

Examining the Effects of Structured and Non-Structured Therapeutic Activity
Programming in a Forensic Mental Health Treatment Facility

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ABSTRACT

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North Florida Evaluation and Treatment Center (NFETC) is an evaluation and treatment center for individuals with mental illnesses who are involved in the criminal justice system. NFETC offers services to adult males who are either incompetent to proceed to trial or have been judged to be not guilty by reason of insanity. In 2005, DCF implemented a system of structured programming in their state forensic psychiatric hospitals. Resident programming went from a referral based activity program (approximately 6 hours per week for each resident) to a structured activity program (approximately 24 hours per week for each resident).

In the previous system, a resident's involvement in the referral based activity program was initiated by the residents' counselor and based on the resident's interests. In the current structured TAP program, all residents now average 24 hours per week of activity involvement. Resident attendance is mandatory for those well enough to attend programming. Despite the importance decreasing length of stay (LOS) has on state legal and criminal systems, little research exists on the role recently implemented structured programming plays in resident LOS. This study contains Retrospective Quantitative analyses on the relationships between facility programming and resident demographics,

criminal charges, mental health diagnoses, LOS, and attendance and participation rates; as well as Qualitative analyses on program offerings and staff impressions of the current structured programming at NFETC.

The results suggest that, despite many differences between the samples of residents receiving the two programs, there is a therapeutic value to the activity programs offered regardless of the program setting. With consideration of staff perspectives and quantitative findings, the current program can be restructured to provide additional benefit. The benefits of activity programming in general were evident in the results of the analyses run separately for each program. Within the Referral based programming, residents with lower participation levels had an increased LOS. Within the structured TAP programming, residents with lower participation levels had an increased LOS and residents with high participation levels had a decreased LOS. These results indicate that involvement in therapeutic activities, regardless of programming format, may be beneficial in decreasing LOS.

The Qualitative staff interview component of the current research provided additional insight into issues related to the prior and current program offerings at NFETC, much of which were supported by the Quantitative data. Qualitative findings included staff impressions of both programs as well as issues regarding LOS, value of therapeutic activities, accessibility, attendance, resident choice, internal motivation, safety, program content, and resident participation. The issues, if addressed, have the potential to streamline the program at NFETC into a more effective and useful therapeutic element. These Quantitative and Qualitative findings should serve as suggestions for a program revamping at NFETC.

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CHAPTER ONE: INTRODUCTION

Recent estimates suggest that 50,000 - 60,000 defendants are evaluated for competency to stand trial each year, and that nearly 20 percent of these defendants are found incompetent by courts (Mossman, 2007). Defendants incompetent to proceed to trial (ITP) occupy more than 10 percent of the nation's state psychiatric hospital beds (Wortzel et al., 2007).

In 2006, multiple motions were filed against the state of Florida Department of Children and Families (DCF), the agency responsible for overseeing state-run psychiatric facilities. These motions were in response to DCF's failing to provide timely service to inmates with mental illness awaiting treatment that is necessary to manage symptoms and understand the legal process so these inmates can be declared competent and proceed to trial. These inmates languished in county jails waiting for a bed to become available at one of the state psychiatric hospitals. Florida law requires DCF to provide mental health treatment within 15 days after the inmate is ordered into care (Nesmith & Miller, 2006). DCF did not have the beds or funds available to provide the appropriate treatment within the required time frame; as many as 300 inmates waited in county jails for an available bed for weeks and sometimes months. Less than a year later, under new leadership, the wait list was eliminated and the average wait time went from 72 days to eight days (Miller, 2007). DCF added 300 beds at secure psychiatric hospitals and spent \$3.3 million for treatment at community mental health centers that were willing to treat nonviolent inmates who could be diverted from secure state facilities (Miller, 2007).

North Florida Evaluation and Treatment Center (NFETC) is an evaluation and treatment center for individuals with mental illnesses who are involved in the criminal

justice system, run by the DCF. NFETC offers services to adult males who are either incompetent to proceed to trial or have been judged to be not guilty by reason of insanity. The mission is to evaluate, treat and discharge in a manner which ensures proper safety, security and respect for rights. NFETC is a maximum security treatment facility, not a jail or prison; therefore, all individuals with mental illness who are in the custody of NFETC are referred to as residents, not inmates or offenders. NFETC treats its residents with dignity and respect while using a wide variety of treatment and rehabilitation techniques. Treatment may include medication, individual and group therapy, counseling, education, training and behavioral management as well as therapies involving art, music, recreation, horticulture, video production and work opportunities.

The issues faced by DCF emphasize the importance of decreasing ITP residents' LOS, while maintaining quality treatment capable of meeting residents' needs. NFETC is pushed by the state to restore ITP residents' competency as quickly as possible; a lower LOS means a faster turnaround, opening up a bed for another individual waiting in county jail. Approximately two years before the push to decrease the waiting list, DCF implemented a system of structured programming in their state forensic psychiatric hospitals. Resident programming went from a referral based activity program (approximately 6 hours per week for each resident) to a structured activity program (approximately 24 hours per week for each resident).

In the previous system, a resident's involvement in the referral based activity program was initiated by the residents' counselor. The resident was referred to a specific therapy in the Rehabilitation Therapy Department. Therapy programs were conducted in small groups, generally consisting of five or less residents. Individual goals were set for

each resident. The therapies included Art Therapy, Music Therapy, Horticultural Therapy, and Fitness Therapy. This referral was generally based on the resident's interest and each resident averaged 6 hours per week of therapy. In addition to the referral based activity program, group based modules were regularly scheduled for each building, and these groups covered topics such as competency and substance abuse. In this system, residents spent the rest of the week entertaining themselves; this generally involved watching TV or hanging out outside their building.

The structured programming, or Therapeutic Activity Program (TAP) as it's known to residents, consists of 3 one hour programs in the morning and 3 one hour programs in the afternoon, four days a week. In this system, all residents now average 24 hours per week of activity involvement. Resident attendance is mandatory for those well enough to attend programming; regular attendance in TAP permits residents' access to the canteen where residents can purchase snacks and beverages. Residents move from program to program with other residents from their building, approximately 20-25 residents. Programs include music, art, horticulture, educational video, crafts, physical exercise, and general recreation consisting of free time, video games, cards, or board games. The music, art, horticulture, craft, and physical exercise programs have general therapeutic goals for every resident: increased socialization, decreased manifestation of symptoms, appropriate social interaction, and increased awareness of leisure interests. Although specific activities in each program may be designed based on a resident's interests, individualized goals are not established. Individual residents' progress towards the general activity goals is not documented; however, their attendance and level of participation is documented in their resident record. For every activity their building is

scheduled to attend each day, each resident receives an indication of ‘present’ or ‘not present’ and total minutes spent in each activity are recorded in their record. For those indicated as present, participation level is ranked on a scale of 1-5 (i.e., Actively participated, Passively Participated, Remained Quiet, Quiet Yet Inattentive, and Disruptive, respectively). Within TAP, the substance abuse and competency modules are no longer scheduled for each building; while they may still be offered on a building by building basis around the TAP schedule.

Despite the importance decreasing LOS has on state legal and criminal systems, little research exists on the role recently implemented structured programming plays in resident LOS. Prior research has examined how various resident characteristics (demographics, clinical diagnoses, criminal history, etc.) relate to resident LOS, but little has been done to determine the role structured programming has, while taking resident characteristics into consideration as well. This study contains Retrospective Quantitative analyses on the relationships between facility programming and resident demographics, criminal charges, mental health diagnoses, LOS, and attendance and participation rates; as well as Qualitative analyses on program offerings and staff impressions of the current structured programming at NFETC. Results obtained from this research not only have agency and state wide implications regarding effective programming decisions, but also Public Health implications regarding community based services administered to the mental health community.

CHAPTER TWO: LITERATURE REVIEW

Varied Fields

Due to the nature of this study and the limited research on this topic within this particular population, the literature basis for this study lies at the intersection of the mental health, criminology, and leisure fields. The mental health system that serves as the setting for this study ascribes to the Recovery Philosophy and the services explored fall within the enrichment services, therefore the basis of Recovery Philosophy and the intention of such enrichment services is explored within this literature review. The nature of enrichment services brings to light Leisure services and their place within Criminal Justice settings which leads to an examination of Caldwell and Smith's four perspectives on leisure and crime (2006). These four perspectives are based on, and therefore warrant, a discussion of Osgood, Wilson, O'Malley, Bachman, and Johnston's (1996) Routine Activity Theory and Hirschi's (1969) Social Control Theory.

Length of Stay (LOS) serves as the dependent variable in a number of this study's analyses; therefore, literature exploring factors contributing to LOS has been included as well as literature examining factors related to mental health competency (the determining factor in resident discharge at NFETC). The current study explores the role of programming on LOS, hence research findings exploring the importance of treatment factors in resident LOS, structured programming, the value of leisure and recreational pursuits, and the implications of recidivism on LOS have also been included. Based on the literature findings, the significance and implications of this current research are discussed. Lastly, the aims and hypotheses of the current research are also stated.

Recovery Philosophy

The state of Florida's mental health services ascribe to the Recovery philosophy, "all interventions are grounded with the belief that with appropriate treatment, rehabilitation, and enrichment, persons with serious mental illness can learn to manage their symptoms, recover from their illness, and develop or recover functional skills which enable them to realize significant improvements in their quality of life" (Florida State Hospital, 2005).

The state of Florida's mental health services philosophy encompasses three main components: treatment, rehabilitation, and enrichment. The treatment services are focused on assessing, diagnosing and reducing the symptoms of distress in mental illness. Rehabilitation services are focused on developing skills and resource supports to enable individuals to overcome the functional disabilities which resulted from mental illness. The enrichment services are focused on maintaining/improving quality of life by increasing knowledge and abilities or developing/maintaining interests (Florida State Hospital (2005). The structured therapeutic activity program falls within the enrichment services.

Anthony (1993) describes recovery as:

A deeply personal, unique process of changing one's attitudes, values, feelings, goals, skills, and/or roles. It is a way of living a satisfying, hopeful, and contributing life even with limitations cause by illness. Recovery involves the development of new meaning and purpose in one's life as one grows beyond the catastrophic effects of mental illness (p.527).

Recovery is a multidimensional concept, there is no single measure of recovery, and therefore the recovery vision expands our concept of client outcomes to include self-esteem, adjustment, empowerment and self-determination (Anthony, 1993). According to the recovery philosophy, interventions can provide the client with more meaning, more purpose, more success, and more satisfaction, in addition to the traditional goals of less impairment and less disability. Anthony calls for recovery-oriented mental health systems to structure their settings so that recovery “triggers” are present. “Boring day treatment programs and inactive inpatient programs characterized by a dearth of recovery stimulants” must help "sow and nurture the seeds of recovery through creative programming” (p. 534). In an effort to further ascribe to the Recovery Philosophy and "sow and nurture the seeds of recovery through creative programming", NFETC has increased the frequency of their activity program offerings.

The Recovery Philosophy shares key concepts with the field of Public Health. According to Hutchinson et al. (2006), examination of how health promotion and wellness are understood in other fields, particularly in public health, allows for an understanding of the possibilities for health and wellness services for people with psychiatric disabilities.

In contrast to the field of mental health, the field of public health has long embraced a holistic, multidimensional, future-oriented view of health as vital not only to individuals but also to groups and communities...Public health definitions of wellness are extremely comprehensive and broad, indicating an underlying philosophy that suggests wellness implies living a balanced, fulfilling and optimal life (Hutchinson et al., 2006, p. 244)

Hutchinson et al. argue for the inclusion of multifaceted health promotion interventions for people with serious mental illness, interventions designed to reduce their risk and prevalence of co-morbid conditions and improve their overall functional health and quality of life. In a call for more research in the area of recovery, Anthony, Rogers, and Farkas (2003) suggest that:

Qualitative and non-traditional measures of studying important processes and outcomes related to recovery must be used, and the influence of nonrandomized trials for the development of evidence-based practice must be acknowledged.

Program principles and practices, rather than program models, should be our next focus of research, and the underlying values of our field should be operationalized and tested (p. 111-112).

This need underlies this dissertation's proposed research with NFETC.

Leisure and Criminal Theory

Caldwell and Smith (2006) described research relating to leisure and crime among adolescents as being summarized by four perspectives: Filled time perspective - time filled with prosocial activities cannot be filled with deviant activities; Association with deviant peers perspective - certain activities are more likely to instigate deviant behavior or association with a deviant subculture; Activity structure perspective - time spent in informal and/or unsupervised activities is likely to promote deviance, while time spent in supervised activities protects against it; Person/environment interaction perspective – Self control and attachment to conventional norms and activities protect against deviant behavior (p. 399). Caldwell and Smith derived the four perspectives from three well

known delinquency theories: Routine Activity Theory, Social Control Theory, and Differential Association Theory.

Osgood et al. (1996) describe Routine Activities Theory as shifting attention away from the personal histories of offenders and towards the dependence of crime on opportunities presented in the routine activities of everyday life. Within this frame of thought, Osgood et al. (1996) describe unstructured activities, those with no agenda for how time should be spent, to be more conducive to deviance. The authors maintain that the amount of structure in an activity is relevant because greater structure means that more time will be spent in designated ways, and this time will not be available for deviance.

Hirschi's (1969) social control theory also contributes delinquency to lack of involvement. In his description of "elements of the bond to conventional society", Hirschi describes the involvement or engrossment in conventional activities. The assumption being that a person may be simply too busy doing conventional things to find time to engage in deviant behavior. According to Sutherland, Cressey, and Luckenbill (1992) Differential Association Theory maintains that others affect delinquency only insofar as they influence an individual's associations with behavior patterns favorable and unfavorable to violation of law.

Although NFETC ascribes to the Recovery Philosophy, the recent programming shift to mandatory structured programming bears a great deal of similarity to Caldwell and Smith's (2006) filled time perspective and activity structure perspective. According to these theories, the shift from a referral based activity program (averaging approximately 6 hours per week for each resident) to a structured activity program

(averaging approximately 24 hours per week for each resident) would dramatically decrease residents' time and opportunity to engage in deviant behaviors at the center. Less time to engage in deviant behavior may mean more time to focus on recovery, possibly leading to a decreased length of stay. This dissertation will examine the impact structured programming has on LOS.

Length of Stay

Previous research examining the factors related to LOS has provided varied results. Dell, Robertson, and Parker (1987) found, in an analysis of factors related to LOS that, for offenders with mental illness, the only factor relating to the individual's charges significantly related to LOS was whether the offense had been sexually motivated. Factors relating to the seriousness and chronicity of their mental illness were more relevant; finding that the course of the illness, not the nature of the offense, was a dominant consideration in discharge decisions (Dell et al., 1987). Moran, Fragala, Wise, and Novak (1999) found previous employment to have a strong predictive power on LOS. Having been employed prior to the offense was predictive of shorter LOS. Moran et al. (1999) also found that age and education were predictive of LOS as well; resulting in longer stays for younger, less well-educated individuals.

Rodenhauser and Khamis (1988) examined the influence of diagnostic factors, patient histories, and hospital course on length of hospitalization and restoration to competency in a 110 bed maximum security forensic hospital. 376 patients admitted and discharged between June 1980 and February 1984 were included in the study. Rodenhauser and Khamis found that the mean length of hospitalization for those diagnosed with schizophrenic disorders is significantly higher than for those diagnosed

without schizophrenic disorders while the mean length of hospitalization for those diagnosed with personality disorders is significantly lower than for those diagnosed without personality disorders. No significant differences were found in length of hospitalization between users and non-drug users, alcohol and non-alcohol abusers, or previously incarcerated and not. However, the length of hospitalization was significantly higher for those charged with a felony than those charged with a misdemeanor. Rodenhauser and Khamis found a low, but significant positive correlation between length of hospitalization and number of previous hospitalizations. Rodenhauser and Khamis concluded the presence of a diagnosis of schizophrenia, the absence of a personality disorder diagnosis, a felony charge, drug treatment refusal, receiving medication involuntarily, and requiring physical restraint to be factors significantly associated with an increased length of hospitalization.

Competency

Resident LOS at NFETC is directly determined by the length of time taken for that resident to be restored to competency. Therefore, research examining factors related to competency can provide valuable justification for potential variables. In a study examining the characteristics of incompetent defendants predicted to be restorable and not restorable to competency, Hubbard, Zapf, and Ronan (2003) found that "incompetent defendants with a criminal history were more likely to be predicted restorable, while incompetent defendants without a criminal history were more likely to be predicted as not restorable"(p. 135). Incompetent defendants currently charged with murder were more likely to be predicted as restorable, incompetent defendants diagnosed with a nonpsychotic minor disorder were also more likely to be predicted to be restorable, as

were younger defendants. Logically, incompetent defendants possessing the ability to understand the criminal justice process were significantly more likely to be predicted as restorable, this makes sense seeing as knowledge of the criminal process is a requirement for declaration of competency. Due to the relationship between LOS and competency to restoration at NFETC, these characteristics are likely to be major factors in our analysis of resident characteristics. It is important to state, however, that Hubbard et al.'s research examines the characteristics of incompetent defendants predicted to be restorable and not restorable to competency by mental health examiners, not the actual competency determination. It is the actual competency determination, not the prediction of, that is the ultimate factor in determining a resident's LOS at NFETC; once the ITP resident obtains competency he is returned to the arresting county to stand charges.

