

2021

Psychological Distress as a Predictor of Methamphetamine Use Among Racial Minority Women

Sundra Barnett Allen
Walden University

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Walden University

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Sundra Barnett Allen

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Walden University

2021

Abstract

Psychological Distress as a Predictor of Methamphetamine Use

Among Racial Minority Women

by

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MA, Texas Southern University, 1972

BS, Texas Southern University, 1972

Dissertation Submitted in Partial Fulfilment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

November, 2020

Abstract

The scope and magnitude of methamphetamine (MA) use among racial minority women (RMW) created pivotal health concerns due its highly addictive nature. Despite much available research, the problem of psychological distress (PD) as an attribute of MA use among RMW remained as a gap in the literature. The purpose of the present study was to examine the relevancy between PD and MA use among RMW to determine if distress predicts MA use among this population. The attributes of PD, as defined in the K6, are nervousness, restlessness, hopelessness, feelings of sadness or depression, feelings that suppress effort, and a sense of worthlessness. Archival information was taken from the 2013 National Survey of Drug Use and Health (NSDUH). The research questions query whether an association between PD and MA use exists among RMW, using the six attributes found in the K6. The target population for this study included scores of 8,688 RMW who took the K6 provided in the NSDUH. Using a quantitative logistic regression design, the focus of the study was on the correlation between PD and MA, yielding insight into their predictability among RMW. The resulting five null hypotheses were tested and determined to be significant. These results align with Lazarus' theory of psychological stress and coping. The effectiveness of this information, if put to good use in the practice of scholar practitioners and healthcare professionals, will begin a new trend in mental healthcare for MA drug addiction, thereby enhancing positive societal transformation for RMW around the world.

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Dedication

This dedication page is for my loving mother and father, who always believed in me, inspired me, and encouraged me to advance to a higher education. I pay special tribute to my children and grandchildren, brothers, sisters, nieces, nephews, cousins, and friends. Thanks to all of you, for without you, this dissertation work would not have been possible. Much love to all.

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Chapter 1: Introduction to the Study

The scope and magnitude of methamphetamine and amphetamine (MA) use and abuse among racial minority women (RMW) created pivotal health concerns for the last three decades in the United States (Substance Abuse and Mental Health Services Administration) [SAMHSA] (2011; Witkiewitz, Greenfield, & Bowen, 2013). Researchers found evidence that showed “MA was a highly addictive central nervous system stimulant that resulted in a prompt onset of euphoria” (Vearrier, Greenberg, Miller, Okaneku, & Haggerty, 2012, p. 40). Because of MA’s highly addictive nature, the neurotoxin affected pathological pathways as it infiltrated the central nervous system. Illicit substances could create far-reaching internal and physical consequences, resulting in irreparable harm to RMW for a lifetime.

Individuals who abuse substances appeared to be influenced by subconscious states of pleasure that placed them in a dimension of sustained gratification and allowed them to escape from reality. Researchers found that the effects of powerful psychoactive stimulants like MA, resulted in internal and external harm (Panenka et al., 2013). Not only do these drugs impair the body’s ability to function, but they also weaken an individual’s mental acuity. The alarming account of women’s upsurge in drug use highlighted an atypical trend in the number of women’s applications for MA treatment and an incredible shift that warranted observation.

Exposure to sources of tension and strain may be only one challenge to the vulnerabilities of the internal system in women. MA’s illegal consequences surfaced in numerous reports linking it to stress in women (Torchalla, Linden, Strehlau, Neilson, & Krausz, 2015). The psychoactive stimulant’s path of destruction led to internal feelings of hopelessness and depression that necessitated remediation by psychological clinical professionals.

The purpose of this empirical research study was to determine if a relationship existed between MA use and (PD) among RMW in the United States, and if distress predicted MA use among this group. In the investigative study, the goal was to explore feelings associated with mental health conditions including nervousness and depression that arise from stressful encounters. Illicit drug use was closely related to ill temper and irritability and linked to mental health factors (Darke et al., 2011). In this chapter, developing the background to understand the relationship between PD and MA use and abuse among RMW assisted in learning more about the etiology and its triggers.

The problem involved understanding MA abuse among RMW, and the PD leading to drug use, that could trigger drug abuse among minority women. To that end, the purpose statement was focused on evaluating the relationship between MA use and PD or stress among RMW in the United States. To help alleviate the battle of chronic MA drug use among RMW, topics of discussion included various components of stress that enlightened both women and men of the hazards relative to illicit MA use.

Positive social change for RMW resulting from the inspective study included a conscious awareness of self that translated into healthy living involving psychological well-being and the physiological structure of the human anatomy. Another potential advantage gained from awareness of MA drug exploitation encouraged society to educate abusers on the possible stressors and mental distress associated with illicit drug culture. By focusing on a subgroup population of minority women, research findings were used to improve diagnostic taxonomy or treatment effectiveness. Finally, using results of the study, psychologists and therapists could support more programs racially and ethnically tailored for treatment and prevention of MA use and abuse.

While MA use was portrayed as a negative consequence by society, another merit of this study was it translated into increased awareness of the MA problem for clinicians and scholar practitioners. The positive social change that the present study contributed was potentially substantial. Clinical psychologists and healthcare professionals used its results to improve their ability to connect with clients, and better diagnose and interpret symptoms distinct from clients with normal functioning. The professionals could also provide intervention and prevention strategies that may convert into high-quality mental healthcare to reduce or eliminate the initiation of MA's illicit use in minority women. Public health organizations could collaborate with agencies such as schools, rehabilitation centers, and healthcare professionals to strategize and develop objectives and associated action to minimize drug use among the RMW subgroup population.

In Chapter 1, the problem statement and purpose statement set the foundation for the research questions and hypotheses. Based on the theoretical framework of Lazarus' theory (2006), methods of coping were used extensively in many facets of stress and especially in coping with alcohol or drug use. The independent and the dependent variables in this study were defined and described according to the theory of Lazarus (2006). The discussion included an overview of the planned study in terms of the definitions and assumptions, scope, and delimitations as well as limitations. Chapter 1 culminated with the significance of the investigation and a summary.

Background

Stress, according to the American Medical Association, was a "basic cause of 60% of all human illnesses and disease (Ketchum, 2017). Extreme stress resulted in a reduction of grey matter in the brain, which can lead to future mental and emotional problems (American

Psychological Association, 2016). Historically, scholar practitioners made available services that help to lessen symptoms affiliated with stressful events. The present research resulted in an increased awareness to the public relative to the importance of alleviating overwhelming stressors.

Research relative to minority women and MA use regarding PD received little attention in the past. RMW have chronicled various struggles throughout the years. A heightened perception of the pressures placed upon RMW by society was featured in the study to recognize extensive histories of stress and the challenges of suicidal ideation (Bryan et al., 2014). A great deal of research established MA use was associated with depressed mood and stress in females (Darke, et al., 2011). The researcher found major gaps existed that examined whether PD was an attribute of MA use among RMW.

Drug use and abuse in the United States was not a new phenomenon. Over time, various drugs consistently emerged on the illicit drug market. Abusing drugs dates back over a century and has been grossly associated with negative health risks and problems to community well-being, according to Herzberg, Guarino, Mateu-Gelabert, and Bennet (2015). Although changes in use occurred over the years, substance abuse still remains a widespread issue, especially now that the current drug culture includes an array of nonmedical preparations as well.

The Centers for Disease Control and Prevention (CDC) posited that deaths from psychoactive pharmaceuticals increased to the point that they equal and possibly exceeded deaths from automobile accidents (Herzberg et al., 2015). Subsequently, the mass epidemic of nonmedical prescription drug use, which included MA use, has become so popular that accidental deaths regularly headline news media relative to America's most famous personalities. At the same time, countless individuals continue to involve themselves with illicit substance use.

Drug abuse remains a rampant construct, and all too often, stress has been one of the main concepts with which it has been affiliated. Stress involves a form of anxiety, sleep deprivation, impairment of health tension, fear, and depression that disturbs everyday life (Milton, 2016). Ironically, recent studies highlighted the premise that individuals start to use drugs to cope with stress (Sudraba et al., 2015). Individuals who were disturbed by a stressful event may find difficulty accepting actions of the event and could choose to seek other venues as a coping process. For instance, studies indicated that stressful experiences during pregnancy were associated with poor maternal health behaviors such as smoking and substance use (Divney, Gordon, Magriples, & Kershaw, 2016). Researchers proved that the stress and coping theory illustrated how exposure to life stressors affect risk behaviors and mental health of pregnant adolescents and their partners (Divney et al., 2016). When individuals become stressed, they determine if mental resources were available as a form of coping to combat the stressors. Stress highlighted a major contributing factor in contemplating the use of psychoactive drugs such as MA.

Simplistically speaking, stress is the basic cause of all human illnesses and disease, which can lead to future mental and emotional problems (Ketchum, 2017). If individuals can manage the stressful event successfully, they tend to cope using a problem-focused strategy to attempt a solution. If, on the other hand, the individual denies the event or does not focus on it, that person may lean toward substance use, indicating a form of avoidance coping. Stress management, in all likelihood, determines either the initiation or deprivation of drug use.

Psychological Distress

Frequently, stress is believed to contribute to a wealth of mental disorders separate and diverse from normal functioning. According to the Diagnostic and Statistical Manual of Mental

Disorders (2013), disorders involving mental health include, but are not limited to, substance-related disorders, mood disorders inclusive of depression, and nervous disorders, inclusive of post-traumatic stress disorder (PTSD). Stress and PD are thought to arise from brain appraisal processes that assign threat-related meaning to experiences that burdened or exceeded humans' coping ability (Gianaros & Wager, 2015).

Researchers found a link between heart disease, risk, and stress. Individuals who exhibit prolonged stress may sustain increases in blood pressure and heart rate that can put a person at risk for hypertension, heart attacks, and premature death (Gianaros & Wager, 2015). As stress is analyzed, events become extremely challenging, as individuals must surrender to their ability to judge or appraise the surrounding circumstances. The state of affairs could lead to an assessment of potential stress.

By understanding the six identifiable dimensions of the stress experience, the feelings that could invariably lead to levels of tension can be discerned. Based on survey findings, the predictors of PD included feelings of nervousness, restlessness, or hopelessness; feelings of sadness or depression; feelings that suppress effort; and feelings of worthlessness (SAMHSA, 2013). In one research study, Sunderland, Hobbs, Anderson, and Andrews (2012) assessed depression, dysthymia, bipolar, PTSD, substance use, and dependence, and noted the presence of PD as a trigger for each of these issues. On a scale of nervousness, hopelessness, irritability, negative affect, fatigue, and worthlessness over the past 30 days, PD was measured in some level in the assessments (Sunderland et al., 2012).

Responses of the participants in terms of PD factors differed according to age. Younger participants tended to possess more PD factors than older participants. Feelings of hopelessness or nervousness dictated events too difficult to handle, and individuals may or may not be

amenable to finding suitable methods to cope. As a consequence, an individual may suffer from various levels of depression, anxiety, or emotional instability. Stress was a powerful cognitive force that was recognized as soon as possible to help prevent mental illness and the loss of enjoyment and happiness in daily life.

Stress may become an unwelcomed part of life, but one to which the body adapts. The brain appraisal systems may generate states of PD relative to threats to the individual's physical, social, and personal well-being that exceeds coping ability (Gianaros & Wager, 2015). As a result, the brain appraisal systems link PD to health-related physiology to evaluate thoughts, memories, and life situations for their meaning and significance.

The physiology of the brain, when under stress, encompasses varied reactions. Stressors represent an increased neural secretion of cortisol and increased sympathetic nervous activity that prepares the body for a potential stressful situation (Ganzel et al., 2013). The sympathetic nervous activity prepares the body to organize for battle to overcome stress placed upon it or to attempt physiological control of the situation by withdrawing (Huang et al., 2012). This action is referred to as "fight or flight" reaction, whereby the individual withdraws from the body's own defenses and chooses another route such as drug use. While complex pathways of the human anatomy involve infinite stressors that work in tandem to help secure the body's substantial functional structure, everyday life dictates a continuum of demand and strain.

Social Disadvantages of Psychological Distress

A major aspect of the present study involved MA and mental health of socially disadvantaged women. To understand more clearly the symptoms that contribute to PD in RMW, attempts were made to identify several social disadvantages and chronic adversities that increase illicit drug behaviors (Green et al., 2012). Since the turn of the century, researchers highlighted

the premise that stress can result in the development of various neurotoxins that encourage individuals to use drugs to help manage the stress of daily living (Sudraba et al., 2015).

Researchers highlighted the phenomenon of PD as an essential component in women who were most likely to use MA (Green et al., 2012).

Impairment of health resulted from numerous sources that reflected the stress and strain in the environment (Messina & Calhoun, 2014). Franklin (2008) suggested a plausible theory that women who suffered traumatic and physical abuse intentionally chose to segregate themselves to dull the pain and to survive. They resorted to using drugs for comfort and as a coping mechanism for a quick fix. These individuals found the immediate gratification of MA use to be only a temporary means of escape from the intensities of life's stressors.

