Staff Perception and Assessment of Residential Treatment of Adolescents and Children in the United States (SPARTAC-US)

Scott McFee

A Dissertation Submitted to the Faculty of

The Chicago School of Professional Psychology

In Partial Fulfillment of the Requirements

For the Degree of Doctor of Psychology

August 22nd, 2014

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2014

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Acknowledgements

This dissertation would not be possible without the aid of Dr. Foltz, Dr. Benitez, and Dr. Catlow. Thank you for your feedback and assistance throughout the process. This dissertation would also not have been possible without the tireless support of my wife, and her patience and understanding. Finally, my children deserve a space here for understanding that I needed some time and space to get work done.

Abstract

Direct care staff in residential treatment centers (RTC) are the primary delivery agents of milieu therapy for severely emotionally disturbed (SED) youth, spending time with the children for most of their waking hours. The current body of research suggests that direct care staff in RTC is an important, but under-measured element of the RTC system of care. The Staff Perception and Assessment of Residential Treatment of Adolescents and Children in the United States (SPARTAC-US) is a quantitative survey designed to assess staff beliefs about their role in the RTC model of care with SED youth. Questions about efficacy of treatment, beliefs about etiology of mental illness, compassion satisfaction, interpersonal style, and workplace satisfaction are addressed. It is hoped that factors that emerge from the survey will validate the hypothesis that there are distinct constructs related to residential staff interacting with SED adolescents and children.

Table of Contents

List of Tables

Chapter 1: Introduction

It is estimated that nearly 34,000 youth are referred to residential treatment centers (RTCs) each year (Dozier, et al., 2013). Despite these numbers, the National Center for Health Statistics (2010) registers only 458 organizations as *Residential Facilities for Emotionally Disturbed Youth*. These facilities had a total of 33,835 beds in 2004. According to the American Association of Child Residential Centers (AACRC, 2000), children in RTCs are cited as having severe emotional problems and aggressive behaviors that are unacceptable and unable to be effectively managed in the community.

Perhaps due to this, staff turnover rates in RTCs can be as high as 46.1% in a three and a half year period (Connors et al., 2003). Braxton (1995) suggested that staff members are often young and severely under trained for their jobs; however, data on the frequency, sophistication, and / or content of staff training is not often collected. In addition, agencies require a range of trainings as mandated by human resource policies, such as learning safe restraints, first aid, CPR, human resources policies, and vehicular safety. This suggests that less emphasis is placed on trainings related to psychological dynamics such as attachment, therapeutic interactions with clients, or self-care. Without psychological training, staff will rely on their workplace experience, life experiences, and popular psychology sources for an understanding of severely emotionally disturbed (SED) youth, which, depending on the training curriculum, may hamper their effectiveness in intervening with these children.

Direct care workers in RTCs are an important resource in terms of how they affect therapeutic change in their clients (Goocher, 1971). However, it should be noted that there are many ways to define therapeutic change in this level of treatment. It has been shown that clients in RTCs develop attachment to the staff in their institution, indicating that they are a vehicle for

emotional sustenance and perhaps change (Moses, 2000a).

Eighty-three percent of RTCs serving SED youth indicate that they use milieu therapy as a form of treatment (AACRC, 2000). Milieu therapy is using the process of living with other patients and direct care staff as a catalyst for therapeutic change (Abroms, 1969). Direct care staff plays an important role in the effectiveness of milieu therapy, as well as creating a safe environment for SED youth. Ninety-five percent of RTCs serving SED youth indicate that they employ residential direct care staff, indicating that this is a common group of persons serving clients in RTCs (AACRC, 2000).

Methods of evaluating, retaining, or relinquishing the services of direct care staff has been largely unexplored. To add to the complication of exploring these features of care, Braxton (1995) stated that RTCs have a mandatory level of *coverage* that they must meet, which refers to a ratio of staff to clients. Braxton (1995) suggested that this creates difficulties at an administrative level in removing staff that are ineffectual. It is also difficult to define what it means to be ineffectual, much less to create such rigid definitions as to allow for someone to be let go. On the other side of this, defining what are the effective qualities in a staff is also difficult, as there are no current methods of evaluating a prospective direct care staff's ability to be calm in crisis, compassionate with children, emotionally mature, or able to control their own anxiety and anger. There are no measures to determine whether direct care staff members are either effective or ineffective at their jobs. A third element of this is that direct care staff members are not paid commensurate to the amount of work they are expected to do. This creates a volatile mixture, and crisis situations in RTCs are notable in high direct care staff turnover, low morale, and direct care staff who are unable to do actual therapeutic work with the clients that are their charges. In addition, lack of strenuous control of staff qualities and the relative ease with which

training is cut from the budget can create a feedback loop of ineffective, under-trained staff quitting, only to be replaced by ineffective, under-trained staff.

As psychologists attempt to work at a systemic level with the families of children in residential facilities, it is important to address the residential system itself, including the staff, in order to work toward an evidence-based understanding and utilization of milieu therapy in RTCs. Ensuring the widespread use of evidence-based practices is still a primary goal of the American Psychological Association (APA, 2006). The ability to assess the attitudes of staff in RTCs would be an important tool in improving the efficacy of the milieu therapy, as the efficacy of RTCs as a level of care is disputed (Lyons et al., 2001; Hair, 2005; Vaughn, 2005; Pavkov, Negash, Lourie, & Hug, 2010).

Some investigation has been done of the motivations of direct care staff in RTCs, as well as some assessment of how the children and adolescents form attachments to these staff (Moses, 2000a; 2000b). Surveys or measures of interaction styles, attitudes, and beliefs of the staff have not been conducted, and no such surveys currently exist. The purpose of this dissertation was to create a quantitatively measurable battery of questions about staff demographics, philosophy of treatment, levels of vicarious trauma, assessment of treatment style, and workplace satisfaction. This would allow the psychological community to address whether staff-level interventions actually produce attitudinal change in the staff they are measuring. In addition, correlating overall staff-level philosophies could be linked to outcome measures, such as incidents per month or medication management issues. Other uses might allow residential-level management staff to determine if there are training deficits that need to be addressed, or if creating a more effective shift of residential staff requires moving those with different or similar attitudes together, in order to generate more team cohesion, which would, in turn, need to be researched

and measured beforehand.

Creating an effective survey of RTC staff attitudes will create an access point into this vital layer of the system of residential care. This will allow for direct measurement and targeted interventions, which will likely create a more effective staff body. This measure could also be used to assess how some models of care compare to others, in order to create an efficacious theoretical model for milieu therapy within residential treatment and create a foundation for training.

The methodology of the survey design was based on the writings of Fowler (1998), in order to create effective and efficient questions that accurately portray the staff's experience of RTC work with SED youth. This entailed having the staff members who filled out the questionnaire reflect on how well the survey addressed their experience of being a residential staff working with SED youth. Eliminating extraneous and ambiguous questions was an important goal of this dissertation project.

This survey was designed to create a list of dependent variables which can be measured based on independent variables created by future researchers, and therefore, the hypothesis did not posit a correlation between independent and dependent variables. Instead, it posited relationships between dependent variables that do not currently exist and which will be based on available research. One hypothesized factor includes an authoritarian-medical factor, where measures of authoritarian, critical interactive styles are strongly related to a belief in the medical-model of mental disorder. This hypothesis emerges from my personal experience that direct care staff who believe strongly in the medical model of mental illness struggled to temper this with the capacity expected of psychiatrists to also have strong empathy for clients.

Questions were operationalized based on the research collected below on the related

topics. Otherwise, questions were refined through focus groups and participant involvement, in order to ensure that the staff members questioned felt that the survey best reflected their experience. A portion of this dissertation was an attempt to balance the needs of those who will be taking the survey and those who would be using it.

The outcome of this dissertation was a focused, streamlined questionnaire that accurately measures the philosophies and attitudes of residential staff with regard to the children in their care (etiology of problems, psychopathology) and the settings in which they work (description of the workplace as experienced by them), as well as what they believe they need to provide in order to facilitate improvement in their clients (structure and medication).

Chapter 2: Literature Review

Literature Review Methodology

This literature review was conducted by database search. EBSCOhost and ProQuest were searched with the criterion of including information about residential centers for children and adolescents, as well as information regarding staff in those institutions. Relevant studies were reviewed, and their sources were also reviewed, to find earlier studies that may be important to the conceptual constructs, in case these were missed by the database searches.

In that studies on residential staff working with residential youth are not abundant, the following qualifications were used to determine inclusion, in order of importance:

1. Studies that addressed the central issue of staff in residential care of adolescents.
2. Studies that addressed milieu therapy as used in RTCs.
3. Studies that addressed the efficacy and difficulty of the child and adolescent residential population.
4. Studies that addressed the seriousness of the residential system and its difficulties.
5. Studies that were published in journals.
6. Relevant books on the subject or residential care.

This literature is organized into five primary categories: literature about the state of RTCs, literature about the SED youth clients treated in RTCs, the current research on staff in RTCs, research available on milieu therapy, and specific studies on interventions at the staff level in RTCs. The overarching goal was to demonstrate that RTCs for SED youth need intervention and that one valuable area to intervene and measure would be with the staff members, who deliver and shape the intervention of milieu therapy.

Residential Treatment Facts

Edwards (1994) reviewed the numbers of children currently in residential treatment facilities (RTFs), which include RTCs, and found that exact numbers were difficult to determine. This is because there are differing definitions of such institutions, and there was no national organization that is designed to manage or regulate them. In 1994, Edwards was able to determine that there were over 11,000 children, aged 6-15, in 122 RTFs. This was only 38% of placements in the United States labeled as RTFs.

More recently, the United States Government Accountability Office (GAO, 2008) suggested that 200,000 children were served by RTFs in 2004, including RTCs, juvenile detention centers, and wilderness programs. The reason that this number is not more specific is because different states have different rules for reporting the number of residential facilities, and some states do not report to the GAO at all. This means that actual reports of the number of children in residential care are not currently available. On the other hand, the National Center for Health Statistics (NCHS, 2010) found that there were 33,385 beds throughout 458 facilities labeled as 'residential treatment for emotionally disturbed children'. These results indicate that these facilities are almost filling their beds twice over in a year.

It is estimated that 34,000 children went through RTCs in 2013 (Dozier et al., 2014). Children in RTCs account for roughly one quarter of the mental health funds for children (Vaughn, 2005). The services offered by RTCs cost $90,000 per year per child (Vaughn, 2005).

The GAO (2008) found that additional oversight is needed in RTFs, overall. They found cases in varied residential facilities of abuse, neglect, and unsafe or improper housing. This highlights the difference between possible institutions: when sampled out of a group of institutions, there are many that deliver quality work (Friedman et al., 2006). On the other hand,

many use abusive physical practices and questionable treatment practices (GAO, 2008). While it is not clear if these differences are due to the amount of funding intake, it is clear that disparities exist, indicating a need for improved standards of residential care.

In terms of funding, it is difficult to determine the exact cost of RTCs for children, in that each institution operates differently in different states, and those states have different rules for collecting such information (GAO, 2008). Moreover, agencies may establish contracts with state funding sources that may vary between providers. This can be coupled with the fact that 70% of children in residential facilities appear to be paid for by the government (AACRC, 2000). This indicates that efficiency of care in residential treatment, especially with durable, long-term gains, is in the best interest of government, as well as the institutions themselves, in order to reduce mental health care costs. In contrast, lack of consistent or sufficient funding also challenges the ability of agencies to provide well rounded, evidence based care, with competent well-trained staff. This is coupled with the expectation that RTCs provide more treatment with less funding and clinical teams with less schooling and qualifications (Leichtman, 2006).

Further, it is difficult to define RTCs in research as well as practice (Butler & McPherson, 2007; Leichtman, 2006). It is necessary to differentiate RTCs and foster care, kinship care, and family teaching. Butler and McPherson provided the definition used by this paper, in that the required components of a RTC are "a therapeutic milieu, a multidisciplinary care team, deliberate client supervision, intense staff supervision and training, and consistent clinical/administrative oversight" (Butler & McPherson, 2007, p 469). Note that this definition does allow for inpatient settings for clients to be included in the definition of RTC, but eliminates foster care. Leichtman's summation of the necessary qualities of residential is also worth considering (Leichtman, 2006).

The AACRC has issued several statements of public policy, describing their intent to treat within the realm of RTCs (AACRC, 2012a). The AACRC has over 100 member institutions and therefore represents a large portion of the RTCs serving SED youth in the United States. Members of the AACRC are accredited, licensed RTCs. Members are licensed by bodies such as the Joint Commission (formerly the Joint Commission on Accreditation of Healthcare Organizations [JCAHO]). The AACRC was founded in 1956, with the goal of uniting RTCs for children and adolescents under a single organization. In their Public Policy and Position Papers, they outline their goal for RTCs for children and adolescents: being family driven, ensuring the preconditions for healthy change, management of performance outcomes, use of evidence-based practices, and trauma informed care.

The first paper establishes that RTCs for children and adolescents are meant to be part of a continuous system of care (AACRC, 2005). This includes the notion that such a system of care will have at its disposal the appropriate evaluations necessary to determine whether residential care is the ideal form of treatment for a given client. This paper established that safe environments are a top priority for their clients. It is the purpose of this dissertation to find a way to measure staff attitudes on what they consider to be priorities in treatment. It is also the position of the AACRC (2005) that RTCs not be used as a treatment of last resort, and should not connote failure on the part of the child or family. RTCs should be seen as a respite for such families that need them, with a significant element of continued care in the community at the end. This paper ends with the statement that changes need to be made in order to help RTCs become a part of a system of pooled resources.

Authors of the second paper discussed the history of RTCs as surrogate parents that usurp the role, emerging from historical orphanages (AACRC, 2006). This historical underpinning

carried with it the belief that parents were to blame. The authors asserted that parents must be involved in care, and that parenting blaming is counterproductive. Thus, increasing the family role in care is taken to be a high priority in improving residential care, as decreasing stigma and increasing involvement will only improve treatment. The surgeon general and presidential commissions have also made it clear that this is a high priority in terms of the care of children in treatment systems like RTCs. The authors of this paper asserted that children need parents, that families need power, and that RTCs cannot afford to alienate families as they are sources of information. The sixth paper (AACRC, 2009) also indicated that family members feel a meaningful need to be integrated into residential care, by shadowing staff, and involving them in the development of trainings. Families also desire to be engaged by direct care staff in a meaningful way. This dissertation aims to create a tool to determine at what level direct care staff members believe family is important in the care of the child.