Treatment Factors

While the previous studies examined characteristics from the residents' histories and demographics (i.e. diagnosis, employment history, age, and education level), research has suggested the importance of dynamic risk variables, or treatment factors, in decreasing resident LOS. Lindqvist and Skipworth (2000) concluded that "delineating dynamic risk variables (or treatment factors) is the first step towards investigating the effectiveness of forensic psychiatric rehabilitation" (p. 321). In their call for evidence based rehabilitation in forensic psychiatry, Lindqvist and Skipworth stated:

Any assessment that looks only at the patient and neglects to analyze the forensic system within which the individual lived will reveal only part of the answer to what will constitute optimal treatment for that individual. In the past, there has been insufficient analysis of those factors external to the patient and of their

influence on the prognosis. It is, therefore, essential to focus therapeutic rehabilitative endeavors on factors within both the person and the rehabilitative environment in which they live. (p. 321)

Similarly, Visher and Travis (2003) found that in-prison experiences are important factors in an individual's long-term postprison reintegration. According to Visher and Travis, in-prison experiences include length of stay, participation in treatment programs, contact with family and friends, and prerelease preparation. Due to the temporal nature of a resident's time at NFETC as being located between his time in jail or prison awaiting mental health services and his time in jail or prison awaiting his trial following mental health services, these experiences, although taking place within the walls of a mental health treatment facility, continue to hold the same importance. Recognizing this importance, we have included these characteristics as factors in our analysis.

Structured Programs

The focus on the rehabilitative environment and in-prison experiences has included research on resident schedules and the appropriate amount of therapeutic activity, recreation, and leisure to be allotted in daily routine. Metzner and Dvoskin (2006) have reported that specialized mental health programs in jails or prisons should offer “at least 10 to 15 hours per week of out - of - cell structured therapeutic activities in addition to at least another 10 hours per week of unstructured exercise or recreation time” (p. 764). It can be extended then, that mental health treatment facilities servicing the same population should offer similar, if not more, hours of activity for residents.

Metzner and Dvoskin recommend programs provide enough healthy social interaction for treatment purposes and to prevent a person with a serious and disabling mental illness from potentially getting worse because of the absence of normal social interaction. Childs (2002) reminds professionals that the effects of institutionalization must be counterbalanced with occupational and recreational pursuits. Social recreation features may benefit patients' functioning during treatment by normalizing the environment (Timko, 1996).

Structured programming research has received a lot of attention in adolescent and juvenile delinquency research. Gottfredson, Cross, and Soule (2007) found that structured programming is an important factor in producing positive behavioral outcomes and reducing delinquency in adolescents. Mahoney and Stattin (2000) found that, among adolescents, structured activity participation was linked to low antisocial behavior, while involvement in less structured activities was associated with high antisocial behavior. Mahoney and Stattin suggest activities that are rule guided, led by a competent adult, follow a regular participation schedule, and are aimed toward skill building. Similarly, Larson (2000) found structured voluntary activities to be a context well suited to the development of youth initiative and that these activities provide a fertile context for positive development. While the juvenile delinquent and adolescent population differs from the mentally ill offender population, the benefits associated with routine and structure are relevant to both groups. Prince (2006) found that services addressing daily structure were effective in preventing re-hospitalization in individuals with Schizophrenia.

Value of Leisure and Recreational Pursuits

In addition to the structure provided, the activity itself can be important in a variety of ways. In 1870 the National Prison Association approved a rehabilitative mission for prisons in the United States; recreation, stemming from the Latin *recreatio*, literally refers to recovery or restoration (Robertson, 2000). The National Advisory Commission on Criminal Justice Standards and Goals (1973) established standard policies and practices for recreation programs that included recommending that every institution employ a full-time director of recreation; that every offender be evaluated for interest in leisure services; that recreation programs provide some interaction opportunities with the outside community; and that a wide range of recreational activities be made available to inmates (Frey & Delaney, 1996).

Leisure and recreational pursuits can be important in symptom management, a determining factor in resident LOS at facilities such as NFETC. Delespaul, Devries, and van Os (2002) found that passive leisure activities (such as watching TV) increased the intensity of hallucinations, while engaging in work activities led to a decrease in hallucinatory intensity over time. Due to low frequencies of active leisure reports, Delespaul et al. were not able to assess the effects of active leisure on hallucinatory intensity. However, in most facilities the absence of actively engaged leisure activities encourages engagement in passive leisure activities (e.g., watching TV), so their findings do hold some programming value. Kulkarni and Power (1999) found that the development of leisure skills can fill the emptiness experienced by these individuals following the remediation of long standing hallucinations. Also, Liberman and Kopelowicz (2005) suggested that the definition of recovery “should include participation

in work or school, and in social, family, and recreation activities as well as achieving symptom remission” p. 739.

In addition to symptom management, leisure and recreation activities can function as a means of coping and self restoration. Kleiber, Hutchinson, and Williams (2002) introduced four functions of leisure, two related primarily to coping (self protection) and two that identify the role of leisure in bringing about a more complete course of adjustment (self restoration):

Proposition one states that leisure activities can buffer the impact of negative life events by serving as a distraction. Proposition two states that leisure activities can buffer the impact of negative life events by generating optimism about the future. Proposition three states that leisure activities can buffer the impact of negative life events by aiding in the reconstruction of a life story continuous with the past. Proposition four states that leisure activities can be used in the wake of negative life events as vehicles for personal transformation. In a qualitative study on nine female prisoners, Ozano (2008) found that the prisoners experienced physical and psychological benefits such as increased confidence, self-esteem, and self-belief. These women recognized that exercise and sport can be used as a coping mechanism to handle stress and worry, and that it can be a reasonable way to release aggression.

Emphasizing the importance of leisure and recreation in the recovery process, Andrews, Bonta, and Wormith (2006) have included leisure and/or recreation as one of their major risk factors and targets for reduced recidivism. Andrews et al. described risks such as low levels of involvement and satisfaction in anticriminal leisure pursuits. They described a dynamic need in the field to enhance involvements, rewards, and satisfactions

related to leisure pursuits. Building on Andrew and Bonta's work, Gendreau (1996) also identifies leisure activities as one of a specific set of risks to be targeted in offender rehabilitation.

Draine, Wolff, Jacoby, Hartwell, and Duclos (2005) also described a need for additional help in structuring residents' time in order to manage the eventual stress of their transition back to the community. A study by Franklin, Kittredge, and Thrasher (1975) found a significant difference in leisure time activities of those readmitted and those not readmitted to a mental hospital. The examination of 143 patients discharged from a southern state mental hospital between 1972 and 1973 revealed that:

Those not readmitted engaged in more activities and engaged in them more often.

Those readmitted rarely interacted with friends or relatives and frequently spent their time sitting, thinking, and daydreaming. Also they were slightly more dissatisfied with their leisure activities (p. 751).

In their comprehensive review of the literature, Driver and Bruns (1999) reported that leisure benefits include psychological, psychophysiological, social and cultural, and economic benefits. Socially and culturally, leisure can help with social alienation, conflict resolution, community integration, nurturance of others, and prevention of social problems - all factors relevant to successful reintegration into the community (Driver & Bruns, 1999).

Robertson (2000) describes institutions' focus on preparing prisoners for the workforce and minimal focus on how the prisoners spend their free time (when most acts of crime occur) as impetus for increased leisure education programs in prisons. Robertson describes leisure education as providing prisoners with the opportunity to develop the

attitudes, knowledge, and skills required to access and facilitate meaningful experiences and satisfy their personal needs in a socially acceptable manner. Through leisure education, individuals can develop acceptable outlets for stress, identify activities which serve as alternatives to drug and alcohol, foster interpersonal skills, enhance self-esteem, increase access to new social environments, foster new interests, develop awareness of personal needs and appropriate avenues to satisfy them, discover ways to overcome specific barriers to participation, develop decision-making and problem-solving skills, and develop new interests that could evolve into a career such as writing, photography, or music (Robertson, 2000).

Recreational and leisure pursuits can help residents manage their symptoms, cope with their illness, restore themselves, and adjust to their surroundings in an appropriate manner – all important factors in a resident’s treatment to obtain competency and ease their transition to the legal phase and their possible return to the community.

Recidivism and Length of Stay

Research has examined the relationship of length of stay to recidivism. While most of this research is clinically based, indicating hospital recidivism and not arrest recidivism, the relationship between the two does have implication for this population. The literature, however, presents conflicting results, some studies determining a negative relationship between LOS and recidivism and other studies determining a positive relationship between the two.

Appleby, Desai, Luchins, Gibbons, and Hedeker (1993) found that LOS, previous hospitalizations, sex, and age predict early readmissions. In an 18 month study of 1500 patients with schizophrenia, those hospitalized for short stays were more likely to return

within 30 days than those hospitalized for longer periods (Appleby et al., 1993). Likewise, using the ordinary least- squares analysis estimation to control for sicker patients having longer admissions, Figueroa, Harman, and Engberg (2004) found a non-linear effect between readmission rate and LOS, changes in LOS had a significantly larger impact on readmission rate when length of stay was shorter. Also in support of a negative relationship, in a population based study of 29,373 patients with schizophrenia in Taiwan, the results indicated that a very short length of stay on an index admission is significantly related to increased 30 day readmission rates. However, this data set lacked variables that can affect readmission rates and LOS such as socioeconomic status and severity of illness.

In contrast, Thompson, Neighbors, Munday, and Trierweiler (2003) found that length of hospital stay did not independently affect readmission and that neither background characteristics nor emotional support served as significant predictors of readmission within six months of discharge. Heeren, Dixon, Gavirneni, and Regenold (2002) also found no statistically significant difference in the overall mean length of stay between patients readmitted and those who were not.

Results from a survival analysis by Mojtabai, Nicholson, and Neesmith (1997) did indicate a significant relationship between the length of stay on the index admission and the rate of relapse. However, in this case, even after controlling for the severity of psychopathology, they found that length of stay was positively related to readmission. "Patients who stayed longer had a 1.5 times greater rate of relapse as calculated by antilog transformation of the parameter estimate for the dummy coded variables of length of hospital stay" (Mojtabai et al., 1997, p. 124).

Although previous research has emphasized the importance of leisure and recreation in this population's recovery and transition back to the community, little has been done to examine the role recreational pursuits, administered in a structured program, have on LOS. Legal battles, such as the one ensued by DCF, have demonstrated the importance of decreasing LOS in order to expand treatment access to all those in need.

Research Questions

The broad objectives of this research will be to *determine the influence of individual characteristics on resident LOS*, specifically the *impact of structured programming on resident length of stay (LOS) at NFETC*. In order to achieve these objectives, research questions relating to LOS and program participation have been established. The research question *What are the similarities and differences between characteristics of residents at NFETC during referral based programming to those of residents at NFETC during structured programming?* will allow for direct comparison of the resident population during referral based programming and the resident population during structured programming. The research question *How does resident LOS during referral based programming compare to resident LOS during structured programming?* will determine whether, and the extent to which, the implementation of the Therapeutic Activity Program contributed to a change in resident LOS. The successful completion of the broad objective is dependent on this particular research question; however, the other research questions also contribute to a deeper understanding of the role structured programming plays in LOS.

The research questions *What are the predictors of resident LOS during referral based programming?* and *What are the predictors of resident LOS during structured*

programming? will provide a deeper understanding of other factors that may be impacting resident LOS.

The research questions *What are the predictors of recreation participation level during referral based programming?* *What are the predictors of recreation participation level during structured programming?* will provide a deeper understanding of the factors contributing to a resident's decision to participate in recreational programming.

Knowledge of these factors has implications for program planning and program design, allowing facilities to cater specific programs to specific subsets of residents thereby increasing their involvement.

The research question *What are the similarities and differences between characteristics of residents with high participation rates during referral based programming and characteristics of residents with low participation rates during referral based programming?* will determine factors that contribute to or encourage a higher level of participation. The research question *What are the similarities and differences between characteristics of residents with high participation rates during structured programming and characteristics of residents with low participation rates during structured programming?* will also determine factors that contribute to or encourage a higher level of participation. The comparison of the LOS of residents with high participation during structured programming to the LOS of residents with low participation during structured programming can provide insight as to whether the impact of structured programming on resident LOS is due to the residents' involvement in recreational pursuits or simply due to the routine provided by structured programming.

Hypotheses

Based on the literature findings, the following hypotheses have been put forth for the current study:

H1. There will be no significant differences regarding demographics, diagnoses, and criminal charges between the residents at NFETC during referral based programming and residents at NFETC during structured programming; however, a significant difference in LOS is hypothesized.

H2. Resident LOS during structured programming will be significantly shorter than resident LOS during referral based programming.

H3. In accordance with previous research, the seriousness and chronicity of the mental illness, previous employment, age, and education will be significant predictors of resident LOS during referral based programming.

H4. Structured program attendance level will be a significant predictor of LOS during structured programming, in addition to predictors discussed in previous research: the seriousness and chronicity of the mental illness, previous employment, age, and education.

H5. In accordance with previous research on predictors of LOS, the seriousness and chronicity of the mental illness, previous employment, age, and education will also be significant predictors of participation level during referral based programming.

H6. In accordance with previous research on predictors of LOS, the seriousness and chronicity of the mental illness, previous employment, age, and education will also be significant predictors of participation level during structured

programming. However, due to the mandatory nature of the structured programming, the predictors: previous employment, age, and education will not be as significant in predicting structured programming participation as in predicting referral based programming.

H7. Due to the voluntary nature of the referral based programming, the characteristics of residents with high participation rates and low participation rates during referral based programming will not significantly differ.

H8. Due to the mandatory nature of the referral based programming, the characteristics of residents with high participation rates and low participation rates during structured programming will be significantly different.

- ❖ In order to maintain objectivity as a qualitative researcher, no hypotheses were set for the primary data collection staff interviews or primary data collection passive program observation.

CHAPTER THREE: METHODOLOGY

Retrospective Secondary Quantitative Data Collection

Sample

Data was collected from the NFETC digital database of resident records. Analysis was limited to residents classified as Incompetent to Proceed to Trial (ITP), excluding all residents classified as Not Guilty by Reason of Insanity (NGI). Residents admitted to and discharged from NFETC between the dates of September 2003 – September 2010 were included in the analyses. N = 1915 (exceeding the necessary sample size of 642 residents, as determined by Power Analysis based on proposed analyses). The variables described below are documented within the facility's Psychosocial History Form; the form is started at admission and must be completed within 30 days of resident's arrival. The Global Assessment of Functioning (GAF) Scale is administered at the intake interview and updated as necessary.

Measures

Table 1 describes the variables obtained from NFETC digital records or those calculated from variables obtained.

Table 1
Quantitative Analyses Variables

Data collected from NFETC resident Database

Resident Identification Number (randomly reassigned following data collection)

Previous Admissions (yes or no)

LOS (length of stay, in days)

Admitting Legal Status - Incompetent to Proceed (ITP) or Not Guilty by Reason of Insanity (NGI)

Race

Arresting County

Source (location prior to admission)

Age

Primary Arresting Charge

Additional Charges

Primary and Additional Charges Dichotomized as Violent or Non-Violent

Primary and Additional Charges Dichotomized as Sexual or Non-Sexual

Marital Status

Marital Status Dichotomized as Single or Relationship History

Religion

Religion Dichotomized as Reports Religion or Not

Occupation

Occupation Dichotomized as Employed or Unemployed

Substance Abuse History (Alcohol, Drug, Poly-Substance, or None)

Substance Abuse History (Dichotomized as History of Abuse or None)

Nationality

Veteran Status (Veteran or Non-Veteran)

Length of Florida Residency (in months)

Fluent Language

Education Level

Admitting Diagnosis
 Additional Diagnoses
 Admitting Diagnosis Dichotomized as Schizophrenia Based or Non
 Global Assessment of Functioning (GAF) Score,
 Discharge Legal Status (Competent or Not Competent)
 Discharge Destination
 SumSumHoursPerMonth (Resident's total hours in activities per month)*
 SumMeanHoursPerMonth (Resident's mean total hours in *each* activity *type* per
 month)*
 SumMaxHoursPerMonth (Maximum # of hours spent in a *single* activity *type* per
 month)*
 Percentage of sum of time greater than 2 hours involved in activities
 Mean Participation (Averaged for each resident from resident's participation scores
 from all activities)

Note. *Standardized by resident LOS.