To expound further on the trajectory of ills affiliated with traumatic experiences of women, childhood negative experiences were believed to be a source of unwanted stress. In a study, investigators acknowledged the prevalence of sexual assault and mental distress of most African American RMW offenders who were raped as children and were currently homeless and psychologically dependent on MA (Lutnick et al., 2015). These women offenders most likely suffered overwhelming PD as a child and possibly at the hands of family members with little or no compassion for their traumatic encounters. The risk factors and stress associated with MA use overwhelmed women to the point that they willingly yielded to the dangers of violence (Lutnick et al., 2015). Regrettably, women who were victimized from childhood and adulthood suffered physical and psychological damage that translated into a dimension of mental illness. Integrating of stress and coping strategies into one's life attenuated a less stressful lifestyle with the hope that these women attempted different strategies until one emerged as successful (Lutnick et al., 2015).

Women were subjected to familial or parental encounters regarding drug application and addiction. An examination of individuals with parents who suffered drug dependence as a child were reviewed. Langlois and Garner (2013) studied Canadian adults who were traumatized by parental addiction as children. According to Langlois and Garner, more women than men were affected by parental substance addiction, with results comparable to the rates in the United States. Negative childhood experiences had indelible consequences on adults. Victims continued to experience PD well into their senior life, laying the groundwork for adult drug use.

Another aspect of drugs was the economic influence affiliated with the sale of drugs. Economic pressures affected the use of the psychoactive stimulant as an income-producing agent to earn revenue. Although drug dealing was historically considered a male activity, women now sought the opportunity to sell drugs (Semple, Strathdee, Zians, & Patterson, 2012). Investigators of the study maintained the idea that certain social disadvantages, such as poverty, lack of education, and limited employment opportunities, forced many MA-using women to participate in the illicit drug economy (Semple et al., 2012). Consequently, when an economic downturn occurred, female drug users simply used whatever resources were available. Selling drugs became a means of placing food on the table for their children and themselves. Economic pressures resulted in strain, and taking precautions helped alleviate its challenging urgency by using stress and coping strategies.

Psychological Distress Attributes

Women who seriously pondered stressful situations find despair occurs with no sign of relief. Torchalla et al. (2015) conducted a study on the challenges of stress and found that MA's illegal consequences coincided with stress in women. The women could not forecast anything positive for the future when faced with stress than to seek relief in illegal substances. Other

researchers established MA use was associated with depressed mood and stress in women (Darke et al., 2011). When hopelessness was imminent, women's needs transformed to help counter stress. Other researchers, Carbone-Lopez, Owens, and Miller (2012), who assessed the needs of minority women and adolescent offenders, consistently showed extensive histories of depression and suicidal ideation. One accepted premise in the Black culture was that RMW tended to endure more hardships at an escalated pace than do women in mainstream society. RMW suffered feelings of anguish and despondency at higher rates of frequency than their Caucasian counterparts. No research was found to document the relationship between PD and RMW and MA drug use.

Women encountered numerous feelings of despair at times. To comprehend the feelings invoked in PD, a definition of the term is provided. Survey findings from 2013 National Survey of Drug Use and Health consisted of predictors of PD to include feelings of hopelessness, nervousness, restlessness, feelings of sadness or depression, feelings that suppress effort, and a sense of worthlessness (SAMHSA, 2013). Stress was a factor that became an unwelcomed part of life with a disproportionate amount passed on to the adolescent population. As part of another description, hopelessness was defined as a state of having increased negative expectancies for the future and showed a strong association with suicidal ideation (Huen, Ip, Ho, & Yip, 2015).

SAMHSA (2013) and Huen et al. (2015) referred to a sense of desolation and hopelessness with women in mind. Suicidal ideation was another factor related to stress. Despite how women suffered negative feelings, to deter advancement of suicidal tendencies, a clinical professional was an immediate necessity.

In that same vein, the prevalence of abuse and hopelessness was observed in minority women immigrants, as well. Researchers established a connection between Haitian women living

in the United States and HIV infections associated with PD and drug abuse (infected through sexual contact or substance abuse) (Glemaud et al., 2014). Women infected with HIV was a cause for distress that translated into hopelessness. Most HIV-infected women reported anxiety and PTSD with symptoms of depression, such as feeling down, depressed, and hopeless, with decreased interest and self-esteem (Glemaud et al., 2014). Women from other countries who endured PD were influenced toward drug use because they experienced the same risk factors as American-born women who abused drugs. More to the point, they already suffered an inordinate amount of stress from HIV exposure alone.

Consequently, cognitive feelings of despair transitioned into dimensions of worthlessness and sadness. Other researchers found a connection between depression and distress symptoms associated with major depressive disorders (MDD) and anxiety sensitivity (AS) (Allan, Macatee, Norr, Raines, & Schmidt, 2015). According to Allan et al. (2015), depression was also linked with feelings of nervousness and psychological and emotional symptomatology. Allan et al. (2015) concluded that mental distress was connected with dimensions of trepidation and apprehension that led to disorders involving drug and alcohol mismanagement. Distress disorders seemed a common denominator of three factors including stress, depression, and anxiety. The aforementioned risk factors involved feelings of hopelessness, depression, and nervousness that functioned as attributes of the independent variable PD in the present study.

Feelings of desolation and belonging were affiliated with PD in young people of racial minorities. Researchers Corrales et al. (2016) showed a connection between childhood adversities and a lack of feeling loved along with amplified grief, resulting in a form of PD in young individuals who were racial minorities. Findings showed that individuals with PD often

experienced hopelessness, depression, or degrees of unhappiness. Hopelessness was demonstrated to be associated with forms of stress that encouraged substance use and abuse.

The stress and coping theory may shed light on the construct of hopelessness. Johnson, Wood, Gooding, Taylor, and Tarrier (2011) argued that PD affected and strengthened the attributional style of coping to cushion hopelessness. The attributional style referred to the ways a person explained events in terms of causes. External causes were often used to buffer the negative effect of an action, while internal causes were often used to receive credit for the positive effect of an action (Johnson et al., 2011). This style of coping was helpful for the person feeling sadness and sorrow when encountering bouts of strain and tension (Johnson et al., 2011). For this reason, the stress and coping theory helped shield detrimental risks such as suicidality and hopelessness and were a welcomed concept that influenced individuals who experienced feelings of dejection.

Equally important, as part of a drug abuser's life, psychological challenges that mitigated the stresses of substance use emerged. Anxiety or nervousness tended to be a natural component of daily life and drug use. Dobry, Rice, and Sher (2013) stated that nervousness influenced the use of stimulants such as ecstasy (MDMA). In general, nervousness affects PD, possibly leading to the use of psychoactive stimulants.

African Americans suffered more stressful encounters, which forced disorders to surface. Similar findings indicated that among Asian Americans, depression was higher among women, and was inclined to be persistent, lasting long periods, and that Asian women were less likely to seek treatment and adequate care than non-Hispanic Whites (Li et al., 2016). With such a high incidence rate, Asian Americans found greater release by seeking to consult a physician or clinical psychologist that helped reduce the rate of mental illness. As reported by National

Institute of Drug Abuse (NIDA) (2015), “In some cases, mental disorders such as anxiety, depression, or schizophrenia preceded addiction; in other cases, drug abuse triggered or exacerbated those mental disorders, particularly in people with specific vulnerabilities” (p. 2). Stress was a known vehicle to trigger substance abuse, which led to mental health disorders, and at times, if an individual suffered major depression disorder, stress precipitated new disorders.

Depression encompassed a level of PD that produced more stress in women who had a disability. Researchers Houston, Gomes, and Naccarato (2016) conducted a study of individuals who had severe PD and a mental or physical disability. PD was defined as a state of emotional suffering characterized by depressive and symptoms of anxiety as an indicator of mental health (Houston et al., 2016). The investigation yielded further evidence that PD was a prevalent illness that needed to be addressed urgently.

To realize that stress dictated behaviors equivalent with illicit substances was important. Pressure or tension on the human structure created a level of stress that embodied but was not limited to anxiety, physical trauma, depression, and infection (Ganzel et al., 2013). Depression and feelings that suppressed effort generated a dimension of sadness. Schepis (2014) conducted a study that involved the psychoactive stimulant Zolpidem, taken from the NSDUH 2009-2011. The results yielded higher scores for women than for men for nonmedical use of the neurotoxin. Mental health issues and general feelings of sadness continued to warrant attention in combination with drug use, particularly among women.

Stress was a factor that initiated and predicted substance use behaviors as well as other addictive actions. Hwang and Yun (2015) showed that distress and depression paralleled to not only substance use but also smoking behaviors subject to addiction. The researchers reiterated that the “level of stress increased when people faced events or stimuli that were emotionally or

physiologically challenging, resulting in negative affect and distress” (Hwang & Yun, 2015, p. 2190). Hwang and Yun used the NSDUH to show PD was a persuasive factor in the initiation of substance use among Caucasian and racial ethnic genders. The final analysis confirmed that stress positively incited urges to smoke (Hwang & Yun, 2015). Researchers noted that PD led to substance use behavior and smoking initiation. Stress, nervousness, and depression were strong emotions that continually engendered modifications in an individual’s existence if he or she succumbed to MA dependence.

Drug and MA Abuse

Drug abuse therefore became a behavioral health concern. Once a stimulant drug was introduced into the human immune system, the drug itself produced stress on the body’s anatomy (Panenka et al., 2013). The researchers’ study described the physiological and psychological effects of MA use. Investigators asserted that after the drug was consumed, users experienced the effects immediately. Levels of stress hormones “were increased by over 200% in humans following administration of MA and remained elevated for hours after the final exposure” (Panenka et al., 2013, p. 169), which made it difficult to maintain normal health. Stress invoked strain and tension on an individual’s psyche that undermined an appraisal of an urgent event. Initiation into the drug culture resulted in negative behaviors, feelings, and imminent risk factors possibly associated with drug use.

Bioavailability of MA Use in Women

In general, investigations demonstrated that the absorption and bioavailability of MA in women differed from that in men. Soldin, Chung, and Mattison (2011) established that consequential differences included physiological differences between the sexes. Further research showed that maximum concentration for drug absorption presented at a greater level in women

(Soldin et al., 2011). A higher percentage of concentrated absorption of a drug such as MA indicated that women began to feel the effects of MA quicker or faster than men and represented a prolonged effect. This enlightenment had extensive physiological consequences that erupted into a need for the drug or caused dependence.

For women, the distribution process showed differences as well. The blood distribution affected organs and tissues, creating “a percentage of the total body mass that affected the clearance rates, resulting in decreased liver blood flow” and lower drug clearance in women (Soldin et al., 2011, p. 4). A lower drug clearance reflected a slowed drug process, which, in turn, meant the drug remained in the system longer. This protracted release of MA into the female anatomy permitted an extended euphoric demeanor that translated into dependence.

Psychological factors exacerbated by pressure placed upon RMW in all likelihood dictated stress. Powerful mental and emotional tension was equal to motivational causes and concerns of situations that appeared impossible. Researchers indicated that present-day RMW suffered far more from socioeconomic stress compared with their non-Hispanic counterparts (Okamoto et al., 2014). Distressed individuals typically followed pathways that brought some portion of relief from the daily challenges of mitigating social status and social class (Okamoto et al., 2014).

Connecting drug use to stress and coping theory created an avenue to remind individuals of their impending lack of unequal power and their chronic stress situation. In fact, based upon the theory, some chose drug initiation as a vehicle to dull the pain of everyday stressors (Kilminster, 2014). The unlawful substance MA continued to exert an unhealthy psychophysiological effect on the human body with sociological and biomedical consequences.

In the long run, stress modified behaviors that led to negative processing and possible inconsistency and irritability.

Recurring exposure into the relationship between cocaine, heroin, or ecstasy use and of levels of PD among Caucasian women and specific ethnic female drug users warranted investigations. Researchers found evidence of PD within a specific drug culture, such as ecstasy users (George, Kinner, Bruno, Degenhardt, & Dunn, 2010) and evidence of PD among regular MA and opioid users (Darke et al., 2011). Understanding the relationship between PD and MA use among RMW assisted in learning how women became attracted to MA and then initiated dependency on the psychoactive stimulant so that more effective treatments were designed. One limitation of previous investigations into the relevancy between MA use and PD among RMW was that no studies were available to examine MA use independently of other drugs and mental distress among RMW, creating a literary gap. No researcher to date examined the six components that made up PD as measured by the K6 among RMW and MA use as a unit, warranting the present study. Exploration of research studies yielded predictors of MA use, and PD among RMW were not considered or investigated, which mandated further analysis.

The lack of research regarding this topic necessitated an investigation of the PD attributes that included feelings of hopelessness, worthlessness, nervousness, restlessness, and sadness or depression. The question was whether these feelings as a unit dictated drug use in RMW. Ideally, a clinical psychologist was the most salient professional to invest in the welfare of the RMW as a MA user for possible treatment and prevention. The present quantitative study was needed to examine the relevancy between MA use and PD among RMW and to determine whether stress predicted MA use among this subgroup population.