Authors of the third paper asserted that residential treatment of children needs to make certain transformations in order to fully realize its potential as a powerful form of intervention (AACRC, 2014a). While residential is often used as a placement resource, this makes for less effective therapeutic impact. Therefore, authors of this paper posited that RTCs require baseline standards, including licensing and regulations. These regulations create core expectations that RTCs must live up to, and accreditation provides responsibility on the part of the RTC to maintain standards. Additionally, internal standards are important to continue improvement. Authors of the fifth paper (AACRC, 2008) noted that it is increasingly important to utilize evidence-based practices in RTCs. Evidence-based interventions are a part of an organization's ability to assess its own growth and efficacy, and by using standardized treatments, practitioners can enhance the quality of care. The tenth paper followed up on these themes by addressing the

need to assess functional outcomes of clients in the long-term (AACRC, 2012b). The product of this dissertation creates a way to measure change in residential direct care staff, which, in turn, allows the creation of baseline information about these staff and whether evidence-based practices create a change in staff attitudes or intervention styles. In addition, it may allow RTCs to assess what intervention styles and direct care staff attitudes lead to the most beneficial functional outcomes.

Authors of the fourth paper (AACRC, n.d.a) argued that the definition of residential care itself needs to change. While these authors acknowledged that there have been disputed claims that RTCs are not effective forms of intervention with children, they stated that benchmarks will help generate better results in both the efficacy and effectiveness of residential care. These benchmarks require everyone's involvement in improving residential care. This includes the staff, parents, youth, stakeholders, and community partners. This requires information supported by evidence, and common data sets, which this dissertation intends to provide a tool for. In addition, there needs to be data on what occurs in residential, such as medication usage, restraints, and functional outcomes regarding how clients are faring before, during and after residential treatment. This provides a strong imperative to collect data in order to increase viability and credibility for RTCs, but also to improve quality of care for children and families.

The seventh paper (AACRC, 2010a) is based on the assessment of RTC care by youth within the system. These youth noted that direct care staff are often patronizing, and they felt that the adults do not understand them. These youth also felt that some interventions styles implemented by the direct care staff are arbitrary and unhelpful. They noted that behaviors they feel would be viewed as normal in most settings are viewed as mentally unhealthy by the direct care staff. Finally, the youth noted that staff members sometimes use coercive behaviors that

cause stress and induce fear. The paper then argues that youth-guided care is an important element of creating efficacy in RTCs. It should also be noted that the youth are able to assess what is considered negative direct care staff behaviors, but at the research level, there is no ability to differentiate direct care staff members who use patronizing, intimidating, or unhelpful interventions or structures with children. The SPARTAC-US aims to be an entry point to discerning the qualities of direct care staff members that may then be used to differentiate effective from ineffective staff.

Papers 8, 10, and 11 focused on the alteration of treatment environments to ensure rational use of care in light of trauma, psychotropic medication, and the reduction of coercive environments (AACRC, 2010b, n.d.a, 2014). These papers indicated that it is important for direct care staff to be educated on such concepts in order to ensure that treatment delivery is trauma-informed, noncoercive, and in line with the rational use of medication. Therefore, the SPARTAC-US aims to assess how direct care staff members view their interactions with clients, their opinions on medication, and their beliefs about trauma.

The AACRC (2010b) stated that children are referred to residential centers for four primary reasons:

- Severe emotional disturbance: clinical depression, post traumatic stress disorder, mood disorders, anxiety disorders, attachment disorder, and self destructive behaviors.
- Aggressive/violent behaviors: oppositional & defiant behaviors, conduct disorder, assault, and other forms of physical aggression including self-injurious behavior.

  Family/school/community problems: inability to function at home, in school, or in the community; family dysfunction, placement failures, needing an alternative to juvenile justice and drug use/abuse.

Abuse: physical, sexual, or emotional abuse. (AACRC, 2000, p. 17)

These children receive a variety of treatments from a variety of individuals, including psychiatrists, psychologists, social workers, nurses, and the floor or line staff (AACRC, 2000). The floor or line staff includes the direct care staff members who work directly with the SED youth in RTCs, maintaining the milieu, and ensuring that the SED youth are provided for emotionally and physically (Butler & McPherson, 2007). In addition, these children receive services such as psychiatric and medication evaluations, individual therapy, family therapy, and both family and intellectual assessments, in order to address the severity of their troubles (AACRC, 2000).

These children arrive from their homes (25.6%), foster homes (18.5%), group homes (8.6%), different RTCs (13.5%), hospitals (18.3%), or a juvenile detention center or emergency center (15.4%; AACRC, 2000). This highlights the versatility of the RTC in the goal of finding the least restrictive environment for the clients that are referred to them. RTCs exist in a hierarchy of care whose goal is to reduce restrictions on the child while increasing safety for the children and those around them. Eight out of 10 clients in AACRC institutions are discharged to lower levels of care. Thirty-four percent of these children are discharged home with their biological parents. As a success measure, this does not tell us about their emotional functioning (such as healthy attachment, emotional adjustment), but it indicates improvement in behavioral functioning or behavioral management at the time of discharge.

However, only one third of the institutions polled during the AACRC study routinely collect follow-up data (AACRC, 2000). Only 11% of all RTCs collect information on children for more than six months, which indicates that there are very few sources for determining whether gains made in RTCs are long-term for the clients. Further research is necessary to ensure

that SED youth in RTCs are making positive, durable changes in their behavior.

Residential Treatment Effectiveness

Research into the effectiveness of residential care has been contentious, and there are many conflicting sources of information (Butler & McPherson, 2007). This largely stems from the fact that there are many dependent variables and it has been impossible to create an effective control group (Bettmann & Jasperson, 2009). In addition, an operational definition of residential care has not been in use, meaning that some of the research that claims to be about residential care may be confounded by the inclusion of other types of care (Butler & McPherson, 2007; Leichtman, 2006). This lack of information and definition causes decreased funding, which creates a "vicious cycle of *lack of evidence due to lack of funding*" (Butler & McPherson, p. 467). This creates a weak body of literature, which provokes funding declines, both of which are fueled by misinformed responses in policy. This is not new information, in that RTFs have lacked a clear definition and universal diagnostic procedures for at least two decades (Edwards, 1994).

Foltz (2004) summarized the primary modes of operation for RTCs in the United States, discussed by primary, relevant diagnoses. Disruptive disorders such as conduct disorder and oppositional defiant disorder do not appear to have clear treatment methodologies, and there is no one medication that is capable of increasing compliance. Attention deficit hyperactivity disorder (ADHD), another disruptive behavior disorder, is typically treated with stimulants, and secondarily with behavioral interventions; however, research suggests that in the long-term, neither stimulants nor behavioral treatments are helpful when compared to a control group (Molina et al., 2008). Across all of these disruptive disorders what studies have found to be most helpful are integrative family therapies, such as multisystemic therapy (MST), which is not a

primary modality of RTCs in the United States (Foltz, 2004; Henggeler, 1999).

Other notable mental disorders, such as major depressive disorder, bipolar disorder, and psychotic disorders, are also commonly seen in RTCs (Foltz, 2004). The standard treatment for major depressive disorders is medication combined with therapy. Bipolar disorder is also typically treated with a combination of medication to treat mood fluctuations, and therapy to address compliance with expectations, such as avoiding disruptive behaviors and ensuring medication compliance, while mitigating family difficulties (McClellan, Kowatch & Findling, 2007). However, there is some indication that the standard treatment for bipolar disorder in children in RTCs may miss major underlying issues of trauma by focusing on compliance rather than underlying causes (Foltz et al., 2013). Anxiety disorders are treated primarily with psychosocial therapies (such as cognitive-behavioral therapies or psychodynamic therapies) combined with medications, such as selective serotonin reuptake inhibitors (SSRIs) and benzodiazepines. Psychotic disorders in children are difficult to diagnose, and are difficult to treat effectively (Foltz, 2004). While psychosocial treatments have been shown to have some success with psychotic children, the standard treatment is antipsychotics.

Controlled studies of pharmacological treatments are rare within RTCs. One study has indicated that decreases in problematic behavior are concurrent with decreases in medication overall (Bellonci et al., 2013). When studying the use of polypharmacological treatments versus monopharmacological treatments, Griffith and associates (2010) were unable to find any variables that were able to explain why a client received multiple medications or just one. Controlled studies of psychosocial, individual treatment methods in residential centers are difficult in that it is hard to determine a control group, and most treatments are designed to be systemically based, as mentioned below (Bettmann & Jasperson, 2009).

Another of the many variables that have not been measured or controlled for is the level of training, or ideological adherence to the institution's treatment methods, of staff (Bettmann & Jasperson, 2009). In an attempt to create a total treatment environment for children, the ability to measure all relevant variables will be important. A brief review of what has been measured follows.

Edwards (1994) found that RTCs often attempt to prove that they have more viable treatments than others. This is an outcome of the drive towards evidence-based or empirically supported treatments still espoused by the American Psychological Association (2006). Edwards (1994) showed that problems that emerge from the attempt to operationalize variables in RTFs are profoundly difficult, in that diagnoses are not clearly based in evidence, and "it is still not clear if one clinician's major depressive might not be another's conduct disorder, or substance abuser; or if a post-traumatic stress disorder is not, in reality, a sexually or physically abused child" (Edwards, 1994, p. 41).

Authors of one study suggested that measuring improvement is difficult (Connor, Miller, Cunningham, & Melloni, 2002). By rating children on two different measures of adjustment, researchers found that children's behavior improved in residential care. More specifically, they found that children with a high capacity to internalize their negative feelings (appearing in such forms as anxiety and depression) improved noticeably. However, the alternative to this is that children who externalize their feelings may not benefit from residential care. It should be noted that children who externalize may still require residential care because aggressive behaviors cannot be managed in the home (AACRC, 2000; Hair, 2005).

One of the reasons that measuring outcomes is difficult is not only the use of different measures, but also that different people have different impressions of what getting better means

(Connor, Miller, Cunningham, & Melloni, 2002). “The results point out how individual subject outcome results may be very different depending on who the raters are and what constitutes the outcome criteria” (Connor, Miller, Cunningham, & Melloni, 2002, p. 116). This is further confounded by the notion that the treatment must be specifically selected for the diagnosis, and based in evidence. If there is a vast difference in raters, then there is a high likelihood of difference in diagnosis. The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (APA, 2013) already has low levels of interrater reliability (Freedman, Lewis & Michels, 2013). In addition to this, some diagnoses that appear to be accurate, such as bipolar disorder, may obscure the treatment of underlying issues, such as a notable trauma history (Foltz et al., 2013). These elements further complicate notions of getting better.

Another study showed that residential treatment is effective with many of the four primary problems listed by the AACRC, with the notable exception of behavioral disorders like conduct disorder and oppositional defiant disorder (AACRC, 2010; Lyons et al., 2001). The researchers followed 285 adolescents placed in RTCs by the Department of Mental Health (Lyons, et al, 2001). Sixty-three percent of these were male. They were placed at a variety of sites throughout the state. The diagnoses ran from PTSD (27%) to psychotic disorders (6%) to adjustment disorders (1%), indicating a broad spectrum of diagnostic categories represented. The children were rated on a measure that indicates levels of psychiatric illness, the Child and Adolescent version of the Acuity of Psychiatric Illness scale (CAPI), created by the authors of this study. Additionally, Lyons et al. (2001) found that clients suffering from bipolar disorder did not show strong signs of improvement and appear to have worsened over the two-year period studied. Also found was an increase in risky behaviors in clients diagnosed with ADHD throughout the study. On the CAPI, it was noted that there was an overall improvement in the

symptoms-clusters of depression and psychoses, there was also an increase in the symptoms of anxiety and activity. The study suggests that RTCs may be beneficial for reducing risk behaviors, depression and psychosis, but that RTCs may not help increase functioning. Some faults with the study include a lack of follow up on the patients after the study or once they were released into the community, a lack of information of the treatments provided at the various programs, and that the study used largely retrospective data. In addition, the study noted a broad degree of difference across different RTC sites. One site in particular was a source of bad outcomes, which the study attributes to an aging facility and administrative instability.

A research review was done of studies of RTC efficacy, totaling seven studies that measured outcomes immediately after treatment was completed (Hair, 2005). One of the first things noted is that there is an extreme difficulty in controlling the variables in RTCs. Further, the studies that measured outcomes used very different measures, kept varying amounts of data, and collected varied amounts of post-discharge follow-up. Multiple studies found that internalized behavior tends to show improvement in residential care. Another cited study showed that clients displaying antisocial behaviors in an adolescent RTC had a greatly reduced amount of this behavior persisting into adulthood, an average of six years later (as cited in Hair, 2005). Over 28% of the youth that they followed up with showed persistent antisocial behaviors, whereas they found that the national average was 40-50% persistence rates. The general findings of the research is that patients with internalizing disorders, high-risk behaviors, and overall behavioral and emotional disturbance showed improvement with care in RTCs; however, at least one study found that 45% of the children measured had to be readmitted to an RTC after 8 months (Hair, 2005). This highlights the differences between residential centers, noted above, in that different sites appear to have different methodologies and attitudes, and thus, wildly

differently outcomes. Hair (2005) additionally found that the presence of family in therapy is one of the largest factors in creating successful treatment in residential facilities. The previous studies indicate a need for improved data gathering within RTCs, of which the SPARTAC-US could be a part.

Authors of another study directly reviewed issues of treatment efficacy and how it is measured (Bettmann & Jasperson, 2009). They argued that both psychiatric inpatient and RTCs should be viewed as similar enough to represent a singular construct. This appraisal stems from the direct similarities of the treatment approaches, with the primary difference relating to the length of stay. In addition, both meet the definition of RTC according to Butler and McPherson (2007). Therefore, the SPARTAC-US should be able to be utilized in inpatient psychiatric units as well.

Leichtman (2006) argued that the two main elements that define residential care are the focus on *milieu therapy*, which Leichtman specified is the helpful life skills modeling and explicit training that occurs in the relationship between direct care staff and clients, and life-space interventions, which are the interventions that occur between staff and clients when the client is in crisis. This definition differs from Butler and McPherson's (2007) by arguing that inpatient care is a sharp change in the ideology behind the treatment (Leichtman, 2006). In contrast, Leichtman argued that group homes may also be included for their use of milieu therapy and crisis intervention. It is my position that direct care staff members in group homes, RTCs, and inpatient units are unlikely to feel the ideological differences between their respective settings, although they may experience the pressures of work differently. The SPARTAC-US survey is therefore designed with the ability to be applied in any situation where direct care staff members are working with clients who are required to live within the treatment environment,

including RTCs, group homes, and inpatient care.

Dozier and associates (2014) argued that residential care is inherently damaging to children. This is due to the inconsistency of caregivers within the residential, the iatrogenic peer environment, the disruption of notable attachment relations (giving the example of kibbutz care in Israel), likelihood of harm, and the long-term negative effects that can come from having younger children in care. The conclusion is that residential and collective care of children should be avoided where possible. It is notable that one of the major concerns with residential or collective care of children is the difficulty in maintaining, and adequately training staff, in order to create a safe environment in which attachment relationships can be built. Therefore, the SPARTAC-US aims to help determine what are the characteristics of effective, long-term direct care staff members, in order to improve residential care overall.