Procedure

Data was obtained from the NFETC electronic database in multiple excel and
 access files. All data was merged on the key variables: Resident Identification Number
 and Admit Number, so as not to lose multiple admit data. In order to obtain the Sum of
 Time Spent in Activity Programs, the Mean for Sum of Time Spent in each activity, the
 Maximum Sum of Time spent in a single activity type, the percent greater than two hours
 spent in Activity Programs, and the Mean Participation Score, totals were aggregated
 from an access database containing resident attendance and participation for each class
 attended during their LOS. These totals were then merged into SPSS with the additional
 variables. The three sum values were then standardized for each resident based on each
 resident's LOS. The resulting values were then calculated to produce activity totals

measured in hours per month. This standardization process resulted in the variables: SumSumHrsPerMonth, SumMeanHrsPerMonth, and SumMaxHrsPerMonth, representing Resident's total hours in activities per month, Resident's mean total hours in *each* activity *type* per month, and Maximum # of hours spent in a *single* activity *type* per month, respectively.

Within resident records, participation level is ranked on a scale of 1-5 (Actively participated, Passively Participated, Remained Quiet, Quiet Yet Inattentive, and Disruptive; respectively). Each resident's participation levels for each class attended were averaged together to obtain the Mean Participation variable for each resident.

All of the variables collected, with the exception of the Activity Program Time Sums and the Mean Participation score were obtained from the NFETC electronic database as string variables. In order to maintain a Syntax record of all recoding, every variable was auto-coded by SPSS, categorized by hand, and then re-coded in SPSS Syntax using the original SPSS auto code and the researcher assigned recode.

The variable Birthplace was re-coded as the following values: Florida, Southeast, Northeast, Midwest, West, Southwest, US other, Canada, Caribbean, Central and North America, South America, International Other, Unknown, and Missing. Education level was re-coded from string variable to numeric with values ranging from 0-19, with GED indicated as value 15. String variable education level from NFETC contained grade indicators of 0 and 12+; in order not to lose these values, 0 and 12+ were included in the numeric re-code causing GED to be valued as 15, instead of 12 or 13 as commonly found in research. Length of Florida residency was re-coded from string variable to numeric in months of Florida residency.

Admitting Diagnosis and Additional Diagnoses, after recode, produced 56 different values. For analysis purposes, based on previous literature findings, the diagnoses were dichotomized between Schizophrenia based diagnoses and non-Schizophrenia based diagnoses. Within the data obtained, GAF scores were listed as string variables within the Additional Diagnoses variable. GAF scores were selected by the Axis identifier (Axis 5) present in the data. Some residents, depending on their length of time at the facility, had multiple GAF scores within the file. In order to maintain consistency, the first GAF score indicated for each resident (the score obtained upon admitting administration of the GAF) was selected from the data using the “Identify Duplicate Cases” command, thereby assigning the first GAF score a corresponding value of 1 and each additional GAF score after the initial score a corresponding dummy code of zero. All GAF scores with the corresponding value of 1 were then merged with the rest of the data. The GAF score string values were then autocoded by SPSS, categorized by hand, and re-coded in Syntax using the SPSS autocode values and the researcher assigned values into the new numeric values. Some GAF scores indicated a range, rather than an exact number, in these cases, the median occurring number within the range was indicated as the numeric value.

Primary Arresting Charge and Additional Charges, after recode, produced 114 different values. For ease of analysis, based on previous literature findings, these values were dichotomized into two variables: Violent/Non-violent charges and Sexually motivated/Non-Sexually Motivated Charges.

Occupation was auto-coded and then re-coded creating 68 different values. For analysis purposes, based on these values, an addition variable was created containing the

values for Employed, Unemployed, and On Disability. Religion was auto-coded and then re-coded creating 61 different values. For analysis purposes, based on these values, an addition variable was created containing the values for Reports Religion, Does Not Report Religion.

The structured Therapeutic Activity Program, also known as TAP, at NFETC began on September 19, 2005. In order to determine which program each resident was involved in, the variables Date of Admit (DOA) and the Date of Discharge (DOD) were copied into new variables, the new variables were then converted to numeric date form (ie. 2005262, Year 2005, 262nd day of the year) then string, then numeric form. Program identification was done in a mutually exclusive manner - those with a Numeric DOD from the start of the data (2003303) thru the day before TAP began (2005262) were assigned a value of 1, and the rest were given a dummy code of zero in the new variable REF. Those with a Numeric DOA from the start of TAP (2005263) through the day of data collection (2010256) were assigned a value of 1, and the rest were given a dummy code of zero in the new variable TAP. The new variable PROG was then computed using the following logic: “If REF = 1 and TAP = 0 then PROG = 1”, “If REF = 0 and TAP = 0 then PROG = 2”, and “If REF = 0 and TAP = 1 then PROG = 3”; with the Referral Based program valued as 1, the structured Therapeutic Activity Program valued as 3, and any resident who participated in both indicated by 2.

Statistical Analyses

Comparing Program Participants' Characteristics

In order to ensure similarity between the residents at NFETC during referral based programming to those of residents at NFETC during structured programming, prior to

additional analyses, hi Square Analyses were run on Program Type by Previous Admissions, Race, Sexually Motivated Charges, Violent Charges, Marital Status, Reports Religion, Employment Status, Substance Abuse History, Veteran Status, Presence of Schizophrenia based Admitting Diagnosis, and Discharge Status. T-tests were run on Program Type by Age, GAF score, Length of Florida residency, Resident's total hours in activities per month, Resident's mean total hours in *each* activity *type* per month, Maximum number of hours spent in a *single* activity *type* per month, Percent greater than two hours in Sum of Activity Time, and Activity Participation Mean.

Comparing Program Participants' LOS

Based on the aims of this study to compare resident LOS during referral based programming to resident LOS during structured programming, a T-test was conducted on LOS by Program Type.

Program Type

The SPSS data file was then split based on program and the remaining analyses were conducted on separate SPSS files, those who were at NFETC exclusively during the Referral based activity program and those who were at NFETC exclusively during the structured TAP program.

Predictors of Resident LOS

In order to determine predictors of resident LOS during referral based programming and predictors of resident LOS during structured programming, a Cox Regression was run on the following variables: Previous Admissions, Sexually Motivated Charges, Violent Charges, Presence of Schizophrenia based Admitting Diagnosis, GAF score, Employment Status, Educational level, Substance Abuse History, Age, Resident's

total hours in activities per month, Resident's mean total hours in *each* activity *type* per month, Maximum number of hours spent in a *single* activity *type* per month, Percent greater than 2 hours in Sum of Activity Time, and Activity Participation Mean. Due to the censored nature of the data, LOS was calculated for all residents and a status indicator for discharge occurred was included in the regression. Residents not yet discharged were marked as so with the indicator variable and date of data collection was used as their date of discharge. LOS was then plotted as a Hazard Function for all of the above stated variables.

Predictors of Participation Level

In order to determine predictors of recreation participation level during referral based programming and predictors of recreation participation level during structured programming, a Generalized Linear Model was run with the following variables entered as factors: Previous Admissions, Race, Sexually Motivated Charges, Violent Charges, Marital Status, Reports Religion, Employment Status, Substance Abuse History, and Presence of Schizophrenia based Admitting Diagnosis with reference categories defined for every variable. Educational level, GAF score, Age, and Resident's total hours in activities per month were entered as covariates. Raw residuals were saved as a new variable and graphed against a normal curve for additional analyses.

Comparing Characteristics of High Participators and Low Participators

In order to compare the characteristics of residents with high participation levels during referral based programming to the characteristics of residents with low participation levels during referral based programming and the characteristics of residents with high participation levels during structured programming to the characteristics of

residents with low participation levels during structured programming, Activity Participation means were dichotomized as high and low (Lowest mean value thru 1.99 = High Participation, 2 thru Highest mean value = Low Participation) and the following analyses were conducted based on variable type. Chi Square Analyses were run on Program Participation level by Race, Previous Admissions, Sexually Motivated Charges, Violent Charges, Marital Status, Reports Religion, Employment Status, Substance Abuse History, Veteran Status, Presence of Schizophrenia based Admitting Diagnosis, and Discharge Status. T-tests were run on Participation Level by Age, GAF score, Education Level, Length of Florida residency, Resident's total hours in activities per month, Resident's mean total hours in *each* activity *type* per month, Maximum number of hours spent in a *single* activity *type* per month, Percent greater than two hours in Sum of Activity Time, and LOS.

Primary Qualitative Data Collection

Staff Interviews

This component is intended to provide qualitative depth for the analysis of the resident records. Within the past 5 years NFETC moved from a referral based activity program (averaging 6 hours a week of programming per resident) to a more structured mandatory program - known to staff as the Therapeutic Activity Program (averaging 24 hours a week of programming per resident). Qualitative interviews were conducted with programming staff and administrators to develop a deeper understanding of the previous program, the current program, and staff impressions. Key concepts explored included attendance/frequency of activity involvement, resident participation levels, benefits of involvement, and impact on resident life and LOS.

Preliminary questions were asked to ensure staff's knowledge and memory of both activity programs offered at the center. Staff participants were then asked for their thoughts and to compare both programs regarding the following: resident attendance and frequency of involvement, residents' actual level of participation, program benefits to the residents, impact on resident life overall, and impact on resident length of stay and time to obtain competency. Table 2 lists the questions as posed to facility staff.

Table 2

Qualitative Staff Interview Questions

Regarding the referral based activity program, what are your thoughts on resident attendance and frequency of involvement?
Regarding the referral based activity program, what are your thoughts on the residents' level of actual participation in the program
Regarding the referral based activity program, what are your thoughts on program benefits to the residents?
Regarding the referral based activity program, what are your thoughts on the program's impact on resident life and resident length of stay?
Regarding the structured Therapeutic Activity Program, what are your thoughts on resident attendance and frequency of involvement?
Regarding the structured Therapeutic Activity Program, what are your thoughts on the residents' level of actual participation in the program
Regarding the structured Therapeutic Activity Program, what are your thoughts on program benefits to the residents?
Regarding the structured Therapeutic Activity Program, what are your thoughts on the program's impact on resident life and resident length of stay?

Interviews were audio recorded digitally and transcribed by the student researcher upon return from data collection. Each phrase from the transcription was then coded based on topic and content using the ATLAS.ti Qualitative Analysis software. Each code was categorized as General, pertaining to the Referral Based program, pertaining to the structured TAP programming, or pertaining to both types of programming. Each code was also assigned a positive, negative, or neutral indicator. The codes were then grouped into broader networks to determine main concepts or themes within the qualitative data.

Non-intrusive, direct program observation

This component is also intended to provide qualitative depth for the analysis of the resident records. The student researcher observed 14 sessions of eight different program offerings within the current structured mandatory program in order to gain insight into the current program offerings. Detailed notes regarding overall resident participation level (number of residents actively participating during the 1st, 2nd, 3rd, and 4th quarters of the session), staff interaction (percentage of time spent not interacting with residents, engaging in 1:1 interactions, and group interactions), program length, and nature of activity (passive, active, physical, creative, mental) were recorded. In order to respect the confidential nature of the facility, primary data pertaining to individual residents was not collected.

CHAPTER FOUR: RESULTS

Retrospective Secondary Quantitative Data

Resident Demographics

North Florida Evaluation and Treatment Center resident records for residents admitted to and discharged from NFETC between the dates of September 2003 – September 2010 were included in the analyses (N = 1915). Approximately 23 % of those residents participated exclusively in the referral based activity program (n = 443), approximately 68% participated exclusively in the structured TAP Program (n=1314), and about 8% participated in a combination of the two programs (n=158). The structured TAP program was implemented in September of 2005; therefore, the records contain a larger range of time during the TAP program than the referral based program.

Social Demographics

Approximately 57% of the cases examined are African American (n=1089), almost 37% are Caucasian American (n=706), 6% of the cases are identified as Hispanic (n=114) and less than 1% other (n=6). Approximately 76% of the residents are Single, 17% Divorced or Separated, 5% Married, and 2% Widowed. Frequencies of specific religions were very small; in order to simplify analysis, religion was re-coded as percentage reporting a religion, percentage reporting no religion, and percentage unknown. Sixty seven percent of the residents reported a Religion, 16% reported no religion, and 17% were unknown; of the 67% of residents reporting a religion, 16% were Baptist, 11% were Catholic, and 22% were Christian. Approximately 74% of the residents described themselves as unemployed, 16% reported a job, and 10% reported

receiving Social Security Disability Income. Twelve percent of the residents report having served in the military at some point in their lives. The mean age for the residents was 40, with the youngest being 19 and the oldest being 82. The mean length of Florida residency was 25 years. The mean education level was 10th – 11th grade, with a minimum of no education at all and a maximum of Graduate School.

Clinical Demographics

Approximately 42% (n=803) of the residents contained in the data files have been diagnosed with a Schizophrenia based diagnosis (Schizoaffective Disorder, Schizophrenia Paranoid Subtype, Schizophrenia Disorganized Subtype, Schizophrenia Catatonic Subtype, Schizophrenia Undifferentiated Subtype, Schizophrenia Residual Subtype, Schizophreniform Disorder, and Schizophrenia debate between types). The GAF (Global Assessment of Functioning) Scale is a numeric score ranging from 1-100 administered as part of the 5th Axis in the DSM-IV; it is used to assess social, occupational, and psychological functioning of adults. The average GAF score for the residents included in the database was 40.75, with a minimum score of 10 and a maximum score of 75. About 58% of the residents reported a history of poly-substance abuse, 11% reported a history of alcohol abuse, 14% reported a history of drug abuse, and 17% reported no substance abuse history. The mean LOS for all of the residents included in the time frame examined was 192 days, with a minimum of 2 days and a maximum of 1803 days. The mean LOS for those declared competent to proceed to trial was 148 days.

Criminal Demographics

Approximately 80% of the residents had no prior admissions to NFETC while almost 20 % had at least one prior admission. The majority of ITP clients are admitted to

NFETC from jail (97.2%). Approximately 8% of residents have sexually motivated charges (n=145) versus those with non-sexual charges (92%, n=1770). Almost 60% of the residents have been admitted for a Violent Charge (n=1145) versus those whose primary charges were not considered violent (40%, n=770). Eighty six percent of those who were discharged were returned to jail as competent to stand trial, 13% were transferred to a state civil mental health facility, and 1% of those discharged were transferred to another state forensic mental health facility.

What are the similarities and differences between characteristics of residents at NFETC during referral based programming and those of residents at NFETC during structured programming?

Table 3 presents the results of the Chi Square Analyses and t-tests used to compare the characteristics of residents present for the two types of programming. Resident characteristics for those present during Referral Based Programming and those present during Structured TAP programming were similar in all circumstances except the following variables: Employment status, presence of a Schizophrenia based admitting diagnosis, discharge status, GAF score, length of FL residency, Resident's total hours in activities per month, Resident's mean total hours in *each* activity *type* per month, and Maximum number of hours spent in a *single* activity *type* per month.

Residents present during the TAP program were more likely to have a Schizophrenia based diagnosis than those present during the Referral Based Program. Residents present during the Referral Based programming were more likely to report no job than those present during the TAP program. Residents present during the Referral Based Program were also more likely to be declared competent than those present during

the TAP program. Those present during the Referral Program had significantly greater GAF scores than those during the TAP program. Residents during the TAP program had significantly greater lengths of Florida residency. Residents present during TAP programming had significantly greater total hours in activities per month, while those present during Referral Based Program had significantly greater mean total hours in *each* activity *type* per month and significantly greater maximum number of hours spent in a *single* activity *type* per month.

Table 3

Participant Characteristics by Program

Variable	Values	Referral Based Program				Structured TAP Program				ChiSquare Value / t	df	p																																																																																																										
		%	N	M	SD	%	N	M	SD																																																																																																													
Previous Admissions ¹	Yes	18%	79			20%	268			1.37	1	.241																																																																																																										
	No	82%	364			80%	1046						Race ¹	Black	56%	247			57%	749			.209	1	.647	White, Hispanic, Other	44%	196			43%	565			Sexually Motivated Charges ¹	Yes	7%	30			8%	101			.40	1	.526	No	93%	413			92%	1213			Violent Charges ¹	Yes	38%	170			58%	758			2.12	1	.145	No	62%	273			42%	556			Marital Status ¹	Single	76%	335			77%	998			.059	1	.807	Relationship History	24%	106			23%	306			Reports Religion ¹	Yes	77%	290			82%	900			3.74	1	.053	No	23%	85		
Race ¹	Black	56%	247			57%	749			.209	1	.647																																																																																																										
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Reports Religion ¹	Yes	77%	290			82%	900			3.74	1	.053																																																																																																										
	No	23%	85			18%	199																																																																																																															

How does resident LOS during referral based programming compare to resident LOS during structured programming?

As shown in Table 3, resident LOS was significantly greater (longer) for those residents present during TAP programming as compared to those present during Referral based programming.