Problem Statement

A great deal of research on use and abuse of drugs by individuals in the United States, as well as PD among adults, was available. Although a great deal of research was available on the use and abuse of drugs by individuals as well as psychological distress among adults in the United States, few studies were available on the relevancy of the six factors comprising psychological distress, as measured by the K6, and methamphetamine use by U.S. racial minority women. The researcher found that major gaps exist that examines whether PD is an attribute of MA use among RMW.

The problem was that few studies were available on MA use by RMW who suffered from PD. Scholar practitioners gained a major role in assisting RMW and received much attention in academic research in the United States since the late 1990s (SAMHSA, 2011; Witkiewitz et al., 2013). Researchers found the abuse of MA caused harmful effects to cognitive functioning (Kaushal & Matsumoto, 2011). One limitation of previous investigations into the relationship between MA use and PD among minority women was that a lack of documentation existed that showed why the RMW subgroup population resorted to the use of MA. This powerful psychoactive stimulant resulted in physiological as well as psychological harm, as it penetrated throughout the human anatomy, impairing the body's framework and an individual's mental acuity.

To expound further on the gravity of the MA condition among women, the Treatment Episode Data Set (TEDS) yielded a high volume of related treatment facility requests and admissions (SAMHSA, 2013). Current treatment requests and admissions were proportionate with women who suffered a substance use problem or dependency. TEDS indicated that over

half (58.3%) of new drug users were female, and 2.7% began by using stimulants such as MA (SAMHSA, 2010). Statistical data fortified MA's use.

A woman may encounter numerous feelings of despair at times. Previous survey findings from NSDUH consisted of predictors of PD to include feelings of hopelessness, nervousness, restlessness, feelings of sadness or depression, feelings that suppress effort, and a sense of feeling down on oneself, feeling no good, or feeling worthless (SAMHSA, 2013). Regardless of the description, if an individual continues in a stressful mindset, thoughts of suicide may occur. Despite how women suffer negative feelings, immediate attention necessitates a clinical professional to help deter drug abuse and mental health disorders.

Feelings of worthlessness permeated the MA user if victimized during their youth. According to survey findings in rural Tennessee, the typical female MA user appeared to have a history of childhood trauma and experienced a chaotic childhood (MacMaster, 2013). They were primarily single mothers who had low levels of educational attainment and nonpermanent residences (MacMaster, 2013). Women who endured traumatic experiences suffered unimaginable dimensions of stress and instability, resulting in MA use.

A weakness of previous investigations into the relationship between MA use and PD among minority women was a lack of documentation existed that showed why the RMW subgroup population resorted to the use of MA. A second weakness consisted of not knowing if PD was a major contributor to drug use. Previous researchers examined MA use combined with other drugs and mental distress among minority women (Hwang & Yun, 2015), but what remained a gap in the literature that this study aimed to fill was that MA was not investigated independently with the specified RMW subgroup population. No study to date examined the six

components that made up PD as measured by the K6 among minority women as a unit and MA use; the study was warranted.

Purpose of the Study

The purpose of the present quantitative logistic regression study was to determine the relevancy between each of the attributes comprising psychological distress (PD) and MA use among RMW across the United States, and if distress predicted MA use among this group. This information was obtained using archival information from the 2013 NSDUH. The K6 was a self-report catalyst with six items intended to extract mental disorders such as depression and anxiety. This particular testing apparatus was used to help define PD as a composite of six attributes as measured by the K6 instrument (SAMHSA, 2013). Recent studies illuminated the premise that individuals started to use drugs to cope with stress (Sudraba et al., 2015). Feelings of PD took the form of any specific mental illness with any of the six attributes permeating the internal environment. The independent variables comprised the six attributes of PD including feelings of nervousness, restlessness, hopelessness; feeling sad or depressed; feeling everything was an effort; and feelings of worthlessness (SAMHSA, 2013).

According to Lazarus (2006), the stress and coping theory influenced PD and the initiation of substance use. The 2013 NSDUH researchers chose an instrument to measure addictive behaviors, especially with alcohol and illicit drugs. The questions were based on the criteria in the American Psychiatric Association (APA) Diagnostic and Statistical Manual of Mental Disorders (1994).

The K6 was used to measure the independent variables of PD. A dichotomous measure of whether adults had scores of less than 13 or scores of 13 or higher based on six items to estimate symptoms of PD was investigated. The time frame used was one month in the past 12 months

when participants were at their worst emotionally (SAMHSA, 2013). The K6 helped determine the level of stress RMW received during a specified timeframe.

The dependent variable was methamphetamine use among RMW. Interview questions obtained from participants were produced to measure the use of alcohol and illicit drugs. Six questions were asked to determine if a participant was considered dependent on a drug. The questions elicited the following information: Did the individual:

- Spend a great deal of time over a period of a month getting, using, or getting over the effects of the substance. Yes_____ No _____.
- Use the substance more often than intended or was unable to keep set limits on the substance use. Yes_____ No _____.
- Need to use the substance more than before to obtain desired effects or noticed that the same amount of substance had less effect than before. Yes_____ No _____.
- Find him or herself unable to cut down or stop using the substance every time he or she tried or wanted to. Yes_____ No _____.
- Continue to use the substance even though it was causing problems with emotions, nerves, mental health, or physical problems. Yes_____ No _____.
- Find that substance use reduced or eliminated involvement or participation in important activities. (SAMHSA, 2013, p.137). Yes_____ No _____.

The NSDUH added more questions in 2005 relative to the use of methamphetamine. According to SAMHSA (2013, p. 138), the questions were, “Have you ever, even once, used methamphetamine?” and “Have you ever, even once, used a needle to inject methamphetamine?” The new questions were structured specifically to determine if an individual used MA.

Research Questions and Hypotheses

In the present study, the objective was to answer five research questions and test five related hypotheses as part of the research investigation. The research questions with the associated hypotheses follow:

RQ1: Is there an association between PD and MA use among RMW based upon six factors found in the K6?

H₀1: There is no association between PD and MA use by RMW based upon the K6.

H₁1: There is an association between PD and MA use by RMW based upon the K6.

RQ2: Do feelings of nervousness, restlessness, or hopelessness, correlate with MA use by U.S. racial minority women?

H₀2: Feelings of nervousness, restlessness, or hopelessness, do not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁2: Feelings of nervousness, hopelessness, or restlessness correlate with MA abuse by U.S. racial minority women as measured by the K6.

RQ 3: Does feeling so sad or depressed that nothing could cheer up a person correlate with MA abuse by U.S. racial minority women?

H₀3: Feeling so sad or depressed that nothing could cheer up a person does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁3: Feeling so sad or depressed that nothing could cheer up a person correlates with MA abuse by U.S. racial minority women as measured by the K6.

RQ 4: Does feeling that everything was an effort correlate with MA abuse by U.S. racial minority women?

H₀4: Feeling that everything was an effort does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁4: Feeling that everything was an effort correlates with MA abuse by U.S. racial minority women as measured by the K6.

RQ 5: Does feeling down on oneself, feeling no good, or feeling worthless correlate with MA abuse by U.S. racial minority women?

H₀5: Feeling down on oneself, feeling no good, or feeling worthless does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁5: Feeling down on oneself, feeling no good, or feeling worthless correlates with MA abuse by U.S. racial minority women as measured by the K6.

Theoretical Framework for the Study

The theoretical framework used for this investigation was the theory of psychological stress and coping originally developed by Lazarus (2006) in the 1950s. According to Lazarus (2006), coping was a major factor when an individual experienced stress and strain since both constructs could lead to adaptation outcomes such as somatic illnesses to include “depression, hopelessness, and despair” (p. 149). One form of coping with stressful situations involves ameliorating the thought that substance use was equivalent to a form of dealing with the immediate problem.

Lazarus indicated two processes that was helpful when attempting a definitive response to a stressful situation. The first was referred to as the cognitive appraisal process, which signified thought processes relevant to decision making. The second process was referred to as coping, which was an “effort to manage psychological stress” (Lazarus, 2006, p. 111). Stress appeared as an overwhelming factor, but coping helped to alleviate sources of frustration. Both

processes were crucial in understanding how a person should respond to environmental scenarios, and both had long-range outcomes (Lazarus, 2006). When stress was imminent, a coping process involved enhanced positive results. Based upon the theory of psychological stress and coping, exposure to violence was stressful, and “certain types of coping increased the likelihood of substance use” (Kliewer & Zaharakis, 2013, p. 361). A source of strain was unavoidable, but if an individual was armed with an arsenal of coping strategies, substance abuse became a passive force.

Application of the theory offered guidance on ways to initiate the coping process, thus allowing for the clinical psychological dimension to surface (Boden et al., 2014). Clinical professionals thrived on providing therapeutic services for clients in a state of psychological distress. The theory of stress and coping additionally allowed an individual to fight or flight relative to a stressful encounter. RMW may do one of two things: (a) prepare to manage the stress or survive feelings of hopelessness, restlessness, or nervousness before embarking on the never-ending trail of MA use, or (b) succumb to the challenges and risks of the illicit substance. The framework of Lazarus’ (2006) theory provided information on possible methods of coping. The inquiry alluded to by Lazarus was cited in several peer-reviewed articles, and his work was used extensively in many facets of stress and coping and alcohol or drug use.

Lazarus used his coping approach to elaborate on a person’s environmental factors. He portrayed the cognitive appraisal system as explaining methods involving long-range outcomes. The approach signified two processes as critical mediators of stressful person-environment relations and featured long-range outcomes (Lazarus, 1986). Based upon the theory of psychological stress and coping, violence was stressful, and increased the likelihood of substance use and abuse (Kliewer & Zaharakis, 2013). Application of the theory offered guidance on ways

to initiate the coping process, thus allowing for the clinical psychology challenge of the dissertation (Boden et al., 2014). The theory of stress and coping additionally allowed an individual the fight or flight option relative to a stressful situation. Minority women could do one of two things: (1) prepare to manage, or (2) survive feelings of hopelessness, restlessness, or nervousness before embarking on the never-ending trail of MA use.

The stress and coping theory related to the investigative study in that it provided an examination of the deleterious effects of MA abuse and psychological stress placed upon RMW. Lazarus' theory also involved the process by which an individual secures a means to cope when nervous situations arise as well as fostered strategies for avoiding its harm. Individuals established a daily pattern of stress affected by behavioral outcomes that proved to have negative effects on the human anatomy. With repeated doses of MA, RMW developed mental health problems and somatic illnesses. Positive coping strategies were a consideration for life's unexpected and, at times, traumatic circumstances that proved to become less of a burden.

The stress and coping theory related to research questions in terms of stress predicting MA use in RMW; research questions built upon existing theory prompted by the rigors of internal pressures. These rigors provided a connection to experiences of stressful events. For instance, feeling nervous, restless, or hopeless requires a natural progression originating from systematic internal controls translated to full-scale pressure. Detailed explanation in Chapter 2.

In accordance with the theory, an individual chose either cognitive appraisal or coping when stressful situations arose to formulate a positive preference. The individual set out to determine if the stressor created potential harm or benefit while considering other options such as possibly altering the stressful event. RMW involved coping strategies such as appraising the encounter as taxing or exceeding the person's resources. If an individual felt stressed, the

decision permitted a person to either advance to useful strategies to avoid the negative outcome or succumb to the pressure and possibly initiate use of illegal substances or MA.

Based upon research results, Kliewer and Zaharakis (2013) noted actions of a mother with regard to drugs were far more influential on teenage children than actions of the father. With that in mind, the female caregiver became an important consideration for managing offspring in the family especially from a prevention standpoint. If she was an RMW, she had even less access to social health care and was more likely to underutilize care facilities and drop out of care compared to her white counterpart (Ruglass, 2014). The RMW stands a great chance of having more struggles in her lifetime than was usual for mainstream women.

The stress and coping theory embellished the idea that stress was also useful because society needed a fraction of stress to maintain the lifestyle in which contemporary individuals became accustomed. A small quantity of uneasiness compelled individuals to take care of their biological, physical, and emotional needs. What was important to realize was an overabundance of stress could lay a foundation for initiation into substance abuse. The stress and coping theory offer an outlet for positive social change for the RMW instead of indulging in drugs.

Nature of the Study

The nature of this study was a quantitative design involving logistic regression using archival data from the NSDUH to measure levels of PD among minority women who used MA. The goal of the logistic regression paradigm was to predict the values on the dependent variable (MA used: yes or no), which was categorical in nature. By doing so, the researcher was essentially attempting to predict group membership of the independent variable of minority women. Assessments of the quality of the problem statement was used in conjunction with interview questions derived from the archival data.

The NSDUH consisted of several questionnaires including the K6 that was focused on the six components of PD experienced by MA-using minority women. The sample design for the NSDUH was an extension of a coordinated 5-year study distributed to civilian, noninstitutionalized population aged 12 years old or older residing within the United States and the District of Columbia (SAMHSA, 2013). Only women who were 18 years old and above could participate in the K6.

Using the K6, minority women revealed the PD attributes of hopelessness, worthlessness, nervousness, restlessness, and feeling sad or depressed as presented by SAMHSA (2013). To comprehend more clearly the independent predictor variables of PD, attempts were made to review feelings of despair and the stigmatization of traumatic lifestyles. The scores of the women who completed the K6 were pulled from the SPSS software and used for the logistic regression.