Bettman and Jasperson (2009) suggested that measuring change in a diagnostically diverse and heavily impacted population such as the SED youth that RTCs serve is a difficult task, where many studies simply aim for symptom reduction. Critics of RTCs have suggested that putting SED youth together, especially those with behavioral challenges, provides a harmful environment (Vaughn, 2005; Dozier et al., 2014). In addition, critics have suggested that applying a universal level of structure to children who are used to chaotic environments can be distressing to them. On the other hand, as Bettman and Jasperson (2009) suggested, RTCs can be helpful for reducing symptoms and building strengths in children, although the former is easier to measure and the latter is rarely measured at all. It is important to remember that RTCs exist in a continuum of providing a least-restrictive environment, meaning that SED youth are in RTCs because they have behaviors that cannot be maintained in the home. Some studies suggest that a multidimensional approach is ideal, addressing both symptom improvement and positive changes.

James (2011) attempted to discern what structured, manualized treatments would be evidence-based and highly relevant within residential care. Five models were reviewed: positive peer culture, re-ED, sanctuary, teaching family model, and the stop-gap model. Only positive peer culture was determined to be actively supported by the evidence within residential care. Sanctuary, teaching family model, and stop-gap were all determined to be promising, and all had medium relevance to child welfare. Re-ED lacked notable evidentiary support within RTCs, due to it being it lacking controlled experiments of its effectiveness. This article addressed that there is not only heterogeneity in the definition of residential, but also in its implementation. What is referred to as milieu therapy is likely to mean very different things in different institutions, and is clearly the case among five different manualized practices.

Many attempts have been made to identify if there are individual characteristics of the clients that determine whether or not they will be successful (Bettmann & Jasperson, 2009). Clients who were female, younger, had better reading and writing skills, fewer diagnoses, and parents who internalized more than externalized were more likely to be rated as successful by caseworkers at 6, 12, 18, and 24 month follow up. Some of these findings can be easily justified in that clients who have higher IQs and better reading and writing skills are likely better able to process information and generate insight, which is likely relevant in therapy with these children. This indicates a level of training is necessary for staff to know how to work best with clients in order to help improve long-term outcomes.

If the children are in families who are more likely to internalize than to externalize their negative emotions, then the children are more likely to be calm, rather than continuously activated by stress (Perry, 2007). Another study cited by Bettman and Jasperson (2009) found that children with abuse histories tend to demonstrate more psychopathology at discharge than

those without, which is also in line with the previous conclusion regarding internalizing vs. externalizing parents effects on outcome. This indicates a need for trauma-informed care in residential staff, which the SPARTAC-US can aid in assessing.

Other scholars in this line have found that ratings of parental discord from children also have associations with how well the children are adjusted, in terms of levels of depression and accuracy in self-image (Bettman & Jasperson, 2009). Many studies reinforced the notion that those who have behavioral disorders such as Conduct Disorder and ADHD are less likely to benefit from RTC treatment than others. In general, individuals seem to do better in residential when they are younger, less affected by trauma, and more intelligent. This indicates a possible treatment gap in the delivery of care to externalizing children, which could be possibly addressed with further training.

On the other hand, the problems that stem from RTFs (which include RTCs) seem to be based on concerns with accreditation (Friedman et al., 2006; Pavkov, Negash, Lourie, & Hug, 2010). Some institutions are unable to meet accreditation and work without license. Worse, in some states, accreditation itself does not actually indicate good practices. This is a concern that is difficult to address without broad-ranging reforms, and is additionally clouded by lack of research into these institutions, lack of definition at the state and federal level, and disagreement in levels of accreditation (Friedman et al, 2006; GAO, 2008).

Researchers found that RTFs frequently fall short of basic treatment standards (Pavkov, Negash, Lourie, & Hug, 2010). These researchers reviewed 26 facilities, and found that while there were many that delivered excellent service across the board, many others fell short of practice guidelines. Examples include abusive behavior (such as posting diagnoses on the doors of residents, extended seclusions, remaining seated for 24 hours), polypharmacological treatment

without consent, and inadequate educational services. This, again, highlights a need for improvement of residential treatment.

A further impediment to generating evidence-based, efficacious residential treatment is the presence of unlicensed residential programs (Friedman et al., 2006). These programs are reported not to have oversight, and do not require psychiatrists to be on staff. The treatment methodology at these locations varies highly. Many of these sites appear to use rigid discipline, and have been involved in cases of physical abuse, as well as several deaths.

Ultimately, the research shows that, despite being less effective with externalizing populations, RTCs are generally effective overall (Bettmann & Jasperson, 2009; Hair, 2005; Connors, Miller, Cunningham, & Melloni, 2002; Lyons et al., 2001). While the results are not uniform, it does appear that RTCs should not be dismissed as a source of care for SED youth. While this may be a gross understatement, it is a theoretical starting point to suggest areas of improvement, or areas of new research. Access to staff viewpoints may serve as a viable port of access to improving residential care.

Importantly for this dissertation, Bettmann and Jasperson (2009) noted that many questions of the theoretical orientation of any given RTC cannot be measured because it is not clear how much the staff who work there are schooled in any given orientation, and thus the delivery of a given therapeutic intervention cannot be measured. Therefore, if a measure such as the SPARTAC-US proposed by this study could measure the theoretical orientation espoused by the staff in RTCs, then this would open a research avenue for testing this important diagnostic construct.

Current Staff Research

Direct care staff members are considered one of the primary implementers of treatment,

on account of their close proximity to the clients, and their direct relationship (Goocher, 1971; Moses, 2000a). This bears mentioning for the purposes of this research because, as a theoretical underpinning, if direct care staff members are not important and effective in the delivery of treatment, then there would be less or no need to intervene with them. This section explores some research on staff, both direct and indirect, as well as some important theoretical points of view regarding staff in RTCs.

Braxton (1995) outlined some of the major issues that are facing direct care staff working with children who have severe anxiety issues. Braxton (1995) suggested that most direct care staff members in RTCs are between the ages of 20 and 30, and have a bachelor's level education. According to the studies that reported these findings in the United States, this suggestion appears valid (Zimmerman, Abraham, Reddy & Furr, 2000; Moses, 2000a; Eastwood & Ecklund, 2008). In some agencies, a bachelor's degree is not required, which may or may not influence effectiveness. Braxton asserts that this constitutes inadequate training, and direct care staff members may respond based on their own emotional biases, especially when clients are aggravated, scared, or aggressive (Braxton, 1995). It is important for direct care staff members to have help understanding that these children have powerful emotional problems that will pull for strong emotional responses from the staff themselves. Braxton asserted that these under-trained, equally emotional direct care staff members are often expected to do the work that therapists require years of training to do. These proposed inadequacies would be more understandable if they were not working with SED youth who have been deemed too risky to remain in less restrictive environments with aggressive behaviors, emotional disorders, problems in the community, and abuse histories (AACRC, 2000).

In comparison, studies of staff in the Netherlands working with individuals with

intellectual disabilities showed that in the Netherlands, staff are generally older, and are required to have more training (Huitink, Embregts, Veermen, & Verhoeven, 2011; Willems, Embregts, Hendriks, & Bosman, 2011; Ziljman, Embregts, Bosman, & Willems, 2012; Roeden et al., 2012a; Roeden, Maaskant, Bannink, & Curfs, 2012b). These studies are only mentioned briefly, here, for the differences in staff demographics. These studies were selected specifically because they all measure the relationships between staff and clients with intellectual disabilities, and will be explored later.

While staff are not frequently utilized as an information source for residential outcomes, some studies use staff measures to determine how the children are doing, which provides a brief window into staff perceptions (Connor et al. 2002). In this study of 89 residentially-treated children being rated by their teachers, 59 were also rated by their treatment teams, including the direct staff that worked with them. The two sources of scores (although on different measures) were corrected for chance and analyzed for inter-rater reliability. The score was 0.15, on a scale from 0 to 1, where 1 indicates agreement. This implies that the treatment team, working on the floor with the children has a very different view of the children's adjustment and functioning than the teachers, who ostensibly should be seeing the children in some of the same ways. This could be due to a number of factors: perhaps the teachers and staff have vastly differing approaches regarding the children, and are from different theoretical orientations. It could also be due to the limited capacity in which the teachers see the children (only in the classroom). Another distinct possibility is that the staff and teachers have extensively different trainings. If this is the case, then this difference should be able to be measured quantitatively, and the reasons should be addressed.

Moses (2000a) has done extensive studies on staff in RTCs, including studying how the

staff relate to and attach to the children with whom they work. This study was conducted by interviewing 25 residential staff for 90 minutes to two hours. What emerged from these interviews was that staff invests considerable time and effort into their relationships with the children in residential care. Regardless of the actual style of interaction, or the type of attachment it generates, it is clear that the staff is invested in these relationships emotionally. Moses found that the staff often attempt to make connections with the children on a personal level, particularly suited to each child. “Staff members seemed to operate with an intricate set of considerations and constraints that worked to shape their response; these included personal biases, the quality and volume of residents' troublesome behavior, and working conditions on the unit” (Moses, 2000a, p. 488). However, residents who were perceived as easier to work with, or more likely to succeed, were also more likely to receive individualized attention, instead of standardized care. Standardized treatment “... emphasizes maintaining control over residents and minimizing staff discretion” (Moses, 2000a, p. 488). In terms of balancing individualized versus standardized care, it appears that there are a wide number of variables that affect how staff members interact with children, including the aforementioned ease of interaction, but also how recently the client arrived. Finally, Moses (2000a) notes that a hypothesis emerged: children who receive more individualized staff attention achieve better outcomes. This is left as a place for possible longitudinal follow up studies. However, with no simple way to measure this, the SPARTAC-US aims to answer some of these questions for the purposes of follow up study.

Moses (2000b) has also studied the motivations of people who are working as child-care workers. She attempted to understand the motivations of the staff qualitatively, by engaging in interviews with twenty-five residential staff, which lasted between an hour and a half and two hours. Several positive themes emerged from the data: the staff felt they had something of value

to give to the children, some described values that drove them to work with the next generation, some desired work that would be emotionally rewarding and worthy of pride, others felt it was their debt to pay for the help they received in their childhood. One particularly negative theme emerged: The work is clearly temporary to these workers. The fact that the job pays poorly, lacks security and benefits, and is very demanding, both physically and emotionally, the staff frequently made reference to the fact that their work was not long-term. Some threats to validity include the small sample size and the effects of social desirability. The sampled reasons for working in residential care are explicitly included in the SPARTAC-US questionnaire.

Staff cohesion is a measurable construct that shows how well a team of staff are able to help manage each other's needs (Johnson, 1991). This author compared two cottages (both staff and clients) on their perception of staff cohesion and the environment. They found that one variable labeled Staff Control was positively correlated with the number of locked hours in rooms. This also was related to low staff cohesion. "It is possible to deduce from these findings that client autonomy may only be possible when staff experience the "social solidarity" … which... gives the staff a sense of security that enables them to interact in a more open and nonauthoritarian manner with their clients" (Johnson, 1991, p. 229). Lack of cohesion increases need for authoritarian style of interaction, with rule enforcement and structure. The question of workplace satisfaction with co-workers is expressly addressed by a single question in the SPARTAC-US.

Joy (1981) found that, on an inpatient unit, there are definitive shift styles that affect client violence rates. Joy found a clear pattern in supervisory expectations and staff behavior on the evening shift. Staff was informed about high levels of violence by supervisors, with an expectation to keep the violence down. This promoted a style of active confrontation in the staff

that then prompted client-violence. Regardless of who initiated the aggressive behaviors, the incident would be documented as client initiated violence, with staff enforcing limits and control. Joy hypothesized that decreased expectations of staff to manage crisis would lead to a change in the shift style, thus decreasing the amount of violence on the unit overall. While this is largely speculative, determining the shift-style of a unit may help supervisors intervene more effectively to decrease aggressive behaviors, one of the four main reasons that children are referred to RTCs (AACRC, 2000). The SPARTAC-US expressly addresses this issue by asking questions about workplace training, support, and satisfaction.

Eastwood and Ecklund (2008) studied whether staff in RTCs suffer from compassion fatigue and burnout, while rating their compassion satisfaction. Compassion fatigue is defined as "a state of tension and preoccupation with the traumatized patients by re-experiencing the traumatic events, avoidance/numbing of reminders, [and] persistent arousal (e.g. anxiety) associated with the patient. It is a function of bearing witness to the suffering of others" (Eastwood & Ecklund, 2008, p. 105). Three dimensions define burnout: "emotional exhaustion, depersonalization, and a lowered sense of personal accomplishment" (Eastwood & Ecklund, 2008, p. 105). Eastwood and Ecklund (2008) found that staff members who engaged in self-care were able to ameliorate their burnout, but their compassion fatigue did not appear to be related to this. This indicates that staff can be suffering from compassion fatigue while still feeling successful in their jobs and without the more profound effects of burnout. Compassion fatigue, however, is highly likely to have an impact on the staff behavior with children. Burnout in staff appears to be predictive of later compassion fatigue. In this study, reading for pleasure and receiving support outside of work appeared to protect workers from compassion fatigue. Eastwood and Ecklund (2008) suggested that the best way to ameliorate compassion fatigue in

staff in RTCs is to address burnout risk. They additionally suggested that intervening around staff stress levels, and supporting staff in developing and maintaining good self-care practices outside of work can improve staff retention and improve the childcare environment. Eastwood and Ecklund (2008) found that the most salient indicator of staff burnout was whether or not staff felt stressed, and whether they felt that they had activities outside of work that helped them deal with work-related stress. These questions will be included in the SPARTAC-US questionnaire.

Milieu Therapy

Milieu therapy is the spontaneous, interpersonal treatment that occurs between clients and staff, in an environment moderated by the staff (Treischman, Whittaker, & Brendtro, 1969). Eighty-three percent of AACRC (2000) member institutions report that they use milieu therapy as a treatment modality. Research on milieu therapy is assessed.

The goal of the therapeutic milieu remains, as defined by Abroms (1969), to put limits on pathological behavior and to build psychosocial skills through interpersonal interaction. This remains a goal even today (Aiyegbusi & Norton, 2004). Patient-centered, humanistic approaches to interaction and safety of clients is an important goal of milieu therapy, and the staff on the floor are often responsible for the structuring of such treatment, whose express goal is to create an optimal healing environment (Mahoney, Palyo, Napier, & Giordano, 2009). This treatment is based on creating an environment in which the client can feel safe enough to heal, and is an expressly collaborative approach with staff and clients.

