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ANXIETY REDUCTION AMONG WASHINGTON COUNTY JAIL INMATES:

A COMMUNITY SERVICE PROJECT

A MASTER'S PROJECT SUBMITTED TO THE GRADUATE FACULTY

GRADUATE SCHOOL BETHEL UNIVERSITY

BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

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Abstract

The general principle of anxiety has been thoroughly studied in many populations and shown to have variable underlying etiology, partially related to abnormalities in brain chemistry as well as unfamiliar or uncomfortable social situations. The role of environmental factors pertaining to anxiety is the particular interest of this community service project, to which the research team and the staff of the Washington County Jail have focused the efforts of this community service project in improving and reducing anxiety levels among Washington County Jail inmates.

The research team and the staff of the Washington County Jail identified the use of pharmacologic agents as the primary resource to which inmates were utilizing for the reduction of anxiety in the incarcerated setting. The use of these pharmacologic agents have not only proven to be costly to the institution, but ineffective for a subset of inmates due to the unwarranted side effects that accompany these medications and the potential for neurophysiologic dependence. As a result, this community service project was established to identify and implement alternative therapies for the reduction of anxiety among Washington County Jail inmates in hopes to decrease the amount of pharmacologic agents being used at the institution.

To accomplish the goal of identifying alternative anxiety reducing therapies, the research team reviewed numerous research studies that detailed successful alternative therapies used for the treatment of anxiety among the incarcerated population. In addition, the research team also consulted with a mental health practitioner that was familiar with the Washington County Jail inmate population. Ultimately, the research

team identified several strategies that were considered to be both successful in reducing anxiety among the inmates and feasible for the Washington County Jail and jail staff to implement and maintain for future use. The resources identified by the research team include the following: Dr. Claire Weekes' book *Hope and Help for Your Nerves*, an educational pamphlet centered on coping with situational anxiety, video-instructed yoga classes, and animal-assisted therapy. These resources were then proposed and accepted by the Washington County Jail. Due to the security restrictions of the Washington County Jail facility, the resources will be implemented and managed as seen fit by the staff of the Washington County Jail.

Acknowledgements

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Chapter 1: Introduction

Introduction

The concentration of this community service project is directed towards creating a program that may relieve anxiety in the jailed population without the use of anxiety reducing medications. The hope of this community service project is to not only reduce the use of pharmacological agents among inmates of the Washington County Jail, but also implement an alternative therapy that may supplement the use of anxiety medications.

Background to the Problem

According to the American Psychological Association (n.d.), anxiety can be defined as “an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure” (para 1). Anxiety is often precipitated as the result of a life event or social circumstance, however, is largely associated with underlying biological mechanisms.

When understanding the biological background of anxiety, a knowledge of key neurological systems is crucial. The hippocampus and the amygdala are two vital structures in the limbic system of the human brain that are essential to human behavior. The amygdala brain circuitry is associated with behavior and expression, whereas the hippocampal circuit involves the conversion of short-term memory to long-term memory, as well as spatial memory (Koda-Kimble et al., 2009). Furthermore, it is believed that the neural circuitry arising from the central nucleus of the amygdala is what controls an individual’s fear and anxiety response (Koda-Kimble et al., 2009). Anxiety disorders appear to emanate from the exaggeration or dysregulation of output through the

amygdala-related circuitry. These variances in dysregulation are likely the foundation of anxiety disorders (Koda-Kimble et al., 2009).

“Prison anxiety” has long been an established term in the American Journal of Psychiatry, when Slater first used this terminology to describe the effects imprisonment had on inmates (Reinhardt & Rogers, 1998). According to a study, Differences in anxiety between first-time and multiple-time inmates: A multicultural perspective, Slater expounded prisoner anxiety as “a combination of tension, irritability, sleeplessness, nightmares, inability to think clearly or concentrate, and fear of impending loss of impulse control.” (Reinhardt & Rogers, 1998, p.376). Prisoner anxiety is thought to have a multifaceted effect on inmates, with the most significant including inability to concentrate, insomnia, as well as disturbances in behavior that includes suicidal ideation (Reinhardt & Rogers, 1998).

As a means to determine the origin, as well as treatment, of an inmate's anxiety it is necessary to screen for mental illness among the jailed population. Researchers of the study, Mental health screening tools in correctional institutions: A systematic review (Martin, Kolman, Simpson, & McKenzie, 2015), performed a meta-analysis of 22 different screening tools in an effort to determine the most accurate method of detecting mental illness among inmates. The researchers conducting the systematic review found five specific screening tools most effective and therefore preferred in the detection of mental illness among inmates. These screening tools included the following: Brief Jail Mental Health Screen (BJMHS), Correctional Mental Health Screen for Men (CMHS-M), Correctional Mental Health Screen for Women (CMHS-W), England Mental Health Screen (EMHS), and the Jail Screening Assessment Tool (JSAT) (Martin et. al, 2015).

However, with the limited time inmates reside in jail, the Generalized Anxiety Disorder-7 (GAD-7) questionnaire may be more appropriate when determining the magnitude of an inmate's anxiety. The GAD-7, formulated in 2006 by Spitzer, Kroenke, Williams, & Löwe, is often utilized to address the short term significance of an individual's anxiety level, specifically over a two-week duration. The GAD-7 focuses primarily on the significant indicators of anxiety; such as restlessness, irritability, as well as feelings of apprehensiveness. (Williams, 2014). The itemized categories included on the GAD-7 are then scaled numerically, from zero to two, producing a cumulative total indicating one's level of anxiety. According to Oxford Journal: Occupational Medicine, a cumulative total greater than ten warrants evaluation for anxiety reduction and assessment of a possible anxiety disorder. (Williams, 2014).

Anxiety disorders are of the most common mental disorders affecting Americans today. Among the common treatments, pharmacologic therapy is one of the most frequently utilized. Anxiety-related medications include a multitude of classes of medications, each with varying indications depending on the patient's symptoms and circumstances. There are four main classes of medications that are used for the treatment of anxiety disorders; including selective-serotonin uptake inhibitors, serotonin-norepinephrine reuptake inhibitors, tricyclic antidepressants, and benzodiazepines. Selective-serotonin reuptake inhibitors (SSRIs) keep serotonin available longer by blocking its reabsorption via specific neurons in the brain. Serotonin-norepinephrine reuptake inhibitors (SNRIs) work similarly to SSRIs by blocking the reabsorption of serotonin, but also functioning to block the reabsorption of norepinephrine. Tricyclic antidepressants operate in similarity to SNRIs, blocking the dual reuptake of serotonin

and norepinephrine. Lastly, benzodiazepines function to cause relaxation and reduced muscle tension. Other less commonly used drugs may be utilized to treat anxiety on an individual basis if a mental health professional deems them indicated (Anxiety and Depression Association of America, n.d).

Aside from pharmacological agents as the mainstay of anxiety reduction among inmates, there have been numerous studies evaluating the use of alternative therapies relating to anxiety diminution among the jailed population. The varied research in regards to alternative therapy analyzed the implantation of cognitive behavior therapy, exercise programs and the effects of yoga, as well as the utilization of music therapy and animal-assisted therapy for the treatment anxiety among inmates (Milkman & Wanberg, 2007; Buckaloo, Krug, & Nelson, 2009; Bilderbeck, Farias, Brazil, Jakobowitz, & Wikholm, 2013; Gold et. al, 2013; Cooke & Farrington, 2016).

Purpose

The purpose of this community service project was to evaluate the use of anxiety reducing techniques in order to develop a program that may have the potential to reduce anxiety among inmates of the Washington County Jail. The Washington County Jail has analyzed concerns regarding the increasing use of anxiety medications among inmates, prompting the research of alternative therapies in an effort to minimize pharmacological treatment.