Program Type

The following results are based on analyses run on separate SPSS data files: those who were at NFETC exclusively during the Referral based activity program and those who were at NFETC exclusively during the structured TAP program.

What are the predictors of resident LOS during referral based programming?

Table 4 presents the results for the Cox Regression to determine significant predictors of resident LOS during the referral based programming. Due to the censored nature of the data, LOS was calculated for each case and a variable was created to indicate whether discharge occurred for that case (1 = discharge occurred). For those residents present at NFETC during referral based programming, GAF score, Age, Resident's mean total hours in *each* activity type per month, and Participation Mean were significant predictors of LOS. For every one point increase in GAF score, residents are 2.8% more likely to be discharged. For every additional year in age, residents are 0.9% less likely to be discharged. As a resident's mean total hours in each activity type per month increases, likelihood of discharge increases as well. Lastly, for every one point increase in participation mean, residents are 36.2 % less likely to be discharged; keeping in mind that participation mean was reverse scored, this means that residents with decreased participation are 36.2% less likely to be discharged.

Table 4

Predictors of LOS during Referral Based Programming

	b	SE	Wald X ²	p-value	Exp(b)
Previous Admissions	-.10	.124	.69	.406	.90
Sexually Motivated Charges	.25	.190	1.7	.191	1.3
Violent Charges	-.08	.098	.58	.447	.93
Schizophrenia Based Admitting Diagnosis	-.19	.099	3.6	.059	.83
GAF Score	.03	.005	26.4	<.001*	1.0
Employment status	.07	.107	.45	.503	1.1
Education level	-.002	.015	.01	.914	.99
Substance Abuse History	-.01	.051	.06	.814	.99
Age	-.01	.004	4.9	.026*	.99
SumSum Hours Per Month	.006	.003	3.44	.064	1.0
SumMean Hours Per Month	.73	.047	.244.6	<.001*	2.08
SumMax Hours Per Month	-.017	.013	1.61	.205	.98
% greater than 2 hours in Sum of Time	.009	.005	3.20	.074	1.01
Participation mean	-.45	.106	17.95	<.001*	.64

**p*<.05*What are the predictors of resident LOS during structured programming?*

Table 5 presents the results for the Cox Regression to determine significant predictors of resident LOS during the structured TAP programming. For those residents present at NFETC during the structured TAP programming, presence of a sexually motivated charge, presence of a violent charge, a Schizophrenia based admitting

diagnosis, GAF score, age, resident's total hours in activities per month, Resident's mean total hours in *each* activity *type* per month, maximum # of hours spent in a *single* activity *type* per month, percent of time greater than two hours in sum of time in activities, and participation mean were significant predictors of LOS.

According to the results, residents with a sexually motivated charge are 30% less likely to be discharged, while residents with a violent charge are 11.5% less likely to be discharged. Residents with a Schizophrenia based diagnosis are approximately 35% less likely to be discharged. For every one point increase on the GAF score, residents are 3.4% more likely to be discharged, while every one year increase in age is associated with a 1% less likelihood of discharge. For every additional hour in activities per month, a resident is almost 1% more likely to be discharged. For every additional hour of a different activity type per month, residents are also more likely to be discharged. Likewise, residents are more likely to be discharged for every additional maximum number of hours spent in a *single* activity *type* per month. Lastly, for every one point increase in participation mean, residents are 34.2 % less likely to be discharged; keeping in mind that participation mean was reverse scored, this means that residents with decreased participation are 34.2% less likely to be discharged.

Table 5

Predictors of LOS during structured TAP programming

	b	SE	Wald x ²	p-value	Exp(b)
Previous Admissions	-.12	.07	2.7	.101	.89
Sexually Motivated Charges	-.37	.11	10.8	<.001*	.69
Violent Charges	-.12	.06	4.3	.038*	.89
Schizophrenia Based Admitting Diagnosis	-.43	.06	53.5	<.001*	.65
GAF Score	.03	.003	109.5	<.001*	1.03
Employment status	-.09	.06	2.5	.112	.91
Education level	-.01	.01	.56	.456	.99
Substance Abuse History	.05	.03	3.3	.067	1.1
Age	-.01	.002	17.1	<.001*	.99
SumSum Hours Per Month	.01	.001	25.7	<.001*	1.01
SumMean Hours Per Month	.637	.029	484.6	<.001*	1.89
SumMax Hours Per Month	.016	.004	12.9	<.001*	1.02
% greater than 2 hours in Sum of Time	-.01	.004	11.3	<.001*	.99
Participation mean	-.42	.05	69.3	<.001*	.66

**p*<.05

What are the predictors of recreation participation level during referral based programming?

In order to determine predictors of recreation participation level during referral based programming, a Generalized Linear Model was run with the following variables entered as factors: Previous Admissions, Race, Sexually Motivated Charges, Violent

Charges, Marital Status, Reports Religion, Employment Status, Substance Abuse History, and Presence of Schizophrenia based Admitting Diagnosis with reference categories defined for every variable. Educational level, GAF score, Age, and Resident's total hours in activities per month were entered as covariates. Raw residuals were saved as a new variable and graphed against a normal curve for additional analyses. Table 6 presents the resulting tests of model effects and parameter estimates for the categorical predictors of participation level during referral based programming. Table 7 presents the tests of model effects and parameter estimates for the continuous predictors of participation level during referral based programming. Examining the significance levels for both tables reveals that only the resident's total hours in activities per month is a significant predictor of participation level. Sum Hours Per Month, the variable representing resident's total hours in activities per month, is negatively predictive of participation level. Since the participation mean was reverse scored, this indicates that higher total activity hours are predictive of greater participation.

Table 6
Categorical Predictors of Participation Level during Referral Based Programming

	N	%	Wald Chi-Square	df	Sig.
No previous Admissions	283	82.5%	.79	1	.373
Previously Admitted	60	17.5%			
NON sexual	317	92.4%	.95	1	.330
Sexually motivated Charge	26	7.6%			
NON-Violent Primary Charge	138	40.2%	2.82	1	.093
Violent Primary Charge	205	59.8%			
No Religion	77	22.4%	.85	1	.358
Reports a Religion	266	77.6%			
Job Reported	43	12.5%	.002	1	.968
NO Job Reported	300	87.5%			
Yes Substance Abuse History	289	84.3%	.08	1	.780
No Substance Abuse History	54	15.7%			
NONSchiz Based Diagnosis	215	62.7%	.42	1	.519
Schiz Based Diagnosis	128	37.3%			
Non-Black	153	44.6%	.05	1	.821
African American (Black) Race	190	55.4%			
Single	254	74.1%	.71	1	.400
Relationship History	89	25.9%			

Table 7
Continuous Predictors of Participation Level during Referral Based Programming

	N	Minimum	Maximum	Mean	Std. Deviation	Wald Chi-Square	df	Sig.
Education Level	343	1	23	11.7	3.2	.33	1	.564
GAF score	343	15	70	44.5	9.5	2.23	1	.136
Age	343	21	70	40.7	11.1	1.02	1	.312
Sum of Activity Hours Per Month	343	13	101	47.9	12.9	15.79	1	<.001*

* $p < .05$

What are the predictors of recreation participation level during structured programming?

In order to determine predictors of recreation participation level during Structured TAP Programming, a Generalized Linear Model was run with the following variables entered as factors: Previous Admissions, Race, Sexually Motivated Charges, Violent Charges, Marital Status, Reports Religion, Employment Status, Substance Abuse History, and Presence of Schizophrenia based Admitting Diagnosis with reference categories defined for every variable. Educational level, GAF score, Age, and Resident's total hours in activities per month were entered as covariates. Raw residuals were saved as a new variable and graphed against a normal curve for additional analyses. Table 8 presents the resulting tests of model effects and parameter estimates for the categorical predictors of participation level during Structured TAP Programming. Table 9 presents the tests of model effects and parameter estimates for the continuous predictors of participation level during Structured TAP Programming. Examining the significance levels for both tables reveals that presence of substance abuse history, GAF score, resident's total hours in activities per month, and race are significant predictors of participation level. GAF and total activity hours per month were negatively predictive of the participation mean. Since the participation mean was reverse scored, this indicates that higher GAF scores and higher total activity hours are predictive of greater participation. Presence of African American race was also negatively predictive of the participation mean; indicating, due to the reverse scored participation mean, that African American race is predictive of high participation. Presence of substance abuse history is positively predictive of activity

participation mean; due to the reverse coding of the mean, this indicates that a history of substance abuse is predictive of decreased participation levels.

Table 8
Categorical Predictors of Participation Level during Structured TAP Programming

	N	%	Wald Chi-Square	df	Sig.
No previous admissions	728	79.2%	2.418	1	.120
Previously Admitted	191	20.8%			
NON sexual	846	92.1%	1.59	1	.208
Sexually motivated Charge	73	7.9%			
NON-Violent Primary Charge	390	42.4%	.017	1	.895
Violent Primary Charge	529	57.6%			
No Religion	159	17.3%	.337	1	.562
Reports a Religion	760	82.7%			
Job Reported	156	17.0%	.037	1	.848
NO Job Reported	763	83.0%			
Yes Substance Abuse History	772	84.0%	4.81	1	.028*
No Substance Abuse History	147	16.0%			
NONSchiz Based Diagnosis	531	57.8%	.004	1	.951
Schiz Based Diagnosis	388	42.2%			
Non-Black	392	42.7%	11.24	1	.001*
African American (Black) Race	527	57.3%			
Single	698	76.0%	.067	1	.795
Relationship History	221	24.0%			

* $p < .05$

Table 9
Continuous Predictors of Participation Level during Structured TAP Programming

	N	Minimum	Maximum	Mean	Std. Deviation	Wald Chi-Square	df	Sig.
Education Level	919	1	22	12	3.0	.81	1	.368
GAF score	919	10	70	39.8	9.4	8.89	1	.003*
Age	919	19	79	40.3	12.2	.12	1	.732
Sum of Activity Hours Per Month	919	3.4	159	55.8	20.9	9.37	1	.002*

* $p < .05$

What are the similarities and differences between characteristics of residents with high participation rates during referral based programming and characteristics of residents with low participation rates during referral based programming?

Table 10 presents the results of the Chi Square Analyses and t-tests used to compare the characteristics of residents with high participation and residents with low participation during Referral based programming. Significant differences were found between high participators and low participators regarding marital status, presence of a Schizophrenia based diagnosis, veteran status, discharge status, education level, LOS, resident's total hours in activities per month, resident's mean total hours in *each* activity type per month, and percent of resident time spent in two hours or more of the same activity. Participants with high participation means were more likely to indicate a relationship history, have a Schizophrenia based diagnosis, be veterans, and be discharged as competent. High participators had significantly higher education levels, total hours in activities per month, mean total hours in each activity type per month, and a

higher percentage of time in activities over two hours. Lastly, high participators during the referral based program also had significantly shorter LOS, than low participators during the same time frame.

Table 10

Comparison of Residents with High Participation Levels to Residents with Low Participation Levels within the Referral Based Program

Variable	High Participation Levels					Low Participation Levels					ChiSquare Value / t	df	p																																																																																																																																																																											
	Values	%	N	M	SD	%	N	M	SD																																																																																																																																																																															
Previous Admissions ¹	Yes	18%	48			18%	29			.031	1	.860																																																																																																																																																																												
	No	82%	215			82%	136						Race ¹	Black	54%	142			58%	96			.721	1	.396	White, Hispanic, Other	46%	121			42%	69			Sexually Motivated Charges ¹	Yes	8%	21			5%	9			.996	1	.318	No	92%	242			95%	156			Violent Charges ¹	Yes	64%	169			57%	94			2.27	1	.132	No	36%	94			43%	71			Marital Status ¹	Single	72%	190			81%	133			4.04	1	.044*	Relationship History	28%	72			19%	31			Reports Religion ¹	Yes	77%	171			77%	109			.019	1	.892	No	23%	50			23%	33			Employment-Reports Job ¹	Yes	12%	30			14%	23			1.73	2	.421	No	80%	208			80%	132			Substance Abuse History ¹	Yes	85%	217			82%	133			.518	1	.472	No	15%	39			18%	29			Veteran Status ¹	Yes	13%	34			5%	8			7.48	1	.006*	No	87%	226		
Race ¹	Black	54%	142			58%	96			.721	1	.396																																																																																																																																																																												
	White, Hispanic, Other	46%	121			42%	69						Sexually Motivated Charges ¹	Yes	8%	21			5%	9			.996	1	.318	No	92%	242			95%	156			Violent Charges ¹	Yes	64%	169			57%	94			2.27	1	.132	No	36%	94			43%	71			Marital Status ¹	Single	72%	190			81%	133			4.04	1	.044*	Relationship History	28%	72			19%	31			Reports Religion ¹	Yes	77%	171			77%	109			.019	1	.892	No	23%	50			23%	33			Employment-Reports Job ¹	Yes	12%	30			14%	23			1.73	2	.421	No	80%	208			80%	132			Substance Abuse History ¹	Yes	85%	217			82%	133			.518	1	.472	No	15%	39			18%	29			Veteran Status ¹	Yes	13%	34			5%	8			7.48	1	.006*	No	87%	226			95%	155																				
Sexually Motivated Charges ¹	Yes	8%	21			5%	9			.996	1	.318																																																																																																																																																																												
	No	92%	242			95%	156						Violent Charges ¹	Yes	64%	169			57%	94			2.27	1	.132	No	36%	94			43%	71			Marital Status ¹	Single	72%	190			81%	133			4.04	1	.044*	Relationship History	28%	72			19%	31			Reports Religion ¹	Yes	77%	171			77%	109			.019	1	.892	No	23%	50			23%	33			Employment-Reports Job ¹	Yes	12%	30			14%	23			1.73	2	.421	No	80%	208			80%	132			Substance Abuse History ¹	Yes	85%	217			82%	133			.518	1	.472	No	15%	39			18%	29			Veteran Status ¹	Yes	13%	34			5%	8			7.48	1	.006*	No	87%	226			95%	155																																										
Violent Charges ¹	Yes	64%	169			57%	94			2.27	1	.132																																																																																																																																																																												
	No	36%	94			43%	71						Marital Status ¹	Single	72%	190			81%	133			4.04	1	.044*	Relationship History	28%	72			19%	31			Reports Religion ¹	Yes	77%	171			77%	109			.019	1	.892	No	23%	50			23%	33			Employment-Reports Job ¹	Yes	12%	30			14%	23			1.73	2	.421	No	80%	208			80%	132			Substance Abuse History ¹	Yes	85%	217			82%	133			.518	1	.472	No	15%	39			18%	29			Veteran Status ¹	Yes	13%	34			5%	8			7.48	1	.006*	No	87%	226			95%	155																																																																
Marital Status ¹	Single	72%	190			81%	133			4.04	1	.044*																																																																																																																																																																												
	Relationship History	28%	72			19%	31						Reports Religion ¹	Yes	77%	171			77%	109			.019	1	.892	No	23%	50			23%	33			Employment-Reports Job ¹	Yes	12%	30			14%	23			1.73	2	.421	No	80%	208			80%	132			Substance Abuse History ¹	Yes	85%	217			82%	133			.518	1	.472	No	15%	39			18%	29			Veteran Status ¹	Yes	13%	34			5%	8			7.48	1	.006*	No	87%	226			95%	155																																																																																						
Reports Religion ¹	Yes	77%	171			77%	109			.019	1	.892																																																																																																																																																																												
	No	23%	50			23%	33						Employment-Reports Job ¹	Yes	12%	30			14%	23			1.73	2	.421	No	80%	208			80%	132			Substance Abuse History ¹	Yes	85%	217			82%	133			.518	1	.472	No	15%	39			18%	29			Veteran Status ¹	Yes	13%	34			5%	8			7.48	1	.006*	No	87%	226			95%	155																																																																																																												
Employment-Reports Job ¹	Yes	12%	30			14%	23			1.73	2	.421																																																																																																																																																																												
	No	80%	208			80%	132						Substance Abuse History ¹	Yes	85%	217			82%	133			.518	1	.472	No	15%	39			18%	29			Veteran Status ¹	Yes	13%	34			5%	8			7.48	1	.006*	No	87%	226			95%	155																																																																																																																																		
Substance Abuse History ¹	Yes	85%	217			82%	133			.518	1	.472																																																																																																																																																																												
	No	15%	39			18%	29						Veteran Status ¹	Yes	13%	34			5%	8			7.48	1	.006*	No	87%	226			95%	155																																																																																																																																																								
Veteran Status ¹	Yes	13%	34			5%	8			7.48	1	.006*																																																																																																																																																																												
	No	87%	226			95%	155																																																																																																																																																																																	

Schizophrenia Based Admitting Diagnosis ⁷	Yes	41%	109		30%	50			5.39	1	.020*
	No	59%	154		70%	115					
Discharge Status ⁷	Competent	97%	252		88%	141			11.34	1	.001*
	Unlikely	3%	9		12%	19					
Age ⁺			263	41	11	165	39	11	1.781	426	.076
Education Level ⁺			261	12	3	163	11	3	2.618	422	.009*
GAF score ⁺			252	45	10	158	43	10	1.591	408	.112
Length of FL residency ⁺			254	273	170	158	286	158	-.782	410	.434
SumSum Hours Per Month ⁺			263	50	13	165	45	13	3.544	426	<.001*
SumMean Hours Per Month ⁺			263	2	.80	165	1.5	.88	4.377	426	<.001*
SumMax Hours Per Month ⁺			263	17	5	165	17	3.15	1.465	426	.144
% greater than 2 hours in Sum of Activity Time ⁺			263	42	11	165	34.5	10	6.837	426	<.001*
LOS [#]			263	141	83	165	164	108	-2.353	283	.019*

What are the similarities and differences between characteristics of residents with high participation rates during structured programming and characteristics of residents with low participation rates during structured programming?