Problematically, milieu therapy has not been well-researched or compared to other intervention formats (Mahoney, Palyo, Napier, & Giordano, 2009). Additionally, it has not been compared to other intervention styles in any recent studies. This suggests that milieu therapy is in need of research, and the SPARTAC-US would provide access to some elements of this layer of

treatment. Leichtman (2006) noted that most RTCs are likely to state that they have a milieu, and that it is therapeutic, but that these terms are left largely undefined or vague. Leichtman's solution is to break down milieu elements into the other 23 hours, wherein staff model skills and intervene in crisis situations. When manualized, it has also not been clear that any codified strategies of milieu practices are qualified as evidence-based, except for positive peer culture (Leichtman, 2006).

Effects of Staff Intervention

This dissertation is explicitly based on the empirically-supported assumption that staff is important in the delivery of milieu therapy, as well as a primary source of care for SED youth (Bettman & Jasperson, 2009; Moses, 2000a; Goocher, 1971). Therefore, studies that focused on interventions directly on staff in RTCs or related institutions are reviewed.

It is much harder to measure the effectiveness of interventions with staff than with the SED youth, because it is difficult to measure the effectiveness of residential care as a whole, and because milieu therapy is not a validated construct (Butler & McPherson, 2007). However, some studies have been done into the realm of intervening with staff in order to create positive change. The Assaulted Staff Action Program (ASAP) was designed explicitly to work with staff to debrief them after an incident in which a nurse staff was assaulted (Flannery, Fulton, & Tausch, 1991). ASAP aimed to prevent the onset of traumatic symptoms such as post-traumatic stress disorder in staff after such critical incidents happened. One of the findings was that after the implementation of ASAP with staff and nurses, the overall level of incidents in the institution went down. While later findings have been mixed, it does indicate a possible chain of action where implementing changes within the staff will create change in the behavior of the clients (Flannery, Anderson, Marks, & Uzoma, 2000). It is hypothesized that better trained staff will

have better responses to their clients, which support Joy's (1981) assertion that negative staff responses lead to negative client outcomes. These studies are direct interventions with staff that appear to produce change within the institution as a whole (Flannery, Fulton, & Tausch, 1991; Flannery, Anderson, Marks, & Uzoma, 2000). One weakness in the generalizability of this research is that it is based exclusively on work with adults. This suggests that assessment of staff in residential may assist in residential treatment outcomes.

Several communities in the Netherlands have begun research into staff working with clients with intellectual disabilities who are housed in RTCs (Huitink et al., 2011; Willems et al., 2011; Ziljman et al., 2012; Roeden et al., 2012a; Roeden et al., 2012b). As mentioned, there are some notable differences in the level of training, with many staff having nursing degrees and almost all of them having some form of degree. Some other differences between those studies and ones that would be ideal for this dissertation are that the staff are better educated and from a different culture with different values, that the clients are adults, and that the mental health systems in the Netherlands has more resources than those here. However, despite this, these studies are all about instruments created to directly assess staff interactions with clients, which is why they are included in this study. These studies, gone into specifically below, are the generation and testing of instruments to measure specific staff-client relationships in residential care. Each instrument is a measure of how a staff interacts with a specific child, which is not the aim of the SPARTAC-US; however, some generalization of the factored constructs in question will be applied to help guide the generation of questions for the SPARTAC-US.

The Staff-Client Interactive Behavior Inventory (SCIBI) is an instrument developed to measure the interpersonal relations between a staff and a particular client, as measured by the staff (Willems et al., 2011). The SCIBI measures the interactive profile of staff and their

relationships with clients. The factor loadings indicated themes in questions that have been named as follows: assertive control questions, hostile interpersonal behaviors, friendly behaviors, support-seeking behaviors, proactive thinking, self-reflection behaviors, and critical expressed emotion behaviors. These factors have been found to be reliably measured by the SCIBI. Questions regarding interpersonal response style are modified to apply to all clients, rather than a single client, and included in the SPARTAC-US.

The Student-Teacher Rating Scale (STRS) concluded that there are three reliable factors in their rating of relationships between individual clients with an intellectual disability and staff (Roeden et al, 2012a). Each questionnaire is addressed to a specific staff-client dyad, and thus staff fill them out for each of the clients with whom they work. While specific, this creates difficulties in generalization, as mentioned above. Conflict, dependency, and closeness appear to be the three primary factors involved in the questions. These constructs will be compared to factors groupings on the SPARTAC-US in order to assess construct validity of this dissertation project.

Solution-focused coaching (SFC) is a method of promoting strengths-based reasoning with staff that are working with individuals with intellectual disabilities in the Netherlands (Roeden et al., 2012b). SFC was utilized with thirteen treatment teams working with thirteen different individuals with intellectual disabilities. By noting exceptions in client's pathological behavior, and focusing primarily on how the client is improving, SFC offers a very different point of view for the staff than normal, which is often focused on tallying negative behaviors and maintaining a particular level of safety and self-regulation. And while this particular study suffers from a number of methodological flaws from the point of view of controlled, comparative research, it addresses directly intervening with staff. And while there is no capability for a

control group due to ethical concerns, it still provides a view of positive change due to staff intervention (Butler & McPherson, 2007; Roeden et al., 2012b). In order to measure pre and post levels of change, the staff was measured on the STRS about their direct relationships with particular clients on whom they received coaching. In general, the SPARTAC-US would differ in that it would serve as a pre and post measure for staff overall in an institution, rather than with individual clients. This would allow researchers to measure how effective an ideological or theoretical shift was affecting the staff's perception of treatment in a fast and general way, rather than with individual clients at any given time, for which this measure would be more effective.

In summary, staff members in RTCs need effective research (Bettman & Jasperson, 2009; Butler & McPherson, 2007). This is due to a lacking evidence base, difficulty in determining what measures to use, and lack of entry points into the system. Staff is a viable access point to treatment where measurement may be useful, both for demographic data and for pre- and post-test interventions. Staff are often highly-stressed and under-trained, insofar as they have been measured, which is not often (Butler & McPherson, 2007; Braxton, 1995). Precedent is set by studies that have found improvements in client and RTC unit functioning when intervening with the staff (Flannery, Fulton & Tausch, 1991; Roeden et al., 2012b).

Chapter 3: Methods

The survey was created in two parts. Each portion will be discussed in detail below. The first part was to deliver the survey to a smaller sample of direct care workers in a residential treatment center. Following this administration, the goal was to refine the questions based on collected responses and staff experience of the survey. This first round of delivery involved taking the survey and an interview to refine question the question format and wording and to determine if the sample being surveyed agrees with the design of the survey (Fowler, 1995). The second part was to deliver the survey online to a much larger sample of direct care workers from residential treatment centers. Exploratory factor analysis was run and factor loadings were reviewed in order to create tentative theoretical underpinnings to direct care staff evaluation of residential care.

Prospective Participants

The SPARTAC-US first draft survey was delivered in person to staff who are currently working in RTCs. The staff filled out the survey as it stood in the first draft. Staff were selected from varied RTCs, in order to create a broad survey of potential viewpoints. This avoided boxing in view points that would be biased by only one institution. Various sites were polled by calling their clinical directors in person to determine if it was feasible. Two sites were able to participate within the available time frame. Sixteen staff were available from the pool of prospective participants at each site, and were then invited to participate in this dissertation project. Written consent was obtained from all participants prior to the delivery/administration of the survey.

The second draft was delivered by an online survey system with the intention of creating a broad database of answered surveys. Inclusion criteria were assessed with a single question: ”By selecting ’Yes‘ to this question, I am certifying that I am currently a staff in a

residential treatment setting for children in the United States over 18 years of age.“ A common, online survey system was used, in order to ensure that delivery was maximized, and reliable. The online version of the survey included an electronic informed consent form. While this format is less reliable than those delivered in person, the survey was able to reach ninety-seven people during an open period of two to four weeks. In addition, there was a 10% that an online participant was asked to take the Professional Quality of Life Scale (ProQOL-5) as well as the SPARTAC-US, in order to determine if the SPARTAC-US Compassion Satisfaction section accurately assesses staff compassion fatigue (Stamm, 2009). This led to 24 individuals filling out the ProQOL-5 as well as the SPARTAC-US. Before and during this two-week period, clinical directors at various member sites of the AACRC were contacted in order to see if their institution would be interested in giving the survey to their staff.

Survey Design

The SPARTAC-US, in its current draft, was developed based on factor loadings of similar questionnaires, and based on themes that have emerged from the research on RTCs as mentioned in the literature review. These factors emerge from qualitative research about staff motivations and staff-client interactions (Moses, 2000a; Roeden, Maaskant, Bannink, & Curfs, 2012; Willems et al., 2011). The questions were designed using Likert scales as the primary form of question. It should be noted that there is controversy around the idea of Likert scales, in terms primarily of their measurement, not their use (Jamieson, 2004; Norman, 2010). Likert scales are often inaccurately used as interval scale data, while it is not clear whether the distance between two options (such as “totally agree” and “agree”) are the same distance apart as another two subsequent options (in this case “agree” and “neither agree nor disagree”; Jamieson, 2004). This informs the use of statistical measures in the end, but does not affect factor loading, which can be

performed on ordinal data. Questions are arranged into the following subgroups: motivation questions, psychopathology beliefs personal, treatment beliefs, beliefs about personal efficacy, workplace satisfaction questions, interpersonal style questions, and vicarious trauma questions (see Appendix A).

The first draft of the survey was given to all sixteen first round participants, followed up by an interview about the questions, as suggested by Fowler (1995). This allowed for the viewpoints of the staff to inform the creation of the final draft. Also, this will allowed for some correction in the ambiguity of wording to be addressed and modified before the survey was sent out as a final draft.

Statistical Procedures

Factor loading was performed using the Statistical Product for the Social Sciences (SPSS), version 20. This process was used to determine whether or not any of the questions group together into factors. When they did, the factors were then labeled by looking at the grouped questions and analyzing them for themes. Once factors were selected, extraneous questions were excluded based on the following criteria: questions that are too highly correlated with other questions or questions that are too ambiguous to earn a consistent response or questions that cross-load on multiple factors (Fowler, 1995; Hooper, 2010). Once factors were found, they were analyzed for reliability, and translated into *t* scores. Those *t* scores were then correlated with ProQOL *t* scores in order to determine if there is any apparent relationship between them. Finally, items that were not present in the exploratory factor analysis, due to having a categorical format, were used as the dependent variable to determine if there is any relationship between categorical variables and the factors that emerged from the SPARTAC-US.

The Professional Quality of Life Scale (ProQOL) version 5 by Stamm (2009) was used to

determine if any factors correlated with known concepts of compassion satisfaction and compassion fatigue. The ProQOL produces one scaled score that indicates compassion satisfaction, and two scores to reflect compassion fatigue. The two compassion fatigue scales are burnout, and secondary traumatic stress. Burnout indicates the exhaustion, anger and despair felt by people who are struggling with the compassionate elements of their work. Secondary traumatic stress indicates the exposure to trauma, both secondary and primary, that the worker is feeling, as well as the fear that is generated by this.

Chapter 4: Results

The results section of this dissertation project is broken into two sections: qualitative survey feedback and refinement, and exploratory factor analysis of the final survey. This is done to ensure that the qualitative and quantitative results of this survey are sufficiently separated for ease of understanding. The final chapter of this dissertation project will discuss both sets of results and their implications.

Qualitative Survey Feedback and Refinement

Participants

The first sample was a seven person group of midlevel residential supervisors at a rural residential site in a Midwestern state. These supervisors spend more than 90% of the time with the clients, but have a stronger role in planning the unit's activities and supervising other staff. All residential supervisors in this first group were male. Four participants identified as white, Caucasian, or European-American. The remaining three participants identified as black or African-American. This sample had an average age of 36, an average height of 71 inches (5'11"), and an average weight of 243 lbs. The average length of employment was 12 years and one month. The average expected length of continued employment in this field was seven years. Every participant offered verbal feedback during this focus group. In this initial group, the survey took approximately nine minutes for all parties to complete.

Approach to Data Analysis

After completion, participants were asked how the survey reflected their experience as residential staff, what questions they felt were ambiguously worded and needed further definition, or what questions were missing from the survey overall. Following is a summary of their feedback about the survey with relevant quotes.

With regard to reflecting their experience, the staff did not posit that there were any missing areas of information, and in general seemed satisfied with the design of the survey. While they did offer feedback on individual items, it appears that the different topics included in the SPARTAC-US are able to encapsulate the experience of being a staff in residential. This suggests that no alterations need to be made to the form or format of the survey itself.

Some questions on the SPARTAC-US were regarded as ambiguous, and the staff requested further explanation of some terms. An interpersonal style question reads: "In general, when I am angry, I let clients know." This question was responded to with worry by one of the staff that "angry" may convey the wrong connotation to the reader. He stated, "I think it's important to check in with my staff, with clients, but I'm thinking people will get the wrong idea about 'angry.'"

Another element of ambiguity came up for the motivation check boxes in the statement, "I have values I want to impart to the next generation." One of the staff present indicated that he felt that his generation may have had some values that were not worth imparting, and others that were. He stated, "I have *some* values I want to pass on, but not others," indicating that the question needs some adjustment in order to accurately reflect his motivation for engaging in this work.

The staff also provided some feedback about what they felt was missing from the survey. The first missing element proposed was an additional motivation of wanting to understand others. One of the staff suggested that he is, "interested in how people work." He added that, "If you like to roll up your sleeves and get to know people, then this is good work," indicating that he is in the job for its highly intensive and social nature.

Another staff member suggested that he felt that there is an additional struggle for

children in residential, specifically. This staff member showed concern that sometimes children are set up to fail (although he rejected this language when I used it) in that they are returned to difficult environments where they cannot maintain the positive gains they have made. He told a story about a client of his that he would have to drive to home visits, stating:

> [He] has to pass by two, three cliques of gangs to get to school, you know? He's a young African-American guy. He says to me "you trying to teach me all of these skills but you're sending me back to the jungle".... We send these kids to their environment, they got to adapt to survive…. He's got these… difficult backgrounds with him.

Other staff member echoed this sentiment, stating that sometimes the family that they were sending a kid back to might be actively detrimental to the client's mental well-being. This discussion ended with the suggestion by another staff member of a question that might read, "Has there been enough preparation for the kids to go back to their community," clearly indicating the need for residential counselors to help clients have the ability to transition to potentially dangerous environments. The initial round of survey design missed this focus on an environment outside the RTC as an area of concern for the staff.

After this initial delivery, the following question was added to the online version of the survey, under the efficacy section of the questionnaire: "On average, I feel like I have prepared the children I work with to successfully adapt to the environment they are discharging to." This question was placed after the initial two efficacy questions. In addition, the wording was changed on one answer and one question. First, the answer "I have values I want to impart to the next generations" was altered to read, "I have some values I want to impart to the next generations" within the staff motivation question in order to allow for the sense that not all values a person has are to be transmitted. Second, the question, "In general, when I am angry, I let clients know,"

was changed to “In general, when I am angry or frustrated, I let clients know,” in order to allow more leeway in the feelings represented by the question. Furthermore, the questions on intervention regarding medication management and individual therapy under the section Treatment Beliefs were removed, in that this writer felt they were better reflected in the section Staff Specific Treatment Questions. I did not add an alternative option for the motivation section because I felt that the prosocial motivation for this work could be better accounted for by the other motivation questions. For the final version of this survey, see Appendix B.