Significance of the Problem

According to the Bureau of Justice Statistics (2014), more than 744,000 individuals were incarcerated in jail systems in 2014. A significant number of those suffer from anxiety due to the change and discomfort of their circumstance. As a result,

jail medical staff deal with frequent requests from inmates for pharmacological management of their anxiety. This presents a challenge for the medical staff of jailing systems. Anxiety relieving pharmaceuticals vary significantly in mechanism, some taking a significant amount of time before noticeable benefits, while others come with high risk of dependence. As with any medication, there is a potential for unwanted side effects. For that reason, jailing systems may benefit greatly from alternative methods of managing anxiety.

Needs Assessment

Multiple needs assessments of the Washington County Jail were conducted by the research team, in addition to members of the Washington County Jail staff. The initial needs assessment was conducted with the Jail Commander, at Washington County Jail in Stillwater, Minnesota. An inventory of programs already implemented at Washington County Jail was conducted, resulting in a list of resources that were currently available to inmates. These programs included the following: Alcoholic and Narcotic Anonymous support groups, Gambling Anonymous support group, various religious study groups, pregnancy education classes, GED completion programs, as well as reentry programs that provide housing, medical, and occupational informational assistance for the first 90-day transition of an inmate's entrance back into society. Inmates are also given an hour of indoor recreation a day to utilize exercise equipment, play basketball, or read books from the resource cart. The needs assessment of the Washington County Jail then resulted in the discovery of a lack of anxiety reduction and management programs and resources, as well as the potential implementation of Vivitrol for inmates combating opioid addiction.

Definition of Terms

The following definitions have been provided for terms commonly used within this paper.

Inmate: Any person who is incarcerated due to committing an illegal action (US Legal, n.d.).

Incarceration: The act of being confined or imprisoned, often in a local jail, state prison, or federal prison depending on severity of criminal act (US Legal, n.d.).

Pharmacological Agent: Any oral, parenteral, or topical drug used to alleviate symptoms and treat or control a disease process or aid recovery from an injury (Mosby's Medical Dictionary, 2009).

Serotonin: A monoamine neurotransmitter that modulates neural activity, causes vasoconstriction, inhibits gastric secretions, and stimulates smooth muscle (Miller-Keane Encyclopedia and Dictionary of Medicine, 2003).

Norepinephrine: A monoamine neurotransmitter in postganglionic neurons of the sympathetic nervous system and in some parts of the central nervous system, is a vasopressor hormone of the adrenal medulla, and is a precursor of epinephrine in its major biosynthetic pathway. Its systemic effects include vasoconstriction and bronchodilation (Merriam-Webster, n.d.).

Conclusion

The usage of pharmacological agents to treat anxiety has become increasingly popular throughout the United States. It is no surprise that as the public knowledge of pharmacological agents' popularity increases, jail inmates feel that these medications may be of benefit to them. Although there are indications and benefits associated with

pharmacological treatment, inmates may show improvements related to anxiety reduction with alternate forms of therapy. The goal of our community service project was to be able to reach out to these inmates who are feeling the anxiety related to their circumstance and introduce alternative options.

Chapter 2: Literature Review

Introduction

Today's correctional facilities face an ever increasing problem with mental illness amongst inmates. One of the most prevalent mental illnesses seen in the incarcerated population is anxiety. With an understanding of anxiety, how it impacts inmates, and how to recognize those individuals needing treatment, it may be possible to identify strategies that could positively impact the mental health of those incarcerated. Pharmacologic treatment, cognitive behavioral therapy, animal assisted therapy, music therapy, exercise, and yoga are the strategies being considered in this literature review.

Anxiety

Anxiety is a feeling of vague fear or uncomfortableness and its associated physical manifestations (Koda-Kimble et al., 2009). Anxiety is an innate reaction that allows an individual to appropriately respond to a perceived fear or stressor. Anxiety encompasses mental components including fear, worry, and inability to concentrate, as well as physical components such as tachycardia, trembling, shortness of breath, and restlessness (Koda-Kimble et al., 2009). These manifestations may also be precipitated by certain medical illnesses and pharmacological agents. Anxiety, when excessive, can impair activities of daily living with the potential to develop into an anxiety disorder (Koda-Kimble et al., 2009).

Anxiety has a core neurological foundation relating to the limbic system. The limbic system controls our basic desires and human behavior. According to Koda-Kimble et al. (2009), the amygdala and hippocampus are two structures of the limbic system vital to human behavior. The brain circuits of the amygdala are associated with emotion and

its expression, whereas the circuits of the hippocampus are responsible for converting short-term memory into long-term memory. The amygdala also functions to perceive and respond to fear and anxiety. It is the excessive variance in responses generated by the amygdala that differentiates classes of anxiety disorders (Koda-Kimble et al., 2009). The neurobiological component of anxiety disorders is heavily dependent on three primary neurotransmitters including serotonin, norepinephrine, and gamma-aminobutyric acid (GABA). The characteristic hyperresponsiveness associated with anxiety disorders occurs as these neurotransmitters interact with the amygdala (Shah & Han, 2016).

According to Shah and Han (2016):

Anxiety is a psychological and physiologic state characterized by a constellation of somatic, emotional, cognitive, and behavioral symptoms. Whether or not physiological stress exists, anxiety creates feelings of fear, worry, uneasiness, and dread, causing significant distress or impairment in daily functioning. (p. 772)

Anxiety disorders are among the most common mental health conditions in the world, affecting over 10% of the world's population (Craske & Stein, 2016). The most common subtypes of anxiety disorders include phobias, separation anxiety disorder, social anxiety disorder, agoraphobia, selective mutism, and generalized anxiety disorder (Craske & Stein, 2016). Oftentimes these disorders arise early in life, but may also develop in early adulthood. Risk factors for anxiety disorders include childhood maltreatment, family history of mental disorders, low socioeconomic status, and overprotective parenting. Individuals with anxiety disorders tend to be excessively anxious, fearful, or avoidant of an environmental or internal threat (Craske & Stein, 2016).

Mental illness is often associated with anxiety and other mental disorders, both becoming more prevalent in today's society. Anxiety disorders have shown to affect roughly 30 million Americans at some point in their lives, with depression affecting nearly 20 million Americans (Shah & Han, 2016). Anxiety and depression, although increasingly prevalent among many members of society, has shown to affect women twice as much as men (Shah & Han, 2016).

Anxiety in the Jailed Population

Incarceration often is defined by the length or duration of an inmate's prison sentence, however, comes with much larger penalties in terms of psychological and emotional distress. Slater, in 1986, was the first to coin the term "prison anxiety," describing the emotional toll that paralleled with imprisonment (Reinhardt & Rogers, 1998). According to Reinhardt and Rogers (1998), prison anxiety was defined by Slater as "a combination of tension, irritability, sleeplessness, nightmares, inability to think clearly or concentrate, and fear of impending loss of impulse control" (p.376). Furthermore, Slater continued to describe the significant impact prisoner anxiety had on an inmate's life, affecting daily concentration and resulting in frequent insomnia. When prisoner anxiety reaches an intolerable level it can often be associated with increasing suicidal ideation (Reinhardt & Rogers, 1998).

