is empirical support for both theories, bottom-up will be used in this study as one purpose of this study is to predict changes in life satisfaction among people with and without physical disabilities.

Affect

In the structure of subjective well-being, affect is the affective dimension and reveals the amount of positive and negative emotions one is experiencing (Schimmack, 2008). The relationship between these emotional experiences are

said to be causal independence (Schimmack, 2008). Making the claim that positive affect is caused by different emotional responses than negative affect. These experiences have no tendency to be of any particular relation to one another (Bradburn, 1969). This means that each experience of positive and negative emotions is completely independent of each other. One of the arguments made for the interdependence of positive affect and negative affect is the negative correlation the emotions elicited during measurement (Schimmack & Reisenzein, 2002). When examining positive affect responses like happiness, excited, and satisfied are associated with positive emotions, negative affect responses like sadness, depressed, and hostile are associated with negative emotions. These two variables that have no common emotional responses should have a negative correlation. This was even verified by Bradburn (1969) when he demonstrated that positive affect predictors were different from negative affect predictors.

The Relationship of Affect on Life Satisfaction

One's emotional response can determine satisfaction of life domains. If a person is constrained from going to the opera and that person is a patron of the arts, it can be inferred that that person will experience a negative emotional response (negative affect). This will inevitably cause that person to assess their life satisfaction lower. On the other hand, if a person is going on a much needed vacation to a dream destination, it can also be inferred that that person will experience a positive emotional response. Schwartz & Strack (1999) made the argument that mood can strongly influence a person's life satisfaction. Schwartz & Strack (1991) concluded that individuals use their current mood as a prudent

indicator of their well-being; unless the informational value of their emotional state is questioned. This affect should be stronger for more global reports of life satisfaction. Bradburn (1969) stated that any comprehensive model must consider the presence of positive affect as well as the absence of negative affect. Facilitating the concept that life satisfaction occurs when one experiences pleasant emotions while having low levels of negative emotions (Busseri, Sadava, & DeCourville, 2007). That is, positive affect will have a positive impact on one's life satisfaction and negative affect will have a negative impact on one's life satisfaction. This was supported by Wismeijer, Van Assen, Marcel, Sijtsma, & Vingerhoets (2009), using a regression analysis to determine the effect of positive affect and negative affect on life satisfaction, Wismeijer et al. found that negative affect had a negative correlation with life satisfaction $r = -.24, p < .001$ (n=588); and positive affect had a positive correlation with life satisfaction $r = .21, p < .001$ (n=588). In order to account for all the variance in affect, both positive affect and negative affect must be separate components (Busseri et al., 2007; Pavot & Diener, 1993).

Life Domains

Life domain is a term that encompasses an aspect of one's life. These aspects can be said to be one's family life, the place of one's employment, to the type of domicile one lives. The problem with life domains are that there are thousands of life domains that can be identified; making a robust questionnaire that utilize life domains impossible. In order to condense the amount of life domains to a manageable number and keep the domains reliable and valid, one

study asked respondents to indicate which domains are important to them (Abrams, 1973). The most important domains found by Abrams were health, productivity, material well-being, and intimacy. Both Flanagan (1978) and Krupinski (1980) also asked respondents to indicate which domains are important. Again the same four life domains of health, productivity, material well-being, and intimacy were found to be important, but another domain was also rated as important, emotional well-being. Two other domains were introduced by Cummins (1995) while researching for a "gold standard" in life satisfaction. The two domains introduced by Cummins are safety and place in community.

To encompass all the different aspects of life, seven key life domains are used; (1) material well-being, (2) health, (3) productivity, (4) intimacy, (5) safety, (6) place in community, and (7) emotional well-being (Cummins, 1996). Each domain is comprised of several terms that make up a domain. A domain can contain as little as six items or as many as twenty five items. Below the domains will be discussed, they are in no particular order and the items discussed are not comprehensive of the entire domain.

The material well being domain is the domain that consists of items that are owned or consumed by a person. These items include car, clothes, home, possessions, amount of pay, quality of meals, and living situation. The health domain is one's perception or feelings of physical health. Health includes health functioning, physical fitness, strength, and hygiene. The productivity domain consists of tasks one can achieve or complete. These tasks are gaining employment, completing school, activities available, work tasks, and house work.