As a complication to this portion of the design of the survey, further sites were not visited due to difficulty attaining contact, consent, and time to arrive on site and deliver the survey within the time constraints of this dissertation project. This placed this writer in the position of needing to move forward with the second round of survey participants with only seven subjects in the first survey group. Therefore, the above listed changes are the only changes that were made before the second, online round of surveys was delivered. This is considered to be a major limitation of this dissertation project.

Secondary Data Collection

A second site became available after the final survey data collection began online. I added this group for additional information should this survey be refined beyond the scope of this dissertation. In addition, these additional voices provide insight into the mindset of the direct care staff taking the SPARTAC-US, and were felt to be a meaningful addition to the qualitative portion of this dissertation. This second group spanned two separate units of staff within one treatment institution. This treatment institution is an urban institution with multiple units within a major Midwestern city.

Participants for Secondary Data Collection

Data collection for the second site was done in two groups. The first group had one male and two females. The average age of these direct care staff was 27 years of age. One participant identified as African-American, one as Caucasian, and the third as Hispanic. The average length of employment at this institution was three years. The average height was 69 inches (5'9"). The average weight was 175 lbs. This first group completed the survey within 10 minutes.

All three participants in this group offered feedback. This group did not feel that there were any questions that needed to be removed, and felt that the survey was able to capture the experience of being a residential staff. They also offered the following feedback.

Two different staff members offered other motivations for working as a residential direct care staff. One staff stated that he wanted to work in residential because of his own traumatic background, stating "[I] grew up with trauma as a youth." One of the other participants offered that she "wanted to work with kids" as her primary motivation. Both of these appear to be sufficiently different from the stated motivation answers as to possibly merit their own options in revisions of this survey, going forward. It is possible that the desire to work with children may not be a valuable addition to the questionnaire as secondary reasons may be more important.

One staff members raised the point that the wording on the questions "I believe that the most effective intervention for children in residential care is medication management" and "I believe that the most effective intervention for children in residential care is individual therapy" created a false dichotomy between two options that the staff felt were both necessary in equal measure. This point indicates that the word choice used in the treatment questions can create the impression that one cannot, for example, completely agree with more than one question under the Treatment Beliefs section. This indicates that, possibly, different word choices should be

used in the future, as it is not the intent of the questions to force the survey-participant to choose one intervention above others.

One staff member raised the point that there are few questions about the actual structure of the treatment environment from the point of view of the staff. For example, this staff member suggested question asking about how much one-on-one time the staff is able to spend with clients. This suggests that this staff member is interested in being able to represent how much time they are able to spend with clients. Wording on this question would have to be represented in percentage of a shift, in that many institutions have different lengths of shift. In addition, this staff member also suggested questions on how the staff is able to intervene with the clients. When asked to elaborate, he requested questions asking about whether staff "set limits," or "problem solving with a kid," or letting the child "act out."

Finally, a staff member suggested alterations to the compassion satisfaction question, stating that the response "I am stressed" was insufficient, because it did not address where the stress was coming from, saying, "What about stress during the work week, like I see how you got 'are you stressed' on here, but how about 'how do you rate your stress coming in on a Monday' versus 'how do you rate your stress at the end of your work week?'" This staff member was able to elaborate as to why he wanted these changes, saying, "I guess you could say something like 'how do you feel like the stress affects your ability to perform your job?'" This indicates that this staff member is keenly aware of his own stress levels and may want the survey to reflect awareness of how stress affects work, rather than a global assessment.

The second group had two males and four females. The average age of these direct care staff was 30 years of age. Two participants identified as BLK or African-American, three identified as white or Caucasian, and one identified as Asian. The average length of employment

was two years and one month. The average height was 68 inches (5'8"). The average weight was 171 lbs. This second group completed the survey in 11 minutes.

All staff persons except one were able to offer verbal feedback. These staff felt that no questions needed to be removed, and that this survey accurately reflected staff experience. This second group offered the following feedback.

One staff members requested the ability to choose more than one motivation. This would allow for a greater wealth of information and options regarding why direct care staff work in residential. It is my fear that it may also provide too much information for this question to be meaningful. In addition, this staff requested that in the item, "I believe I will remain employed in this field of work for at least the next _____ years (please answer numerically)," the phrase "this field of work" should be made to be more specifically understood as to intent. The intent of the item was to ascertain for how many years the direct care staff intended to work as a direct care staff, and the item should reflect this.

Another staff echoed the sentiment of the prior survey group that the Treatment Beliefs section's use of the phrase "needs most," in reference to different treatment modalities, makes it difficult to answer the question. They suggested that perhaps rating different treatments in terms of perceived importance might be a better way to ask the question. A different staff members offered that structure and discipline are different, with reference to the item, "I believe that what children in residential need most is structure and discipline" (also under Treatment Beliefs), stating that structure and discipline are different: "I believe they're both important, but structure is different. Discipline is punitive."

Another staff member stated, "I hate these kinds of questions. Some days I know why I'm here, and some days I don't!" This appears to refer to a fundamental ambiguity of questions

like this, in that answers may not feel stable to the staff answering them. This staff member followed this up by noting, “Each kid is individual. Would individual therapy work best with some? Sure.” In addition, another staff member made a comment about the format of the Likert scales, stating, “‘Don’t know’ isn’t great. ‘Sometimes’ might be better. Maybe ‘indifferent,’” and then jokingly added, “Maybe ‘Don’t give a shit.’”

Finally, one staff member requested that there be an item added regarding their relationship with the administration. He stated, “I think there should be some questions about the relationship with the administration. Not contact every day, but whether we have a relationship with them.” This indicates a need for direct care staff to be able to address their views on the administrative staff’s capacity to interact with them.

Exploratory Factor Analysis of Final Survey

Participants

Ninety-seven participants entered into the online survey and began answering questions. Of those, 72 completed the final question, which indicates that 25 people were unable to complete the survey. This is considered a complication in the present study. Five people did not meet criteria as assessed by the inclusion question, ‘‘By selecting ‘Yes’ to this question, I am certifying that I am currently a staff in a residential treatment setting for children in the United States over 18 years of age,” or did not consent to the survey, and an additional 20 did not complete the survey through to the final question. Reasons for not completing were not collected, which is a minor limitation of the present study.

Other possible limitations include small sample size. While this is an area of some controversy, sample size is an important element of exploratory factor analysis (Meyers, Gamst, & Guarino, 2006). Meyers, Gamst, and Guarino (2006) stated that 50 participants is a very poor

sample size, and 100 is a poor sample size; they also suggested having a ratio of participants to questions (referred to a *N*:*p*) of 10:1. Hooper (2010) suggested a minimum of 100 participants. Regarding both of these, the present survey lacks the numerical power to provide anything further than speculative results.

In counter-response, MacCullum, Widamon, Zhang, and Hong (1996) argued that satisfactory exploratory factor analysis does not require a strict *N*:*p* ratio, and that some exploratory factor analyses have been completed with an *N*:*p* ratio of as low as 1.3:1. They posited that what is more important are high levels of communalities in the data (preferably higher than 0.5), and a high level of overdetermination. Overdetermination is a complex construct, but can be estimated by calculating the ratio of questions to the number of factors (referred to *p*:*r*). The suggested estimate is that there should be several times as many questions as there are factors. As communalities and overdetermination increase, sampling error decreases and accurate recovery of population solutions can be obtained with a relatively low sample size.

As a qualification to this dissertation project, surveys were only collected for final inclusion in the exploratory factor analysis when they had answered the final question, and had fewer than three missing answers. This was in an attempt to mitigate incomplete surveys, with the belief that if the last question was not answered, it would be impossible to tell if the subject had closed out of the survey early, or if they had simply decided not to answer the question. An additional qualification to this data is that 75% (54 participants) are female, and 25% (18) are male, which may not accurately represent the distribution of the direct care worker population; however, there is no data on gender distribution in the actual residential care population, and therefore we are unable to determine how much this alters the sample's accuracy. This left a total of 72 participants through all rounds of data analysis.

Exploratory factor analysis was applied to the data, following Hooper's (2010) guidelines. These guidelines indicate that the statistical method used within SPSS should be the principal axis factoring, with Promax rotation. Principal axis factoring is designed to help find underlying theoretical constructs within data. Hooper (2010) noted that items with high levels of cross loading should be removed from the analysis, as well as items that do not load to any factors. Principal axis factoring was run until a set of items remained in which there was no crossloading or factors that did not reach a 0.4 level of agreement with one factor. This produced an analysis with a total of 26 items (which indicates that 21 items either loaded for more than one factor or did not load to a factor at all) participants.

These 26 items were subject to principal axis factoring to determine dimensionality of the data. The Keyser-Meyer-Olkin was 0.730 (See Appendix C, Table C4, which is above the .6 threshold suggested by Kaiser (1974), and the Bartlett's Test of Sphericity reached statistical significance ($p < 0.001$), indicating that the correlations were sufficiently large for exploratory factor analysis. In addition, there were no Heywood cases, which would have been serious challenges to validity. Factors were rotated obliquely using Promax rotation. The pattern matrix shows all factor loadings (See Appendix C, Table C2). This is considered the final analysis for the purposes of this dissertation.

The final analysis appears to meet both the communality and overdetermination qualifications recommended by MacCullum, Widamon, Zhang, and Hong (1996). Over half of the communalities (14 out of 26, or 53.8%) exceeded 0.5, indicating that there is a low likelihood of sampling error (See Appendix C, Table C2). The six extracted factors explain 66.8% of the variance. This number of factors was determined by eigenvalues, analysis of the scree plot, and cumulative variance. The ratio of questions-to-factors is 26:6, or 4.3, which meets suggested

standards. While the dataset remains small, it appears that sampling error can be said to be low, and that factors extracted have enough statistical strength to be spoken of as representing the population.

The six factors will be broken down into the questions that strongly loaded to the factor and statements of reliability. The factors will also be named by themes extracted from the questions involved. This portion of exploratory factor analysis is not an exact science, but it is believed that the questions each factor is built from appear to follow a theme (Hooper, 2010). Questions are included in a factor when their loading is 0.4 or higher.

The first factor is comprised of the following eight items, with factor loadings listed in parenthesis after each question:

- I feel that my supervisors understand the children's concerns. (0.850)
- I feel that my supervisors understand my concerns. (0.831)
- I feel that the clinical staff know what is best for the clients. (0.757)
- I feel that my workplace is helpful for the clients' well-being. (0.694)
- I feel that I am adequately trained for the work that I do. (0.633)
- I feel supported by my fellow staff. (0.578)
- I feel that I am compensated (pay and benefits) for the work that I do. (0.519)
- I feel that my workplace is helpful for my mental well-being. (0.434)

Reliability analysis produced a Cronbach's alpha of 0.855, which is higher than Nunnaly's (1978) gold standard of 0.7, suggesting that this factor is reliable enough to be used in further analysis. This factor appears to have items about overall satisfaction with the systemic structure of the RTC; therefore, this factor has been labeled Systemic Satisfaction.

The second factor is comprised of the following three items, with factor loadings listed in parenthesis after each question:

- In general, I think about why I am going to do things with clients. (0.887)
- In general, I think about what I am going to do with clients. (0.885)
- In general, I think about how I am going to do things with clients. (0.807)

Reliability analysis produced a Cronbach's alpha of 0.927, which is much higher than Nunnaly's (1978) gold standard of 0.7, suggesting that this factor is reliable enough to be used in further analysis. This question appears to include items regarding the proactive planning of activities with clients; therefore, this factor has been labeled Proactive Planning.

The third factor is comprised of the following four items, with factor loadings listed in parenthesis after each question:

- In general, I enjoy spending time with clients. (0.822)
- In general, I work well with clients. (0.776)
- In general, I value the clients I work with. (0.610)
- In general, I am nice to clients. (0.571)

Reliability analysis produces a Cronbach's alpha of 0.818, which is higher than Nunnaly's (1978) gold standard of 0.7, suggesting that this factor is reliable enough to be used in further analysis. This factor appears to include items regarding the subject's enjoyment of working with clients; therefore, this factor has been labeled Client Enjoyment.

The fourth factor is comprised of the following five items, with factor loadings listed in parenthesis after each question:

- In general, I tell clients my opinion directly. (0.833)
- In general, when I am frustrated or angry, I let clients know. (0.683)

- In general, I let clients know when I do not agree with them. (0.602)
- I believe that most of the children in residential struggle because of a physical or chemical problem in their brain. (-0.480)
- I believe that what children in residential care need most is to be kept away from people they could hurt. (-0.448)

The final two listed items are negatively loaded on the factor, indicating that they decrease in relation to increases in the first three items, and vice versa. Reliability analysis (which required reversing the negatively loaded questions, such that a score of one was changed to five, a two to a four, etc.) produces a Cronbach's alpha of 0.725, which is higher than Nunnaly's (1978) gold standard of 0.7, suggesting that this factor is reliable enough to be used in further analysis. This factor appears to include items in a relationship that indicates issues to do with beliefs about client agency; therefore, this factor has been labeled Client Agency.

The fifth factor is comprised of the following four items, with factor loadings listed in parenthesis after each question:

- What is your age? (0.776)
- In general, I handle my rules in a strict manner. (-0.655)
- In general, I enforce rules despite what clients think. (-0.629)
- Number of years and months of employment at current institution (yy/mm): (0.595)

The second and third items were negatively loaded on the factor, indicating that they decreased as the first and fourth items increased, and vice versa. Reliability analysis (which required reversing the negatively loaded questions, such that a score of one was changed to five, a two to a four, etc.) produced a Cronbach's alpha of 0.207, which is much lower than Nunnaly's (1978)

gold standard of 0.7, suggesting that this factor is not reliable enough to be used in further analysis, and therefore will not be labeled.

The sixth factor is comprised of the following two items, with factor loadings listed in parenthesis after each question:

- On average, I feel successful with the children I work with in residential care. (0.855)
- On overage, I feel like the children I work with in residential care will be successful in life (0.616)

Reliability analysis produced a Cronbach's alpha of 0.764, which is higher than Nunnaly's (1978) gold standard of 0.7, suggesting that this factor is reliable enough to be used in further analysis. This factor appears to include items to do with the direct care staff's sense of personal efficacy; therefore, this factor has been labeled Personal Efficacy.