Reinhardt and Rogers, authors of the article Differences in anxiety between first-time and multiple-time inmates: A multicultural perspective (1998), used Slater's definition of prisoner anxiety to evaluate its application among that of first-time inmates. Although a rather dated study, it provided insight into the variance of anxiety among those first adapting to the correctional system and those who have had prior experience

with the correctional system. With a sample size of 129 male inmates of the Tarrant County Jail of Texas, Reinhardt and Rogers (1998) utilized self-evaluations in order to determine the adjustment to incarceration among inmates. As a result, Reinhardt and Rogers (1998) were able to detect a heightened pattern of vigilance and scanning behaviors among first-time inmates. However, researchers also noticed heightened levels of situational anxiety common among all inmates, regardless of their experience within the judicial system (Reinhardt & Rogers, 1998).

The level of prisoner anxiety an inmate experiences during incarceration may negatively impact an inmate's ability to re-enter society, thereby having the potential to reduce their beneficial societal contributions and increase their likelihood for recidivism (Haney, 2001). Prisons, commonly referred to as institutionalization, is used to describe patterns of behavior an inmate is forced to adapt while incarcerated. These alterations in behavior during incarceration, including hypervigilance and mistrust, allow inmates to survive the confines of imprisonment, however, do not benefit them as they attempt to adjust to life post-prison (Haney, 2001). In the publication by Haney (2001), *The psychological impact of incarceration: Implications for post-prison adjustment*, a prison researcher was quoted describing the effect prisons have on an inmate's personality. The researcher remarked, "Many prisoners believe that unless an inmate can convincingly project an image that conveys the potential for violence, he is likely to be dominated and exploited throughout the duration of his sentence" (Haney, 2001, p.8) As a result, it should come as no surprise that the effects of prisons and manifestations of prisoner anxiety make reentrance into society largely difficult for previous offenders.

Anxiety Screening Tools

According to the National Institute of Mental Health (n.d.), 18.1% of adults in the United States suffer from some form of anxiety disorder (National Institute of Mental Health, n.d.). In order to screen for general anxiety disorder (GAD), a brief self-guided questionnaire referred to as GAD-7 was developed. The GAD-7 questionnaire screens individuals for seven specific groups of symptoms, following criteria as indicated by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). Individuals are asked to rate the frequency of such symptoms over a two-week duration, as well as their inability to carry out day to day activities (Spitzer et al., 2006). Analysis of the GAD-7 results in a numerical score that directly correlates with an individual's level of anxiety. The scores are categorized and evaluated, with zero to four indicating minimal anxiety, five to nine showing mild anxiety, 10-14 proving moderate anxiety, and greater than 15 indicating severe anxiety (Spitzer et al., 2006).

Further study performed by Löwe et al. (2008) provided evidence that the GAD-7 was reliable and valid. The study conducted by Löwe et al., consisting of 5,030 participants, confirmed that the GAD-7 appropriately reflected anxiety levels in participants independent of their age, gender, educational level, partnership, household income, and employment status. Furthermore, Löwe et al. (2008) suggested that when considering the likelihood of an anxiety disorder, GAD-7 scores of greater than or equal to 10 should be treated as "yellow flags." Any GAD-7 value greater than or equal to 15 should indicate "red flags" for probability of an anxiety disorder (Löwe et al., 2008).

A systematic review conducted by Martin, et. al (2013) identified and evaluated several other screening tools that showed promise in detecting multiple mental health

conditions, including anxiety, among inmates in correctional facilities. These screening tools included the following: the Brief Jail Mental Health Assessment (BJMHS), the Correctional Mental Health Screen for Men (CMHS-M), the Correctional Mental Health Screen for Women (CMHS-W), the England Mental Health Screen (EMHS), and the Jail Screening Assessment Tool (JSAT) (Martin et al., 2013). The BJMHS is an eight item questionnaire that has been found to be 75% as accurate in identifying male inmates who need further screening when compared to a Structured Clinical Interview DSM (SCID). However, the BJMHS accuracy for identifying female inmates needing further screening was reported at 62% when compared to SCID (Kubiak, Beeble, & Bybee, 2011). In order to address the differences in screening between men and women found in the BJMHS, the CMHS-M and CMHS-W were created. Kubiak et al. (2011) found that the CMHS-M correctly classified 75%-80% of men, whereas the CMHS-W correctly classified 70%-80% of women for mental health disorders when validated against several other standard screening tools. However, the CMHS-W offered no improvement as a screening tool compared to the BJMHS when used for the evaluation of mental disorders among incarcerated black women, resulting in a unique and puzzling exception (Kubiak et al., 2011). The EMHS obtained 100% sensitivity in a small pilot study of men and women, however, an attempt to replicate the study yielded a sensitivity rate of 42% (Martin et al., 2013). In contrast to the BJMHS, CMHS, and EMHS which can be administered in as little as 5 minutes, the JSAT takes 20-30 minutes to administer. The developmental study of the JSAT has a sensitivity in male participants of 84%, with a replicated study involving female participants indicating a sensitivity of 75% (Martin et al., 2013).

Pharmacological Treatment for Anxiety

Several classes of pharmacologic drugs are used in the treatment of anxiety. According to Katzung, Masters, and Trevor (2009), medications commonly used to treat anxiety disorders include Selective Serotonin Reuptake Inhibitors (SSRIs), Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs), Tricyclic Antidepressants, and Benzodiazepines (Katzung et al., 2009). Selective Serotonin Reuptake Inhibitors reduce the reuptake of serotonin in the brain by binding to the serotonin transporter (SERT) on the axon terminal in serotonergic neurons and blocking the intracellular transport of serotonin. Serotonin-Norepinephrine Reuptake Inhibitors work similarly to SSRIs. Serotonin reuptake is blocked by the drug binding to the SERT. Additionally, the activity of the norepinephrine transporter (NET), which is structurally similar to SERT, is reduced by a similar mechanism. Tricyclic antidepressants work similarly to SNRIs by inhibiting the reuptake of serotonin and norepinephrine. However, their affinity for binding SERT and NET can be significantly variable. There is also the potential for tricyclic antidepressants to be antagonists to the histamine H1 receptor in addition to blocking alpha adrenoceptors causing significant side effects (Katzung et al., 2009). Benzodiazepines work by enhancing the inhibitory effects of Gamma-Aminobutyric Acid (GABA). The GABA neurotransmitter is largely responsible for inhibiting other neurotransmitters in the central nervous system. By enhancing the effects of GABA, the effects of serotonin and norepinephrine are reduced (Wells, DiPiro, Schwinghammer, & DiPiro, 2012).

According to Dell'osso and Lader (2013), benzodiazepines have become second line therapy to many of the SSRI and SNRI drugs due to the lack of data suggesting that

benzodiazepines are useful beyond acute anxiety. However, benzodiazepines like alprazolam (Xanax), lorazepam (Ativan), clonazepam (Klonopin), and diazepam (Valium) have been found to be efficacious in panic disorders due to their rapid onset (Dell'osso & Lader, 2013). Benzodiazepines also run the risk of causing significant side effects such as motor impairment, sedation, memory impairment, and coordination problems. Physiologic dependence and abuse are also problems associated with benzodiazepines (Dell'osso & Lader, 2013).

Other drugs that are currently used to treat anxiety include hydroxyzine, buspirone, and propranolol. Hydroxyzine (Vistaril) acts as an antagonist to histamine receptors and also has been shown to provide anxiolytic effects. According to a randomized, double blind, placebo controlled study by Llorca, et al. (2002), hydroxyzine was found to be superior to placebo in reducing anxiety and performed similarly to the benzodiazepine, bromazepam. Hydroxyzine also has not shown to have the risk for dependency like benzodiazepines (Llorca et al., 2002). Buspirone falls into the azapirone class of medications and works to reduce anxiety by modulating the activity of serotonin in the presynaptic and postsynaptic neuron terminals. Like other medications that act on serotonin, buspirone requires two to four weeks before the effects can be seen (Egger and Hebert, 2011). A paper written by Egger and Hebert (2011) reviewed several studies and found that buspirone performed statistically as well in patients with anxiety as did similar patients on the benzodiazepine, oxazepam (Egger & Hebert, 2011). Propranolol, a beta-1,2 adrenoceptor antagonist, may also work to reduce anxiety. Propranolol is used to block catecholamines by competing with them for their receptors and therefore reduce some of the physical manifestations of anxiety. However, a meta-analysis performed by

Steenen et al. (2016) found insufficient evidence to suggest the use of propranolol over benzodiazepines. Steenen et al. (2016) did state that propranolol's rapid onset may offer a treatment bridge between diagnosis of an anxiety disorder and the onset of effective treatment of other medications like SSRIs (Steenen et al., 2016).