The operationalized predictor variable was PD and its various levels associated with symptoms of distress, which augmented the influence of MA drug use in the minority female community. The criterion variable “if minority women used MA” was used as a dichotomous variable (yes or no) in the logistic regression model. The operationalized criterion variable was used to measure responses on the K6 for symptoms of PD.

Definitions

Bioavailability: Referred to peak plasma methamphetamine concentration indicating efficient transfer of the drug into the blood stream (Cruickshank & Dyer, 2009).

Cis-female: A female born biologically as female (Dobson, Ramagopalan, & Giovannoni, 2012).

Desoxyephedrine hydrochloride: A white or translucent crystal commonly referred to as ice or crystal meth (Cruickshank & Dyer, 2009).

Drug addiction/dependence: Symptoms that related to cognitive, behavioral, and physiological constructs when an individual continued use of a substance despite significant substance-related problems was part of an uncontrollable reliance of a substance. Repeated self-administration or dosage resulting in tolerance, withdrawal, and compulsive drug taking behavior (APA, 2013).

Methamphetamine/amphetamine (MA): A highly addictive central nervous system stimulant “distinguished from amphetamine by a more rapid distribution” into the central nervous system, resulting in the prompt onset of euphoria (Vearrier et al., 2012, p. 38).

Neurotoxin: A repeated exposure to an amphetamine that leads to neuronal damage and elevated cerebral temperature (Cruickshank & Dyer, 2009).

Psychoactive stimulant/compound: Chemical agents grouped into categories representative of the drug type. “Psychoactive compounds such as amphetamine-type stimulants (ATS), L-amphetamine, D-amphetamine, methamphetamine, methylphenidate, and 3,4-methylenedioxymethamphetamine (MDMA) a family of drugs that share common elements in their chemical structure” (Mackey, Stewart, Connolly, Tapert, & Paulus, 2014, p. 104).

Psychological distress (PD): A state of emotional suffering characterized by depressive and symptoms of anxiety as an indicator of mental health (Houston et al., 2016).

Racial minority women (RMW): Racial ethnicities to include Black, Latino/Hispanic, Asian, Native American/Alaska Native (Mader et al., 2016) other non-Caucasians and to include the phrase “women of color” and “marginalized women” (Semple et al., 2012).

Withdrawal from addiction: A condition created by ceasing to use amphetamines after a period of abuse characterized by differences in behavior, sleeping and eating patterns, and slowed reactions (APA, 2013).

Assumptions

Certain assumptions underlie this paper. All data collected by the NSDUH was presumed to be correct and valid. The following were also assumptions of the study:

- MA was the drug of choice of those using drugs.
- All women were cis-females.
- Addiction or dependence was a disease resulting in substance abuse.
- K6 was the most expedient and reliable method of obtaining information relative to PD.

Scope and Delimitations

Substantial strengths were cited with use of the NSDUH. This annual survey included data for RMW needed for the scope of the present study as well as data reflecting MA use in the United States. NSDUH contained an accumulation of numerous types and immense amount of data from all 50 states. NSDUH had a vigorous data collection methodology and a robust research design. The survey's large sample size contributed strength to potential generalizations. NSDUH provided considerable amounts of information relative to RMW subgroup populations as well as ethnic groups such as Mexican, Asian, and Pacific-Hawaiian. In this study, the focus was on African American and Hispanic Americans because of the format of the data.

Limitations

Although the NSDUH data sets were useful for determining components of nonmedical prescription MA use, to determine when users first began using the drug legitimately or when an individual began using illegal drugs was not accessible from the data. Information was also not provided or available relative to the rationalization or motive for MA use. Because the data sets were managed by a government agency, the format and information were subject to government

purposes and not the needs of this study. The quantitative approach used in this study limited results to measuring MA use and abuse.

Significance of the Study

The following section on Significance includes the effects of this study's results on theory, practice, and social change. Numerous studies featured pertinent information targeting drug exploitation and its adversities. Predictions of PD might help alleviate MA use and may lead to reduced drug-related harm (George et al., 2010). Lazarus' theory involved the process by which an individual, under stress, secures a means to cope, fostering strategies for avoiding the drug's piercing harm. The information received from this present research would result in informing RMW on the association of stress and the powerful detrimental force of MA use.

Significance to Theory

The psychological theory of stress and coping created by Lazarus (2006) in the 1950s related to this investigative study in that it provided an examination of the deleterious effects of MA abuse and psychological stress placed upon RMW. Individuals established a daily pattern of stress affected by behavioral outcomes that proved to have negative effects on the human anatomy. With repeated doses of MA, RMW developed mental health problems and somatic illnesses. Positive coping strategies were a consideration for life's unexpected and, at times, traumatic circumstances that proved to become less of a burden. These rigors of internal pressures provided a connection to experiences of stressful events. For instance, feeling nervous, hopeless, or restless requires a natural progression originating from systemic internal controls translated to full-scale pressure.

In accordance with the theory, an individual chooses either cognitive appraisal or coping when stressful situations arise to formulate a positive preference. The individual sets out to

determine if the stressor creates potential harm or benefit while considering other options such as possibly altering the stressful event. RMW involved coping strategies such as appraising the encounter as taxing or exceeding the person's resources. If an individual felt stressed, the decision permitted a person to either advance to useful strategies to avoid the negative outcome or succumb to the pressure and possibly initiate use of illegal substances or MA. The framework of Lazarus' (2006) theory included information on possible methods of coping. The potential benefits gained from awareness of MA drug use encouraged society to locate the source of MA use in minority women and help alleviate initiation into illicit drug use.

The theory of stress and coping additionally allowed an individual to fight or flight relative to a stressful encounter. RMW may do one of two things: (a) prepare to manage the stress or survive feelings of hopelessness, restlessness, or nervousness before embarking on the never-ending trail of MA use, or (b) succumb to the challenges and risks of the illicit substance. The framework of Lazarus' (2006) theory provided information on possible methods of coping.

Based upon research results, Kliewer and Zaharakis (2013) noted actions of a mother with regard to drugs were far more influential on teenage children than actions of the father. With that in mind, the female caregiver became an important consideration for managing offspring in the family especially from a prevention standpoint. If she was an RMW, she had even less access to social health care and was more likely to underutilize care facilities and drop out of care compared to her white counterpart (Ruglass, 2014). The RMW stood a great chance of having more struggles in her lifetime than was usual for mainstream women. The influence of a minority mother to her adolescent child relative to MA drug use could have deleterious consequences in later life and the teen could have substance use problems well into young adulthood.

The stress and coping theory by Lazarus had a polar effect on daily stress and pressures of life, as well. He embellished the idea that stress was also useful because society needed a fraction of stress to maintain the lifestyle in which contemporary individuals became accustomed. A small quantity of uneasiness compelled individuals to take care of their biological, physical, and emotional needs. What was important to realize was an overabundance of stress could lay a foundation for initiation into substance abuse. The stress and coping theory offered an outlet for positive social change for the RMW instead of indulging in drugs.

Significance to Practice

Scholar practitioners gained a major role in assisting RMW and received much attention in academic research in the United States since the late 1990s (SAMHSA, 2011; Witkiewitz et al., 2013). Researchers found the abuse of MA caused harmful effects to cognitive functioning (Kaushal & Matsumoto, 2011). Regardless of the description, if an individual continues in a stressful mindset, thoughts of suicide may occur. Despite how women may suffer negative feelings, immediate attention necessitates a clinical professional to help deter drug abuse and mental health disorders. Within this framework, understanding the causes of drug use among minority women may help improve diagnostic taxonomy or treatment effectiveness and support more programs that are racially and ethnically tailored for treatment and prevention.

Suicidal ideation suggests a risk of death or suicide that could connect to stressful situations and possible mental disorders. Researchers found the abuse of MA caused harmful effects to cognitive functioning (Kaushal & Matsumoto, 2011). Regardless of the description, if an individual continues in a stressful mindset, thoughts of suicide may occur. Despite how women may suffer negative feelings, immediate attention necessitates a clinical professional to help deter drug abuse and mental health disorders.

The present study positively contributes to social change by helping to raise awareness of the problem of the MA detriment to clinicians, scholar practitioners, and the general public. Clinical psychologists and healthcare professionals diagnose and interpret symptoms as distinct from normal functioning and provide intervention and prevention strategies that translate into high-quality mental health care to reduce or eliminate the initiation of MA use. Public health organizations potentially could collaborate with other agencies such as school personnel, rehabilitation centers, school counselors, and medical health care professionals to strategize and develop objectives and associated actions to curtail the initiation of drug use among the minority female population.

Significance to Social Change

An awareness of health concerns affects the illumination of MA use and abuse of RMW who prevail in the use of illicit drugs within the United States. The problem was that few studies were available on MA use by RMW who suffered from PD. One limitation of previous investigations into the relationship between MA use and PD among minority women was that a lack of documentation existed that showed why the RMW population resorted to the use of MA. This powerful psychoactive stimulant resulted in physiological as well as psychological harm, as it penetrated throughout the human anatomy, impairing the body's framework and an individual's mental acuity. Perception and discernment among the subpopulation of RMW are pertinent when decision-making gravitates to whether or not to enter into the world of MA drug use and abuse. Being cognizant of the under-studied territory relative to health concerns of minority women remains a relevant construct.

Frequently, stress is believed to contribute to a wealth of mental disorders separate and diverse from normal functioning. According to the Diagnostic and Statistical Manual of Mental

Disorders (2013), disorders involving mental health include, but are not limited to, substance-related disorders, mood disorders inclusive of depression, and anxiety disorders, inclusive of post-traumatic stress disorder (PTSD). Stress and PD are thought to arise from brain appraisal processes that assign threat-related meaning to experiences that burdened or exceeded humans' coping ability (Gianaros & Wager, 2015). Researchers found a link between heart disease, risk, and stress. Individuals who exhibit prolonged stress may sustain increases in blood pressure and heart rate that can put a person at risk for hypertension, heart attacks, and premature death (Gianaros & Wager, 2015). As stress is analyzed, events become extremely challenging, as individuals must surrender to their ability to judge or appraise the surrounding circumstances. The state of affairs could lead to an assessment of potential stress.

Psychological distress within minority women tend to predict the use of psychoactive stimulants as a means of escape from the reality dimensions of stressors. Stresses include such mindsets as nervousness, hopelessness, restlessness, sadness or depression, suppressing effort, and feeling down, feeling no good, or feeling worthless. The information received from this present research would result in informing RMW on the association of stress and the powerful detrimental force of MA use. The RMW should know the likelihood of eradicating the loss of enjoyment and happiness in daily life through MA use.

The direct benefit received from this study is an educational advantage that apprises the RMW of the ills of MA drug use. MA use is a national public concern. Because of its highly addictive nature (Chen et al., 2014) and its immediate distribution into the central nervous system, substance abusers relished in its "rapid onset of euphoria" (Vearrier, Greenberg, Miller, Okaneku, & Haggerty, 2012, p. 38) and appear to be influenced by subconscious states of pleasure that placed them in a dimension of sustained gratification and escaped reality. The

constant rushes of intense sensation quickly cause addiction or dependence especially if the user is not careful to discontinue use of the neurotoxin. Thus, education of MA's harm is vital.

Women of color could use the information from this planned study to seek programs that may assist and educate them when stressful situations arise. Structured interventions could teach marginalized populations how to solicit help when they feel saturated with stress and strain, with an emphasis on the theory of stress and coping by Lazarus. The stress and coping theory offer an outlet for positive social change for the RMW instead of indulging in drugs.

Professional counselors could teach minority women about the awareness of alternative ways to cope when PD is evident. Another implication is the avoidance of using stereotypical ideas to counsel clients. Training in drugs, theories on drug use, and awareness of MA drug exploitation can encourage therapists to educate abusers on the possible stressors and mental distress associated with the illicit drug culture. Special drug centers could be set up in heavily concentrated drug areas around the city to teach alternatives to MA use and abuse and teach RMW how to reduce risky behaviors.

Supervised housing and rehabilitation centers could be another effective medium for the individual preparing to succumb to MA use. Economic pressures affect the use of the psychoactive stimulant as an income-producing agent to earn revenue. Although drug dealing was historically considered a male activity, women now seek the opportunity to sell drugs (Semple et al., 2013). Consequently, when an economic downturn occurs, female drug users simply use whatever resources are available. Selling drugs become a means of placing food on the table for themselves and their children.

However, given supervised housing for RMW and their children should encourage nonconformity of MA use and reduce levels of PD in her life. Specific factors are associated

with MA use and its diversion from conventional pathways. For example, MA's illegal consequences coincide with stress in women (Torchalla, et al., 2015). A great deal of research establishes MA use is associated with depressed mood and stress in women (Darke, et al., 2011). Subsequently, supervised housing would allow for pressure relief from the reality of everyday life and reinforcement of reduced risk behavior into the MA drug culture. RMW could then become involved and may learn to participate in important and healthy activities rather than succumb to illegal substances.