T scores were calculated for each scale and correlations were checked to determine overall agreement between scales. As with the reliability scales, the recoded negative items and positively coded items within a factor were summed in order to create a total score for each factor. These were then converted into *t* scores for increased agreeability between variables. A Pearson correlation was run between the five reliable factors to determine levels of apparent agreement between them (See Appendix C, Table C4). The Systemic Satisfaction scaled score correlated positively with the Proactive Planning scale (r=0.349, p<0.01), the Client Enjoyment scale (r=0.386, p<0.01), and the Personal Efficacy Scale (r=0.404, p<0.01). The Proactive Planning scaled score correlated positively with the Client Enjoyment scale (r=0.511, p<0.01), and the Personal Efficacy scale (r=, p<0.01). The Client Enjoyment scaled score correlated positively with the Personal Efficacy scale (r=, p<0.01). The Client Agency scaled score did not

correlate with any of the other scales.

The ProQOL was set to a 10% chance of being administered to participants. Twenty-four participants completed the ProQOL. Not every participant completed every question for every scale of the ProQOL, therefore, missing cases were excluded pairwise when scoring the ProQOL. The ProQOL has three scales, Compassion Satisfaction, Burnout, and Secondary Traumatic Stress. These three scales were analyzed via Spearman's rho correlations against the factors produced by the SPARTAC-US. Spearman's rho was chosen because the data for these analyses was not parametric, in that this subsample had less than 30 subjects. The scores for the ProQOL were computed by reversing the scores on negatively worded questions, and then adding the numerical values of those answers together into a single, unified score as directed by the scoring manual (Stamm, 2009). The scores from the ProQOL were combined into scale scores and then transformed into *t* scores, and then compared with the t-scores computed for the SPARTAC-US.

Fifteen analyses were computed, with each of the three ProQOL scales (Compassion Satisfaction, Burnout, and Secondary Traumatic Stress) being measured against the five reliable SPARTAC-US factors (Systemic Satisfaction, Proactive Planning, Client Enjoyment, Client Agency, and Personal Efficacy). Refer to Appendix C (Table C5). Ten of 15 factor-pairings produced significant correlations.

The ProQOL's Compassion Satisfaction scale was positively correlated with every scale on the SPARTAC-US: Systemic Satisfaction (r=0.636, p<0.05), Proactive Planning (r=0.742, p<0.05), Client Enjoyment (r=0.614, p<0.05), Client Agency (r=0.498, p<.05), and Personal Efficacy (r=0.475, p<0.05). This indicates that those who are satisfied by their work as a helping professional are also likely to be satisfied with their RTC's supervisory system. This also indicates that those who proactively plan their activities with clients are also likely to be satisfied

with their work. They are also likely to directly tell clients how they feel, and to believe that clients are not dangerous or physically or chemically damaged. Those who are satisfied with their work are also likely to feel effective and that their clients will be successful.

The ProQOL's Burnout scale was negatively correlated with the SPARTAC-US's Systemic Satisfaction (r=-0.532, p<0.05), Proactive Planning (r=-0.491, p<0.05), and Personal Efficacy scales (r=-0.529, p<0.05). This indicates that those who are experiencing high levels of burnout would be less satisfied with their working environment and its effectiveness, low levels of planning ahead with their clients, and may also feel unsuccessful in their work. The reverse of this would also be true, in that those experiencing low levels burnout would feel that their workplace was effective, would plan ahead about their clients, and would feel effective as staff.

The ProQOL's Secondary Traumatic Stress scale was negatively correlated with the SPARTAC-US's Systemic Satisfaction (r=-0.499, p<0.05) and Personal Efficacy scales (r=-0.493, p<0.05). This indicates that those who are experiencing high levels of secondary traumatic stress are likely to be dissatisfied with their workplace, and to feel that the RTC is detrimental to the health of clients and staff. This also indicates that those who are experiencing secondary traumatic stress are less likely to feel that they are successful with the children they work with. Both of these would be true in reverse as well, indicating that low levels of secondary traumatic stress would likely have increased scores on the Personal Efficacy and Systemic Satisfaction scales.

Finally, tests were run to determine difference between groups that answered differently on different discriminatory questions that were not included in the exploratory factor analysis, to see if these questions provided any additional worth to this analysis. Due to the small sample size and uneven statistical groupings, non-parametric statistics were used, which do not assume equal

sample size, equal variance, or large numbers in the sample. These analyses were run as independent samples tests using the following items as the independent variables: ”The main reason I chose to work in residential care was: (please choose one),” ”Gender,“ ”What is your race/ethnicity,“ ”I believe that what I provide most to my clients is,“ ”Of the following interventions, I believe the children benefit primarily from.”

When the motivation item, ”The main reason I chose to work in residential care was: (please choose one)” was used as the independent variable, the results of a Kruskal-Wallis test were significant on the factors of Proactive Planning ($H = 14.536$, 4 *d.f.*, $p < 0.01$) and Personal Efficacy ($H = 11.359$, 4 *d.f.*, $p < 0.05$). The Kruskal-Wallis indicates that the ranked means of the motivations were not significantly different on the scales of Systemic Satisfaction, Client Agency, or Client Enjoyment. Post-hoc testing on the Proactive Planning scaled score differences indicated a significant difference between people who selected the option ”I primarily needed employment,“ and ”I find this work emotionally rewarding.“ Post-hoc testing on the Proactive Planning scaled score differences also indicated a significant difference between people who selected the option ”I primarily needed employment,“ and those who selected, ”I am working to repay those who helped me when I was young.“ The post-hoc tests for the separate items on the Personal Efficacy scale did not indicate any significant differences between the ranked means of the pairs of motivational answers.

When using Gender as the independent variable, the results of a Mann-Whitney test were significant for the factor of Personal Efficacy ($U = 324$, $p < 0.05$). Mann-Whitney tests indicate that the ranked means of the genders were not significantly different on the scales of Systemic Satisfaction, Proactive Planning, Client Agency, or Client Enjoyment. Females rated higher on the Personal Efficacy scale than males by a significant amount. This may indicate that male

direct care staff tend to feel less successful with residential clients than female direct care staff.

In order to use the item ”I believe what I provide most to my clients is:“ as the independent variable some recoding was done in order to allow for easier discernment of themes. The two responses, ”Care” and ”Appreciation,” were recoded into a single response titled ”Responsiveness,“ in line with the literature on parenting styles (Santrock, 2011). The two responses, “Structure” and “Discipline,” were recoded into “Demandingness,” for the same reason. When “Responsiveness” and “Demandingness” scores were used as the independent variable, the results of a Mann-Whitney test were significant for the *t* score of the factor Proactive Planning ($U = 294$, $p < 0.05$). Mann-Whitney tests indicated no significant difference in the mean ranks for the scales of Systemic Satisfaction, Client Enjoyment, Client Agency, or Personal Efficacy. Those who selected a ”Responsiveness” option for what they primarily provide appeared more likely to endorse that they proactively plan activities with their clients.

Some items provided no significant results when analyzed for between-group differences. When using the item “Of the following interventions, I believe children primarily benefit from:” as the independent variable, Kruskal-Wallis tests indicated no significant difference between the five reliable SPARTAC-US factors. When using Race/Ethnicity as the independent variable, Kruskall-Wallis tests indicated no significant differences between the five reliable SPARTAC-US factors.

Chapter 5: Discussion

For purposes of this dissertation, the discussion section will be split into two sections: analysis of the qualitative portion and analysis of the quantitative data. This will be preceded by a short discussion of the major limitations of the study overall. The conclusions will then be discussed overall, including future ramifications and directions.

A major limitation for this study was the number of participants. While statistically the sample analyzed arguably represents the population due to its statistical power, more numbers may allow for better feedback through qualitative focus groups with, and with more thorough extraction of factors, hopefully including more questions meeting reliability criteria for inclusion in the extraction of those factors. It would be hoped that, going forward, more participants might be gained to create a more complete picture of the attitudes of staff in residential.

Another notable limitation was gender skew within the quantitative portion of the survey. While the sample of subjects given the live version of the survey did had a notable skew in gender towards males, having a ratio of ten males to four females, the quantitative portion had an increased number of females, with 75% of the usable sample (54 participants) being female, and the remaining 25% (18 participants) being male. While not clear, it may be possible that the focus group feedback portion of the survey may have reflected a more masculine perspective than if there had been more females, which may have altered how the second, final survey was generated for the exploratory factor analysis.

Discussion of Qualitative Focus Group Analysis

The qualitative portion of the survey provided interesting results. Many of the staff felt that altering the item wording may be highly important to getting an accurate picture of staff assessment. Many of the treatment questions are worded “I believe what clients in residential

need most is....” Staff in the feedback portion found this wording to be constrictive, and suggested that it be changed to make it more clear that staff are able to select the option “Completely Agree” to different forms of intervention. One staff stated that she believed that combined medication and therapy was the most effective intervention format, and that the item format of the survey made it seem that she could not pick two. This is clearly a fault in the survey design, and questions need to be modified to allow this, as a ranking system is not the intent. The intent was to prevent a prospective staff from answering “Agree” or “Completely Agree” to all interventions. Perhaps wording the questions as “I believe that children in residential require [individual intervention] as a high priority in their treatment.” Stating that multiple treatments can have a high priority may allow for the survey-taker to select multiple options at the same rating without confusion.

While some participants found the item’s Likert scale format to be confusing, it is hard to find a better alternative. In order for exploratory factor analysis to be performed, having numerically coded scales is important (Hooper, 2010). It may be more helpful to have different options for further revisions of this survey, as a larger scale can help exploratory factor analysis meet statistical considerations; however, there is a point at which this becomes visually confusing (MacCullum, Widamon, Zhang, & Hong, 1996). It may be more effective to have each section read: “Please answer the following items with a scale of 1 to 10, with 1 being completely disagree, and 10 being completely agree,” or something similarly worded. While this may increase ambiguity somewhat, it may also solve the problem one staff mentioned with the intermediate answer being “Don’t Know.” It will have to be explored whether forcing the answer choices to follow this format will increase or decrease usefulness of the survey. Perhaps this is a question that can be asked in future focus groups, with a sample of questions presented in both

formats.

It is worth noting that some staff members have an excellent sensitivity to the client's world. In the very first focus group, the staff was quite concerned with the environment that the client was returning to. While it was apparent that these staff felt that they had a strong handle on the client's environment in the RTC they worked in, they clearly had fears and concerns about the environments that the clients were discharging to. It is interesting, then, that this question did not meet reliability criteria for inclusion in the final factor analysis.

In the second focus group (the first group of the second site), one staff wanted items to reflect how much time a staff was able to spend with the clients directly (referring to this as 'one to one' time). This indicates that this staff felt spending direct, one on one time with clients was important to their treatment, or at least to being an effective staff. The wording of being able to, rather than simply electing to, implies that there are constraints on the ability to spend time with the client, which is an area that should have been explored further. For example, there is a difference between struggling to be able to spend one-on-one time with a client because you are understaffed, or because there is a crisis, or because there is supervisory or administrative strictures in place that present this, all of which may be options as to why such time is not available. This is a line of inquiry that may be beneficial, but adding questions may detract from one of the most useful elements of the survey: it took at most eleven minutes to finish.

In the third focus group, the point was up brought that all children are different, and may benefit from different interventions, saying that individual therapy may work for one kid, and implying that it may not work for others. This is not considered a problem of the survey's design as much as it is a problem of intent. The survey is intended to measure staff attitudes and perceptions of treatment on the whole. Unfortunately, this necessarily loses specificity.

Another direct care staff also wanted the presence of an item that indicated whether they felt they had a relationship with the administration, as separate from the supervisory and clinical staff. It is possible that this indicates that direct care staff believe that there are three separate tiers of individuals in the system, in terms of their relationship with the direct care staff. Since no comments or objections were made to either the items addressing clinical staff or the supervisory staff, it can be assumed that direct care staff find those to be valid qualifications. If this is the case, it is important to include a measure of staff satisfaction with the administrative element of the RTC they work for. As a tentative addition to this project, the items "I feel that the administrative staff understand my concerns" and "I feel that the administrative staff understand the children's concerns" will be added, in that the administrative staff affect both the staff and client's interactions with the RTC.

Many staff had comments or questions regarding the idea of selecting which was their primary motivation for working in residential care. The options selected were based on the qualitative observations of Moses (2000b) and my own experiences. Other options emerged throughout the different focus groups. One staff member stated that she wanted "to work with kids." This option seems like it would be less likely to generate meaningful information, in that I suspect that many people who work in residential want to work with kids, but have other reasons for choosing residential that are more specific and therefore more useful in terms of information provided. Another staff member stated "[His] own trauma history," as his primary reason for entering this work, which introduces the direct care staff's personal history as a reason to get involved. Another staff noted that he was primarily interested in "how people work," and that this was a job for "getting to know people." These responses indicate that there is an interest in working with people, and may be indicative of a layperson's viewpoint on the psychological

understanding of others.

A specific limitation of these focus groups was the presence of supervisory figures. In the first group, all participants were supervisors, meaning they directly interacted with other direct care staff in a supervisory, potentially punitive fashion. In the second and third groups, the survey was delivered during treatment team meetings, in which supervisory figures were present. This may have skewed responses to the survey by preventing staff from being able to express concerns about supervisory style or the clinical team's understanding of the clients, which are addressed by specific questions on the SPARTAC-US.

Overall, I found the focus group format to be of high utility, but it could use improvement. All three focus group sessions were constrained by time, and therefore it is possible that information was not gathered that could have been. Time constraints are a part of residential treatment, however, and may not be avoidable. As mentioned, one of the benefits of the survey was that it had a relatively low time-to-complete in the focus group samples, although such data was not collected for the online portion. Being able to complete the survey in around ten minutes means that systemically, it can be introduced into staff meetings, debriefings, or other periods of time, with little difficulty. This allows for easy delivery as the survey is refined in the future.

Further focus-group sessions should be completed in order to determine if there are areas that do require improvements, or it would be beneficial to add more questions to the survey. It is my intent to ensure that the SPARTAC-US stays short, such that it can be easily entered into the structure of RTCs in general, especially noting how direct care often have little time for training or reflection (Braxton, 1995).

Exploratory Factor Analysis and Related Findings

Some limitations of the quantitative analysis of the SPARTAC-US are the low sample size, the high number of questions unusable in the factor analysis due to format, and the low number of questions in the final analysis due to reliability. The low sample size has been addressed in the analysis, but will summarized here saying that while the sample's results are statistically quite likely to represent the population, it is possible that other questions may have met the criteria for reliability if the sample size had been larger. In addition, more statistical strength is always better. At the stage of design, it was seen as likely to be useful to have several discriminatory variables that avoided the Likert scale, in order to reduce the time it took to complete the survey. However, this also reduced the number of items that could be entered into the exploratory factor analysis. In addition, the number of items on the survey able to be included in the exploratory factor analysis was a fraction of the total number of items available (26 out of 49). This was in part due to the item format as mentioned before, but also due to the low reliability and factor cross-loadings of many of the remaining items. This means that several items did not load to factors, indicating that they have a low level of usefulness. Other items loaded to multiple factors, which is referred to as cross-loading, indicating that they are not specific enough to be reliably included in only one factor.