Alternative Therapies for Anxiety

Cognitive behavior therapy. Among the non-pharmacological treatments for anxiety, cognitive behavior therapy (CBT) has long been at the forefront of anxiety management. According to a review and discussion for corrections professionals published by the National Institute of Correction, the need for mental health services, such as CBT, is largely in demand due the increasing number of jailed population (Milkman & Wanberg, 2007). Cognitive behavior therapy, dating back to the 1960s, is a unique and effective form of therapy that blends a focus of both internal thoughts and external behaviors in an effort to treat all aspects of the individual (Milkman and Wanberg, 2007). When utilizing CBT within a correctional facility, the skills needed for re-entrance into society should also be addressed in an effort to reduce recidivism and maximize an inmate's contribution to the community (Milkman & Wanberg, 2007).

Milkman and Wanberg, authors of *Cognitive Behavioral Therapy: A review and discussion for corrections professionals*, outlined six cognitive behavior programs that are primarily utilized within the correctional facility in an effort to treat an inmate's emotional distress. These CBT programs include the following: Aggression Replacement Training (ART), Criminal Conduct and Substance Abuse Treatment: Strategies for Self-Improvement and Changes (SSC), Moral Reconation Therapy (MRT), and Reasoning and Rehabilitation (R&R). ART, Aggression Replacement Training, is a form of CBT that

focuses on developing social skills training, anger control training, and moral reasoning in hopes to reduce anger and violence among offenders. ART is primarily targeted towards younger offenders within the juvenile system, and requires a participation duration of 10 weeks (Milkman & Wanberg, 2007). SSC, Self-Improvement and Change, is an alternate form of CBT developed by Milkman and Wanberg that focuses on an inmate's struggle with substance abuse as it relates to criminal offenses. SSC is generally used for offenders above age 18 and lasts for a duration of nine to twelve months (Milkman & Wanberg, 2007). MRT, Moral Reconciliation Therapy, dates back to 1979 and utilizes CBT to focus on substance abuse and difficult behaviors among offenders. MRT takes the form of group therapy, whose focus is directed largely towards nine stages of personality that inmates may find themselves entering throughout the program. These nine stages of therapy include disloyalty, opposition, uncertainty, injury, nonexistence, danger, emergency, and lastly normality and grace (Milkman & Wanberg, 2007). R&R, Reasoning and Rehabilitation, originates from the University of Ottawa in the mid-1980s. R&R draws upon cognitive behavior therapy through 35 small group sessions to foster an offender's social foundation and improve impulse control. A modified version of R&R, referred to as R&R2, consists of 15 sessions targeted at those older than 18 and at high risk for entering the criminal system or in need of specialized therapy (Milkman & Wanberg, 2007).

Cognitive behavior therapy not only focuses on the offender while incarcerated, but also has been shown to reduce the rates of recidivism among those reentering society. Many studies have been conducted to support this claim, as outlined by Milkman and Wanberg in chapter four of their publication, *Cognitive behavioral therapy: A review and*

discussion for corrections professionals. One such study indicated an average rate of recidivism as low as 30%, meaning that less than one-third of inmates released from incarceration went on to commit further crimes (Milkman & Wanberg, 2007). Due to such impressive outcomes linked with cognitive behavioral therapy, it is understandable that CBT is among the most favorable forms of alternative therapy in treatment related to emotional distress of the jailed population.

Animal assisted therapy. In an effort to direct the treatment of anxiety away from that of a pharmacological focus, animal assisted therapy has become an increasingly popular technique utilized within the incarcerated population (Cook & Farrington, 2016). Among the most favored forms of animal assisted therapy are dog-training programs (DTPs), with more than 290 correctional centers adopting its application (Cook & Farrington, 2016). Dog-training programs give the inmates the opportunity to act as animal trainers for service dogs, building a foundation of companionship and trust (Cook & Farrington, 2016).

According to the article published by The Prison Journal, The effectiveness of dog-training programs in prison: A systematic review and meta-analysis of the literature, animal assisted therapy has been largely effective in reducing externalizing and internalizing behavior among the jailed population (Cook & Farrington, 2016). The researchers of this investigation performed a dual meta-analysis of 10 studies from 310 DTP participating inmates, with 514 controls. Through extensive literature search conducted by Cook and Farrington (2016) dog-training programs have shown to not only provide emotional support for inmates, but also allow inmates to develop skills vital for reintroduction to society, including responsibility and task management. Cook and

Farrington (2016) analyzed a case study conducted by Currie detailing the self-evaluation of inmates' progress through a DTP, in which 80% reported an increase in responsibility and 37% percent marking an improvement in patience. One inmate simply stating, "one of the reasons I stayed out of trouble was so that I could get a dog," (Cook & Farrington, 2016, p.856). Furthermore, an 80% increase in pride and 60% rise in self-esteem was reported through participation in DTPs (Cook and Farrington, 2016). As a result of this meta-analysis, Cook and Farrington (2016) were able to confirm the beneficial effects of dog-training programs as it related to inmate antisocial behavior and depressive ideation.

Music therapy. According to the study conducted by Gold et al. (2014), entitled Music therapy for prisoners: Pilot randomised controlled trial and implications for evaluating psychosocial interventions, roughly half (48%) of Norwegian inmates have at least one anxiety disorder warranting treatment. Due to many compounding factors, inmates are receiving pharmacological treatment instead of the more effective mental health therapy (Gold et. al, 2014). Music therapy has been shown to be a successful alternative therapy to improving psychiatric symptoms and psychosocial functioning in those inmates who have poor motivation, as compared to pharmacological treatment alone (Gold et al., 2014). Music therapy helps to promote health by using the experiences of music to develop a therapeutic relationship between the inmate and therapist (Gold et al., 2014). The genre and style of music is chosen depending on the client's desires and needs. By adding a mode of nonverbal communication, it is viewed that supplementing music therapy improves the therapeutic relationship of mental health rehabilitation (Gold et. al, 2014).

Ideally, musical therapy will be performed two to three times per week and includes playing in a band, recording music, improvisation, songwriting, and verbal reflections. The style of therapy is chosen by the therapist to address the unique needs of each individual (Gold et al., 2014). According to Gold et al. (2014), “the aims of music therapy were to facilitate self-expression, shared social experiences, sense of achievement, building secure relations, and the opportunity to explore one’s role within a group” (p. 1525). It is suggested that music therapy could potentially assist inmates to become better acclimated once released by performing similar musical activities as performed during therapy (Gold et al., 2014).