10

The intimacy domain is the different types of relationships one can have. The types of relationships are sex, friends, spouse, family, and co-workers. The safety domain is one's perception of personal security. The safety domains consist of privacy, financial security, amount of crime, and how one can handle their own problems. The place in community domain is the area in which one is associated. This area is the country and city one lives, clubs belonged to, and social organizations. The seventh domain of emotional well-being is the activities one engages in that helps with one's psychological well-being. These activities are religion, leisure, relaxation, and amount of free time.

Cummins (1996) states that health, intimacy, emotional well-being, material well-being, and productivity are "regarded as very important aspects of their lives by a large majority of people" (p. 561). Specific to people with physical disabilities, studies have found that emotional well-being, health, and intimacy are key life domains (Boschen, 1996; Chase et al., 2000; Nosek et al., 1995). With a manageable amount of life domains, these seven domains are used to asses one's satisfaction and the importance of each domain.

Domain Satisfaction

A judgment made in relation to one's satisfaction with specific life domains is commonly referred to as domain satisfaction (Sirgy et al., 2006). If a life domain is important and participation is high, then one should be satisfied with that life domain. Sirgy et al. points out that life satisfaction at the theoretical and conceptual level should be assessed with specific domain satisfaction. This theoretical level cannot ignore domain satisfaction especially if the bottom-up

theory is used. This directionality of domain satisfaction to life satisfaction relationship must be positive in order to make a global determination. Wu, Chen, & Tsai (2009) supported the direct relationship between domain satisfaction and life satisfaction. Using partial least squares Wu et al. (2009) examined 557 Taiwanese undergraduate students and staff's domain satisfaction in living environment, learning atmosphere, social environment, transport, money, eating, health, sleep, leisure activities, energy, non-study performance, learning performance, social relationships, and social support. The study found that overall domain satisfaction had a strong positive relationship with life satisfaction $r = .60$ where all calculations were significant at the $p < .001$ level. Bishop (2005) found that domain satisfaction had a strong correlation $r = .727, p < .001$, with life satisfaction. Although domain satisfaction is important to understand one's global satisfaction with life, one must also take into consideration domain importance in life satisfaction prediction.

Domain Importance

The importance of life domains is a key element in life satisfaction. The direct relationship between domain importance and life satisfaction can be derived from the amount of involvement or level of attainment compared to others of a particular domain. The level of attainment can be illustrated with the health domain. If health is an important domain to someone and that person has a health condition that prevents them from obtaining the same level of health as others, that person will assess their life satisfaction lower than others who perceive health as important. Also, if one places a lot of importance on family life and they spend

a lot of quality time with their family then that individual will assess their life satisfaction higher. Hsieh (2003) showed that in order to make a model stronger, domain importance needs to be a weighted factor on life satisfaction; where the weighted factor is used to place important life domains in a hierarchy of importance. Chang-Ming Hsieh (2003) placed religion, friendship, family time, spare time, neighborhood, work, health, and financial situation into a hierarchy and found that domain importance and domain satisfaction accounted for 38% of the variance of life satisfaction, with overall domain importance having a moderate relationship with life satisfaction $r = .56$ (n=100).

Domain Control

Domain control is defined as a self- assessment of the capacity to exert control over one's own life (Bishop et al., 2008). When a person has a physical disability, one thing a person will struggle with is control of their life domains. As friends and family open doors, drive them around, and make every attempt to do things for them, control is diminished. Even though most people are doing this out of the kindness of their heart, what they do not realize is they are taking control away from that person. Gooden-Ledbetter et al. (2007) stated that control over one's own life is a significant factor in life satisfaction. Research has demonstrated that life satisfaction for people with physical disabilities is significantly affected by perceived control (Chase et al., 2000; Gooden-Ledbetter et al., 2007). With the increase in adaptive equipment, especially in the leisure field, a person with physical disabilities does not need as much assistance as they did in the past. With equipment to assist in everyday tasks such as taking care of