Table 11 presents the results of the Chi Square Analyses and t-tests used to compare the characteristics of residents with high participation and residents with low participation during the structured TAP programming. Significant differences were found between high participators and low participators regarding race, sexually motivated crime, employment status, discharge status, GAF score, resident's total hours in activities

per month, resident's mean total hours in *each* activity *type* per month, maximum number of hours spent in a *single* activity *type* per month, percent of resident time spent in two hours or more of the same activity, and LOS. Within the structured therapeutic activity program sample, residents with high participation scores are more likely to be non-black than low participators, are more likely to have non-sexually related charges, and are more likely to be declared competent than residents with low participation scores. Low participators are more likely to report no job than high participators, although unemployment was prevalent among both groups. Residents with high participation scores have significantly greater GAF scores, total hours in activities per month, mean total hours in each activity type per month, maximum number of hours spent in a single activity type, and a greater percent of resident time spent in two hours or more of the same activity than residents with low participation scores. Furthermore, high participators have significantly shorter LOS than low participators.

Table 11

Comparison of Residents with High Participation Levels to Residents with Low Participation Levels within the Structured TAP Program

Variable	Values	High Participation Levels				Low Participation Levels				ChiSquare Value / t	df	p																																																																																																																																																																																																																								
		%	N	M	SD	%	N	M	SD																																																																																																																																																																																																																											
Previous Admissions ¹	Yes	17%	103			22%	123			3.5	1	.063																																																																																																																																																																																																																								
	No	83%	488			78%	442						Race ¹	Black	54%	320			62%	351			7.5	1	.006*	White, Hispanic, Other	46%	271			38%	214			Sexually Motivated Charges ¹	Yes	6%	34			10%	54			5.95	1	.015*	No	94%	557			90%	511			Violent Charges ¹	Yes	58%	340			57%	323			.015	1	.901	No	42%	251			43%	242			Marital Status ¹	Single	77%	450			79%	442			.952	1	.329	Relationship History	23%	138			21%	118			Reports Religion ¹	Yes	83%	431			82%	367			.036	1	.850	No	17%	91			18%	80			Employment-Reports Job ¹	Yes	18%	103			15%	85			6.01	2 [~]	.050*	No	71%	415			77%	431			Substance Abuse History ¹	Yes	86%	503			82%	450			3.42	1	.064	No	14%	81			18%	98			Veteran Status ¹	Yes	13%	76			13%	71			.013	1	.910	No	87%	512			87%	488			Schizophrenia Based Admitting Diagnosis ¹	Yes	42%	248			44%	251			.714	1	.398	No	58%	343			56%	314			Discharge Status ¹	Competent	90%	486			81%	386			17.3	1	<.001*	Unlikely	10%	52		
Race ¹	Black	54%	320			62%	351			7.5	1	.006*																																																																																																																																																																																																																								
	White, Hispanic, Other	46%	271			38%	214						Sexually Motivated Charges ¹	Yes	6%	34			10%	54			5.95	1	.015*	No	94%	557			90%	511			Violent Charges ¹	Yes	58%	340			57%	323			.015	1	.901	No	42%	251			43%	242			Marital Status ¹	Single	77%	450			79%	442			.952	1	.329	Relationship History	23%	138			21%	118			Reports Religion ¹	Yes	83%	431			82%	367			.036	1	.850	No	17%	91			18%	80			Employment-Reports Job ¹	Yes	18%	103			15%	85			6.01	2 [~]	.050*	No	71%	415			77%	431			Substance Abuse History ¹	Yes	86%	503			82%	450			3.42	1	.064	No	14%	81			18%	98			Veteran Status ¹	Yes	13%	76			13%	71			.013	1	.910	No	87%	512			87%	488			Schizophrenia Based Admitting Diagnosis ¹	Yes	42%	248			44%	251			.714	1	.398	No	58%	343			56%	314			Discharge Status ¹	Competent	90%	486			81%	386			17.3	1	<.001*	Unlikely	10%	52			19%	89																				
Sexually Motivated Charges ¹	Yes	6%	34			10%	54			5.95	1	.015*																																																																																																																																																																																																																								
	No	94%	557			90%	511						Violent Charges ¹	Yes	58%	340			57%	323			.015	1	.901	No	42%	251			43%	242			Marital Status ¹	Single	77%	450			79%	442			.952	1	.329	Relationship History	23%	138			21%	118			Reports Religion ¹	Yes	83%	431			82%	367			.036	1	.850	No	17%	91			18%	80			Employment-Reports Job ¹	Yes	18%	103			15%	85			6.01	2 [~]	.050*	No	71%	415			77%	431			Substance Abuse History ¹	Yes	86%	503			82%	450			3.42	1	.064	No	14%	81			18%	98			Veteran Status ¹	Yes	13%	76			13%	71			.013	1	.910	No	87%	512			87%	488			Schizophrenia Based Admitting Diagnosis ¹	Yes	42%	248			44%	251			.714	1	.398	No	58%	343			56%	314			Discharge Status ¹	Competent	90%	486			81%	386			17.3	1	<.001*	Unlikely	10%	52			19%	89																																										
Violent Charges ¹	Yes	58%	340			57%	323			.015	1	.901																																																																																																																																																																																																																								
	No	42%	251			43%	242						Marital Status ¹	Single	77%	450			79%	442			.952	1	.329	Relationship History	23%	138			21%	118			Reports Religion ¹	Yes	83%	431			82%	367			.036	1	.850	No	17%	91			18%	80			Employment-Reports Job ¹	Yes	18%	103			15%	85			6.01	2 [~]	.050*	No	71%	415			77%	431			Substance Abuse History ¹	Yes	86%	503			82%	450			3.42	1	.064	No	14%	81			18%	98			Veteran Status ¹	Yes	13%	76			13%	71			.013	1	.910	No	87%	512			87%	488			Schizophrenia Based Admitting Diagnosis ¹	Yes	42%	248			44%	251			.714	1	.398	No	58%	343			56%	314			Discharge Status ¹	Competent	90%	486			81%	386			17.3	1	<.001*	Unlikely	10%	52			19%	89																																																																
Marital Status ¹	Single	77%	450			79%	442			.952	1	.329																																																																																																																																																																																																																								
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Age ⁺	591	40	11.9	565	39	12.5	.923	1154	.356
Education Level [#]	581	12	2.9	550	12	3.2	.079	1102	.937
GAF score ⁺	576	41	9.5	554	38	9.1	4.496	1128	<.001*
Length of FL residency ⁺	570	312	182.1	536	315	178.9	-.244	1104	.807
SumSum Hours Per Month ⁺	591	58	21.1	565	52	19.8	4.366	1154	<.001*
SumMean Hours Per Month [#]	591	2	.65	565	1	.56	7.169	1144	<.001*
SumMax Hours Per Month ⁺	591	17	7	565	15	5.8	4.394	1154	<.001*
% greater than 2 hours in Sum of Activity Time ⁺	591	40	9	565	38	8.4	3.272	1154	.001*
LOS [#]	591	161	131.2	565	223	198.8	-6.227	971	<.001*

* $p < .05$

~Residents reporting Disability Income were not included in this table

[!]Chi Square Analysis

[#]t-tests (Equal Variances Not Assumed)

⁺t-test (Equal Variances Assumed)

Primary Qualitative Data

Staff Interviews

A Qualitative component was included to provide depth for the analysis of the resident records. Due to the recent programming transition at NFETC, interviews were conducted with programming staff and administrators to develop a deeper understanding of the previous program, the current program, and staff impressions.

Twelve interviews were transcribed to produce approximately 57 pages of transcription. Staff and administrative representation was as follows: three administrators, three counselors, three Rehabilitation Therapists, two operations staff, and one

corrections officer. Four hundred and thirty four individual quotes were identified from the total transcription, and then categorized into 171 total codes. Table 12 represents the breakdown of these codes.

Table 12

Qualitative Code Breakdown

	Positive Connotation	Neutral Connotation	Negative Connotation	Total
General	4	10	7	21
Both Types of Programming	0	3	0	3
Referral Based Programming	15	3	15	33
Structured TAP Programming	50	9	55	114

These 171 codes were then categorized further into 68 networks. Table 13 describes the distribution of the 68 networks. Some codes were duplicated and placed into multiple categories, as were quotes, in order to ensure appropriate categorization of each statement.

Table 13

Qualitative Network Breakdown

	Number of Networks	Number of Nodes (Codes)	Number of Quotes
General	2	6	8
Both Types of Programming	4	7	24
Referral Based Programming	18	34	101
Structured TAP Programming	44	127	367

The ten most discussed networks, based on quote count, are listed in Table 14.

Table 14

Ten Most Discussed Networks

Number		Total Quotes
1	Benefits of Structured TAP Programming	31
2	TAP Safety	23

3	TAP Participation Levels	21
4	TAP provides residents with knowledge to explore new activities	20
5	Less idle time with TAP program	19
6	Accessibility issues regarding Referral based program	19
7	TAP Attendance levels	18
8	Mandatory attendance of TAP, but not mandatory participation	17
9	Accessibility of TAP program	16
10	Suggestions to improve TAP Program	15

The 68 networks were then grouped into key themes based on content. Themes were created based on need, if a network did not fit into an already created theme, then a new theme was created. This process continued until all networks had been grouped into a theme. Table 15 lists the key themes established as a result of the Qualitative staff interviews. These themes will be explored in the following sections.

Table 15

Key Themes of Qualitative Interviews

 LOS

Value of therapeutic activities

Accessibility

Attendance

Choice

Safety

Documentation

Idle Time/Structure

Internal Motivation

Facility Level and Community Level Issues

Participation

Program Preference

Program Content

Resident Accountability

Program Commonalities

Criticisms and Suggestions

Value of therapeutic activities

Staff described the overall value of therapeutic activities in meeting resident needs regardless of referral based or structured programming type. Staff acknowledged a culture change at the facility, an increase in the importance of resident involvement in

activities, stating that the value of therapeutic activity has become evident in other realms of the facility as well (referring to operations staff competency games played on weekends and evenings).

Referral Program Benefits. Staff described the benefits of the referral based program in place approximately 5 years ago. The work place program and skills based programs were described as being beneficial to the residents in that they were developing skills that can be used outside the classroom and facility setting (i.e. car repair, musical instrument instruction).

Structured TAP Program Benefits. Staff described various benefits of the current program in place, including relaxation, communication, hand eye coordination, problem solving, successful accomplishment of task or game to build self esteem, and social involvement. Some staff did point out that the activities are only beneficial when evenly matched with residents' abilities. Other staff described TAP as having no therapeutic benefit at all.

Yeah. But, ability to play a video game is not gonna help them. Ping pong skills, not gonna help them stay out of here. Although it's a good recreational activity, but recreational not therapeutic, and I think it's a misnamed program.

While some staff admitted that only a few are receiving the benefits, but that once they are open to the idea they are more likely to benefit from their involvement. *"It's as constructive as they choose to make it"*. Some staff felt that residents' increased activity may lend itself to competency obtainment. Other staff described residents' involvement as a possible diagnostic tool to determine residents' progress without intimidation. Many times staff cited the therapeutic atmosphere benefit, that it offers residents a less

confrontational atmosphere to explore issues in the open with a variety of staff. Here, a rehabilitation therapist describes her perspective regarding the atmosphere:

And those kind of interactions that we have with people is when they're doing projects we do normally have a chance to sit down and talk with them and there are those opportunities and that's what we do is we talk with them and that to me is therapeutic and what we do.

Accessibility

Referral Program Accessibility. With the exception of one individual, the majority of the staff interviewed agreed that the accessibility of the referral program was flawed. Residents had to be psychiatrically stable,

It was broken because it attended to the higher functioning residents, essentially it was attending to the residents that didn't need treatment, they were already on their way out for the most part and lot of them could get jobs.

Residents also had to wait for the new program cycle to begin in order to be referred to a class, at that point they were put on a waiting list, “So as I say, for any guy who came in, who didn't come in in the right month, you might come and go and never have been exposed to any of those things. Under the referral system class size was limited and issues arose between residents when they did not get placed in the class they wanted,

And then there was a fight too because, well you know, this class is full now so even though you wanted to, we are gonna have to put you in something else that you may or may not like just to give you something to do.

The issue of staff awareness of program offerings was also brought up; the residents had to be referred to class by their counselor or physician and in order for this to occur, the staff had to be aware of the program offerings in the first place.

Structured TAP Program Accessibility. The TAP program, however, seemed to be considered much more accessible. *“Every resident virtually every resident has an equal opportunity to participate in everything”*. A topic often discussed was the accelerated involvement within TAP as compared to the Referral based program,

This way as soon as the guys are psychiatrically stable enough they begin TAP, in fact, some guys are admitted and start TAP the next morning... whereas now again most guys within 48 hours if they're not floridly psychotic or acting out are at least beginning to be integrated into the TAP programming.

Many staff appreciate this accelerated involvement because it means the residents can begin to participate early in the recovery process, allowing for a greater variety of staff to be involved in their progress.

Now that isn't a requirement which I think is great because we get them initially as they first come in, before the meds have even taken place, before they've really gone through any type of um, treatment or anything or gone through competency, anything, and that's what I like to see is to be able to see them first thing when they get in and begin to work with them and just see how how they're managed and how they how they improve, and also being a part of that improvement process.

Attendance

Staff cited good attendance during referral based programming, for those referred, meaning the select few admitted to each class. Due to the mandatory nature of attendance in the TAP programming, attendance within TAP was mentioned frequently. TAP, of course, has better attendance rates than the referral system since all residents on a building who are appropriate are required to go. Residents who chose not to go will not obtain a mobility status required to make canteen purchases later in the day. *“A lot of them go there because the choice is you go or you lose your status or else”*. This brings to light a major issue within the leisure literature - choice or internal motivation.

Choice

Referral Program Choice. Staff emphasized the importance of choice in recovery and empowerment. Many staff felt that the residents had more involvement in the process of choosing referral based programming and that they could choose to be there as well. *“Where the referral based program, again they are learning a skill that they want to learn, they have truly chosen to be there.”* While other staff admit that in the referral program *“there wasn’t a whole lot of choices, even when there were choices”*. Residents that may have selected a class and taken it, run out of options once that class is over and they are unwilling to explore new activities,

so that’s the reason why I didn’t like the referral process just on that account is because if you’ve got guys that are staying here for any length of time they run the course and they get bored with things and then they’re not willing to check out the other classes.

So while the Referral Based program offered variety, there was limited encouragement to explore new activities.

Structured TAP Program Choice. The presence (or lack thereof) of the element of choice was an important discussion point for staff interviewed. Many stand by the belief that the more choice a resident has, the more likely they are to be involved in the programming. Many stated that the TAP program needs to provide residents with more choice, while one staff member maintained that TAP, in its current configuration, doesn't give residents any choice at all. Mostly, staff call for a combination, required programming with an increased element of choice. *"So having a TAP where everybody has to attend all the time, but then allowing people to have choice among those options"*. Some describe the lack of choice as the main flaw within the TAP program, causing a loss of empowerment of the residents.

The referral system gave them choices; TAP system doesn't give them many choices at all... the TAP system has better numbers than the old referral system, but I think it's at a price and a cost which is that you don't empower the residents.

Other staff maintain that TAP provides residents with a lot more options in that it exposes them to a variety of activities they would otherwise never experience. The rehabilitation staff, who are actually leading the activities, state that options are provided. Even though the class is titled as one activity, it doesn't mean they are not offered alternatives once they arrive.

But they have a chance to do art, they have a chance just to read magazines or listen to music or do other things and they may just work on their project for a little while and then stop and want to do something else.

Exposure, as well as the comfort and knowledge to explore new activities, was cited again and again as evidence of options provided in TAP.

I just like that we're offering them things that they may have never done before, by having them, to at least come to the classes, even if they don't have to participate, they're being presented with things they maybe have never seen before.

Choice and options bring to mind a topic often discussed within the leisure literature as well as within these interviews, internal motivation.