Exercise. According to a study, Exercise and the low-security inmate: Changes in depression, stress, and anxiety, inmates have higher levels of emotional and mental distress partly because they have little control over their schedule and environment (Buckaloo, et. al, 2009). Giving inmates access to, and the freedom to choose, an exercise program is a means to lower levels of stress, depression, and anxiety by inducing a calming effect (Buckaloo, et al., 2009). There are numerous psychological benefits to participating in an exercise program. These benefits include higher self-confidence, better social interactions, and reductions in anxiety and stress. Physical benefits include improved cardiovascular health and decreased blood pressure (Buckaloo, et al., 2009). Cognitive benefits of exercise include increasing serotonin (5-HT) levels, which plays a vital role in a variety of cognitive processes such as reducing anxiety levels (Zimmer et al., 2016). These physical and cognitive gains can have lifelong benefits as long as the individual adheres to the exercise regimen, and thus can help to reduce anxiety when

released from jail (Buckaloo et al., 2009). Exercise, regardless of program or duration, leads to reduced depression, anxiety and stress levels in inmates (Buckaloo et al., 2009).

Yoga. Although not as heavily studied in comparison to other alternative therapeutical methods, yoga has established itself as beneficial in the treatment of anxiety. Yoga has increased in popularity and thus segregated into distinct styles, however, the most commonly practiced form of yoga in the United States is referred to as Hatha yoga (Harvard Health Publications, 2009). Hatha yoga focuses primarily on physical stances in an effort to connect the body and mind through a series of poses referred to as asanas. In addition to asanas, an equally important aspect of Hatha yoga is controlled breathing, often followed by a period of meditation (Harvard Health Publications, 2009). According to Harvard Health Publications (2009), it has been shown that participating in yoga can help reduce an individual's anxiety and depression.

Due the beneficial impact yoga has shown to have on one's overall health, correctional centers have started to incorporate yoga programs in hopes to alleviate the anxiety among inmates. An article published by Bilderbeck et. al (2013) further investigates the use of yoga in the jailed population, specifically of the male inmate population.

Bilderbeck et al. (2013) pointed out the benefits of yoga, specifically as it relates to anxiety reduction and ultimately decreased levels of aggression among inmates. The researchers utilized self-evaluations administered before and after the 10-week duration of Hatha yoga participation, comparing results to that of a control group. The self-evaluations included various psychological measures to evaluate anxiety and stress among the jailed population, including the following: Barratt Impulsiveness Scale

Version 11 (BIS-11), Positive and Negative Affect Scale (PANAS), Perceived Stress Scale (PSS), and the Brief Symptom Inventory (BSI) (Bilderbeck et al., 2013) In addition, the researchers of the study used cognitive behavioral task completion, referred to as Go and No-Go tasks, to evaluate impulse control among the inmates. The Go task allowed inmates to respond when indicated, whereas the No-Go tasks instructed inmates to repress responses regardless of the provocation (Bilderback et al., 2013). As revealed by Bilderback et al. (2013), inability to follow No-Go commands directly correlated with inmates exhibiting increased aggressive behavior.

Upon completion of the study, Bilderback et al. (2013) were able to conclude that yoga had significant beneficial impacts among the jailed population, specifically in relation to male inmates. The researchers observed marked improvements in both emotional stability, as well as cognitive behavioral tasks, indicating a greater control of impulsive actions and violent tendencies (Bilderback et al., 2013).

Conclusion

The impact of anxiety on the jailed population places a significant burden on the correctional system. Understanding anxiety as it relates to this population and being able to screen inmates for this condition is an important step to providing meaningful treatment. The goal of treating anxiety is not only focused on the manifestations of anxiety itself, but also tailoring treatment that is specific for the individual in order to maximize one's progress towards a healthier lifestyle and re-entrance into society.

This literature review encompasses the general manifestations and biological background related to anxiety, as well as the multifaceted affect anxiety has on the jailed population. Further investigation focused on the various screening tools related to

diagnosing anxiety, as well as the use of pharmacological and alternative therapies as treatment modalities.

Chapter 3: Methodology

Introduction

Over the recent years, the Washington County Jail has noticed a significant increase in the use of pharmacologic agents for the management of anxiety among inmates. The Washington County Jail reported that over sixty-percent of their inmates took some form of mental health related medication, with three-quarters of those medications directed towards treating anxiety. The significant use of pharmacologic agents to treat the inmate's anxiety poses the potential risk for not only unwarranted and undesirable side effects, but also physiologic dependence contingent with the specific pharmacologic agent being utilized. In addition, the increased use of medications to manage the inmate's anxiety poses a financial feasibility concern for the Washington County Jail.

As a result, the purpose of this community service project was to evaluate the use of anxiety reducing techniques in order to develop a program that has the potential to reduce anxiety among inmates of the Washington County Jail. The Washington County Jail has analyzed concerns regarding the increasing use of anxiety medications among inmates, prompting the research of alternative therapies in an effort to minimize pharmacological treatment.

Rationale for Project

Anxiety often has an overwhelming presence among inmates as they attempt to adjust to the confinements and regulations that are associated with incarceration. Inmates at the Washington County Jail have primarily requested medications to effectively treat their anxiety. However, pharmacologic agents used to treat anxiety are associated with

innumerable side effects and contraindications depending on the agent selected, as well as provide an added financial burden to the institution. The goal of this community service project was to implement alternative treatments to pharmacologic therapy to reduce anxiety among Washington County Jail inmates. As a result, this community service project aimed to give inmates more control of their state of anxiety, as well as develop self-coping mechanisms that can be utilized at any time and without limit, unlike the current pharmacologic counterparts.

Population

The Washington County Jail is a 200-bed facility that is coordinated by Jail Commander Roger Heinen. The jail holds male and female pre-trial, straight time, and work release offenders, with the addition of a five-bed, short-term juvenile facility. The population of this community service project will be inmates at the Washington County Jail over the age of 18 who utilize the medical or mental health staff for anxiety concerns.

Project Plan and Implementation

The project plan was to implement a variety of resources with a focus on anxiety reduction in an effort to benefit the inmates at the Washington County Jail, thereby assisting the inmates in coping with the manifestations of anxiety. Initially, the research team met with the Washington County Jail mental health provider to discuss a variety of beneficial resources that would be worth implementing at the jail. During this meeting, the research team, in conjunction with the Washington County Jail mental health provider, decided that the inmates should have access to library resources relating to self-coping techniques for management of anxiety. The research team implemented the book, *Hope and Help for Your Nerves* by author Dr. Claire Weekes, as an available resource on how

to manage the manifestations of situational anxiety. In an effort to provide financial assistance for the Washington County Jail, the research team contacted the Bethel University Reference & Instruction Librarian for assistance in finding a means of financial compensation. Ultimately, the Washington County Jail decided this was a beneficial use of their financial resources and purchased copies of the recommended book for long-term use within the jail. The book, *Hope and Help for Your Nerves*, is currently available on the resource carts that circulate throughout the jail pods and are readily available to inmates that may wish to access this resource.

An educational pamphlet on coping techniques for self-management of anxiety was created by the research team to supplement the instruction given by Dr. Claire Weekes through the available book, *Hope and Help for Your Nerves*. The educational pamphlet attempted to explain and normalize the occurrence of situational anxiety within the jail setting, in addition to focusing on breathing and meditation techniques that could be utilized by an inmate.

After extensive research contained in the literature review of this paper, animal-assisted therapy was shown to have a beneficial impact on an inmate's incarceration and related level of anxiety. The research team contacted several animal-assisted therapy programs, including the following: Twin Cities Tail-Waggers Visiting Dogs, We'll Come a Waggin Therapy Dogs Visiting Dogs, Pals on Paws, and North Star Therapy Animals. The primary means of correspondence was via phone and email, to which North Star Therapy Animals responded showing interest in providing animal-assisted therapy at the Washington County Jail. The research team proceeded to set up correspondence between North Star Therapy Animals and the Washington County Jail for further investigation and

logistics. During this process, the Washington County Jail discovered a potential resource for animal-assisted therapy and proceeded to pursue logistical discussion with the animal-assisted therapy program, Home for Life. Currently, based on the literature review and recommendation by the research team, the Washington County Jail is in correspondence with Home for Life to set up monthly animal-assisted therapy sessions at the jail in an effort to help reduce anxiety among inmates.