one's hygiene, household chores, to driving a person with physical disabilities can have an increase in perceived control. However, even with this adaptive equipment, the nature of having a physical disability can lead one with a sense of loss of control. Treatment schedules, functional limitations, depression, and the extra time it takes to do mundane tasks can all have an effect on a person's sense of control. To examine how control predicts a person's quality of life, Bishop (2005) created the Disability Centrality Model. In this model, domain control along with domain satisfaction has a direct effect on a person's quality of life. Bishop et al. (2008) stated that domain control is "conceptually similar to, and had sometimes been defined so as to, incorporate such related theoretical constructs as …perceived control, self-efficacy, and locus of control" (p. 47). Several other studies have investigated the construct of control in life satisfaction. Boschen (1996) examined how locus of control of spinal cord injured adults correlate to life satisfaction. Chase et al. (2000) studied how perceived control of specific life domains predicted life satisfaction. Gooden-Ledbetter et al. (2007) investigated self-efficacy as a predictor of life satisfaction within PPD.

In the Disability Centrality Model, Bishop demonstrated that the effect of domain control on quality of life has been significant at the $p < .01$ level. However, two of the three studies were conducted with a low number of respondents. Bishop was able to still find a significant correlation between domain control and quality of life $r = .678$, $p < .01$ (n=157). The other studies which also examined control and life satisfaction found a positive relationship. Boschen (1996) found that locus of control along with health, residential

14

satisfaction, and income correlated significantly to life satisfaction in a regression analysis $F(4,73) = 17.6, p < .01$, (n=82). Chase et al. (2000) found that perceived control was the single largest predictor of life satisfaction in a regression model with life domains $\beta = .26, t = 4.5. p < .01$, $r = .597, p < .01$ (n=158). Gooden-Ledbetter et al. (2007) examined 87 people with physical disabilities and found that self-efficacy accounted for 34% of the variance of life satisfaction.

People with Physical Disabilities

It is essential to have a working definition of disabilities to better understand the potential effects of domain control on life satisfaction. The American with Disabilities Act defines a disability as "a physical or mental impairment that substantially limits one or more major life activities". These impairments can have a temporary or life-long impact on one's life. This legal definition demonstrates that people with physical disabilities are impacted in a negative way by their disability. The limitation of major life activities can be assessed by the loss of control in life domains people with physical disabilities encounter in their daily lives. Physical disabilities affect all aspects of life. People with physical disabilities are not as active in their community, experience more constraints in meeting new people, and have more difficulty in finding transportation in rural areas of the country (Gooden-Ledbetter, Cole, Maher, & Condeluci, 2007), not to mention the medical treatment a person with physical disabilities may have to manage every day. Due to all the increased constrains that are encountered in life, people with physical disabilities often need personal assistance in order to compensate for the inability or reduced ability to complete

daily life tasks (Nosek, et al. 1995). This assistance is giving control away to another person or device in order to complete daily life tasks. If domain control is a predictor of life satisfaction, it would have a bigger impact on life satisfaction scores for people with physical disabilities rather than people without physical disabilities. One would expect domain control to be significant only in the people with physical disabilities group.

Literature Review Summary

In order to understand the true relationship domain control has in life satisfaction it needs to be studied with salient predictor variables like positive affect, negative affect, domain importance, and domain satisfaction; where life satisfaction is the dependant variable. This will follow the bottom-up theory and allow for the control of important life domains to play a central role in predicting life satisfaction. Through this approach this study will gain insight into the precise role domain control has on life satisfaction.

Methods

The problem of this study is to analyze the effect of domain control on life satisfaction when tested in a model with positive affect, negative affect, domain satisfaction, and domain importance. This section will identify the population analyzed, the instruments used, and procedure used to determine the role of domain control in life satisfaction.