Internal Motivation

Many staff maintained that the resident participants in the Referral Based Program were intrinsically motivated to participate because they chose the activities. *“Oh yeah. There's a big difference when they were choosing to go to something they were obviously very intrinsically motivated to do it, they would participate very well.”* While the impression some staff have of the TAP program is that residents are only externally motivated to participate,

But right now we have, this is what you have to do, you have to go to get your canteen, so that's the carrot, you know so it doesn't address self motivation. You know what do you want to get out of this? I want canteen. I want my candy.

If the element of interest is present, then staff does not have to attempt to motivate residents to participate. Within in the Referral Based Program staff knew that residents were interested in being there, selected the activity, and came ready to participate.

So I think it's, you know, the referral based they went to the class and they enjoyed it and if they didn't like it then they didn't go to class. Interest ultimately played a major role in resident participation.

Participation

Staff report that during the Referral based programming, if a resident did not participate they went back to the building and one can assume that this did not happen very often because *"in theory, you could make the argument that under referral system, because they had chosen to come you would have better participation"*. Indeed, many staff stated that the Referral Based program had more participation. However, this participation level was within those attending the program, which represented a very small percentage of the building and the facility in general.

I can remember 6-7 years ago you may have only in a building of 27 guys there may be 10 that participate in anything and now we have at least, I know from my building we get at least 60-70% to participate on an everyday basis so that's a lot better.

Within the TAP program, staff report that *"now every resident has equal opportunity to participate if they so choose and everything that's available"*.

Rehabilitation Services staff emphasize that TAP programming is *"mandatory attendance, not mandatory participation"*, disclosing that residents are offered a range of activities to participate in in lieu of the planned activity. With that said, there were still a number of negatively coded statements regarding TAP participation. Some staff believe the classes are too broad and tend to lose the interest of higher functioning residents when catering to lower functioning residents. *"For some it works for others they're just really*

not inclined because they feel like it's beneath them". Some staff report that although the attendance is high, there is a much smaller percentage of actual participation. *"You see a lot of people you know listening to music or playing cards or talking to their friends as opposed to actually participating in the class that's happening"*. But other staff maintain that *"even those that come in and say I'm not doing this, after a couple of visits or so they end up taking part"*. Instructor involvement and peer influence are two main factors described as contributing to this eventual participation.

I think in reality, this way, what happens guys will, new admissions will come in, that are tentative uncomfortable, perhaps very psychotic, they watch the other guys, they gradually then become integrated in so I think in the long run you get a much higher level of participation.

Of course, peer influence has the potential to go the other way as well. *"You know because again there are residents who just don't want to be there and they are disruptive so those fellas that want to try to really learn something or enjoy the program it's detracted from"*. It is these residents who have no interest in participating, or even attending TAP, that pose a risk to others.

Every time we have a seclusion incident or an incident that results in a significant injury to a resident we have a post event review and one of the things we were concerned about was the fact that you know people may not want to go to TAP and then the question is well, what's available for them outside of tap to keep them occupied and interested and what happens is they kind of languish on the building, they get into trouble, they have a lot of opportunity to think about other things to do and as a result they may end up in a seclusion incident and the whole

idea was you know if we've got people who chose not to go to TAP or don't feel any benefit or involvement with TAP then what are their options.

This situation, although a concern within TAP, was the very same situation most residents found themselves in during the Referral Based Program, idle time and minimal structure.

Idle Time/Structure

During the referral based program, staff reported Idle down time and minimal structure for all residents, including those referred to the activity programs. Of course the issue was much worse for those not referred to an activity.

Things weren't as safe because, you know there were fights and stuff because you have "Oh well if you can't behave or you're not higher functioning, we're gonna leave you all together and the good boys can go to class".

One of the main positives about the TAP program, reported by staff, is that it offers structure to the day and minimizes idle time. *"You know the TAP program again gets them out, gets them going, gets them doing something. Which in itself is good for a majority of these guys".* The daily structure provides practice for life outside the facility. *"There's a daily schedule, and that gets them used to having life outside of here, like they have a schedule so they can't be in the house all day".* The structure also provides resident accountability where there previously was none.

Resident Accountability

During the referral based programming, since a majority of the residents were not engaged in activities, there was minimal resident accountability. *"Prior to TAP, we had about 70% of the residents at any one time might not be engaged, and would be out*

wandering around campus”. With the implementation of TAP programming, “now the guys are in structured activities, the campus wandering has come to an end, you know where to find guys”. Less idle time, more structure, and more resident accountability, according to staff perceptions, has had a major impact on safety.

Safety

During the referral based program, when the majority of residents were not attending activities, they were free to roam the streets of the facility. Once TAP was implemented,

you can walk up and down the streets now without all the guys hanging out, there’s not as much of the gang activity that used to be on the streets that we would find more of the anti-socials that would hang out and then kinda get in the guys that were kind vulnerable and they were more snatching their canteen stuff and you know working that angle of the fellas.

The structured set up also allows for separation and treatment of specific residents.

It’s an easier way to separate gentlemen, you know when you have some that just choose to stay on the building you can get the rest away from them and that way in that sense the ones that stay on the building the counselors or the therapists, psychology, here is their time to come on the building and talk to these guys, counsel them while everybody’s away.

Keeping residents off the streets and engaged in an activity and separating acute residents from the rest of the group does seem to have an impact on safety. Despite data on hand, many staff members stated that they thought the overall safety of the facility has improved since the implementation of TAP.

Documentation

Documentation of resident participation and progress has changed over the years based on the nature of programming. During Referral Based Programming, smaller groups allowed for more detailed progress notes. With the implementation of TAP programming and the larger number of residents present, documentation has lessened. Currently, the Rehabilitation Therapists leading the activities only maintain attendance and a rough participation score for each class.

LOS

Staff described their perceptions of an overall facility trend toward shorter LOS and the contributing factors in that trend (counseling, operations, and competency based lessons). However, administrative staff reported that they wouldn't know exactly what factors are impacting LOS directly.

Facility Level and Community Level Issues

One facility level concern cited by staff for the referral based program was referring staff's awareness of program offerings. Facility level concerns regarding the TAP program include large class size, staffing issues, a decrease in specialized programs (competency, substance abuse, communication, social skills), and that the TAP structured schedule prevents offerings of such groups.

Community level issues cited by staff are that the community based program offerings more closely resemble the Referral Based program, therefore making it less possible to prepare residents for the community within the structured TAP routine.

Program Commonalities

Staff cited many similarities to both programs, therapeutic environment to participate in adjunctive therapies, similar resident/staff interactions, and the same overall goal. In fact, many staff called for a combination of the two programs.

I think they need to maybe overlay referral modules on top of TAP. You know, here's what your schedules like, here are other classes that are being offered, you want to make any changes and would you like to, you know do you want to go to ... Also your schedule for TAP, or would you rather go to some of these other classes? I think there ought to be a compromise system.

Program Content

Many staff described the content of the Referral Based Program and the TAP program, while a number of staff offered suggestions regarding the content of the current program. Some suggestions included the inclusion of competency based programming, the need for individual and group programs, increased program offerings, and more person centered/needs based programming in general.

Program Preference

Four of the twelve individuals interviewed disclosed a preference for the Referral based program, two of the twelve interviewed stated a preference for the TAP program, while the other six remained neutral or liked both equally.

Non-intrusive, direct program observation

This component is also intended to provide qualitative depth for the analysis of the resident records. The student researcher observed 14 sessions of eight different program offerings within the current structured mandatory program in order to gain insight into the current program offerings. Detailed notes regarding the following areas were documented: Overall resident participation level (Percent of residents actively participating during the 1st, 2nd, 3rd, and 4th quarters of the session), Staff interaction (Percentage of time spent engaging in 1:1 interactions, Percentage of time spent engaging in group interactions, Percentage of time spent not interacting with residents), Program length, and Nature of the activity (Passive, Active, Physical, Creative, Mental, Social).

Table 16 depicts a summary of the findings. If the participation level cell has been split, the top percent represents participation in that day's activity, the lower percent represents those participating in an alternative activity, while the remaining percent, not indicated, represents the percentage of residents inactive during that quarter of the class.

Table 16
TAP Program Observations

	Overall resident participation level by class quarters				Staff interaction	Program length	Nature of activity
	1st	2nd	3rd	4th			
Music	100%	100%	77%	77%	1:group (100%)	35 minutes	Passive Mental
Music	100%	100%	90%	100%	1:group (100%)	40 minutes	Passive Mental
Educational Video	100%	100%	100%	100%	1:group (75%)	30 minutes	Passive Mental
Educational Video	83%	83%	83%	83%	1:group (25%)	50 minutes	Passive Mental
Crafts	67%	44%	44%	NA	1:1 (100%)	40 minutes	Active Creative
	33%	56%	56%	NA			
Art	43%	43%	NA	NA	1:group(90%)	35 minutes	Active Creative
	43%	43%	NA	NA	1:1 (10%)		
Art	60%	40%	50%	NA	1:1 (100%)	50 minutes	Active Creative
	0%	50%	50%	NA			
Horticulture	91%	100%	83%	NA	1:group (100%)	35 minutes	Active Mental
Horticulture	100%	100%	100%	100%	1:group (100%)	52 minutes	Active Mental
Activity Room	100%	67%	NA	NA	1:1(10%) 1:group(40%)	30 minutes	Mental Social
Activity Room	92%	77%	77%	93%	1:1(50%) 1:group(40%)	60 minutes	Mental Social
Exercise	100%	100%	NA	NA	1:group(75%) 1:1(25%)	25 minutes	Active Physical Social
	80%	80%	80%	80%	1:group(80%) 1:1(20%)	50 minutes	Active Physical Social
The World Today	89%	89%	78%	NA	1:group (100%)	45 minutes	Passive Mental

Using the participation distributions provided in Table 16, the average percent of participation for all classes observed was calculated. Due to the variation in class length, only the average percent of participation for the first two quarters of the classes was calculated. Approximately 86% of those in attendance during the first quarter of the 14 classes observed were actively participating in the program offered by the Rehabilitation Therapy staff. Furthermore, about 80% of those in attendance were actively participating in the second quarter of the classes. This percentage indicates participation in the primary program offering within each of these classes, not the alternative provided.

CHAPTER FIVE: DISCUSSION

Retrospective Secondary Quantitative Data

Resident Demographics

Approximately 37% of the residents in this sample are Caucasian American, 57% African American, 6% Hispanic, and less than 1% other. These demographics differ greatly from the Constantine et al. (2010) examination of characteristics of adults with serious mental illness involved in the criminal justice system. Constantine et al. (2010) used county and statewide criminal justice records and health and social service archival data sets to identify inmates with serious mental illness who were in the Pinellas County, Florida jail between July 1, 2003, and June 30, 2004, and their health and social service contacts from July 1, 2002, to June 10, 2006. Pinellas County is one of the counties serviced by NFETC, so it can be assumed that the population make up would have some similarities. In fact, Constantine et al.'s distribution of African American and Caucasian inmates differed considerably (74% Caucasian, 20% African American, 5% Hispanic, and 1% other). Additionally, the range within which Constantine et al.'s data was collected is the first year of data collected from NFETC, further supporting the assumption of similarity between the two demographic make ups. The disparity between the Pinellas county race demographics data and this research's demographics may be attributed to the fact that NFETC serves the entire state of Florida, while the racial makeup of Pinellas county is less diverse than the larger cities and counties in the state. Florida's overall demographic distribution is 80% Caucasian, 16% African American, and 21.5% Hispanic; while Pinellas County's demographic distribution is 84.5%

Caucasian, 10.5% African American, and 7.4% Hispanic (U.S. Census Bureau, 2009). Clearly, the Florida demographics are more diverse than the Pinellas County demographics; however there is still a clear over representation of African Americans in the NFETC sample as compared to state demographics.

Approximately 74% of the residents described themselves as unemployed, 16% reported a job, and 10% reported receiving Social Security Disability Income. These employment results are in line with Anthony, Cohen, Farkas, et al's (2002) research which found that only 10 - 20 percent of persons with serious mental illness are currently working. The rate of residents at NFETC receiving Social Security Disability Income is likely lower than expected because according to the Social Security Administration, monthly benefits are not paid to someone who commits a crime and is confined to an institution; this includes those found not guilty by reason of insanity or incompetent to proceed to trial (Social Security Administration, 2010). The 10% who did report receiving Social Security Disability Income is likely attributed to those who either plan on receiving it again upon discharge or those who were not aware their payments stopped upon arrest.

About 58% of the residents reported a history of poly-substance abuse, 11% reported a history of alcohol abuse, 14% reported a history of drug abuse, and 17% reported no substance abuse history; meaning over 80% of the residents indicated some form of substance abuse. This rate is considerably higher than results found by Bradley-Engen, Cuddeback, Gayman, Morrissey, and Mancuso (2010) indicating that offenders with co-occurring substance use disorders made up roughly two-thirds of persons admitted with serious mental illness each year. Studies regarding substance abuse among

individuals with a mental illness are prevalent in industry research. Dually diagnosed individuals not only benefit from specially designed programs addressing both issues, but are also often excluded from many community based mental health services due to their history of substance abuse. These statistics demonstrating the prevalence of dually diagnosed residents at NFETC emphasize the need for a specific substance abuse program at the facility.

Almost 60% of the residents have been admitted for a Violent Charge versus 40% who were admitted for non violent charges; this after the state of Florida witnessed a drop from 728 violent crimes per 100,000 people to 605 violent crimes per 100,000 people during the same time frame in which this data is based (Florida Department of Law Enforcement, 2009). The state violence rates are representative of the entire corrections population not just those with a mental illness. Krakowski, Volavka, Brizer (1986) found that the diagnosis most often associated with violence is schizophrenia. In this research sample approximately 42% of the residents at NFETC have been diagnosed with a Schizophrenia based diagnosis, perhaps partially explaining the large percentage of violent crimes committed by the offenders at NFETC.

What are the similarities and differences between characteristics of residents at NFETC during referral based programming and those of residents at NFETC during structured programming?

Hypothesis - There will be no significant differences regarding demographics, diagnoses, and criminal charges between the residents at NFETC during referral based programming and residents at NFETC during structured programming; however, a significant difference in LOS is hypothesized

Contrary to the hypothesis, the results indicate significant differences between resident characteristics among those present during the referral based programming and those in the structured programming. Significant differences between the two groups of residents were found regarding employment status, presence of a Schizophrenia based admitting diagnosis, discharge status, GAF score, length of FL residency, Resident's total hours in activities per month, Resident's mean total hours in *each activity type* per month, and Maximum number of hours spent in a *single activity type* per month. Table 17 summarizes the direction of these differences.

Table 17

Significant Findings - Resident Characteristics By Program

Referral Based Program

More likely to report unemployment

More likely to be declared competent

Significantly greater GAF scores

Significantly greater mean total hours in each activity type per month

Significantly greater maximum number of hours spent in a *single activity type* per month.

Structured TAP Program

More likely to have a Schizophrenia based diagnosis

Significantly greater length of Florida residency

Significantly greater total hours in activities per month

Significantly longer LOS

As described in the table, residents present during the Referral Based Program were more likely to be declared competent than those present during the TAP program. This may be due to the removal of competency classes from the residents' regular schedule. Residents present during the TAP program still receive competency classes on the building, but classes are not part of the weekly schedule. Residents present during TAP programming had significantly greater total hours in activities per month, while those present during Referral Based Program had significantly greater mean total hours in *each activity type* per month and significantly greater maximum number of hours spent in a *single activity type* per month. The increased total hours in activities per month within the TAP program makes sense due to the mandatory nature of the structured program. Residents were required to attend more classes, more often. The greater mean total hours in *each activity type* per month and significantly greater maximum number of hours spent in a *single activity type* per month for Referral Based Program participants also makes sense based on the nature of the Referral based program. Although, facility wide, the Referral Based Program offered a wider variety of classes than the TAP program, none of the residents were participating in all of the classes offered. In fact, only a very small percentage was even participating in more than one type of class. Less variety of classes for each resident means the number of different classes to divide into the total hours in all classes is going to be smaller, creating a larger value for the mean total hours in *each activity type*. Similarly, since these same residents are spending more time in a single activity, the maximum number of hours spent in a single activity type is also going to be larger for residents present during the Referral Based Program.

How does resident LOS during referral based programming compare to resident LOS during structured programming?

Hypothesis - Resident LOS during structured programming will be significantly shorter than resident LOS during referral based programming.

Contrary to the hypothesis, resident LOS during structured programming was significantly greater (longer) than resident LOS during Referral based programming. This may be attributed to the significant differences found within the two groups' GAF scores, those present during the referral based program had significantly greater GAF scores than the residents in the structured programming. The GAF is administered by clinicians and physicians to subjectively rate the social, occupational, and psychological functioning of adults; therefore, the significant difference in scores between the two groups may have attributed to the length of time to obtain competency for each group and ultimately the LOS. Another possible cause for the difference was mentioned during the Qualitative staff interviews. Staff reported that upon implementation of the structured activity program, less time was allotted for regularly scheduled competency classes. This decrease in competency classes may have attributed to a longer LOS for those residents in the structured activity program.