While these limitations detract from the overall findings by reducing the number of questions usable in the factor analysis, the exploratory factor analysis has produced significant and interesting findings. These are the five reliable factors produced by exploratory factor analysis (and one unreliable factor), the frequency loadings of certain questions, and the between-group differences between different discriminatory questions and the factor loadings of those groups.

The factors, labeled and discussed above, were determined to be reliable and were then converted into scaled scores using the *t*-score scale. Those factors are Systemic Satisfaction, Proactive Planning, Client Agency, Client Enjoyment, and Personal Efficacy. Each factor will be discussed in detail for its implications.

The Systemic Satisfaction factor includes items about the efficacy of the workplace for both the direct care staff and client's well-being, the supervisors understanding of both client and direct care staff's concerns, the belief that the clinical team understands the needs of the clients, the belief in support from fellow co-workers, and the belief in adequate training and compensation. This factor appears to indicate that staff have a separate set of beliefs about the efficacy of their RTC on the whole and their belief in the efficacy of it as a system. It is interesting to note that this includes the items "I feel that my workplace is helpful for my mental well-being" and "I feel supported by my fellow staff." That these items are also included with items about the accuracy and efficacy of the system to treat clients suggests that having an effective structure in place for helping staff feel supported by their peers and by the workplace environment is extremely important in helping staff feel that the entire system is running effectively. That these items covary indicates that the direct care staff may feel that the entire RTC has a "character" of being helpful or unhelpful.

It is notable that compensation and training also vary with the sense that the RTC has an adequate supervisory and workplace structure, as this indicates that direct care staff may feel that their workplace's success is dependent on its ability to train and pay them. It could be inferred from this that direct care staff believe that they are an important part of the client's treatment, and in order to be part of an efficacious RTC, they need to be paid and trained adequately for their jobs. It also indicates that feeling some sense of parity with the treatment team, such as

being accorded higher or more appropriate benefits and pay, as well as being trained sufficiently by the treatment team (which Braxton (1995) suggests is a common feature of RTCs) creates a sense of support which helps staff feel that the workplace is effective.

The Proactive Planning scale includes three items: "In general, I think about why I am going to do things with clients," "In general, I think about what I am go to do with places," and "In general, I think about how I am going to do with my clients." This factor appears to have an obvious grouping and inherently asks the question as to whether this factor is inherently useful. It is possible that these three questions could be more effective grouped into a single question about proactively planning client activities, such as "In general, I think about what, how, and why I am going to do things with clients." This would help reduce the number of questions, which coincides with the design intent of continuing to keep the survey small.

The Client Enjoyment scale includes items about working appropriately and nicely with clients, as well as valuing clients and enjoying their company. This scale indicates that staff that value their clients interact positively with them. This indicates that direct care staff may have an individual set of feelings about the value of their clients in their lives.

One of the more diverse factors produced by the exploratory factor analysis was the Client Agency scale. This factor includes three items about being direct in interactive style: letting clients know when you are angry or frustrated, letting clients know the staff's opinion directly, and letting clients know that they disagree with them. These three items were negatively correlated with the belief that children need to be kept away from people that the clients can hurt, and also the belief that children in residential struggle because of physical or chemical problems in their brain. This indicates that the more a direct care staff member believes that a child is dangerous, and the more he or she believes the client's problems are structural, the less likely he

or she is to directly, honestly engage with a client. This could indicate that when the direct care staff member believes that a client is dangerous and has structural brain problems, the more he or she needs to be coddled. Or, this belief that the less a client is responsible for his or her problems, and the less autonomous he or she is, the less likely it is necessary to be direct and honest with him or her.

The stated hypothesis of this dissertation project was that a factor would emerge with the following characteristics: an indication of the belief that children in RTCs suffer from chemical or physical problems with their brain, an indication of a stricter style of interaction, and an indication that medication is the most effective intervention. While one factor emerged that suggested that direct care staff who believe that children have physical or chemical problems in their brain, medication was not directly addressed by this. In addition, the Client Agency factor indicates that direct care staff who believe that children in residential care suffer from physical or chemical problems in their brain are actually less likely to tell clients how they are feeling at any given time suggests the possibility of the opposite.

The final reliable factor was termed the Personal Efficacy factor. This factor contains two items: "On average, I feel successful with the children I work with in residential care," and "On average I feel like the children I work with in residential care will be successful in life." That these two items correlate together is no surprise. If one feels successful working with a child, then they should feel that the child will be successful in life.

One unreliable factor emerged from the SPARTAC-US, containing the following questions: "What is your age?," "In general, I handle my rules in a strict manner," "In general, I enforce my rules despite what clients think," and "Number of years and months of employment at current institution (yy/mm)" The items regarding age and length of employment were

negatively correlated with the items about handling rules. Unfortunately, this factor demonstrated low levels of reliability.

The five reliable SPARTAC-US factors were compared with each other using Pearson's correlations. Four of the SPARTAC-US factors were correlated significantly with each other: Systemic Satisfaction, Proactive Planning, Client Enjoyment and Personal Efficacy. The final factor, Client Agency, is not correlated with any of the others. This provides some interesting insight into how residential direct care staff may view their workplace. This might indicate that there is a solid difference between the view of the RTC and whether the direct care staff find it rewarding and whether they view the kids as being dangerous and possibly damaged.

The ProQOL's three factors of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress, were compared with the five reliable SPARTAC-US factors. There were 24 valid ProQOLs filled out, which is a low sample size. This is a limitation of this analysis; however, nonparametric statistics were used to help control for this.

The Systemic Satisfaction scale's positive correlation with the ProQOL's Compassion Satisfaction scale, and its negative correlation with the Burnout and Secondary Traumatic Stress scales. When taken in this light, the correlation and causation question takes an interesting light. In that Compassion Satisfaction and Systemic Satisfaction are positively correlated, does that mean that people who find their work rewarding tend to be satisfied with their RTC's supervisory and workplace structure regardless of whether it is or not in reality? Or are they finding their work rewarding because their workplace, supervisory and clinical support is effective? As is usually the case, it is highly likely that it is a combination of the two. It also makes sense that those who find their workplace structure to be unsatisfactory will also be more

likely to feel the effects of burnout and secondary traumatic stress. Therefore, it appears possible that satisfaction with the workplace is a buffer against burnout and secondary traumatic stress.

The Proactive Planning scale was positively correlated with Compassion Satisfaction and negatively correlated with Burnout, indicating that direct care staff who find their work rewarding are also likely to think ahead with their clients. It could be inferred that direct care staff who are feeling the effects of burnout, and not finding their work rewarding, are avoiding thinking activity planning with their clients or perhaps about their clients in general, as a form of avoidance. Or it could be seen as direct care staff that rely on their gut instincts about clients, rather than thinking ahead, may find their work less rewarding. One reason for this might include that relying on instinct may be less effective with clients, thereby increasing the likelihood of a stressful work environment. Another reason might be that burnout, possibly caused by a stressful working environment, as noted by the negative correlation between Systemic Satisfaction and Burnout, may decrease a direct care staff's resources to think and plan ahead with clients. This might be due to other constraints such as inadequate training, time dedicated to paperwork or meetings. It does appear that proactive thought with clients is a strong indicator of work satisfaction.

The Client Enjoyment scale correlates positively Compassion Satisfaction scale of the ProQOL. While this appears logical, it is notable that it does not appear to be correlated in any fashion with either Burnout or Secondary Traumatic Stress. This may mean that the positive interactions and value of clients is not related to how much a direct care staff is burdened by experiencing either burnout or vicarious trauma effects.

The Client Agency scale appears positively correlated with Compassion Satisfaction. This indicates that direct care staff who find their work emotionally satisfying will also be more

likely to believe that their clients have a high degree of autonomy, and should be interacted with honestly regarding the direct care staff's opinion of them. As with Client Enjoyment, this scale does not correlate positively or negatively with the Burnout or Secondary Traumatic Stress scales. This may mean that this belief about children is unchanging dependent on levels of accumulated stress reactions within the work setting for direct care staff.

The Personal Efficacy factor scale correlates positively with Compassion Satisfaction, and negatively with Burnout and Secondary Traumatic Stress. This indicates that people who find their work rewarding are also likely to feel successful. The negative correlations with Burnout and Secondary Traumatic Stress indicates that beyond feeling like the workplace is efficacious to mental well-being (as with Systemic Satisfaction), feeling unsuccessful with the clients they work with will may influence direct care staff feel the effects of burnout and vicarious trauma effects.

A major finding is that all SPARTAC-US factors correlated positively with the Compassion Satisfaction factor of the ProQOL. Therefore, the question could be asked whether the specific factors of the SPARTAC-US are even necessary, since relative levels on all five SPARTAC-US scales can be estimated by looking at a person's score on the Compassion Satisfaction scale on the ProQOL. In response, it is unclear whether the different factors of the SPARTAC-US have a differentiating value. To test this, the categorical questions that were unable to be included in the exploratory factor analysis were used as the independent variables for different factors from the SPARTAC-US. Again, sample size limits these analyses such that non-parametric statistical methods had to be used to assess them. It is my belief that perhaps any of these between-group differences would change if the sample size increased.

When gender was used to split the sample, there was a significant difference between the

two groups on the Personal Efficacy scaled score. Females were more likely to rate themselves more favorably on a sense of personal efficacy with the children they worked with than males. It is unclear why this is true. This is a topic that would benefit from further research.

The five different staff motivations were also tested as an independent variable for the five reliable SPARTAC-US factors. There was a significant difference between those who selected that they chose this job because they primarily needed employment and those who selected that they wanted to repay those who helped them when they were young on the factor of Proactive Planning. This indicates that those who just need to work are less likely to exercise forethought on interacting with their clients or to consider measured interventions rather than simply reacting, than those who having gotten into the job because they wanted to work because they were helped when they were young. It seems a reasonable extrapolation that those who wish to repay those who helped them may be thinking of how they were helped when they were younger. This passing-it-forward of good intentions may be mixed with their own life learning and their formal training (Braxton, 1995).

Another difference was found between those who stated that they needed primarily to be employed and those who find this work emotionally rewarding, again on the factor of Proactive Planning. This creates an alternate possible indication that those who plan ahead with their clients may find the act of planning to increase their sense of success with the children. This may also indicate that the direct care staff find planning ahead with clients to be, in itself, emotionally rewarding, especially if it is successful. It seems likely that planning ahead may actually make one more successful with clients, although that is not measured by this analysis, it appears to be reflected as a viable possibility in these data.

There was no difference between the three possible answers to the first Staff Specific

Treatment Question: “Of the following interventions, I believe clients benefit most from:”. The possible answers to this item are “Therapy,” “Medication and Therapy,” and “Medication.” There was no difference on any of the five reliable SPARTAC-US factors and these three options. Since this expressly includes the Client Agency scale, which appears to be about whether clients are dangerous or damaged, it should be noted that this argues for retaining the null hypothesis of this dissertation: there is no meaningful difference between staff who believe medication should be the primary intervention and those who do not, on any of the scales, but specifically the Client Agency scale.

The Staff Specific Treatment item of “I believe what I provide most to my clients is:” has four answers: “Care,” “Appreciation,” “Structure,” and “Discipline.” These four answers were recoded into two answers according to the two proposed axes of parenting styles: Responsiveness, which includes Care and Appreciation, and Demandingness, which includes Structure and Discipline (Santrock, 2011). Responsiveness included both the “Care” and “Appreciation” answers to the item. Demandingness included both the “Structure” and “Discipline” answers to the item. When coded in this way, and using the recoded Responsiveness/Demandingness dichotomy as the dependent variable, a significant difference was found on the Proactive Planning factor scale of the SPARTAC-US. Those who scored that they used a more demanding interactive style were less likely to plan ahead. This indicates that having a rote set of assumptions about structure or discipline may lead one to intervene less adaptively, and with generalized, rather than individualized, responses. If one believes that they are providing structure or discipline, it appears that the demands settled on the client by the direct care staff may not be adapted to the client (which would require forethought, as reflected by the Proactive Planning scale). Instead, the demands placed on the client by the direct care

staff may be generalized from the direct care staff's interpretation of the milieu's demands given to them by their own experience, those that trained them, and their level of insight about clients (Braxton, 1995).

There is some question of what to do with cross-loaded or non-loaded questions (those questions that initially matched to more than one factor or did not load to any factor). Hooper (2010) recommends their removal from the analysis, but it is not clear if they should be removed from the survey. Would the SPARTAC-US survey meet its design intent if it were reduced to 26 Likert scale questions and a few categorical measures in the absence of the other 21 items. It is the opinion of this examiner that a redesign of the survey is necessary; however, the small sample size indicates that changes at this stage should be small and tentative, rather than broad and sweeping. This is partially due to the valuable nature of exploratory factor analysis in that items that do not meet the criteria for entrance into the exploratory factor analysis are not detracting from the analysis by being there. It is possible, although unlikely, that there was sampling error, or that other questions may join with other factors or produce new ones, depending on the analysis. Some questions, however, will be altered or removed at this stage.

For example, the Proactive Planning factor produced by the exploratory factor analysis does not appear to provide any meaningful information in the differences between the items added. The items included provide for the what, how, and why one interacts with their clients the way that they do. However, that these three questions load together so heavily, and that this factor correlates well with three other factors, indicates that this factor itself could be reduced to a single item that would read: 'In general, I think about what I am going to do with clients, and how and why I do it.' This reduces complexity, which is a design intent of the survey.

Additionally, the following 'Treatment Beliefs' questions will be removed: 'I believe that

the most effective intervention for children in residential care is medication management,' 'I believe that what children in residential care need most is to be cared for and appreciated,' and 'I believe that what children in residential need most is structure and discipline.' These are better suited to be answered by the categorical items under Staff-Specific Treatment Questions, in that they have possibly valid use as dependent variables, depending on the institution. Additionally, none of these questions load favorably on any of the reliable SPARTAC-US factors. This matches the design intent of keeping the survey short while maintaining the diversity of data. It could be argued that direct care staff stating that they believe that they provide care or appreciation versus structure or discipline is different from them believing that the residential clients need it most; however, it is not clear if this distinction is meaningful and it is more in line with the survey's design intent to know how the staff actually intend to act with the clients they work with.

The ProQOL's Compassion Satisfaction scale correlates strongly with all SPARTAC-US factors, which indicates that perhaps Compassion Satisfaction scale may be a simpler, more valid indicator of staff attitudes than the SPARTAC-US survey. While it appears a valid Compassion Satisfaction score would indicate roughly what levels a prospective direct care staff would score on the five reliable SPARTAC-US factors, it is also at the cost of considerable amounts of data. For example, data collected by the SPARTAC-US has possible uses in determining if the various factor scaled scores have a relationship with outcome data, such as number of restraints per month, difference in RTC unit style, and different shift attitudes.