Population Analyzed

This study analyzed two separate populations. The first population of the study is people with physical disabilities that have an impairment of their upper

and/or lower extremities and do not have a mental impairment (World Health Organization, 2001). In the people with physical disabilities sample, only respondents who reported mild to complete upper and/or lower extremity impairment and no impairment in their attention, memory, or higher-level mental functions will be analyzed. To assess extremity impairment, respondents will be asked if they have any impairment of their upper extremities and if they have any impairment of their lower extremities. To assess mental impairment, respondents will be asked if they have any impairments of attention, memory, emotional, or higher-level impairments. These components are all categories of overall mental impairment. In the World Health Organization (2001), attention impairment is the impairment of awareness, alertness, concentration, or sustaining attention; memory impairment is the impairment of short term or long term memory, dementia, or learning; emotional impairment is the feelings of depression, mania, or anxiety; and higher-level mental impairments is mental retardation, or impairment in cognitive flexibility, or problem solving. If a respondent who has an upper and/or lower extremity impairment and mild to moderate emotional impairment, there results will be analyzed. If severe to complete emotional impairment is checked, then their questionnaire will not be analyzed.

A control group was also be analyzed. The control group consisted of a convenient sample of respondents accessible to the researcher. These respondents did not have any type of disability. The control group will be used to compare the questions to the people with physical disabilities sample.

17

Instruments

Five separate scales were used to evaluate the different variables. Each scale has demonstrated to be reliable with high Cronbach's alpha scores, ranging from .78 to .90. The Comprehensive Quality of Life Scale (ComQoL) was used to analyze domain satisfaction and domain importance (Cummins, 1997). The International Positive and Negative Affect Scale short form (I-PANAS-SF) was used to analyze positive affect and negative affect (Thompson, 2007). The Satisfaction with Life Scale was used to analyze life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). The perceived behavioral control portion of the Theory of Planned Behavior was one of two ways to analyze domain control (Ajzen, 2002); the other came from Bishop's original analysis of domain control (Bishop, 2005).

Comprehensive quality of life scale.

To measure respondent's domain satisfaction and domain importance, the Comprehensive Quality of Life Scale – Adult (ComQoL) was used. The scale first asks the respondents about the seven life domains and the amount of participation they engage in each section. The life domains were the seven life domains that Cummins (1996) identified. The scale then asks respondents to rate the seven life domains for their importance and their perceived satisfaction. To rate the life domain's importance, each respondent is asked to rate each domain on a Likert scale; (1) *Not Important at all* to (5) *Could not be more important*. To rate the respondent's domain satisfaction, each respondent is asked to rate each life domain and how satisfied they were on the Delighted-Terrible Scale. Each

domain ranges from (1) *terrible* to (7) *delighted*. Cummins (1997) demonstrated

that the ComQoL has a Cronbach's alpha score of $\alpha = .81$ for domain

satisfaction. Butler & Ciarrochi (2007) demonstrated that the ComQoL has a

Cronbach's alpha score of $\alpha = .84$ for domain importance.

Positive and negative affect schedule.

To measure the respondent's emotional response the International Positive

and Negative Affect Schedule Short Form (I-PANAS-SF) was used. Each

respondent was asked to rate ten separate emotions. The emotions of upset,

hostile, ashamed, nervous, and afraid were used to examine negative affect

responses. The emotions of alert, inspired, determined, attentive, and active were

used to examine positive affect responses. Using a Likert scale each respondent

was asked to rate "to what extent they feel" an emotion, (1) *Never* to (5) *Always*.

Thompson (2007) demonstrated that the I-PANAS-SF has a Cronbach's alpha

score of $\alpha = .78$.

Satisfaction with life scale.

To measure the respondent's life satisfaction, the Satisfaction with Life

Scale (SWLS) was used. Each respondent was asked to what extend do they agree

or disagree, (1) *Strongly Disagree* to (7) *Strongly Agree*, with each of these five

statements; (1) in most ways my life is close to my ideal, (2) The conditions of

my life are excellent, (3) I am satisfied with my life, (4) So far I have gotten the

important things I want in life, and (5) If I could live my life over, I would change

almost nothing. Diener et al. (1985) demonstrated that the SWLS has a

Cronbach's alpha of $\alpha = .87$ with a test-retest coefficient alpha of $\alpha = .82$.

Domain control.