What are the predictors of resident LOS during referral based programming?

Hypothesis - In accordance with previous research, the seriousness and chronicity of the mental illness, previous employment, age, and education will be significant predictors of resident LOS during referral based programming.

For those residents present at NFETC during referral based programming, GAF score, age, Resident's mean total hours in *each* activity *type* per month and participation

mean were significant predictors of LOS. Table 18 summarizes the direction of the discharge predictors.

Table 18

Referral Based Program Significant Findings

Discharge Predictors

For every one point increase in GAF score, residents are 2.8% more likely to be discharged.

For every additional year in age, residents are 0.9% less likely to be discharged.

As a resident's mean total hours in each activity type per month increases, likelihood of discharge increases as well.

Residents with decreased participation are 36.2% less likely to be discharged.

For every one point increase in GAF score, residents are 2.8% more likely to be discharged. This association makes sense since the GAF is a measure of functioning. As a resident's mean total hours in each activity type per month increases, likelihood of discharge increases as well. Lastly, for every one point increase in participation mean, residents are 36.2 % less likely to be discharged; keeping in mind that participation mean was reverse scored, this means that residents with decreased participation are 36.2% less likely to be discharged. This finding also makes sense when one considers that a resident who displays initiative to participate in activities would likely have similar initiative regarding competency obtainment and upon competency obtainment, discharge.

The current study also found that for every additional year in age, residents are 0.9% less likely to be discharged. This study's hypothesis that seriousness and chronicity

of the mental illness, previous employment, age, and education will be significant predictors of resident LOS during referral based programming was proven incorrect for all variables except age. The finding that age is a significant predictor of discharge is supported by Moran, Fragala, Wise, and Novak (1999). However, Moran et al. reported longer stays for younger individuals, the opposite of the current study's findings. Also contrary to the current study's findings, Moran et al. (1999) found education and employment to be significant predictors of LOS, neither of which were found to be significant in this study. The current study's findings also conflict with Dell et al. (1987) and Rodenhauser and Khamis (1988)'s findings, both of which determined diagnosis to be a strong predictor of LOS. The current findings are supported by Rodenhauser and Khamis (1988)'s findings that substance abuse was not a significant predictor of LOS within this population.

What are the predictors of resident LOS during structured programming?

Hypothesis - Structured program attendance level will be a significant predictor of LOS during structured programming, in addition to predictors discussed in previous research: the seriousness and chronicity of the mental illness, previous employment, age, and education.

For those residents present at NFETC during the structured TAP programming, presence of sexually motivated charges, violent charges, a schizophrenia based admitting diagnosis, GAF score, age, resident's total hours in activities per month, Resident's mean total hours in *each* activity *type* per month, maximum # of hours spent in a *single* activity *type* per month, percent of time greater than two hours in sum of time in activities, and

participation mean were significant predictors of LOS. Table 19 describes the direction of the predictors.

Table 19

Structured Programming Significant Findings

Discharge Predictors

Residents with a sexually motivated charge are 30% less likely to be discharged.

Residents with a violent charge are 11.5% less likely to be discharged.

Residents with a Schizophrenia based diagnosis are approximately 35% less likely to be discharged.

For every one point increase on the GAF score, residents are 3.4% more likely to be discharged.

For every one year increase in age, residents are 1% less likely to be discharged.

For every additional hour in activities per month, a resident is almost 1% more likely to be discharged.

For every additional hour of a different activity type per month, residents are also more likely to be discharged.

Residents are more likely to be discharged for every additional maximum number of hours spent in a *single activity type* per month.

Residents with decreased participation are 34.2% less likely to be discharged.

Residents with a sexually motivated charge are 30% less likely to be discharged, while residents with a violent charge are 11.5% less likely to be discharged. Residents with a Schizophrenia based diagnosis are approximately 35% less likely to be discharged. The presence of sexually motivated charges and diagnosis as significant predictors is

supported by the literature (Dell et al.,1987; Rodenhauser & Khamis,1988; Moran et al., 1999). The direction of the Schizophrenia based diagnosis is also supported by the literature; the presence of a schizophrenia based diagnosis predicts an increased LOS and decreases the probability of discharge (Rodenhauser & Khamis,1988).

For every one point increase on the GAF score, residents are 3.4% more likely to be discharged. This association makes sense since the GAF is a measure of functioning. As mentioned in Table 19, every one year increase in age is associated with a 1% less likelihood of discharge. Although Moran et al. (1999) found age to be predictive of LOS, their directional finding conflicts with the results of this study. Moran et al. found a younger age to be predictive of a longer LOS and a decreased probability of discharge; however, the current study's findings found the opposite—as age increases the probability of discharge decreases. The current study's findings conflict with Moran et al. (1999)'s findings that employment and education were significant predictors of LOS as well as those of Rodenhauser and Khamis (1988) who found history of substance abuse to be a significant predictor of LOS; neither of which were supported by the current study. The current study's findings are partially supportive of the hypothesis in that structured program attendance level and chronicity of diagnosis were significant predictor of LOS; however, the hypothesis also predicted previous employment, increased age, and higher education as significant predictors of shorter length of stay and discharge, which were not supported by the results.

For every additional hour in activities per month, a resident is almost 1% more likely to be discharged. For every additional hour of a different activity type per month, residents are also more likely to be discharged. Likewise, residents are more likely to be

discharged for every additional maximum number of hours spent in a *single activity type* per month. Lastly, for every one point increase in participation mean, residents are 34.2% less likely to be discharged; keeping in mind that participation mean was reverse scored, this means that residents with decreased participation are 34.2% less likely to be discharged. This finding is interesting since the structured programming is mandatory, but participation is not; therefore, those with higher participation rates may also be more invested in their treatment and efforts to obtain competency.

What are the predictors of recreation participation level during referral based programming?

Hypothesis - In accordance with previous research on predictors of LOS, the seriousness and chronicity of the mental illness, previous employment, age, and education will also be significant predictors of participation level during referral based programming.

None of the variables stated in the hypothesis were found to be significant predictors of participation level during referral based programming; however, resident's total hours in activities per month was found to be a significant predictor of participation. This finding makes sense considering the voluntary nature of the referral based program; it can be assumed that if they are there willingly, they will also participate. Table 20 summarizes this finding.

Table 20

Referral Based Program Significant Findings

 Participation Predictors

 Higher total activity hours are predictive of greater participation

In support of the hypothesis, but in conflict with the current study's results, Leufstadius and Eklund (2008) found that individuals with a diagnosis of psychosis spent less total time in daily activities than individuals with non-psychosis diagnoses. Leufstadius and Eklund (2008) also found that time spent in daily activities increased significantly with age and that older individuals often had a beneficial daily rhythm.

What are the predictors of recreation participation level during structured programming?

Hypothesis - In accordance with previous research on predictors of LOS, the seriousness and chronicity of the mental illness, previous employment, age, and education will also be significant predictors of participation level during structured programming. However, due to the mandatory nature of the structured programming, the predictors: previous employment, age, and education will not be as significant in predicting structured programming participation as in predicting referral based programming.

Presence of substance abuse history, GAF score, resident's total hours in activities per month, and race are significant predictors of participation level. Table 21 summarizes the direction of these findings.

Table 21

Structured Programming Significant Findings

Participation Predictors

Higher GAF scores are predictive of greater participation.

Higher total activity hours are predictive of greater participation.

African American race is predictive of greater participation.

A history of substance abuse is predictive of decreased participation levels.

The fact that activity sum was a positive predictor of participation, that as the activity sum increases so does participation level, is quite interesting based on the qualitative staff interviews which indicated that a number of residents attend because they have to, but do not participate once there. This finding that activity sum is predictive of increased participation level may indicate that as residents continue to attend the structured TAP programming, their participation level increases. Those who may not be interested in participating initially eventually do participate. In conflict with the current study's findings, Leufstadius and Eklund (2008) found diagnosis and age to be significant predictors of participation level, neither of which were indicated in the current results. The

current findings also prove the hypothesis incorrect, seriousness and chronicity of the mental illness, previous employment, age, and education were not determined to be significant predictors of activity level.

What are the similarities and differences between characteristics of residents with high participation rates during referral based programming and characteristics of residents with low participation rates during referral based programming?

Hypothesis - Due to the voluntary nature of the referral based programming, the characteristics of residents with high participation rates and low participation rates during referral based programming will not significantly differ.

Numerous differences were, in fact, found between residents with high participation levels and those with low participation levels during referral based programming, proving the above stated hypothesis incorrect. Significant differences were found between high participators and low participators regarding marital status, presence of a Schizophrenia based diagnosis, veteran status, discharge status, education level, LOS, resident's total hours in activities per month, resident's mean total hours in *each* activity *type* per month, and percent of resident time spent in two hours or more of the same activity. Table 22 summarizes the direction of these findings.

Table 22

Referral Based Program Significant Findings

High Participator and Low Participator Comparison	
High Participators	Low Participators
More likely to indicate a relationship history	Less likely to indicate a relationship history
More likely to have a Schizophrenia based diagnosis	Less likely to have a Schizophrenia based diagnosis
More likely to be veterans	Less likely to be veterans
More likely to be discharged as competent	Less likely to be discharged as competent
Had significantly higher education levels	Had significantly lower education levels
Had significantly higher total hours in activities per month	Had significantly lower total hours in activities per month
Had significantly higher mean total hours in each activity type per month	Had significantly lower mean total hours in each activity type per month
Had significantly higher percentage of time in activities over two hours	Had significantly lower percentage of time in activities over two hours
Had significantly shorter LOS	Had significantly longer LOS

The finding that the two participation groups were significantly different regarding presence of a Schizophrenia based diagnosis is supported by Leufstadius and Eklund's (2008) work; however, the direction of the relationship differs. Leufstadius and Eklund found that individuals with a diagnosis of psychosis spent less total time in daily activities than individuals with non-psychosis diagnoses, whereas the current results indicate increased participation and involvement among residents with a Schizophrenia

based diagnosis. The fact that age was not present as a significant difference between the two groups is supported by MicKibbin et al.'s (2008) findings which also indicated age as insignificant in predicting participation restriction in middle aged older adults with Schizophrenia. However, Leufstadius and Eklund (2008) did find that time spent in daily activities increased significantly with age.

Residents with greater participation were found to have significantly higher education levels, greater total hours in activities per month, higher mean total hours in each activity type per month, and a higher percentage of time in activities over two hours. The finding that residents with greater participation were found to have significantly higher education levels makes sense due to the voluntary nature of the referral based program. Those with a developed, heightened sense of interest in a particular skill or activity are more likely to be better educated. Those with greater participation levels were also determined to have greater total hours in activities per month, greater mean total hours in each activity type per month, and a higher percentage of time in activities over two hours. This also makes sense considering the voluntary nature of the referral based program; if they have chosen to attend, they will most likely choose to participate as well. The finding that residents with low participation levels had significantly longer LOS is a testament to the competency benefits of participation within the referral based programming.

What are the similarities and differences between characteristics of residents with high participation rates during structured programming and characteristics of residents with low participation rates during structured programming?

Hypothesis - Due to the mandatory nature of the referral based programming, the characteristics of residents with high participation rates and low participation rates during structured programming will be significantly different.

Residents with high participation levels were found to be significantly different than those with low participation levels regarding race, sexually motivated crime, employment status, discharge status, GAF score, resident's total hours in activities per month, resident's mean total hours in *each* activity *type* per month, maximum # of hours spent in a *single* activity *type* per month, percent of resident time spent in two hours or more of the same activity, and LOS. Table 23 summarizes the direction of these findings.

Table 23

Structured Programming Significant Findings

High Participator and Low Participator Comparison

High Participators	Low Participators
Less likely to report no job	More likely to report no job
More likely to be non-black	Less likely to be non-black
More likely to have non-sexually related charges	Less likely to have non-sexually related charges
More likely to be declared competent	Less likely to be declared competent

Significantly greater GAF scores	Significantly lower GAF scores
Significantly greater total hours in activities per month	Significantly lower total hours in activities per month
Significantly greater mean total hours in each activity type per month	Significantly lower mean total hours in each activity type per month
Significantly greater maximum number of hours spent in a single activity type	Significantly lower maximum number of hours spent in a single activity type
Significantly greater percent of resident time spent in two hours or more of the same activity	Significantly lower percent of resident time spent in two hours or more of the same activity
Significantly shorter LOS	Significantly longer LOS

The fact that age was not present as a significant difference between the two groups is supported by McKibbin et al.'s (2008) findings which indicated age as insignificant in predicting participation restriction in middle aged older adults with Schizophrenia. However, Leufstadius and Eklund (2008) did find that time spent in daily activities increased significantly with age. The significant difference between the discharge status of those with high participation means and those with low participation means may be a result of the significant difference in LOS, those with increased LOS have a decreased probability of being determined competent and discharged from the facility.

The finding that those with higher participation scores had a greater percent of time greater than 2 hours in activities indicates that those who were able to attend programming (as opposed to the acute residents restricted to the buildings) were more likely to participate than those who rarely attended programming due to acute symptoms.

The finding that those with higher participation levels had shorter LOS and those with lower participation levels had longer LOS supports the assertion that participation in activities helps participants obtain competency and ultimately lowers their LOS; however due to the differing resident characteristics during referral based programming and structured programming this benefit was not evident in the direct comparison of LOS between the two programming types. One program may not be more beneficial than the other; however results clearly indicate that the benefit of therapeutic activities in decreasing LOS was evident within both programming types.

Primary Qualitative Data Collection

Staff Interviews

In order to maintain objectivity as a qualitative researcher, no hypotheses were set for the primary data collection staff interviews or primary data collection passive program observation.

Value of therapeutic activities

Staff described the overall value of therapeutic activities in meeting resident needs regardless of referral based or structured programming type. Staff acknowledged an increase in the importance of resident involvement in activities at the facilities. The quantitative findings support this importance, demonstrating a link between increased participation and decreased LOS regardless of programming type.

Referral Program Benefits. The work place program and skills based programs were described as being beneficial to the residents in that they were developing skills that can be used outside the classroom and facility setting (i.e. car repair, musical instrument

instruction). The Quantitative data finding that residents with high participation means were found to have significantly higher education levels may offer support for this statement. Those with a developed, heightened sense of interest in a particular skill or activity are more likely to be better educated.

Structured TAP Program Benefits. Staff described various benefits of the current program in place. Some staff did point out that the activities are only beneficial when evenly matched with residents' abilities. Other staff described TAP as having no therapeutic benefit at all. This is refuted by the Quantitative results indicating participation as a significant predictor of LOS for both programming types. Some staff felt that residents' increased activity may lend itself to competency obtainment. The finding that those with higher participation levels had shorter LOS and those with lower participation levels had longer LOS supports the assertion that participation in activities may help participants obtain competency and ultimately shorten their LOS.

Program Accessibility

With the exception of one individual, the majority of the staff interviewed agreed that the accessibility of the referral program was flawed. Residents had to be psychiatrically stable in order to participate. These statements may be supported by the fact that the only significant predictor of participation for referral based programming was total time in activities, possibly indicating a similar group of individuals with similar levels of participation. The TAP program, however, was considered to be much more accessible. There were numerous predictors of participation for the structured TAP programming, possibly indicating that a wider variety of residents are participating in the structured TAP programming.

Attendance

Staff cited good attendance during referral based programming, for those referred, meaning the select few admitted to each class. Due to the mandatory nature of attendance in the TAP programming, attendance within TAP was mentioned frequently. TAP has better attendance rates than the referral system since all residents on a building who are appropriate are required to go. This is supported within the Quantitative results which indicate significant differences in sum of activity time between referral based programming and structured TAP programming.

Choice

Staff emphasized the importance of choice in recovery and empowerment. Many staff felt that the residents had more involvement in the process of choosing referral based programming and that they could choose to be there as well. *“Where the referral based program, again they are learning a skill that they want to learn, they have truly chosen to be there.”* While other staff admits that in the referral program *“there wasn’t a whole lot of choices, even when there were choices”*. The presence (or lack thereof) of the element of choice was an important discussion point in the discussion of the structured TAP programming. Many stand by the belief that the more choice a resident has, the more likely they are to be involved in the programming.