Finally, the outcomes of this inspective study could be associated with decreased psychological distress, reduced drug-related harm, improved judgement, overall better physiological and psychological health, problem-focused coping in a healthy way, greater employment opportunities, improved socioeconomic status, and reduced suicidal ideation, just to name a few. The previous list is in no way complete as many positive outcomes could emerge from this investigative study. Outcomes can be turned around since according to Semple et al. (2013), certain social disadvantages, such as poverty, lack of education, and limited employment opportunities, force many MA-using women to participate in the illicit drug economy. From this study, it is hopeful that positive outcomes prevail with RMW so they emerge to healthy life choices.

Summary and Transition

The scope and magnitude of methamphetamine and amphetamine (MA) use among RMW represents a health concern for the last three decades in the United States (Substance Abuse and Mental Health Services Administration [SAMHSA] (2011; Witkiewitz, Greenfield, & Bowen, 2013). A great deal of research on use and abuse of drugs relative to individuals in the United States, as well as PD among adults, was available. Few studies were available on MA use

by RMW who suffered from PD, however. The purpose of the present quantitative logistic regression study was to determine the relevancy between each of the six attributes comprising PD and MA use among RMW across the United States. What was not known reflected whether PD of RMW predicted MA use.

MA was a psychoactive stimulant that highly energized the central nervous system, produced habitual and persistent desire for the drug, generated euphoria, and created harmful effects to cognitive and physiological functioning as it penetrated the human anatomy (Kaushal & Matsumoto, 2011). Survey findings from NSDUH (SAMHSA, 2013) posited that feelings of hopelessness, nervousness, restlessness, feelings of sadness or depression, feelings that suppress effort, and a sense of worthlessness were predictors of PD. Understanding the relationship between PD and MA use among RMW and if PD predicted MA use among that population was the central focus for the investigative study. The stress and coping theory of Lazarus (2006) supported an explanation for positive social change and coping strategies for the RMW instead of indulging in drugs. A categorical narrative of stressors regarding women was crucial in aiding women of color in prevention. Chapter 2 contained more detailed explanations and research findings found in a literature review of sources on the study topic.

Chapter 2: Literature Review

Use and abuse of methamphetamine and amphetamine (MA) by racial minority women (RMW) have garnered heightened attention in the United States since the late 1990s (Substance Abuse and Mental Health Services Administration [SAMHSA], 2011; Witkiewitz, Greenfield, & Bowen, 2013). Specifically, MA is a psychoactive stimulant that highly energizes the central nervous system, produces habitual and persistent desire for the drug, generates euphoria, and creates harmful effects to cognitive and physiological functioning as it penetrates the human anatomy (Kaushal & Matsumoto, 2011). Researchers showed that reports based on the Treatment Episode Data Set (TEDS) contained a higher volume of women to men in treatment-related drug centers in the United States (SAMHSA, 2014).

In the TEDS report, results indicated 58.3% of new drug users were women and of that percentage, 2.7% began by using stimulants like MA (SAMHSA, 2010). Over half the women reported drug use as part of the NSDUH. This powerful psychoactive stimulant causes physiological as well as psychological harm as it penetrates throughout the human structure and not only impairs the body's physical functioning but mental acuity as well (Panenka et al., 2013). The increase in stimulant use, especially among women, sheds light into pathways of MA drug use and the pathologies associated with its exploitation.

Specific factors may be associated with MA use and its diversion from conventional pathways. For example, MA's illegal consequences coincide with stress in women, (Torchalla et al., 2015). A great deal of research establishes MA use is associated with depressed mood and stress in women (Darke, Torok, McKetin, Kaye, & Ross, 2011). Researchers who assess the needs of RMW and adolescent offenders consistently showed extensive histories of depression and suicidal ideation (Carbone-Lopez, Owens, & Miller, 2012). Survey findings consist of

predictors of psychological distress (PD) to include feelings of nervousness, hopelessness, restlessness, feelings of sadness or depression, feelings that suppress effort, and a sense of worthlessness (SAMHSA, 2013). These six predictors or attributes of PD are the same factors tested in the K6 used in this study. Stress is a factor that becomes an unwelcomed part of life with a disproportionate amount of it affecting mental health. Despite how MA offers relief and escape from reality, its path of destruction may produce feelings of hopelessness and depression that warrants a remedy by clinical professionals.

Substantial interface of MA use and PD may have been correlated with other illegal drugs. The prediction of PD factors on MA use among RMW has not been well researched and is of critical concern to the public (Semple, Strathdee, Zians, & Patterson, 2012). Previous studies have investigated the relationship between cocaine, heroin, or ecstasy use and of levels of PD among two groups of female drug users: Caucasian and nonCaucasian women. No research was available on RMW as an ethnic group of female MA drug users. Researchers have found evidence of a relationship between patterns of ecstasy use and PD with recurring ecstasy consumers (George, Kinner, Bruno, Degenhardt, & Dunn, 2010) and patterns of PD among regular MA and opioid users (Darke et al., 2011). Other illegal chemical substances have been exploited along with the illicit drug MA that has been linked to distress in women.

Understanding the relationship between PD and MA use among minority women may be useful in learning more about the etiology and triggers of MA use so that more effective treatments can be designed to alleviate MA abuse. One limitation of previous investigations into the relationship between MA use and PD is that no studies were found that examined mental distress of minority women and MA use independently of other drugs. During the literature review, no sources that contained information on the relationship between the six attributes

comprising PD as measured by the K6 among RMW and MA use surfaced. Ideally, the clinical psychologist would be the most salient professional to assist the MA user with possible treatment and prevention. The study is warranted to establish whether PD in RMW is associated with MA use.

The purpose of the quantitative logistic regression study is to determine the relationship between PD and MA use among RMW in the United States and whether PD predicts MA use among this subgroup population, using archival information from the 2013 National Survey of Drug Use and Health (NSDUH). Emerging evidence delineates the importance of symptoms that contribute to PD in RMW and the chronic adversities that increase risks of developing mental health and substance use problems (Green, Bebrak, Robertson, Forthergill, & Ensminger, 2012). Understanding the relationship between PD and MA use among RMW can lead to more effective and efficient therapy and treatment.

The use and abuse of MA continues to be problematic into the 21st century because of the complex nature of drug addiction. The negative effects of MA use in the United States prompted news media coverage. Intimate partner violence received national news coverage that linked an MA female perpetrator to homicidal behavior (Carlyle, Scarduzio, & Slater, 2014). In addition to prevalent conveyance of the press and offender investigations, a substantial link between MA use and violence may involve drug trafficking and pharmacological effects (Brecht & Herbeck, 2013). While MA continues to be a source of life challenging crises for its users, newsworthy coverage continues to linger, and reporters incorporate the stigma of crime and violence that may culminate in physical damage.

Major sections of the literature review reveal information pertinent to the assessment of women and RMW who exploit MA and possible effects acquired from its use. In this chapter, an

exploration and review of the objectives relative to the stress and coping theory as a theoretical foundation to understand more clearly the ramifications involved in MA use among RMW occurs. Research on substance abuse and its vital context initiating the user to MA and the user's dependence on the drug culture is also incorporated into this chapter. The drug culture typically involves physiological injury as well as psychological damage (Halkitis, 2009). An appraisal of the pressures placed upon RMW by society is elaborated to recognize extensive histories of stress and the challenges of suicidal ideation (Bryan et al., 2014). To comprehend more clearly the attributes of PD, attempts are made to review emotional feelings of despair and the stigmatization of traumatic lifestyles. The chapter culminates with an explanation of the six attributes associated with PD that can be used to help alleviate stress.

The literature review is organized into five main categories relevant to issues on the research topic. The chapter consists of the introduction, literature search strategy, and theoretical foundation vital to pertinent publications associated with the research topic. A literature review related to key variables or concepts is also provided. The chapter concludes with a summary and conclusion.

Literature Search Strategy

The literature review involving predictors of MA use and PD among RMW in the United States began with Internet searches at Walden University's library databases. The foundation and understanding of the factors that influence exposure to MA addiction in RMW were examined through books and other sources. A search of the literature was also conducted digitally through the use of Google Scholar/Chrome for referencing specialized topics relative to MA use. Peer-reviewed journals contained information on physiological concepts relative to specific topics such as blood brain barriers, MA, substance abuse in women, stress and PD, and RMW. An

examination of EBSCOhost included multidisciplinary databases such as Academic Search Complete and Premier, ProQuest Central, and Science Direct. An investigation yielded the use of Thoreau to search multiple databases. The quest included PsycARTICLES, Psychology, A SAGE Full-Text Collection, SocINDEX, LGBT Life with Full Text, Nurse, CINAHL and MEDLINE Simultaneous Search. Dissertations on related topics were obtained from the Walden University Library.

The list of key search terms used to exhaust the search for this literature review included MA, women and MA, drug addiction, stress and women, PD and women and MA, and biological MA. Other terms included drug dependence, history of drug abuse and women, cardio and women and MA, chemical structure, physiological and female absorption and distribution of drug use, and MA and women and hopeless. Final terms were women and stress and brain, alcohol and drug abuse, racial minority women and MA, theory of stress and coping and MA, theory of prediction and drug abuse, and feeling nervous and female and MA. Government websites included NSDUH, SAMHSA, NIDA, TEDS along with the Office of National Drug Control Policy.

The scope of the literature review was conducted over a period of 2 years that began with outside sources from a local university in a U.S. southwestern metropolitan city. Professors of behavioral psychology, dissertation research, and statistical instruction at this university freely shared their valued perspectives when scant information was available concerning the dissertation topic on MA use and RMW. The important information led to a search of peer-reviewed articles with topics on MA and its use, perusing academic books on the subject, and ending with additional readings on other drugs of abuse. As a result of this information and research, knowledge of women's ways of handling stress became available. While not all women

deviate to drug pathologies, the study involved women who despite their lower socioeconomic status have experienced MA use with easy access to the neurotoxin.

Theoretical Foundation

The theoretical framework used for this investigation is the theory of stress and coping originally developed by Lazarus (2006). As the pioneer of stress and coping theory, Lazarus wrote a great deal on the dimensions and effects of various coping strategies as they relate to stressful encounters. Lazarus asserted that “coping involves an attempt to solve or overcome a problem and is a noteworthy feature when one experiences stressful events such as depression, psychological symptoms, and somatic health” (p. 122). When situations of anxiety arise, coping strategies increase the likelihood of mitigating resolutions to a problem. If unsuccessful in resolving the stressful event, levels of stress may elevate to the point that an individual may be thrust to an increasing likelihood of substance abuse, inclusive of MA. The stress and coping theory help resolve the perils of stress.

Stress episodes are a natural, internal progression within all individuals, but RMW may experience more pressure and strain within the scope of social communities relative to their White counterparts (Stevens-Watkins, Perry, Pullen, Jewell, & Oser, 2014). Stressful encounters may represent situations involving an individual’s genealogical makeup over which the individual has no control. Findings indicated that “racism and sexism among African American women were a significant source of PD” (Stevens-Watkins et al., 2014, p. 561). Due to negative sources of PD, the African American woman may suffer from feelings of hopelessness or sadness that could extend to other health concerns. The various components of PD help us realize feelings linked to stress. Historically, RMW have struggled through the effects of racial discrimination and the stressors and stigma of being Black women.

Within the stress context are guidelines that fuel beliefs and opinions concerning internalizations of the human condition. Relative to the theoretical framework presented, by developing information on stress and coping Lazarus (2006) shed light on positive methods of coping aimed at reducing or eliminating the reinforcing damage of stress. The stress and coping theory may enlighten researchers on the topic of women to the ramifications of stress-related harm.

As part of the discussion of stress management, several processes were examined relative to the ability to cope. A stressful situation may involve factors that facilitate a way to overcome problematic difficulties. Lazarus (2006) employed two processes that help mediate stressors: cognitive appraisal and coping. Both serve within a vital framework of traumatic environments that mediate human relations with the hope of aligning stable outcomes. The value of the two processes is that both have a connection with the person's environment.

An individual's level of stress could be precipitated by external surroundings. Coping skills are an important factor when alcohol and illegal substances have been introduced to individuals for the first time as a means of alleviating stress. Application of the theory offers guidance on ways to initiate the coping process with a possibility of choosing a healthier outlet to manage the symptomatology of the stressful situation (Boden et al., 2014). Stress and coping theory indicate that an individual could use the fight or flight construct, a similar concept. RMW either prepare to manage or survive feelings of hopelessness, restlessness, or nervousness before embarking on the never-ending trail of MA use or RMW succumb to the challenges and risks of illicit drug use.

The need to handle stress emanates from using thought-related processes. According to Lazarus (2006), the cognitive appraisal system involves a course of action that alerts an

individual of an impending environmental encounter that could affect his or her well-being. If the encounter is imminent, the question becomes, “In what ways?” Lazarus maintained that cognitive assessment would encourage an individual to appraise stressful events so that a reduction associated with the trauma of hopelessness or restlessness can evolve into an advantage rather than becoming a disadvantage in life.