It should be noted that this project is an ambitious undertaking. I could have stopped after the design of the initial survey, and still used that data to meet the criteria for a dissertation project. I strongly felt that the project needed to be validated in a statistical sense as well as

reflecting the opinions of direct care staff in order for this project to be worthwhile. As this is a project that I feel strongly about going forward as a professional, it was felt that a strong base of information was necessary for this project at the outset. Therefore, the decision was made to create a project in two stages so that this survey could produce valid data as this project goes forward.

As this is intended to be a pilot study for the survey design of the SPARTAC-US survey, it is clear that there is much work to be done before the survey is able to accomplish the level of data collection that is in line with design intent. A much larger sample base, as well as revising the questionnaire itself in order to ensure the validity of all items that remain on the SPARTAC-US have use. Limitations of the present study have prevented the survey from being able to incorporate data from several staff sources into the exploratory factor analysis. This affects the validity of the SPARTAC-US, whose design intent was to incorporate direct care staff opinion in the design of the survey. It is also clear that some input from RTC administration is important, as the SPARTAC-US needs to be useful to such institutions for collecting data. At this stage, while the SPARTAC-US has identified five reliable factors within direct care staff attitudes and perceptions, there is much work to be done before the SPARTAC-US will be ready to be used for the collection of data that is its intended purpose.

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Appendix A: Initial Survey

Staff Perception and Assessment of the Residential Treatment of Adolescents and Children in the United States

This survey is to help understand your beliefs about treatment within the residential setting. All information will be kept anonymous in order to protect your privacy. The results of this survey will be used only for research purposes.

DEMOGRAPHIC INFORMATION

Age: ____ Number of years and months of employment at current institution (yy/mm):____

Ethnicity/race: _____ Height: _____ Weight: _____

Please answer all questions as they apply to you over the most recent 30 days of your employment.

MOTIVATION QUESTIONS

The main reason I chose to work in residential care was: (please choose one)
□ I have values I want to impart to the next generations
□ I find this work emotionally rewarding
□ I am working to repay those who helped me when I was young
□ I primarily needed employment
□ I am interested in the field of psychology

I believe I will remain employed in this field of work for at least the next _____ years (please answer numerically).

PSYCHOPATHOLOGY BELIEFS

I believe that most of the children in residential care struggle because of a physical or chemical problem in their brain.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that most of the children in residential care struggle because of past events in their lives.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that most of the children in residential care struggle because of their previous or current relationships.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

TREATMENT BELIEFS:

I believe that the most effective intervention for children in residential care is medication management.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that the most effective intervention for children in residential care is individual therapy.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that the most effective intervention for children in residential care is family therapy.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that the most effective intervention for children in residential care is a safe environment.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that what children in residential care need most is to be kept away from people they could hurt.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that what children in residential care need most is to be kept away from people that have hurt them.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that what children in residential care need most is to be cared for and appreciated.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that what children in residential need most is structure and discipline. o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

Staff specific treatment questions
Please pick one:
I believe that what I provide **most** to the clients in my care is
□ Care
□ Appreciation
□ Structure
□ Discipline

Of the following interventions, I believe the children primarily **benefit** from:
□Medication
□Medication and Therapy
□Therapy

EFFICACY BELIEFS

On average, I feel like the children I work with in residential care will be successful in life.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

On average, I feel successful with the children I work with in residential care.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

WORKPLACE QUESTIONS

I feel that my workplace is helpful for my mental well-being.
o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that my workplace is helpful for the clients' well-being.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that my supervisors understand my concerns.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that my supervisors understand the children's concerns.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that the clinical staff know what is best for the client.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that I am compensated (pay and benefits) adequately for the work that I do.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that I am adequately trained for the work that I do.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

INTERPERSONAL STYLE

In general, I handle my rules in a strict manner

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I disregard the criticisms of clients.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I enforce rules despite what clients think.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I frequently set or enforce limits.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I let clients know when I do not agree with them.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I tell clients my opinion directly.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, when I am angry, I let clients know.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I value the clients I work with.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I enjoy spending time with clients.

o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I work well with clients.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I am nice to clients.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I appreciate support and encouragement from clients.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I think about **what** I am going to do with clients.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I think about **how** I am going to do things with clients.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I think about **why** I am going to do things with clients.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

COMPASSION SATISFACTION

I feel supported by my fellow staff.
o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I am stressed.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I have activities outside of work that help me deal with the stress caused by work.

o----------o----------o----------o----------o

o Completely Disagree Disagree Don't Know Agree Completely Agree

Appendix B: Final Survey

Staff Perception and Assessment of the Residential Treatment of Adolescents and Children in the United States

This survey is to help understand your beliefs about treatment within the residential setting. All information will be kept anonymous in order to protect your privacy. The results of this survey will be used only for research purposes.

DEMOGRAPHIC INFORMATION

Age: ____ Number of years and months of employment at current institution (yy/mm):____

Ethnicity/race: _____ Height: _____ Weight: _____

Please answer all questions as they apply to you over the most recent 30 days of your employment.

MOTIVATION QUESTIONS

The main reason I chose to work in residential care was: (please choose one)
□ I have some values I want to impart to the next generations
□ I find this work emotionally rewarding
□ I am working to repay those who helped me when I was young
□ I primarily needed employment
□ I am interested in the field of psychology

I believe I will remain employed in this field of work for at least the next _____ years (please answer numerically).

PSYCHOPATHOLOGY BELIEFS

I believe that most of the children in residential care struggle because of a physical or chemical problem in their brain.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that most of the children in residential care struggle because of past events in their lives.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that most of the children in residential care struggle because of their previous or current relationships.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

TREATMENT BELIEFS:

I believe that the most effective intervention for children in residential care is family therapy.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that the most effective intervention for children in residential care is a safe environment.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that what children in residential care need most is to be kept away from people they could hurt.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that what children in residential care need most is to be kept away from people that have hurt them.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that what children in residential care need most is to be cared for and appreciated.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I believe that what children in residential need most is structure and discipline. o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

Staff specific treatment questions
Please pick one:
I believe that what I provide **most** to the clients in my care is
□ Care
□ Appreciation
□ Structure
□ Discipline

Of the following interventions, I believe the children primarily **benefit** from:
□Medication
□Medication and Therapy
□Therapy

EFFICACY BELIEFS

On average, I feel like the children I work with in residential care will be successful in life.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

On average, I feel successful with the children I work with in residential care.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

On average, I feel like I have prepared the children I work with to successfully adapt to the environment they are discharging to.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

WORKPLACE QUESTIONS

I feel that my workplace is helpful for my mental well-being.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that my workplace is helpful for the clients' well-being.
o----------o----------o----------o----------o
Completely Disagree Disagree Don't Know Agree Completely

Agree

I feel that my supervisors understand my concerns.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that my supervisors understand the children's concerns.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that the clinical staff know what is best for the client.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that I am compensated (pay and benefits) adequately for the work that I do.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I feel that I am adequately trained for the work that I do.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

INTERPERSONAL STYLE

In general, I handle my rules in a strict manner

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I disregard the criticisms of clients.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I enforce rules despite what clients think.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I frequently set or enforce limits.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I let clients know when I do not agree with them.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I tell clients my opinion directly.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, when I am angry or frustrated, I let clients know.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I value the clients I work with.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I enjoy spending time with clients.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I work well with clients.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I am nice to clients.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I appreciate support and encouragement from clients.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I think about **what** I am going to do with clients.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I think about **how** I am going to do things with clients.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

In general, I think about **why** I am going to do things with clients.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

COMPASSION SATISFACTION

I feel supported by my fellow staff.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I am stressed.

o----------o----------o----------o----------o

Completely Disagree Disagree Don't Know Agree Completely Agree

I have activities outside of work that help me deal with the stress caused by work.

o----------o----------o----------o----------o----------

o Completely Disagree Disagree Don't Know Agree Completely Agree

Appendix C: Tables and Graphs

Table C1

Principal Factor Analysis After Removal of Crossloading or Nonloaded Items

Final SPARTAC-US Factor Analysis Matrix[a]

	Factor					
	1	2	3	4	5	6
I feel that my supervisors understand the children's concerns.	**.850**	-.070	-.137	-.135	-.028	.082
I feel that my supervisors understand my concerns.	**.831**	-.055	.139	-.163	-.134	-.079
I feel that the clinical staff know what is best for the client.	**.757**	.091	-.121	.008	-.043	.106
I feel that my workplace is helpful for the clients' well-being.	**.694**	-.208	.099	.028	.055	.185
I feel that I am adequately trained for the work that I do.	**.633**	.196	-.131	.060	.203	-.079
I feel supported by my fellow staff.	**.578**	.260	.138	-.122	-.144	-.027
I feel that I am compensated (pay and benefits) adequately for the work that I do.	**.519**	.002	-.011	.191	.158	-.124
I feel that my workplace is helpful for my mental well-being.	**.434**	-.110	.360	.179	-.006	.061
In general, I think about why I am going to do things with clients.	.078	**.887**	-.024	.050	.032	-.040
In general, I think about what I am going to do with clients.	.010	**.885**	.038	.041	.037	.032
In general, I think about how I am going to do things with clients.	-.110	**.807**	.163	-.083	.017	.141
In general, I enjoy spending time with clients.	.081	-.046	**.822**	.108	.056	.001
In general, I work well with clients.	-.094	.044	**.776**	-.141	.010	.214
In general, I value the clients I work with.	.204	.149	**.610**	.215	-.103	-.204
In general, I am nice to clients.	-.120	.120	**.571**	-.276	-.010	.059
In general, I tell clients my opinion directly.	-.037	.025	-.154	**.833**	-.116	.203
In general, when I am frustrated or angry, I let clients know.	-.106	.127	-.077	**.683**	.002	-.139
In general, I let clients know when I do not agree with them.	-.047	.062	-.076	**.602**	-.221	.170
I believe that most of the children in residential care struggle because of a physical or chemical problem in their brain.	-.032	.195	-.132	**-.480**	-.240	.050
I believe that what children in residential care need most is to be kept away from people they could hurt.	-.022	.031	-.008	**-.448**	-.022	.003
What is your age?	-.110	-.017	.175	.001	**.776**	.125
In general, I handle my rules in a strict manner.	-.118	-.162	.275	.072	**-.655**	.008
In general, I enforce rules despite what clients think.	-.100	.045	.125	.073	**-.629**	-.105
Number of years and months of employment at current institution (yy/mm):	-.093	.041	.217	.122	**.595**	-.119
On average, I feel successful with the children I work with in residential care.	-.058	.073	.180	.038	.058	**.855**
On average, I feel like the children I work with in residential care will be successful in life.	.307	.035	-.046	.058	.047	**.616**

Note: Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.
a. Rotation converged in 6 iterations.
Bold indicates that item met the 0.4 cut-off for inclusion in a factor.

Table C2
Communalities of Principal Factor Analysis

Communalities of Final SPARTAC-US factor analysis

	Initial	Extraction
Number of years and months of employment at current institution (yy/mm):	.477	.428
What is your age?	.643	.635
I believe that most of the children in residential care struggle because of a physical or chemical problem in their brain.	.419	.267
I believe that what children in residential care need most is to be kept away from people they could hurt.	.492	.200
On average, I feel like the children I work with in residential care will be successful in life.	.646	.586
On average, I feel successful with the children I work with in residential care.	.689	.827
I feel that my workplace is helpful for my mental well-being.	.550	.476
I feel that my workplace is helpful for the clients' well-being.	.657	.570
I feel that my supervisors understand my concerns.	.761	.703
I feel that my supervisors understand the children's concerns.	.774	.662
I feel that the clinical staff know what is best for the client.	.731	.628
I feel that I am compensated (pay and benefits) adequately for the work that I do.	.425	.328
I feel that I am adequately trained for the work that I do.	.612	.507
In general, I handle my rules in a strict manner.	.625	.568
In general, I enforce rules despite what clients think.	.506	.428
In general, I let clients know when I do not agree with them.	.659	.495
In general, I tell clients my opinion directly.	.674	.766
In general, when I am frustrated or angry, I let clients know.	.553	.475
In general, I value the clients I work with.	.726	.692
In general, I enjoy spending time with clients.	.734	.748
In general, I work well with clients.	.738	.665
In general, I am nice to clients.	.493	.390
In general, I think about what I am going to do with clients.	.847	.853
In general, I think about how I am going to do things with clients.	.792	.797
In general, I think about why I am going to do things with clients.	.805	.827
I feel supported by my fellow staff.	.642	.561

Note: Extraction Method: Principal Axis Factoring.

Table C3
Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.730
Bartlett's Test of Sphericity	Approx. Chi-Square	962.959
	df	325
	Sig.	.000

Table C4

Correlations Between SPARTAC-US Factors

Correlations Between Reliable SPARTAC-US Factors

		Systemic Satisfaction	Personal Efficacy	Proactive Planning	Client Enjoyment	Client Agency
Systemic Satisfaction	Pearson Correlation	1	.404	.349	.386	.117
	Sig. (2-tailed)		.000	.003	.001	.336
	N	72	72	71	71	70
Personal Efficacy	Pearson Correlation	.404	1	.362	.324	.157
	Sig. (2-tailed)	.000		.002	.006	.195
	N	72	72	71	71	70
Proactive Planning	Pearson Correlation	.349	.362	1	.511	.015
	Sig. (2-tailed)	.003	.002		.000	.901
	N	71	71	71	70	69
Client Enjoyment	Pearson Correlation	.386	.324	.511	1	.094
	Sig. (2-tailed)	.001	.006	.000		.444
	N	71	71	70	71	69
Client Agency	Pearson Correlation	.117	.157	.015	.094	1
	Sig. (2-tailed)	.336	.195	.901	.444	
	N	70	70	69	69	70

Table C5

Correlations Between SPARTAC-US Factors and ProQOL-5 Factors

		Secondary Traumatic Stress	Burnout	Compassion Satisfaction
Systemic Satisfaction	Correlation Coefficient	-.499	-.523	.636
	Sig. (2-tailed)	.013	.012	.002
	N	24	22	21
Proactive Planning	Correlation Coefficient	.026	-.491	.742
	Sig. (2-tailed)	.905	.020	.000
	N	24	22	21
Client Enjoyment	Correlation Coefficient	-.067	-.348	.614
	Sig. (2-tailed)	.756	.113	.003
	N	24	22	21
Client Agency	Correlation Coefficient	-.060	-.121	.498
	Sig. (2-tailed)	.790	.610	.030
	N	22	20	19
Personal Efficacy	Correlation Coefficient	-.463	-.529	.475
	Sig. (2-tailed)	.023	.011	.030
	N	24	22	21