Internal Motivation and Participation

Within the Qualitative Interviews, many staff maintained that the resident participants in the Referral Based Program were intrinsically motivated to participate because they chose the activities. While the impression some staff have of the TAP program is that residents are only externally motivated to participate. If the element of

interest is present, then staff does not have to attempt to motivate residents to participate. Staff report that during the Referral based programming, if a resident did not participate they went back to the building. Indeed, many staff stated that the Referral Based program had more participation than the structured TAP program. Within the TAP program, Rehabilitation Services staff emphasize that TAP programming is “*mandatory attendance, not mandatory participation*”. With that said, there were still a number of negatively coded statements regarding TAP participation. Some staff believe the classes are too broad and tend to lose the interest of higher functioning residents when catering to lower functioning residents. Some staff report that although the attendance is high, there is a much smaller percentage of actual participation. The Quantitative finding that activity sum was a positive predictor of participation, that as the activity sum increases so does participation level, is quite interesting based on these Qualitative comments. This finding that activity sum is predictive of increased participation level may indicate that as residents continue to attend the structured TAP programming, their participation level increases. Those who may not be interested in participating initially eventually do participate. It is the compulsory attendance that increases their chances of eventually participating. Crilly (2008) recognizes “that treatment components within compulsory commitment have coercive qualities but reframes their context as a potential bridge to building therapeutic treatment alliances”. If it weren’t for the mandatory attendance, many of these residents would not have made the initiative to participate or develop these therapeutic relationships with the TAP therapists in the first place.

Idle Time, Structure, Resident Accountability, and Safety

During the referral based program, staff reported idle down time and minimal structure for all residents, including those referred to the activity programs. Since a majority of the residents were not engaged in activities, there was minimal resident accountability. One of the main positives about the TAP program, reported by staff, is that it offers structure to the day and minimizes idle time, creating more resident accountability. The structured set up also allows for separation and treatment of specific residents. Keeping residents off the streets and engaged in an activity and separating acute residents from the rest of the group does seem to have an impact on safety. Despite quantitative data available to support these statements, many staff members stated that they thought the overall safety of the facility has improved since the implementation of TAP.

Length of Stay

Staff described their perceptions of an overall facility trend toward shorter LOS and the contributing factors in that trend (counseling, operations, and competency based lessons). However, administrative staff reported that they wouldn't know exactly what factors are impacting LOS directly. In fact, as indicated within the Quantitative Results and again in the Quantitative Discussion, when comparing LOS during the referral based program to LOS during the structured TAP program, LOS is significantly greater during the more recent structured program. Despite this, the Quantitative finding within the Referral Based program and Structured TAP program samples that those with higher participation levels had shorter LOS while those with lower participation levels had

longer LOS help to strengthen the assertion that participation in activities helps participants obtain competency and ultimately lower their LOS.

Program Commonalities and Content

Staff cited many similarities to both programs, therapeutic environment to participate in adjunctive therapies, similar resident/staff interactions, and the same overall goal. Both programs offered residents the chance to get off the building and establish a therapeutic relationship with staff outside of their direct clinical staff and their building. This therapeutic relationship is in stark contrast to the behaviors that are learned and expected of them in correctional settings. Rotter, McQuisition, Broner, and Steinbacher (2005) discuss the inmate code as adaptations to jail - such as not sharing information with staff, minding one's business, and demonstrating shows of strength. Rotter et al. (2005) state that although these behaviors help the person adapt during incarceration they lie in stark contrast to the expectations of most therapeutic environments. Recreational environments such as those offered within both the previous referral based program and the present structured TAP program allow for residents to let their guard down and create therapeutic relationships with staff and therapists.

In light of the benefits provided by and similarities between both programs, many staff called for a combination of the two programs. Despite many significant differences between the characteristics of the residents present for the two programs, both programs serve to support the benefit of participation in activities on resident LOS. Many staff offered suggestions regarding the content of the current program. Some suggestions included the inclusion of competency based programming, the need for individual and group programs, increased program offerings, and more person-centered/needs based

programming in general. The Quantitative results of the current study found that over 80% of the residents at NFETC between September 2003 and September 2010 reported some form of substance abuse indicating a grave need for a facility based substance abuse program. According to Qualitative interview results, substance abuse classes, as well as competency based classes, were offered more regularly before the inception of the current structured TAP program. The lack of competency based classes in the current program may have attributed to the increase in LOS described in the Quantitative results. The incorporation of competency based classes as well as some form of substance abuse programs within the regular structure of the current program would serve to benefit the residents even more.

Non-intrusive, direct program observation

Approximately 86% of those in attendance during the first quarter of the 14 classes observed were actively participating and about 80% of those in attendance were actively participating in the second quarter of the classes. This percentage indicates participation in the primary activity offered within each of these classes, not the alternative provided. This finding conflicts with the Qualitative Interview results in which some staff assumed a much lower participation rate within the classes offered, when in fact the participation rate would be even higher if participation in alternative activities was taken into consideration. This finding emphasizes the need for clearer program progress statements and objectives to be established between those leading the programs and those offering counseling and other services on the buildings.

CHAPTER SIX: CONCLUSION

Implications

In-prison experiences, including length of stay, participation in treatment programs, contact with family and friends, and prerelease preparation, have been found to be important factors in an individual's long-term post-prison reintegration (Visher & Travis, 2003). Due to the temporal nature of a resident's time at NFETC as being located between his time in jail or prison awaiting mental health services and his time in jail or prison awaiting his trial following mental health services, these experiences, although taking place within the walls of a mental health treatment facility, continue to hold the same importance. This research recognizes that importance through the examination of those factors on resident LOS.

In a call for more research in the area of recovery, Anthony, Rogers, and Farkas (2003) suggest that:

Qualitative and non-traditional measures of studying important processes and outcomes related to recovery must be used, and the influence of nonrandomized trials for the development of evidence-based practice must be acknowledged.

Program principles and practices, rather than program models, should be our next focus of research, and the underlying values of our field should be operationalized and tested (p. 111-112).

Facility Implications

As evidenced by the legal battles described earlier, successfully decreasing the LOS for this population has emotional, legal, and criminal ramifications up and down the

state of Florida. Providing quality mental health treatment while facilitating legal competency is even more difficult when state workers know that the LOS for one resident is directly tied to the length of time another individual with mental illness sits in jail without treatment. Knowledge of the impact programming decisions have on resident LOS will greatly benefit the Florida Department of Children and Families (DCF) in their mission to provide quality services to individuals with mental illness.

Currently, little research exists examining the impact of structured programming on resident LOS in forensic psychiatric facilities. This research provides a direct examination of the effectiveness of structured programs, and therapeutic activity programs in general, in decreasing resident LOS.

The results suggest that, despite many differences between the samples of residents receiving the two programs, there is a therapeutic value to the activity programs offered regardless of the program setting. With consideration of staff perspectives and quantitative findings, the current program can be restructured to provide additional benefit.

The Qualitative staff interview component of the current research provided additional insight into issues related to the prior and current program offerings at NFETC, much of which were supported by the Quantitative data. The issues, if addressed, have the potential to streamline the program at NFETC into a more effective and useful therapeutic element. One such issue, frequently cited by those staff members interviewed, was the need for the current programming to be matched with resident abilities as well as interests. A major implication of this research is the need for a restructuring of the current programming to better reflect the skills and abilities of all participants.

Another issue frequently brought up in the Qualitative staff interviews was lack of participation within the current structured TAP programming. As mentioned earlier, attendance is mandatory but participation is not. This research brings to light two points regarding participation. First, the participation rates of the 14 classes observed indicated an average 86% participation rate within the first quarter time period of the classes and an 80% participation rate within the second quarter time period of the classes. An implication for this study would be to address the discrepancy between what staff thinks the level of participation is and what it actually is while attempting to find common ground amongst a variety of professions and service providers within the facility for improving participation rates.

Second, the Quantitative results indicate activity sum as a significant predictor of participation level, indicating that as residents continue to attend programming, they eventually participate. This finding insinuates that there is indeed something to be said for mandatory or compulsory treatment within this population. While the foundation for this research values the importance of choice and intrinsic motivation, another implication for this study would be to maintain the structure provided by compulsory programming.

When comparing the two programs, LOS was significantly greater in the structured TAP programming. This is unusual because it was assumed that the structure provided would decrease time to competency and ultimately decrease resident LOS. Based on Qualitative interview findings, the increased LOS during the current structured TAP programming may be attributed to a change to regularly scheduled programs in order to make room for TAP programming. According to some staff interviews, regularly

scheduled competency programs became fewer and farther between when the structured program was implemented. This may be the reason for the significant differences between the LOS for the residents within the two program types. This finding has serious implications when programming for this population. At NFETC, LOS can be considered a rough estimate of time to obtain competency; therefore, in order to decrease LOS, competency courses should be regularly scheduled for each and every building within the structured programming.

Despite the LOS differences between the two programs, the benefits of activity programming in general was still evident in the results of the analyses run separately for each program. Within both the Referral based program and the structured TAP program, residents with lower participation levels had a longer LOS and residents with high participation levels had a shorter LOS. These results indicate that involvement in therapeutic activities, regardless of programming format, may be beneficial in decreasing LOS. Hendryx, Green, and Perrin (2009) found that greater involvement in a wide range of activities is related to better recovery. Previous studies have found that involvement in leisure, recreation, and therapeutic activities can function as a means of symptom management, coping, and self restoration; and according to the current study, aid in progress towards mental health competency (Kleiber, Hutchinson, & Williams, 2002). Therefore, successful mental health recovery should include participation in recreation and the development of leisure skills (Lieberman & Kopelowicz, 2005; Kulkarni & Power, 1999).

Another programming implication of these findings is the need for a substance abuse program as part of the structured program. Over 80% of the total residents in the

collected database reported a history of alcohol, drug, or poly-substance abuse. The issue of appropriately designed programs and availability of services to this dually diagnosed population is a popular topic within the mental health field and should also be addressed through mental health programs offered within the corrections systems. Further support can be obtained from the Muntaner, Wolyniec, McGrath, and Pulver (1998) study which found that substance abuse is actually a predictor of criminal history among psychotic patients. Another finding, from Castillo & Fiftal Alarid (2010), reports that alcohol was a contributing factor in increasing the risk of re-arrest for violent offenses after program completion among individuals with mental illness.

These Quantitative and Qualitative findings should serve as suggestions for a program revamping at NFETC. Both programs had their merit; however, as suggested by those staff members interviewed, an amalgamation between the two may provide the most benefit to this population.

Per state of Florida IRB requirements, the current study's findings will be sent to the facility and the state of Florida. The student researcher will also travel to the facility to present the findings to a representation of administration, rehabilitation staff, counselors, security, and building staff. Not only do these results have important implications for facility program development, but the findings can be applied at a state and community level as well.

Public Health Implications

“Societal, community, and institutional factors are critical to promoting healthy behavior changes. They can provide a fertile environment for health enhancement, as well as directly shape individuals' health behavior” (Kegler & Glanz, 2008). Institutional

factors, such as the implementation of a compulsory structured activity program, can help to instill healthy habits within individuals who otherwise would not engage in such behaviors. Fostering interests and behaviors at the institutional level for individuals with mental illness can help create healthy lifelong habits within a population that is increasingly susceptible to secondary conditions (Sokal et al., 2006). Individuals with mental illness have an increased risk of diabetes, lung disease, obesity, and heart disease (Sokal et al., 2006; National Alliance on Mental Illness, 2011). The current study's findings indicate that increased total time in activities is a predictor of increased participation in those activities. If resident participation within the facility can lead to continued involvement in similar activities outside the facility, it holds the potential for improved overall health among individuals with mental illness. Additionally, the current study's findings regarding factors that contribute to increased participation within facility programs can be used to increase participation within community based mental health programs.

Limitations

A major limitation of this research was the reliance on secondary data for the majority of the analyses. Counselors at NFETC are generally those responsible for entering the information as reported by the residents. The computer program used by center does not utilize a standardized drop down menu and therefore allows for input of string data by the counselors and other staff. The string variables required a great deal of recoding by the student researcher in order to be suitable for statistical analyses. Although all hand recoding was done in conjunction with SPSS syntax record, the potential for error still exists.

Another limitation is that some of the counselors at the facility entered more than one charge into the primary charge field; this may have caused the data to inaccurately represent the extent of each resident's criminal history. However, per the technology administrator at the center, the primary charge was the one entered first, therefore that was the charge that was categorized for the analyses. A similar issue arose with GAF score records from multiple administrations of the test; this has been discussed in further detail in the Procedure section of Chapter Three.

Activity sums collected from the facility's digital records included a variety of building based activities and classes in addition to the Referral activity classes and the TAP activity classes whose comparison makes up the core of the current study. An additional limitation of the current study is that resident participation and attendance totals in these classes were included in the activity sums and participation mean variables; therefore, these variables were not exclusively made up of the Referral Based and structured activity classes. However, these classes and services were offered within both the Referral Based program and the TAP program so their representation should be fairly consistent within both program types. Another limitation within the Quantitative analyses is that the participation score given to each resident at each class could be considered a proxy for higher functioning, thereby changing the implications associated with the participation variable. However, due to the range of abilities and acuity of symptoms present within the facility, each resident's level of participation was most likely determined after activities were adjusted for each resident's ability.

A limitation within the Qualitative Staff Interviews was the use of snowball sampling, instead of random sampling. Although the student researcher attempted to

maintain a diverse representation, due to limited time on site for data collection, interviewee selection was done on a word of mouth, snowball basis. Another Qualitative limitation occurs within the direct program observation; the therapists leading the groups may have been more active than usual considering the student research present in the room. However, this is an issue in all unobtrusive primary observation techniques.

Future Research

This research was developed from the ground up based on a need for more evidence based practice regarding programming in forensic mental health facilities. These facilities are often positioned as the bridges between correctional, state, and community mental health care, however little research has been done regarding the effectiveness of the programs offered. Future research may include samples from multiple agencies, allowing the agencies to each offer a different program or serve as the control. This would allow researchers to determine the most effective means of utilizing therapeutic activity programming. Additional research should also examine the programming differences between forensic (correctional) and civil state facilities. Further analyses could be conducted to examine the relationship between various diagnoses, charges, programming, and LOS with expanded categories, rather than the dichotomized values present in the current study.

Future research should also consider alternative outcome measures, although it is difficult to dispute the value of LOS and discharge as outcome measures when the effectiveness of the system as a whole depends on decreasing overall LOS and accelerating resident discharge. Possible alternative outcome measures should be more benefits based, determining the resident by resident effectiveness and individual benefits

of programming as opposed to the facility wide goal of shortened LOS and accelerated discharge.

The Qualitative analyses component within the current research was extremely valuable in providing context for the Quantitative results found; therefore the continued use of mixed methods within this population is encouraged. Future research should incorporate resident perspectives regarding program offerings and effectiveness in addition to Quantitative data. Furthermore, focus groups with residents and/or staff would be helpful to sort through the Qualitative and Quantitative data collected.

The need for and implications of this research are so much more than improving the effectiveness of a statewide system. Rather, the true impetus for and beneficiaries of this research are the individual residents themselves. It is hoped that this research will help initiate the use of evidence based practice to not only create a more effective system, but also to provide quality services to a population that is so often overlooked.

PERSONAL STATEMENT

I didn't realize it at the time, but six years ago I made a decision that would dictate the course of my career - I took a job as a Recreational Therapist at a maximum security forensic mental health treatment facility. For two years I developed and implemented art and music activities for adult males who had been arrested but were found either "not competent to stand trial" or found "not guilty by reason of insanity".

Over time, I realized that the majority of these men were not criminals, but victims of a system-wide failure. Deinstitutionalization, a direct result of law suits originally intended to improve care for individuals with mental illness, instead forced these individuals onto the streets with minimal services and little to manage their illnesses. For years, men and women riddled with psychotic symptoms were unknowingly dragged into battle with law enforcement. Paranoid symptoms often lead to battery charges – dramatically increasing the percentage of individuals with a serious mental illness occupying our nation's jails.

Since deinstitutionalization, policies have been made and implemented; but change cannot come fast enough for the thousands of individuals with severe mental illness who cycle through the criminal justice system every year. Based on my experiences working with this population, four years ago I decided to pursue my PhD in hopes of having a small part in research and policy that would one day put an end to this cycle. I hope to expand on my dissertation to include an examination of programs and services offered at other civil and forensic mental health facilities as well as community

based agencies. Eventually, I hope to use this research to dovetail forensic mental health services with community mental health services through the use of recreational activities.

As a therapist at the forensic mental health treatment facility, I engaged the residents in recreational activities as a means of therapy and symptom management. My role provided me with valuable insight into the person behind the diagnosis and criminal charges. This insight provides me with a unique perspective and philosophy as I pursue a career in research. The need for symptom management should go hand in hand with the needs of the whole person – healthy home life, employment skills, and a healthy leisure lifestyle.

Working with individuals with mental illness in forensic and community settings has provided me with firsthand knowledge and experience regarding the policy and programming needs of this population. Henry Ward Beecher, social reformer and abolitionist, has been credited with the statement, “No man is sane who does not know how to be insane on proper occasions.” Perhaps it is one of the great mysteries of the mind - that we all may be perched on the edge of insanity - that perpetuates the stigma against and lack of services for individuals with mental illness. In reality, this should do just the opposite; the uncertainty of our own sanity should define the standards of care we set for those who have lost theirs.

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