To measure a respondent's perceived control over life domains two
separate scales were used. The first was Bishop's domain control question "How
much control do you have over your [life domain]" was asked. Each domain
control question was asked in the similar context to the domain importance and
domain satisfaction scales used in the ComQoL in order to keep the domains
consistent. Each respondent was asked to rate each domain on a Likert scale; (1)
No Control to (5) *Complete Control*. The second method to measure domain
control was Ajzen (2002) perceived behavioral control section of Theory of
Planned Behavior. This method was also used to establish if the domain control
questions from Bishop (2005) are a good measure of control. Each respondent
was asked to rate seven statements from (1) Strongly Disagree to (7) Strongly
Agree to assess their perceived control. These statements were; (1) For me to
attend to my health needs are easy, (2) It is up to me to engage in my leisure
interests, (3) Whether or not I attend social gatherings are completely up to me,
(4) I am in control with how often I see my friends and family, (5) I am confident
that if I wanted to increase my education, I could, (6) I am capable of attending to
my personal finances, and (7) I am confident that I am safe at home. Ajzen (2002)
demonstrated that the perceived control has a Cronbach's alpha score has high
as $\alpha = .90$.

Procedures

To acquire respondents in the people with physical disabilities sample,
permission was granted from several non-profit organizations and a referral

20

agency that specialize in disability resources in a major Southwest city in the United States. Each agency was emailed a copy of the questionnaire, the study's pre-notice, notice 1, and notice 2. The directors of the agencies were asked to review the materials for approval to be sent to their clients. Each agency was asked to forward all the study related materials in order to keep responses and personal information confidential. Once the study design was approved the agencies were emailed a copy of the pre-notice. The pre-notice email was send by the agency explaining there will be a questionnaire that will be sent in two days. Two days after the pre-notice, the agency forwarded notice 1 which had a direct web-link to the questionnaire. The clients were asked to complete the questionnaire using www.surveymonkey.com. The web-link was attached with a cover letter explaining that the survey was completely voluntary and that responses would be kept confidential. Respondents were given two weeks to fill out the survey online. After the initial two weeks that agency sent notice 2 to the respondents. The respondents were given two more weeks to complete the questionnaire. A follow up email was sent to the agencies and respondents who completed the questionnaire thanking them for their participation.

To acquire respondents in the control sample, emails were sent to the researcher's friends, family, and co-workers. Each person was individually emailed the study's pre-notice, notice 1, and notice 2. The control sample emails followed the same timeline as the people with physical disabilities sample.

Analysis Of The Data

The problem of the study was to analyze the effect of domain control on life satisfaction when tested in a model with positive affect, negative affect, domain satisfaction, and domain importance. This section will identify the demographics, Analysis of Life Satisfaction, the relationship between the two domain control questions, the correlation between all variables, and the multiple regression procedures. All analyses were completed using SPSS 17.

Demographics

The population of prospective respondents for this study came from four non-profit organizations and a university disability resource center. The study consisted of two groups, a control sample and a people with physical disabilities sample. The people with physical disabilities sample consisted of individuals who were receiving services from these organizations from December 2009 to February 2010. The control sample consisted of individuals who responded on the questionnaire as having no disability. There were 14 respondents that were eliminated from the study. Those respondents that were eliminated from the study answered having an attention, memory, and/or higher-level mental functions. Each of the respondents was sent an email and asked to participate in this study by using www.surveymonkey.com. If the respondent did not respond within two weeks, another email was sent and asked to complete it within two weeks. The demographic information can be seen on Table 1.

Analysis of Life Satisfaction

To analysis the life satisfaction between the people with physical disabilities group and the control group, each respondent's life satisfaction questions were calculated. To calculate the life satisfaction score, each of the five SWLS questions was added together. The life satisfaction scores ranged from 7 to 35. Descriptive statistics were conducted to obtain the mean and the standard deviation of the two groups. See Table 2 for results. At first look, the people with physical disabilities had a 3 point difference in life satisfaction scores than the control group. One would expect a larger difference between the two groups given that numerous studies have found a significant difference in these two populations.

To test if there was a significant difference in the two life satisfaction scores an independent sample t-test was performed $(t = -2.2, p < .028)$. The t-test demonstrated that there was a statically significant difference between the two group's life satisfaction scores, confirming that people with physical disabilities in this study do have a lower life satisfaction than those who do not have a physical disability.