As with animal-assisted therapy, extensive research in the literature review of this paper places a positive emphasis on the role of yoga in relation to reducing an inmate's level of anxiety. The research team contacted yoga studios and instructors, including the following: Blue-Sky Therapeutic Yoga, Yoga & More, Yoga-Sol, and Trenti-Training. The primary means of correspondence was via email, to which the owner and yoga instructor of Trenti-Training expressed a possible interest in conducting yoga classes at the Washington County Jail. The research team organized a follow-up meeting with the Jail Commander and head registered nurse at the Washington County Jail to discuss yoga as a potential resource for implementation at the jail. The Washington County Jail ultimately decided that the best utilization of resources was to first initiate video-instructed yoga classes, however, expressed interest in implementing instructor-led yoga classes as a future resource based on the level of participation by inmates to the video-instructed yoga sessions. The Washington County Jail also indicated that the individual staff member coordinating the video-instructed yoga sessions was a certified yoga instructor, therefore making this an acceptable transition for the institution.

Potential Project Barriers

This community service project aimed to help a large percentage of inmates suffering from anxiety, however, there were potential project barriers that could limit its effectiveness. A barrier we foresaw was access to inmates in the Washington County Jail, as we would not have a direct influence on who would receive the informative pamphlets relating to anxiety reduction. Although this could serve as a potential barrier to the community service project, the pamphlets would likely be distributed by the nursing staff who would have direct contact with the inmates. The nursing staff was very supportive and actively involved in the planning of this project, therefore would likely reduce the effects of this potential project barrier. In addition, the active involvement of the nurses at the Washington County Jail could result in a better assessment of the inmates' degree of anxiety and warrant greater and more effective utilization of the anxiety-related resources.

Length of inmate stay was also a limitation to the community service project, as the average inmate stays at the Washington County Jail for one week. To effectively help an inmate reduce high levels of anxiety during a short duration might be difficult, however, with the services recommended by this community service project, the Washington County Jail could work toward the goal of lowering the degree of inmate anxiety.

Project Tools

As is the case with many medical conditions, education plays a large role in helping those affected understand what they are experiencing. Furthermore, understanding their medical condition can help to alleviate some of the stress that comes with the condition. With this information in mind and the advice provided to the research

team by the Washington County Jail mental health provider, the research team created a handout for inmates requesting assistance with managing their anxiety. In order to make the handout available to the majority of the population, the information was presented at or below an eighth grade reading level. The educational pamphlet outlined how experiencing anxiety due to incarceration was a normal and expected response. In addition, the educational pamphlet also offered suggestions on coping techniques to help inmates deal with elevated levels of stress and anxiety. Close attention was given to avoid providing the inmates with any knowledge about anxiety that then could be used in the form of malingering to acquire special treatment and/or unwarranted medications.

The book by author Dr. Claire Weekes, *Hope and Help for Your Nerves*, was implemented to supplement the educational pamphlet and made available to inmates on the resource carts in each jail pod. The book detailed the etiology and manifestations of anxiety, in addition to providing information on how an individual could overcome and manage their feelings of anxiety. In addition to the educational pamphlet and book, animal-assisted therapy and video-directed yoga classes were project tools implemented by the research team to help inmates combat the manifestations of anxiety and stress. Due to the extensive research evident in the literature review of this paper, the research team believed that animal-assisted therapy and yoga were excellent resources with proven anxiety-reduction effects in the jailed population.

Conclusion

The needs assessment of the Washington County Jail concluded that inmates would benefit from further anxiety reduction methods to supplement or replace current pharmacologic treatments. Due to the financial burdens and risks associated with the use

of anxiety medications, the staff at Washington County Jail would like to move away from the increased use of pharmacologic agents and towards methods of alternative therapy. Therefore, our community service project decided to direct our efforts toward the goal of identifying suitable nonpharmacological anxiety reduction techniques that would be both effective and sustainable beyond this project. Our research identified many possible methods proven to work in anxiety reduction, ranging from animal assistance to implementation of yoga exercises. After discussing these techniques with officials from the Washington County Jail and one of the jail's mental health providers, the research team narrowed down these methods to include only those that were estimated to be the most impactful and feasible with the Washington County Jail population.

Chapter 4: Discussion

Introduction

The concentration of this community service project aimed at implementing resources that would aid in reducing anxiety among the inmates at Washington County Jail in Stillwater, Minnesota. With the addition of several anxiety-reducing resources, the research team hopes to contribute to a reduction in the amount of pharmacologic agents used to combat inmate anxiety. The resources introduced by the research team were the result of frequent collaboration with the Washington County Jail commander and support staff. The resources implemented by the research team include the following: an educational pamphlet consisting of coping techniques aimed at situational anxiety, Dr. Claire Weekes' book *Hope and Help for Your Nerves*, the addition of video-assisted yoga classes, and animal therapy sessions.

Summary of Results

Anxiety often has an overwhelming presence among inmates as these individuals attempt to adjust to the confinements and regulations that are associated with incarceration (Reinhardt & Rogers, 1998). Inmates at the Washington County Jail have primarily requested medications to treat their anxiety. However, pharmacologic agents used to treat anxiety are associated with innumerable side effects and contraindications depending on the agent selected, as well as provide an added financial burden to the institution. The goal of this community service project was to implement alternative treatments to pharmacologic therapy to reduce anxiety among Washington County Jail inmates. As a result, this community service project aimed at giving inmates more control

of their state of anxiety, as well as develop self-coping mechanisms that can be utilized at any time and without limit, unlike the current pharmacologic counterparts.

The research team believes this community service project was essential not only for the Washington County Jail in relation to the increasing costs associated with anxiety-reducing pharmacological agents, but for the physical and emotional well-being of the inmates incarcerated at the Washington County Jail. The research team believes that the more opportunities and alternative resources made available to the inmates for anxiety reduction, the greater the chance inmates have at successfully controlling and managing their anxiety symptoms, therefore, setting the foundation to a more fluid transition for re-entrance into society.

Through extensive literature review and collaboration with the jail commander, the research team proposed a number of alternative therapies that may aid in the reduction of anxiety among the inmates at the Washington County Jail and included the following resources: an educational pamphlet and book focused on coping with situational anxiety, yoga classes, and animal-assisted therapy. The anxiety reduction pamphlet materialized from the culmination of information found in the research team's literature review. The pamphlet was given to the medical unit staff of the jail who are then able to distribute the pamphlet to any inmates requesting assistance in reducing anxiety. Dr. Claire Weekes' book *Hope and Help for Your Nerves* is meant to act as a supplemental resource to the educational pamphlet and will be made available in community pods within the Washington County Jail. The book was originally recommended to the research team by one of the Washington County Jail mental health providers. The Washington County Jail has already purchased several copies of Dr.

Claire Weekes' book *Hope and Help for Your Nerves* and further copies are readily available for purchase should replacements be needed in the future. The research team provided a PDF copy of the anxiety reduction pamphlet to the jail staff to be distributed at their discretion. Furthermore, research completed by Bilderbeck et al. (2013) pointed out the benefits of yoga regarding its utility in anxiety reduction and decreasing levels of aggression among inmates (Bilderbeck et al., 2013). In addition, Cook and Farrington (2016) found that animal assisted therapy has been largely effective in reducing externalizing and internalizing behavior among the jailed population (Cook & Farrington, 2016). This information led the Washington County Jail to incorporate the research team's suggestions to implement yoga and animal assisted therapy. The video-directed yoga courses have been added into the activity schedule and, depending on inmate attendance, may progress into in-person, instructor led yoga classes. The Washington County Jail is also coordinating with Home for Life to provide animal therapy sessions to inmates. The future utilization of animal assisted therapy will hinge on its popularity amongst the inmates, and the jail staff's ability and willingness to maintain the program. Through the implementation of these resources, the research team is hopeful that the inmates will utilize these resources for improvement in anxiety reduction.