Within the cognitive appraisal process are two other appraisal subcategories that reflect responses to stressful encounters: primary and secondary appraisals. Primary appraisal refers to assessing any personal risk in the situation. The risk could involve compromise or harm to values, health, or self-esteem. The primary appraisal process starts with questions that should be answered to buffer the decision to help alleviate stress. An individual should be able to benefit from making decisions with ease on whether the well-being of a loved one is at risk. An individual’s self-esteem should not be compromised. Questions relative to the primary appraisal process were part of the decision-making process to benefit individuals interested in overcoming stressful encounters.

Secondary appraisal refers to ways of coping with the risks. The ways of coping could involve changing or accepting the situation or finding other means of avoiding harm. Secondary appraisal can be a source of influence for stressors as well. This type of appraisal assesses the likelihood of what can be done to gain benefit for making a decision. Coping options are then evaluated for the best selection of the benefit to individuals.

Both appraisal systems combine to determine whether the person-environment system is considered harmful or beneficial (Lazarus, 2006). Once a stressor has been evaluated, the individual makes a decision to determine if the stressor is significant or if it can influence stressful behavior. Coping options follow these decisions.

To be able to overcome stressful events, certain considerations may help alleviate unhealthy encounters. Coping is one plan that may prove to be worthy of consideration. Lazarus (2006) defined coping as a “person’s constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands appraised as taxing or exceeding the person’s resources” (p. 36). The thought-related process changes in the attempt to manage inner and peripheral controls of the human structure.

The relationship between stress and coping is a vital combination. Lazarus (2006) developed a process to explain the coping construct and maintained that cognitive assessment would facilitate in the evaluation of stressful events. The thought-related practice of coping becomes an integral part in the application of assisting in the relief of stressful encounters. Lazarus (2006) suggested that “when conditions of stress are appraised as changeable, such as falling within the person’s control, problem-focused coping predominates; when conditions are appraised as unchangeable, emotion-focused coping predominates” (p. 121). Both styles involved the emotion process from start to finish (Lazarus, 2006). Lazarus created these various style combinations to assist in the reinforcement challenges of a stressful situation.

Lazarus’ theory has been applied previously to studies on stress and substance abuse in ways similar to the study. In a study performed by Carrico et al. (2013), affect regulation played an important role in development and maintenance of substance use disorders. According to Carrico et al., who conducted a study on stress and coping with 97 MA-using participants, results indicated that positive affect was uniquely connected to an association of cognitive change processes. The participants who previously had experienced periods of abstinence from alcohol and substances completed a “computer-generated survey to assess positive and negative affects” (p. 625). Carrico et al. explained that positive affect strengthens coping efforts associated with

abstinence. Generally, an individual thinks of coping as an invitation to engage in substance or alcohol abuse, but this study delineated a new image of striving for abstinence rather than craving a substance.

In another research project, avoidant coping used by participants may not reflect the intent of the original theory. Kliewer and Zaharakis (2013) used the stress and coping theory in the wake of conflict and violence. Using the theory of stress and coping to ascertain reinforcing effects of exposure to violence. Kliewer and Zaharakis found the RMW participants used avoidant coping as they were interviewed. This type of coping is a deliberate attempt to deny or minimize interaction with a stressor (Kliewer & Zaharakis, 2013). The sample comprised minority female caregivers of low economic status who were to document any altercation as well as incidents of violence along with individuals with problematic alcohol and other drug use.

To continue with research dynamics, women used avoidant coping to deny the possible existence of violence encountered in their lives. Findings validated that most participants used avoidant coping approaches that mediated more stressful situations and exposure to violence and more substance use and abuse (Kliewer & Zaharakis, 2013). According to Kliewer and Zaharakis (2013), the participants used avoidant coping to deny issues of problematic substance use and abuse by simultaneously extricating themselves from the situation. Women who live in violent communities may feel a sense of uselessness or may prefer to deny the existence of these types of situations.

The rationality of the stress and coping theory for the study was to investigate the etiology of MA use and psychological stress found in RMW. As RMW use the theory, cognitive functions become immobilized to help individuals prepare for coping and to cultivate strategies to prevent harm. Without an established manner of coping, an individual may fall victim to the

inherent pitfalls of abusing drugs, namely MA. As RMW embrace positive coping strategies, a useful and contented lifestyle may emerge within the scope of past drug use.

The stress and coping theory were a significant determinant of how an individual may choose to live their life. A portion of stress is inherently a part of the daily existence to which we have become accustomed. Small amounts of discomfort compel individuals to take care of their biopsychophysiological needs. An overabundance of pressure could lay the groundwork for initiation into substance abuse. The stress and coping theory offer an outlet for positive change for the RMW instead of indulging in drugs.

To predict MA use among RMW prompted by the stress of internal and external pressures, the research questions build upon existing theory. Negative stressors may be used to show how a natural progression of internal controls is connected to extensive pressure that could culminate with drug use. Stressors such as feelings of hopelessness, restlessness, or worthlessness could hasten MA use among RMW. With use of the theory of stress and coping, the choice between cognitive appraisal and coping when stressful situations arise, may help to formulate a positive preference. The individual attempts to determine if nervousness or hopelessness may set into motion a form of potential harm. With that in mind, a resurrection of coping strategies may prove to be beneficial as it could alter the stressful event and produce a positive choice.

When individuals determine that stress is imminent, healthy decisions become a vital part of the assessment process, especially for maternal outcomes. According to Kliewer and Zaharakis (2013), maternal substance use has a greater influence on adolescent outcome than paternal use. With that in mind, female caregivers become an important consideration for managing offspring in the family, especially from a prevention standpoint. If the mothers are

RMW, they have even less access to social health care and are less likely to take advantage of care facilities and healthcare programs compared to their White counterparts (Ruglass, 2014). RMW stand a great chance of having more struggles in their lifetime than is typical for majority women.

Literature Review Related to Key Variables and/or Concepts

The literature review includes several concepts along with discussion on the key variables, methodology, and instrumentation. The concepts include drug abuse in the United States, women and hopelessness, methamphetamine use, pharmacological effects of methamphetamine, clandestine laboratories, biological effects of methamphetamine, and absorption and distribution of methamphetamine. The section concludes with information on women and drug abuse and use of methamphetamine, PD attributes, depression, and feelings that suppress effort, and instrumentation.

Drug Abuse in the United States

Drug abuse remains a salient construct and all too often, stress has been one of the main structures affiliated with it. Stress involves a form of anxiety, sleep deprivation, impairment of health, tension, fear, and depression that disturbs everyday life (Milton, 2016). Studies underscore the premise that individuals start to use drugs to cope with stress (Sudraba et al., 2015). Individuals who are disturbed by a stressful event may find difficulty accepting actions associated with the event and could choose to seek other venues as a coping process. When individuals become stressed, they determine if mental resources are available to combat the stressors by using a form of coping. Simplistically, if individuals can manage the stressful event successfully, they tend to resort to a coping strategy such as a problem-focused strategy to attempt a solution to the problem. If, on the other hand, individuals appraise the event as a denial

or succumbs to a momentary distraction, then they may lean toward substance use, which leads to avoidance coping.

Conversely, drug abuse becomes a behavioral health concern. Once a stimulant drug is introduced into the human immune system, the drug itself produces stress on the body's anatomy (Panenka et al., 2013). Based on a study, Panenka et al. (2013) described the physiological and psychological effects of MA use. After the drug is consumed, Panenka et al. asserted the physiological effects of MA occur rapidly. Levels of stress hormones become elevated to the point that following administration of MA, hormones remain elevated for hours making it difficult to maintain normal health (Panenka et al., 2013). Stress is a known agent that invokes strain and tension on an individual's psyche, emphasizing the potentially harmful nature of a specified event.

Surprisingly, studies across the country have shown massive consumption of chemical substances ebbed and flowed throughout the years in the United States. For instance, Caulkins, Kilmer, Reuter, and Midgette (2014) argued that between 2006 and 2010, marijuana consumption increased by 33%, whereas cocaine fell sharply by 50%. While heroin consumption remained stable but subsequently elevated, MA varied with a sharp increase over the first part of the decade and later declined through 2008 only to rise again. Although heroin remained more stable than MA, cocaine demonstrated more variability than marijuana or heroin.

On the negative side, illicit drugs maintained a long history of life in the United States. A substantial calculated approximation such as the high economic cost provided by ONDCP, 2014 illustrated high rates of chemical substances abused by Americans. The cost signified that individuals who manipulated illicit drugs must have succumbed to the ravages of its use, whether physiologically or psychologically.

Drug Abuse, Women, and Hopelessness

Initiation into the drug culture can produce negative behaviors and feelings, while imminent risk factors may possibly be associated with drug use. Whether an individual commits to drug use or becomes more dependent on the drug through repeated dosage, at a particular juncture, the individual may feel a sense of hopelessness concerning the use of substances. Hopelessness is defined as a “state of having increased negative expectancies for the future and is strongly associated with suicidal ideation” (Huen, Ip, Ho, & Yip, 2015, p. 3). According to survey findings, hopelessness is but one element and a predictor of PD in women (SAMHSA, 2013). PD is thought to arise from the other five components to include feelings of restlessness, sadness, or depression; feelings that suppress effort; and a sense of worthlessness (SAMHSA, 2013). Under those circumstances, drug abusive women may suffer more PD than other women and more than what is considered normal. Internalization of prolonged stress could affect decisions deemed unhealthy, especially if a woman decides on drug use.

Another key point is that the prevalence of abuse and hopelessness may be observed in minority women immigrants. Researchers established a connection between abuse and mental health concerns among HIV-infected Haitian women living in the United States (Glemaud et al., 2014). Women infected with HIV, either through sexual contact or substance abuse, may be a cause for distress that could emerge as hopelessness. In a bivariate analysis conducted by Glemaud et al. (2014), the researcher recruited 96 women participants consisting of African American, Haitian, and Hispanic women infected with HIV.

The participants reported a history of abuse and were believed to be more likely to report symptoms of anxiety and PTSD. Of the minority women immigrants, 49% reported symptoms of depression such as feeling down, depressed, and hopeless, with decreased interest and low self-

esteem. Marginalized women from other countries who endure PD may be influenced toward drug use because they may undergo the same risk factors as American-born women who abuse drugs. More to the point, they may have already suffered an inordinate amount of stress from HIV exposure alone. Consequently, cognitive feelings of despair may transition into dimensions of worthlessness and sadness.

Other researchers found a connection between depression and distress disorders such as major depressive disorder, generalized nervous disorder, PTSD, and anxiety sensitivity (Allan et al., 2015). For example, despair relates to the fear of arousal of anxiety and distress tolerance as well as a disproportionate amount of negative mental health conditions and individuals who abuse alcohol and drugs. Using logistic regression to correlate scores on conditions associated with distress disorders, alcohol, and substance use disorders showed stress and anxiety were connected to fear. Illnesses associated with strain and pressure have a common denominator of three factors including stress, depression, and anxiety, which are related to feelings of hopelessness and alcohol or substance use disorders.

With the stress and coping theory, Lazarus (2006) shed light on the construct of hopelessness. Johnson, Wood, Gooding, Taylor, and Tarrier (2011) provided robust reinforcement for PD moderators that affected the attributional style of coping to buffer hopelessness. The attributional style of coping refers to methods an individual uses to explain negative events in terms of external or internal causes. Consideration of external causes would reflect an aspect of optimism useful in buffering the negative effect of risk (Johnson et al., 2011). This style of coping is considered resistant to the stress and strain of how an individual chooses to live their life (Johnson et al., 2011). For this reason, the stress and coping theory may help

buffer detrimental risks such as suicidality and hopelessness and is a welcomed concept that could influence individuals with feelings of dejection.

Methamphetamine use. MA use is a national public concern. Because of its highly addictive nature (Chen et al., 2014) and its immediate distribution into the central nervous system, substance abusers relish in its “rapid onset of euphoria” (Vearrier, Greenberg, Miller, Okaneku, & Haggerty, 2012, p. 38). Subsequently, substance abusive individuals appear to be influenced by subconscious states of pleasure that place them in a dimension of sustained gratification and escaped reality. The constant rushes of intense sensation may quickly cause addiction or dependence if the user is not careful to discontinue use of the neurotoxin.

Kaushal and Matsumoto (2011) commented that individuals consider MA the epitome of drug use and has been ranked second worldwide after Cannabis because of its prolonged and countless users and their possible dependence of the drug. Illicit use of MA produces damaging consequences upon repeated exposure that may cause hyperthermia, addiction, altered neurological and cognitive functions, psychosis, depression, and neurodegeneration (Kaushal & Matsumoto, 2011). The potential enumerated ills of MA represent a scenario of detrimental harm that could have lasting effects for years to come.

The fact that MA’s outcome and an individual’s chronic use of the drug initiate prolonged satisfaction comprising a recipe for continued use that carries with it a possible path of destruction for both the internal and external environments (Halkitis, 2009). In either case, repeated doses of the psychoactive stimulant places pressure on the neurological foundation, cognitive functioning, and physiological state. Given these disruptive symptoms that may inhibit daily functional behavior, the result appears to be modulated by continued use of the potent substance and by psychological and biophysiological environments.