Domain Control Questions and Perceived Control Questions

To examine if there is a relationship between Bishop's domain control questions and Azjen's perceived control questions, Pearson's Product Moment Correlation was conducted. The relationship between the two domain control questions was statistically significant $(r = .642, p < .01)$. With the two domain

control questions having a strong relationship, both domain control questions will be used to assess the hypotheses.

Multiple Regression

To determine the predictors of life satisfaction a stepwise regression analysis was used to test the predictability of domain satisfaction, domain importance, positive affect, negative affect, and domain control on life satisfaction. Since two different domain control questions were used to asses a respondent's domain control, each group was analyzed with both domain control questions. To determine which domain control question was used, Bishop's domain control questions were named DC1 and Azjen's questions were named DC2.

The initial regression analysis was conducted on the control group using DC1. Once the regression was performed all the variables except domain satisfaction were removed from the equation. The next regression analysis for the control group removed DC1 and added DC2 to determine the predictability domain control on life satisfaction. Similar to the first regression all variables except domain satisfaction were removed from the equation (see table 3 for results). These finding are interesting because the roughly 30% of the variance can be explain by one variable. The elimination of all the variables from the equation except domain satisfaction could be attributable to the moderate and strong correlations of the variables (see table 4 for results).

The same stepwise regression method was used in analyzing the predictability of domain satisfaction, domain importance, positive affect, negative

24

affect, and domain control on life satisfaction in the people with physical disabilities group. Similarly in the control group, all the variables in were removed from the equation except domain satisfaction. This time 25% of the variance can be explained by only one variable. Once more, this elimination of all the variables could be connected to the moderate and strong correlations of the most of the variables. However unlike the control group with the deletion of DC1 and the addition of DC2 to the equation, the model did not change in strength. Indicating that the extent of control domain satisfaction has on DC1 and DC2 is different in the control group, whereas the amount of control domain satisfaction accounts for DC1 and DC2 is equal in the people with physical disabilities group (see table 5 & 6 for results).

Discussion

The purpose of this study was to expand our understanding of salient predictors of life satisfaction. By better understanding life satisfaction predictors within two different populations (i.e., people with and without physical disabilities) our comprehension of how life satisfaction is evaluated will be enhanced.

Similar to past research, the findings from this study have found that people with physical disabilities do have a significantly lower life satisfaction than people without a physical disability. However, one of the primary assumptions to this study; that domain control is only reduced in people with physical disabilities causing a reduction in life satisfaction was not confirmed. Domain control had no effect on life satisfaction in either group. In fact,

according to the correlation matrices of tables 4 and 6 domain control was stronger in the control than it was in the people with physical disabilities group.

Domain Control for People With and Without Physical Disabilities

Given the lack of support for domain control as a predictor of life satisfaction among both groups, the conclusion could be made that there is no difference in the amount of control. The need for assistance from adaptive technology or other people was assumed to have a negative impact on a person's life satisfaction. The assistance provided could have increased the perception of domain control amongst people with physical disabilities to a level that was acceptable to them. Since assistive technology and personal-care assistance is accessible to many people with physical disabilities, domain control should no longer be perceived as to have a negative impact. In this study, domain control was a self- assessment of the capacity to exert control over one's own life (Bishop et al., 2008). This self-assessment may have been increased with the assistance received by a person or device, thus nullifying the effects of a person's disability on their level of control. A more adequate measure for domain control could be the loss of control, instead of one's perception of control. By examining the loss of control, future researchers will be studying if the loss of domain control is actually what predicts life satisfaction.

Domain Satisfaction

One of the most interesting findings of this study is that domain satisfaction is the only predictor of life satisfaction for both people with and without physical disabilities. This has a tremendous impact on life satisfaction

26

research and professionals. With domain satisfaction as the only predictor of life satisfaction, one only has to focus on increasing a person's domain satisfaction to increase life satisfaction. With this simplified direct model, domain satisfaction controls all other salient predictors. What this means is that if a person is satisfied with a life domain then they will have an increase in positive affect, their perception of control will increase, and their negative affect will decrease. For leisure professionals, the same life satisfaction assessment can be used for people with and without disabilities. There is no need to have separate life satisfaction measures for a person with a physical disability measuring domain control and another measure for a person without a physical disability measuring domain satisfaction.