Limitations

The goal of this community service project was to aid in reducing anxiety among a large number of Washington County Jail inmates. However, a few limitations existed that may have potentially hindered the effectiveness of this community service project. The first limitation was the distribution of the educational pamphlet, a task which is reliant on the nursing staff at the Washington County Jail. The research team had

concerns that this may limit the number of inmates receiving the educational pamphlet, as not all of those experiencing anxiety will seek help from nursing staff. However, the research team was confident that the familiar relationships between inmates and the nursing staff would help accurately identify those that would best benefit from this resource. The second limitation foreseen by the research team was the participation in animal assisted therapy and video-directed yoga classes, which were not mandatory activities and may not be utilized by a large number of inmates, therefore, limiting effectiveness. The third notable limitation of this community service project was the length of stay of each inmate. The average length of stay for inmates at the Washington County Jail was 7.7 days. As a result, inmates experiencing anxiety may have had limited exposure and accessibility to the implemented resources, most specifically the yoga and animal assisted therapies which were conducted within the jail on a monthly basis.

Overall, the research team believed the community service project went as planned. Through the support and collaboration with the jail commander and lead nurse at the Washington County Jail, the research team was able to effectively implement many suggestions into available resources at the Washington County Jail. The research team successfully incorporated educational materials regarding anxiety reduction, including a pamphlet and supplemental book, as well as aided in implementing animal assisted therapy and video-directed yoga classes. The research team was confident that these resources had the ability to aid in reducing inmate anxiety, in addition to potentially lowering financial costs associated with the anxiety-reducing pharmacologic agents used at the Washington County Jail.

Further Projects

Numerous options and resources were available to assist in anxiety reduction, many of which were discovered through the literature review of this paper. Ultimately, the research team settled on creating an anxiety reduction pamphlet, utilizing Dr. Weekes' book *Hope and Help for Your Nerves*, implementing animal assisted therapy, and incorporating video-directed yoga classes. The research team decided on these specific resources due to their reported efficacy in the general inmate population, as well as the relative ease of implementation in a complex environment such as the Washington County Jail.

When conducting the initial needs assessment of the Washington County Jail, it was communicated to the research team that the prevalence of anxiety in the Washington County Jail general population was significant. As a result, the research team decided early in the community service project to concentrate efforts on discovering resources for anxiety reduction techniques, particularly those that could be applied to the majority of the population. Although this community service project aimed at reducing anxiety using methodology that focused on a large collection of Washington County Jail inmates, there are future research opportunities that could focus on more specific subsets of the Washington County Jail population. For example, the initial needs assessment revealed a significant subset of Washington County Jail inmates suffering from substance abuse disorders and the consequences of addiction. While the resources implemented during this community service project may be beneficial to this population of inmates, alternative therapies specific to substance abuse and addictive behavior could be an area

of focus in the future and result in increased efficacy of anxiety reduction among this subset of the Washington County Jail inmate population.

In addition, it is reasonable to parallel the prevalence of anxiety at Washington County Jail with that of other inmate populations in the surrounding area. Therefore, future research groups with an interest in correctional medicine could expand on this community service project and apply its methodology to that of other inmate populations. Furthermore, the techniques suggested to reduce anxiety in this community service project could have a potential application outside of institutionalized populations for future research groups interested in the general principle of anxiety reduction.

Ultimately, the future of this community service project is largely in the hands of the Washington County Jail. The research team communicated the proposed recommendations and assisted the staff at the Washington County Jail in developing these resources to ensure the future of this community service project. As a result, there are numerous opportunities to expand for future Bethel physician assistant student groups to expand on this community service project, in addition to identifying other areas that have a potential to make a positive impact in the incarcerated population at the Washington County Jail.

Conclusion

The current research had shown that anxiety is prevalent in a significant amount of the studied inmate populations, which holds true for the inmates of the Washington County Jail in Stillwater, MN (Reinhardt & Rogers, 1998). The research team worked hand-in-hand with the Washington County Jail Commander, Roger Heinen, and additional jail staff to identify the significance of the problem surrounding inmate anxiety.

At that time, it was identified that over sixty-percent of the inmates at the Washington County Jail take some form of mental health medication, with three-quarters of those medications directed towards treating anxiety. These medications represented a significant liability to the jail and the clinicians providing these services. In addition, these pharmaceuticals translated to a substantial amount of taxpayer dollars being utilized to cover the financial costs of these medications. After identifying these burdens, the research team concentrated efforts to develop alternative methods of targeting anxiety relief without the use of pharmaceutical agents. After identifying which of the alternative methods were feasible from a cost and facility resource standpoint, the research team established a group of resources that were most likely to be well received by the inmates and therefore incorporated into their daily routines. The resources agreed upon by both the jail staff and the research team included the following: an educational pamphlet consisting of coping techniques aimed at situational anxiety that had been compiled by the research team, Dr. Claire Weekes' book *Hope and Help for Your Nerves*, the addition of video-assisted yoga classes, and animal therapy sessions.

The completion of this community service project by no means indicates a solution to the problem of inmate anxiety in the Washington County Jail, nor does it suggest that all anxiety reducing applications have been exhausted. However, the research team felt that it accurately identified a population of people that are truly in need of assistance and provided resources that may aid in the process of reducing inmate anxiety. The research team was confident that these resources had the ability to make a positive difference in the lives of the Washington County inmates, most of whom would eventually reintegrate into society. Lastly, as the research team worked closely alongside

those serving the inmate population, it was apparent that there is need for further outreach in terms of resource availability. As a result, it is the research team's sincerest wishes that further research groups will expand on the advances made during this community service project.