Addiction. Because of MA's highly addictive nature, internal and external body dynamics may be affected. Specifically, in response to stress, the psychoactive stimulant translates to a maladaptive pattern of decision making in everyday life (Stewart et al., 2014). The pattern involves blunted somatic sensory malfunction, decreased alertness to destructive moments, an increased capability of denial as well as an emotional disconnect to venting (Stewart et al., 2014). The unlawful substance continues to exert an unhealthy psychophysiological effect on the human body with sociological and biomedical consequences. Eventually, stress tends to modify behaviors that lead to negative processing and possible lack of cohesion and volatility.

As has been noted, the production of MA is a driving force because anyone can make it anywhere and anytime if proper ingredients are available to produce it. Even those familiar with the risks of making MA continue to produce it because it can be made in any location quickly in any climate (Weisheit, 2008). While making MA, individuals can easily dispose of materials if they believe they might be discovered. The federal law regarding the purchase of pseudoephedrine, a main ingredient of MA, has the potential to address the consumption of the potent stimulant (Manning, Wong, Ransley, & Smith, 2016). Individuals who use MA thrive on the purchase of the product and its use since it is readily available.

Economic pressures affect the use of the psychoactive stimulant as an income-producing agent to earn revenue. Although drug dealing has historically been considered a male activity, women now seek the opportunity to sell drugs (Semple et al., 2013). According to Semple et al. (2013), certain social disadvantages, such as poverty, lack of education, and limited employment opportunities, force many MA-using women to participate in the illicit drug economy. Consequently, when an economic downturn occurs, female drug users simply use whatever

resources are available. Selling drugs become a means of placing food on the table for themselves and their children.

Pharmacological Effects of Methamphetamine

Equally important are the pharmacological categories of MA because of its potent contents. To enhance knowledge of precautionary measures of its exploitation, acquiring awareness of MA drug formulation approved by the U.S. Food and Drug Administration was necessary. For the purpose of clarification of the psychoactive stimulant, the biochemical properties of MA represent an N-methyl derivative referred to as a dimethyl categorized under the phenylethylamine class of stimulant drugs (Gutierrez-Lopez et al., 2010). These classifications represent the legal formulation of the drug MA.

Other researchers explain the formulation of the MA drug. Lloyd, Hausknecht, and Richards (2014) reported similar findings as they differentiated the chemical compound, pharmacologically classifying it as methamphetamine d-N. Consequently, these legal names, under which MA can be affiliated and consumed by the public, continue as classified stimulants and are controlled by the federal government to protect society. Notably, the explanation of the MA pharmacological compound with its chemical properties is an effort to avail the populace of its possible health effects and domination over the community's safety and welfare.

The illicit drug continues to affect various parts of the human anatomy and remains an unhealthy influence. Researchers confirmed the neurotoxin has been linked with multiple physiological and psychological problems relative to the human structure (Paneka et al., 2013). For instance, MA agents affect body dynamics and illustrate the pertinent connections "reflective of drug abuse that cause increases in heart rate, enhanced blood flow or dilation of the pupils" (Schwabe & Dickinson, 2011, p. 53). These drug effects can cause trauma to various parts of the

human anatomy that could result in drug urgency or dependence. Given these points, the abuse of the psychoactive stimulant is destructive and continues to prey upon negative health risks and emotional devastation of the human body.

Clandestine Laboratories

Although reputable pharmaceutical companies legally produce MA, much of its exposure is subjected to illegal scrutiny. The product is manufactured illegally apparently because of government restrictions and controls. According to research performed by Weisheit (2008), clandestine laboratories are designed specifically for illicit purposes. Weisheit noted that these labs can be found anywhere in the United States and have created a sense of urgency for law enforcement to control them and protect innocent citizens. The drug culture communities desiring the psychoactive stimulant must locate individuals who can supply them with the product or must create the product themselves.

Communities all over the country complain that MA laboratories are endangering their neighborhoods and harming the environment (Drug Enforcement Administration [DEA], 2011). Federal regulatory agencies are mandated to provide environmental protection from substances of destruction. For this reason, environmental prevention taskforces have been established to reduce MA production in the hope of reducing MA consequences such as hospitalizations, treatment admissions, and arrests (Cunningham et al., 2011). Solicitation of MA production of laboratories can be a frightening concept because most citizens are unaware of drug production next door. As long as individuals seek out MA, the clandestine facility remains convenient with equipment and materials available for immediate illegal disbursement to clients.

Women and Drug Abuse

Emerging literature within the last two decades aligned the importance of studying women who use or abuse illicit drugs as a major public health concern. A point often overlooked is the sociological and cultural components influential to patterns of drug use in women. Equally important is that social identities of women representative of their culture could endorse valued social behaviors. As an illustration, the Latina gender are expected to be virtuous, chaste, subordinate, self-sacrificing, and spiritual, while the African American women are often expected to embody the “strong-black woman” femininity stereotype and the Asian American women are expected to be hyperfeminine, dutiful, and doll-like. (Brady, Iwamoto, Grivel, Kaya, & Clinton, 2016, p. 84)

The established role of mother, wife, or sister is a virtuous one internalized as nearly sacred. Social disapproval is a strong stigma placed on women and how society views them. Most compelling evidence suggests strong feminine sociocultural norms and expectations exemplify that which is socially and culturally acceptable and could be used as a possible determinant for substance use.

Interrelationships between physiological and psychological issues continued to introduce new dilemmas in drug use. In a study performed by Vecitis (2011), participants included women who used chemical substances to overconform to social norms of body weight. The participants found that both licit (pharmaceutical) and illicit (street) drugs were popular psychoactive stimulants. Vecitis (2011) persisted that the street drugs used were cocaine, MA, and forms of supplementary street amphetamines that are known agents to suppress the appetite. Individuals who selected prescription drugs chose Adderall, Ritalin, Concerta, Dexedrine, Wellbutrin,

Xenical, or Meridia (Vecitis, 2011). The use of drugs for weight loss whether licit or illicit creates a source of stress.

Drug use became a different lifestyle for women who chose to use psychoactive stimulants for weight loss. Women were elated with the idea of consuming these illegal substances whether they were obtained from a certified physician or from an illegal source. The use of illicit drugs is a criminal offense punishable by law for anyone who chooses to indulge. Although weight loss is a real possibility with stimulant use, its use can place undue stress on the body. As a result, stimulant use involving illegal drugs leads to not only physiological stress, but also the need to be secretive about the manner in which weight is lost creates stress.

Women may use drug initiation as a catalyst to cope and numb the pain of obesity. Miedziun and Czabala (2015) elucidated that all activities a person performs in a stressful situation is part of a coping strategy. Coping aims to change the difficult situation or at least change the feeling of stress. Women who strive to lose weight feel some remnants of stress because of the failure to consume favorite foods. The loss of eating favorite foods especially at leisure may even cause depression. In fact, patients with substance abuse history are reported to have a higher prevalence of obesity (Annagur, Orhan, Ozer, Yalcin, & Tamam, 2015). Good eating habits are central to weight loss, and coping may have been the ultimate sacrifice to lose weight through substance abuse.

Biological Effects of Women Using Methamphetamine

Given that psychoactive stimulants entering the human body may render different effects for each gender, in turn, these effects may have a slight edge in predicting MA use in women. An explanation of the multicellular process in women was explored with a focus on women. These physiological effects are processed using four biological changes that transpire from beginning to

end: absorption, distribution, metabolism, and excretion (Mullany, Keller, Nugraha, & Wallman, 2014). Based on the literature review, two biological changes are central to women's absorption of MA and its distribution throughout the female body.

On the whole, administration of chemical substances necessitates drug absorption in the human body. Psychoactive substances are usually self-administered, and the individual determines the particular route, but for the immediate purpose of this study, only oral delivery was discussed. Oral delivery involves a less complicated and more straightforward explanation.

In brief, researchers have strongly argued that bodily functions must adhere to a process aligned with conversion of chemical substances in preparation for elimination. Ermer et al. (2012) found that once MA is orally ingested and combined with liquids in the body, neurotransmitters convert it to d-amphetamine. The MA becomes a lipid (fat) soluble that affects absorption (entry into the blood stream via the GI lining) and bioavailability (percentage of the drug actually absorbed). In order to convert MA into a viable component for absorption to occur, lipids must pass to the blood. Ermer et al. further maintained that absorption occurs primarily in the blood where it crosses the blood brain barrier with ease. MA abuse translates to the drug making contact with the brain in order to perform its job-enhancing euphoria in the body. At the same time, with repeated dosage, MA abuse leads to bodily harm as well.

Investigators demonstrated that the absorption and bioavailability in women differ from that of men. In a study performed by Soldin, Chung, and Mattison (2011), they established that consequential differences include body weight, height, body surface area, total body water, and the amount of extracellular and intracellular water. Further research indicated when drug absorption occurs in women, the maximum concentration for the drug is 87% greater than in men. In those areas where concentration of the drug is less, the effect is at 71% greater than in

men (Eugenin, Greco, Frases, Nosanchuk, & Martinez, 2013; Soldin et al., 2011). A higher percentage of concentrated absorption of a drug such as MA indicates that women start to feel the effects of MA quicker than men and could represent a prolonged effect. A lower clearance of the drug from the body mirrors a slowed drug process, which, in turn, reflects the drug remaining in the system longer. This insight can have far-reaching physiological consequences that could erupt into a need for the drug or cause dependence.

Markedly, multiple researchers associated another development after the absorption and bioavailability breakdown that further embraces additional drug effects. In view of the absorption and bioavailability process, another bodily function must be engaged to move along the ingested neurotoxin in preparation for its second destination. As is the case with the stronger drug amphetamine, once MA is absorbed into the plasma membrane, it moves to vascular tissues and its accompanying fluids where it progresses to endothelial tissues in the brain and where distribution occurs (). As the drug moves along its path, it is distributed throughout the tissues and organs to receive various bodily fluids.

For women and men, the distribution process showed differences as well. The distribution of blood platelets and rigorous amounts of blood flow affects organs and tissues that involve the total body mass (Soldin et al., 2011). The blood distribution affected clearance rates that caused decreased liver blood flow in women resulting in lower drug clearance. This protracted release of MA into the female anatomy could permit an extended euphoric demeanor that may become habitual.

Women and MA Use

Habitual MA use in women warrants attention from those affiliated with them and from the public. Studies have documented that rates of MA use equal to men are now found among

women in the United States (Abdul-Khabir, Hall, Swanson, & Shoptaw, 2014). Since the 21st century, American women are using the neurotoxin with greater frequency than previously as noted in this section. With the potential dangers associated with MA use, state and federal restrictions were enacted to prevent over-the-counter sale of preparations of oral medications with MA ingredients (Vearrier, Greenberg, Miller, Okaneku, & Haggerty, 2012).

In 2006, over-the-counter cold remedies containing pseudoephedrine were restricted under the Combat Methamphetamine Epidemic Act of 2005 to undermine the illegal production of MA (DEA, n.a.). Numerous new MA users totaled 133,000 in 2012 with the average age at first use being 12 to 49 that same year (SAMHSA, 2012). MA use is a serious threat to the American people, and government agencies have become involved to help eradicate the MA drug problem.

To provide more understanding of the severity of the MA problem, healthcare and social science researchers supplied information to the medical healthcare arena to apprise them of the detrimental drug situation. The information was sent to physicians as well as tertiary medical staff to enlighten them on the drug dilemma. To demonstrate how healthcare medical staff members were affected by the seriousness of the MA state of affairs, researchers Bairan, Boeri, and Morian (2012) conducted a study involving nurse practitioners. The investigators employed stringent methods to diagnose use of the psychoactive stimulant in women and to provide accessibility to healthcare needs. Bairam et al. used data from 35 MA-using women to conduct the study and added 30 more women from a previous longitudinal study they conducted from 2009 to 2011. Findings indicated nurse practitioners should be provided necessary equipment to assist in helping to relieve MA use in clients.

Bairan et al. (2012) found evidence that a suburban setting elevates the peril for female MA use. Surprisingly, substantiation of MA exploitation in suburban areas brings a shocking news update regarding women's use of the psychoactive stimulant. In the study, they additionally learned that women were as likely as men to inject MA in the previous 6 months. Among female MA users, 56.3% had injected MA during the same time period compared to 46.9% of the male MA users (Bairan et al., 2012).

Based on the findings, Bairan et al. (2012) noted women who reside in suburban areas have the same problems as women in urban areas. Women who been studied in the past have been identified as living in areas of town that did not include suburbia. Women who use MA challenge all vicinities of a township and may now be established in any location and not limited to an urban setting. Unlawful substance use continues to be pervasive among women residing anywhere in the United States.

Among the women who make the conscious decision to use the illicit drug MA are ethnic minority women who may succumb to the pressures of life. RMW have long suffered numerous struggles throughout the years. In fact, RMW have a long history of experiencing multiple reasons for despair throughout domains of work, education, and physical and mental health (Cokley, McClain, Enciso, & Martinez, 2013). Consequently, RMW have a long history of insecurities in virtually every aspect of life. For example, healthcare and its adverse effects among minority women have long been an issue in the medical field and related services.

For the RMW, trauma is a cumulative occurrence commencing as far back as childhood. In a study conducted by Pritchard, Hensleigh, and Lynch (2012), as many as 46% of U.S. adults reported adverse childhood experiences such as abuse, neglect, or family dysfunction. Such stressful early life events can have lasting negative effects on physical and mental health.