Hypotheses Analysis

Hypotheses 2 through 5, stating that domain importance, domain control, positive affect had a positive direct effect on life satisfaction and negative effect had a negative direct effect on life satisfaction were rejected. With such a high interrcorrelation between these variables, especially with moderate to strong correlations with domain satisfaction, none of these variables are independent of each other. Through examining the correlation matrices of both groups it is clearly domain importance, domain control, positive affect and negative affect have a statistically significant moderate correlations with one or more of the other variables. This high level of interrcorrelation amongst the variables produced a regression analysis of domain satisfaction as the only predictor of life satisfaction in both groups. With domain satisfaction being a predictor for both groups

27

hypothesizes 1 and 6 were not rejected. Leading to the explanation that domain satisfaction controls for all other variables, therefore is the only predictor of life satisfaction in both groups. This leads us to the question of; why are researchers examining people with and without disabilities as two separate groups? If the same model can predict life satisfaction in both groups, then there does not need to be separate research examining life satisfaction in people with physical disabilities. The same research used with people without disabilities can be transferred to people with physical disabilities.

Critique of Procedures

At this point, whether or not the response rate was low is unknown. Since the directors of the agencies sent the email notices to each of the study respondents, and the number of people in the agency's email database is unknown the sampling frame cannot be calculated. With the low number of respondents and the size of the city this study was conducted, the assumption can be made that the response rate was low. To increase the response rate, the study should be conducted on a statewide or national level. Enticing statewide and national chapters of the organizations who participated in this study could bring more respondents to the study. The staff of these organizations would also be invited to participate. This could help bring the demographics of the control group into more of a representation of the country.

Critique of Instruments

With other salient predictor variables being eliminated from the equation like positive and negative affect, one must assume this is a spurious finding. Due

to the fact that there are so many variables correlated to each other the uncertainty about the questionnaire arises. Research has justified the use of each individual questionnaire and one would assume that by combining these reliable measures into one questionnaire would produce similar results. However, by examining the reliability of all the component questionnaires, it is discovered that both the domain importance questions and the I-PANAS-SF questions were very low (importance $\alpha = .569$ & I-PANAS-SF $\alpha = .350$). The low reliability scores could be the reason why these two constructs were eliminated from the equation. By not knowing the true value of a person's affect or which life domains are important, those constructs will not be represented well in the equation. Consequently, if the questions are not embodying the true construct of the variable subsequently the variables will be assessed as unnecessary. The problem may come down to the marrying the six questionnaires together. Each questionnaire has been found to be a reliable measure for each variable, but why combing the measures together had such a drastic effect on the reliability will require future research.

Limitations

By conducting the analyses with a low number of respondents, there was not a large enough sample to produce enough of a cluster amongst the individual variables. This lack of clustering does allow for outliers to have a larger impact in the final results of the data. Another limitation is the fact that the sampling frame for people with physical disabilities is not known; as a result purposive sampling was conducted. Even though purposive sampling was done and normally would limit the results to the study population, a random sample of people with physical

disabilities was obtained. Since a random sample was evaluated the results can be generalized to the population.

Future Implications

The underlying theme that can be made from this study is that the study groups' (people with and without physical disabilities) life satisfaction is predicted the same way. Not only is life satisfaction predicted the same way, there is only one variable, domain satisfaction, that predicts life satisfaction. Theoretically, these finds are important. Researchers have been examining domain satisfaction in conjunction with domain importance, positive, and negative affect to assess life satisfaction. With 25% to 30% of the variance in life satisfaction scores being explained by domain satisfaction, researchers can assess a person's life satisfaction with only one variable.