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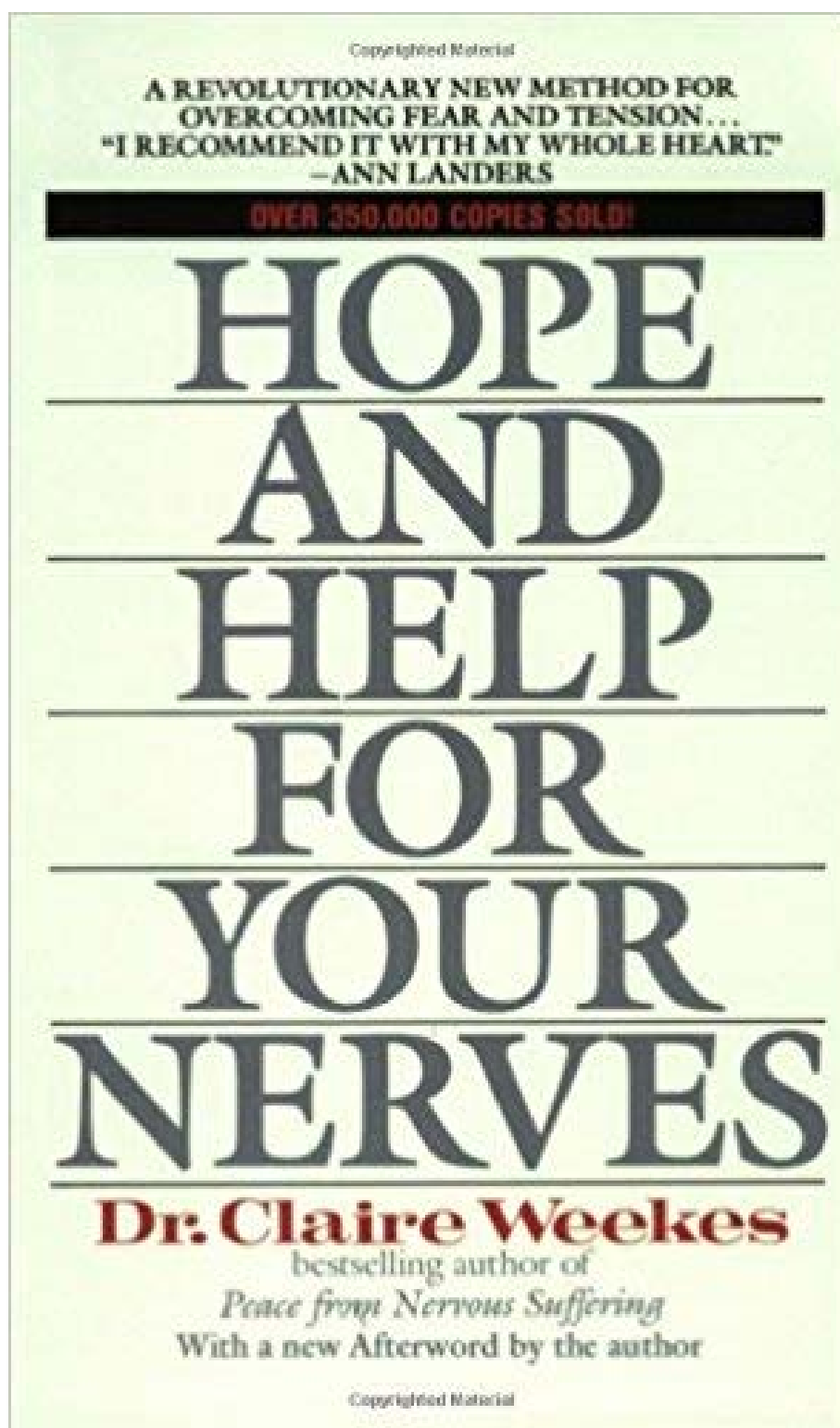
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APPENDIX A

Hope and Help for Your Nerves, Dr. Claire Weekes



<https://www.amazon.com/Hope-Help-Nerves-Claire-Weekes/dp/0451167228>

APPENDIX B

Coping with Anxiety, Educational Pamphlet

Breathing Techniques for Anxiety

1. Calm Breathing:

About: As anxiety builds a person's breathing rate increases, referred to as hyperventilation.

Hyperventilation can make the feelings of anxiety worse. By practicing calm breathing, a person can prevent over-breathing and lessen the severity of anxiety symptoms.

Technique:

- Slowly breathe through the nose over a period of 4 seconds and hold for 1-2 seconds
- Focus on filling the lower abdomen with each breath, shoulders and chest should remain fairly still.
- Slowly exhale through the mouth over a period of 4 seconds
- Duration: Do this for another 6-8 times per minute for five minutes.

Tips:

- Try not to breathe too fast, focus on slow purposeful breaths
- Pause between each full breath

Resources Available

- "Hope and Help for Your Nerves" is a book that addresses coping with stress and anxiety. It is available on the book cart.
- Animal Assisted Therapy— the jail has partnered with a group that brings in dogs to interact with the inmates
- Exercise/Activities
 - ◊ Recreation time
 - ◊ Yoga

2. Progressive Relaxation:

About: Progressive Relaxation uses breathing control in combination with muscle isolation to help a person become more aware of the tension in their body. The goal is to relax the body and mind to help alleviate stress.

Technique:

- Get comfortable, close your eyes, and focus on controlling your breathing
 - Bring your attention to your right foot and gradually tense the muscles in the right foot and hold for 10 seconds
 - After 10 seconds, slowly release the tension from the right foot
 - Focus on the tension leaving your body
 - Shift attention to left foot and repeat
- Gradually work your way up your body in the following order:

Right calf/left calf
Right thigh/left thigh
Hips/buttocks
Stomach
Chest
Back
Right arm/right hand
Left arm/left hand
Neck
Shoulders
Face

Tips

- Distraction— when feeling anxious, try to find an activity to do. Read a book, walk around, or have a conversation with someone.
- Avoid caffeine— caffeine can increase anxiety like symptoms

Information provided by the Washington County Jail with assistance from the Bethel University Physician Assistant Program

Coping with Anxiety

Tips and Strategies for Coping with Anxiety





Anxiety and Stress

Anxiety or stress is your body's response to being in an uncomfortable or unfamiliar situation or place. It is a completely normal human reaction. Most inmates can expect to feel some level of anxiety or stress. However, some of these symptoms can make dealing with daily life and interacting with others hard. There are tips and actions that you can take to help reduce the unpleasant feelings that come along with anxiety and help you cope with your day to day activities.

Beginner's Guide to Meditation

Meditation is often overlooked as a coping technique. It is a great way to relax your body and calm your mind. Below are 8 simple steps for beginners.

1. Comfort is key. If possible, find a quiet comfortable place to sit. Sit tall— imagine a string pulling your head towards the ceiling .
2. Close your eyes and relax. Start relaxing your muscles. Start at the top of your head and work your way down. Scalp, ears, face, jaw, neck, shoulders.... All the way to the tips of your toes. Go slow and focus on releasing the tension from area of your body. This should take a few minutes.
3. Just be tall and still. Take a moment to become aware of your surroundings, body, and mind. Don't attempt to react to anything. Just be aware.
4. Turn your attention to your breathing. Take slow deep breaths in through your nose while expanding your belly. Hold your breath in for a few seconds, and exhale fully out of your mouth while feeling your belly drop. Repeat this 3-5 times.

5. Establish a word or phrase to focus your attention on throughout your meditation. It can be anything that has special meaning to you, or it can simply be, "I am breathing in. I am breathing out."

6. Calm your mind— focus on your breathing. Allow thoughts to enter your mind. Recognize the thought, set it aside, and return your focus to breathing. Do not focus on your thoughts. They are neither good or bad.

7. When first starting to meditate, it may be easier to meditate for shorter periods of time. Maybe 5 or 10 minutes. As you become more comfortable with meditation, try to extend this time. When you are ready to stop meditating, slowly bring you attention back to your surroundings. Wiggle your fingers and toes. Move your hands, feet, arms, and legs. Slowly open your eyes. Move slowly and take your time getting up.

8. Don't necessarily expect amazing results the first time. Practice often. Meditating everyday, even if it is only for 5 minutes, can significantly reduce anxiety.

APPENDIX C:

Washington County Jail Permission Letter



Office of the Sheriff

Commitment to Excellence



William M. Hutton
Sheriff

Daniel Starry
Chief Deputy

Date: February 10, 2017

RE: Washington County Jail Project

To Whom This May Concern,

On behalf of the Washington County Sheriff's Office, I am granting permission for Danny Cuppy, Laura Bakke and Tyler Back to work in our jail on their project "Anxiety Reduction Among Washington County Jail Inmates". I will work with these students to ensure they meet our requirements to meet with the inmates including short background checks, safety and security orientation and compliance with the Prison Rape Elimination Act of 2003. I will work closely with these students over the next year or so.

Sincerely,

Commander Roger Heinen 
Jail Administrator
651-430-7606
Roger.heinen@co.washington.mn.us

Washington County Jail
15015 62nd St. North
Stillwater, MN 55082