As mentioned previously, this study allows for the explanation of a "one-size fits all" evaluation of how to evaluate a person's life satisfaction. By using the same model that has domain satisfaction as the only predictor of life satisfaction, a practitioner or researcher can use the same type of questions to assess life satisfaction for these two groups. To increase life satisfaction, no matter what the group, one only has to focus on increasing domain satisfaction. One key problem with this explanation is that it does not explain why people with physical disabilities generally have lower life satisfaction scores than people without disabilities. In order to fully exhaust this theory, this study should be conducted again with stronger affect and domain important questions, and examine the loss of control, instead the perception of control. If similar results are

30

found, future research will have to examine what else is diminished when a

person has a physical disability.

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Table 1

Demographics

	Physical Disabilities	Control	Total
Sex:			
Male	19	15	34
Female	22	26	48
No response	3	2	5
Ethnicity:			
African-American	2	1	3
Asian/Pacific Islander	0	1	1
Caucasian	32	36	68
Hispanic / Latino	6	2	8
Native American	0	1	1
Other:	1	1	1
No response	3	2	5
Education:			
Less than High School	0	0	0
High School / GED	3	3	6
Associated Degree	6	4	10
Bachelors Degree	19	18	37
Graduate Degree	13	16	29
No response	3	2	5

n=87

Table 2

Life Satisfaction Scores

	n	M	SD
PPD	44	23.8	6.26
Control	43	26.7	5.89

Table 3

Multiple Regression Analysis for Control Group

Full Model	R	R^2	$Adj.R$	F	p
DC1	.553	.305	.288	17.15	< .000
DC2	.562	.316	.299	18.91	< .000

Variables in DC1 equation

	β	t	p
Constant	-3.98	-.539	.593
Domain Satisfaction	5.29	4.14	.000*

Variables in DC2 equation

Constant	-4.86	-.666	.509
Domain Satisfaction	5.48	4.35	.000*

Note. * p < .001

Table 4

Correlation Matrix of Variables (Control)

	LS	DI	DS	PA	NA	DC1	DC2
LS	1.000						
DI	.151	1.000					
DS	.553**	.364*	1.000				
PA	.374**	.216	.548***	1.000			
NA	-.176	-.176	-.208	-.281*	1.000		
DC1	.476***	.289*	.640***	.626***	-.494***	1.000	
DC2	.487***	.098	.722***	.521***	-.548***	.656***	1.000

Note: Life Satisfaction (LS), Domain Importance (DI), Domain Satisfaction (DS), Positive Affect (PA), Negative Affect, (NA), Bishop's Domain Control (DC1), Azjen's Domain Control (DC2). * p < .05, ** p < .01, *** p < .001

Table 5

Multiple Regression Analysis for People with Physical Disabilities Group

Full Model	R	R^2	*Adj.R*	F	p
DC1	.509	.259	.241	14.35	< .000
DC2	.509	.259	.241	14.35	< .000

Variables in DC1 equation

	β	t	p
Constant	.126	.02	.984
Domain Satisfaction	4.38	1.16	.000*

Variables in DC2 equation

Constant	.126	.02	.984
Domain Satisfaction	4.38	1.16	.000*

Note. * p < .001

Table 6

Correlation Matrix of Variables People with Physical Disabilities

	LS	DI	DS	PA	NA	DC1	DC2
LS	1.000						
DI	.096	1.000					
DS	.509***	.197	1.000				
PA	.358**	.093	.093**	1.000			
NA	-.419**	-.078	-.487***	-.385**	1.000		
DC1	.333*	.312*	.644***	.241	-.439**	1.000	
DC2	.228	-.142	.329**	.103	-.192	.562***	1.000

Note: Life Satisfaction (LS), Domain Importance (DI), Domain Satisfaction (DS), Positive Affect (PA), Negative Affect, (NA), Bishop's Domain Control (DC1), Azjen's Domain Control (DC2). * p < .05, ** p < .01, *** p < .001

APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL

To: Ariel Rodriguez

From: Mark Roosa, Chair
                     Soc Beh IRB

Date: 12/10/2009

Committee Action: **Exemption Granted**

IRB Action Date: 12/10/2009

IRB Protocol #:   0912004630

Study Title: Domain Control as a Predictor of Life Satisfaction within People with Physical Disabilities

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.