Children who are abused or neglected show increased risk for substance abuse (Pritchard et al., 2012). Early life pressures can be daunting and can have residual effects in adulthood with negative memories etched in the psyche. Childhood traumatic incidents could be a cause for using MA in order to cope as an adult because of tragic memories difficult to disregard.

To comprehend more clearly the possible stress of the RMW drug user, theorists and therapists can turn to the stress and coping theory for insight. In any given stress encounter, an individual must decide how to handle the situation. A person may succumb to the pressure of the stressful event such as childhood trauma or decide on achieving a process to eliminate the threat. In clinical samples, Verona, Murphy, and Javdani (2016) found a stronger link between early trauma and adverse outcomes for women.

Verona et al. focused on violent maltreatment such as physical abuse or sexual abuse that involved coercion or force that violated the person's physical integrity. These types of victimizations are especially associated with posttraumatic stress symptoms (Verona et al., 2016). Confronted with physical victimization, women experience no other choice if escape from physical harm is not possible. Women must decide how to cope with the stress placed upon them. In these types of circumstances, the RMW could initiate and resort to use of illicit drugs such as the MA psychoactive stimulant for coping purposes or they may opt to change to another form of coping to avoid drug use.

Ethnic minority mothers who are former substance abusers may lead a more complex lifestyle that contains additional stress as they nurture their infants. Children, as a natural part of a mother's existence, are an undeniable dynamic. Parenting stress involves feeling pressured while taking care of their infant (Porter et al., 2015). A mother's uneasiness while performing motherly duties could be a source of tension and unresponsiveness as well as frustration toward

the baby. The combined stress of former incarceration and substance abuse could represent amplified pressure placed upon new mothers.

Porter et al. (2015) reported recovering substance abuse mothers could feel self-conscious over a history of incarceration, mandated rehabilitation programs, and vulnerability to recidivism. These stressors could impair the ability of the substance-abusing mother to cope with the strain of parenting. The majority of women of color desire to become an adequate and loving parent even if substance abuse has been a part of their history. Their preference includes having less stress in their lives in order to manage the parenting role successfully.

MA use is intensely correlated with sexual promiscuity across all divisions of the population. Kilminster (2014) emphasized the importance of individuals understanding that one can be thrust into social transformations which that they readily accept. Kilminster elucidated that drug use behaviors increase sexual risks that promote indiscriminate sexual interaction, often with many people. Poor judgment and inhibition can lead people to engage in all types of risky behaviors (NIDA, 2015). Using drugs continues to alter behaviors that can elevate into sexual promiscuity.

Above all, women should exercise caution when choosing to engage in casual sexual behavior. Approximately one in four people living with HIV infection in the United States was a woman, and 84% of new HIV infections in women result from heterosexual contact (CDC, 2015). Women using the MA neurotoxin undergo increased venereal disease and infectious diseases like Hepatitis B and C. Such women can contract both by sharing contaminated drug injection needles and through unsafe sex, and MA use may worsen the progression of HIV/AIDS and its consequences (NIDA, 2015). To reiterate the negative conditions faced by women at

times, women should opt for safe sex and sanitary drug injections to help prevent unnecessary infectious diseases.

Psychological Distress Attributes

Stress is a factor that may become an unwelcomed part of life to which the body adapts to maintain its healthy existence. The brain appraisal system links PD to health-related physiology to evaluate cognitive function, recall, and daily routines of life to determine significance. Brain appraisal systems can generate states of PD relative to threats to physical, social, and personal well-being that exceeds coping ability (Gianaros & Wager, 2015). This action is referred to as *fight or flight* reaction, whereby the individual withdraws from the body's own defenses and chooses another route such as drug use. While complex pathways of the human anatomy involve infinite stressors that work in tandem to help secure the body's substantial functional structure, everyday life dictates a continuum of demand and strain.

Frequently, stress is believed to contribute to a wealth of mental illnesses separate and diverse from normal functioning. PD is thought to arise from brain appraisal processes that assign threat-related meaning to experiences that burden or exceed our coping ability (Gianaros & Wager, 2015). As stress amplifies, events become extremely challenging as individuals must surrender to their ability to judge or appraise the surrounding circumstances.

Of critical concern are the different facets that may create dynamic forces leading to the onset of MA use. To understand more clearly the symptoms that contribute to PD in women, attempts are made to identify several social disadvantages and chronic adversities that increase risks of developing mental health and substance use problems (Green et al., 2012). Since the turn of the century, studies underscore the premise that individuals start to use drugs to cope with stress (Sudraba et al., 2015). Researchers highlighted the phenomenon of PD as an essential

component in recognizing those women who are most likely to use MA (Green et al., 2012). According to survey findings in rural Tennessee, the typical female MA user appeared to have experienced a history of trauma and chaos in childhood (MacMaster, 2013). The participants were primarily single mothers with low levels of educational attainment and nonpermanent residences (MacMaster, 2013). These social actions and conduct appear to produce stress in women that carries with it a possibility of MA drug use.

Various facets could have a bearing on women and stress and its pathway to drug use. To elaborate further on female indicators of using MA, Torchalla et al. (2015) conducted a study in a poverty-concentrated area and found women from these neighborhoods had high rates of pregnancy and poor pregnancy outcomes. These women experienced unemployment and precarious housing situations and had access to a plethora of readily available low-cost illicit drugs including MA (Torchalla et al., 2015). Abusers of MA experience greater odds of living in areas with deficient housing, high unemployment rates, and unwanted pregnancies. What has not been addressed and what the research study attempts to address, is the gap in the research. Despite the plethora of information on MA use, this addiction has not been researched independently with RMW. No study to date has examined the six components that make up PD as measured by the K6 among minority women as a unit and MA use; this study is warranted.

Society often views MA use as negative. This study could positively contribute to social change by helping to raise awareness of the problem of the MA detriment to clinicians and scholar practitioners. Clinical psychologists and health care professionals could then potentially diagnose and interpret symptoms more effectively as distinct from normal functioning. Therapists and medical staff could provide intervention and prevention strategies that may translate more clearly into high-quality mental health care.

Understanding the relationship between PD and MA use among RMW and if PD predicts MA among that population is the central focus for the study. The stress and coping theory of Lazarus (2006) supports an explanation for positive social change and coping strategies for the RMW instead of indulging in drugs. A categorical narrative of stressors regarding women is crucial in aiding women of color.

In fact, numerous RMW participated in a study because they met specific qualifications. Results confirmed that half the sample was African American, age 40 or older (Lutnick et al., 2014). Fifty-one percent reported being homeless, and a significant number suffered from heightened levels of mental dependence on MA. Lutnick et al. (2014) noted that polydrug users reported using crack cocaine within the past 30 days, while women reported childhood rape at 52% and adult rape at 71%. The trauma of childhood rape and adult rape represents an inordinate amount of stress. Drug-abusing women who are victimized may suffer physical and psychological damage for a lifetime, including the stressors associated with this lifestyle.

The dependence on MA could have lasting drawbacks for adult women. Surprisingly in a study, research findings confirmed that it was not sex trade involvement that sparked sexual abuse in women, but rather, the psychological dependence on MA and experiences of rape as an adult, leading these women to develop specific coping strategies whenever they are raped (Lutnick et al., 2014). Becoming dependent on MA translates to being a perpetual and habitual substance abuser. Stress and coping strategies must become integrated as part of a rape victim's lifestyle to survive the ordeal. An individual may attempt different strategies until one stands out as successful. The risk factors and stress associated with MA use may overwhelm women to the point that they may willingly succumb to the dangers of violence.

Psychological distress and drug abuse. The relationship between PD and drug abuse has been well documented (Fothergill, Ensminger, Doherty, Juon, & Green, 2016). According to Fothergill et al. (2016), drug use became more pronounced when childhood adversities affected African American adults. The study's focal point centered on family economics and poor maternal mental health with the results showing an increased likelihood for drug use as an adult. In another study examined by Wu, Grady, Rosales, and Berenson (2011), the association between ecstasy use and stress showed elevations of risky sexual behavior, especially in women. Both studies reflect that stress coincides with substance abuse increasing the likelihood of risky behaviors.

Although consequences of drug use prevail, continued research highlights the importance of recognizing the detriment of its abuse. Studies have shown that further investigations are needed to continue exploring stress and how this factor relates to psychoactive stimulant use, causal relationships relative to low-income women, and risky behaviors (Wu et al., 2011). Drug use in women continues to be the object of awareness.

Despite the research on PD as a predictor of drug use in women, no studies were found on PD as a predictor of MA use in RMW. The lack of research on the choice of MA by RMW as a unit separate from Caucasian women in response to the PD in their lives leaves a gap in the research for others to pursue. To narrow the gap, in this study, the use of MA was isolated from other drugs, legal or illegal, as a preference of RMW as a unit resulting from PD.

Psychological distress and hopelessness. While not all participants in the study had lower socioeconomic status, they all have experienced stress and times of hopelessness. Psychological factors amplified by pressure placed upon the abuser of MA likely dictate stress. Powerful mental and emotional tension is commensurate with motivational causes and concerns

of situations that appear impossible. Researchers have indicated that present-day RMW have suffered far more from socioeconomic stress compared with their non-Hispanic counterparts (Okamoto et al., 2014).

Distressed individuals in all likelihood follow pathways that bring some portion of relief from the daily challenges of mitigating social status and social class. Hopelessness may create an avenue to remind individuals of their impending lack of equal power and their chronic stress situation (Kilminster, 2014). With that in mind, the stress and coping theory indicates that a number of individuals may choose drug initiation as a vehicle to dull the pain of everyday stressors. Regardless of social class or economic status, individuals seek methods to cope with stressful situations, although at times situations may appear to be hopeless.

Psychological distress and nervousness. Equally important as part of a drug abuser's life, are the psychological challenges that trigger the stresses of substance use. Nervousness may be a natural component to daily life and drug use. Dobry, Rice, and Sher (2013) stated that nervousness may influence the use of stimulants such as ecstasy (MDMA). In general, nervousness affects PD, leading to the use of psychoactive stimulants.

Along with everyday life stressors, anxiety may be more prominent for those who abuse chemical substances. Feelings of nervousness dictate a remedy if an individual chooses to continue a chosen lifestyle. A considerable body of literature indicated that various coping strategies influence physical well-being (Li et al., 2016). As an illustration, problem-focused coping is associated with fewer physical symptoms, slower progression of illness, and higher survival rates from cancer. Problem-focused coping strategy endorses social support-seeking (Li et al., 2016) that may be a better fit for those experiencing feelings of nervousness. Society prefers positive health outcomes if drug abuse is problematic.

Depression in racial minority women. Depression is a prevailing disorder that puts a person in an emotional condition distinguished by sadness or cynicism. Such an illness causes disability, diminishes the quality of life, and imposes a considerable burden on society (Agosti, 2013). RMW may have suffered vulnerabilities to the stresses of depression because of their inherent status. Kim, Park, Storr, Tran, and Juon (2015) found that African Americans have higher rates of persistent Major Depressive Disorder (MDD) lasting up to 12 months, which, if left untreated, escalate to insurmountable, disabling conditions in comparison to Caucasians (p. 15). Similar findings indicated that among Asian Americans, depression is higher and more persistent among women (Kim et al., 2015). African and Asian American women may suffer more stressful encounters forcing disorders to surface.

Depression is associated with a level of PD that may be even more stressful in women who have a disability. Houston, Gomes, and Naccarato (2016) conducted a study of individuals who had severe PD and a mental or physical disability. PD was defined as a state of emotional suffering characterized by depression and symptoms of anxiety as an indicator of mental health (p. 735). The study represented a national sample from the 2011 to 2013 Integrated Health Interview of 5,566 individuals to examine the relationship between disability status and unmet mental health care service needs for people with PD in the United States.

Ethnicities consisted of White-nonHispanic, African Americans, American Indian/Alaskan Native, Asian, and multi-race individuals. A logistic regression analysis was used to show unmet needs and the K6 Screening Instrument was used for general psychological distress. Fifty-nine percent of the women had a disability, 64% of participants suffered from PD, and 80% reported not seeing a mental healthcare provider within the last 12 months (Houston et

al., 2016). The investigators established further evidence that PD is a prevalent illness that needs to be addressed most urgently.

Depression and feelings that suppress effort. To realize that stress tends to dictate behaviors commensurate with illicit substances is important. Pressure or tension on the human structure consist of levels of stress that embodies but is not limited to anxiety, physical trauma, depression, and infection (Ganzel et al., 2013). Depression and feelings that suppress effort tend to generate a dimension of sadness or loss of interest. Schepis (2014) completed a study that involved the psychoactive stimulant Zolpidem, a Schedule IV Controlled Substance. The researcher used the NSDUH 2009-2011 survey of 174,667 participants with 51% being female Caucasian and 49% of various racial/ethnic backgrounds to investigate substance use and associated behaviors such as depression. The examiner also used the K6 for nonspecific PD relative to the worst month in the past year and conducted a test for logistic regression. Results yielded female scores higher than male scores for nonmedical use of Zolpidem and a high mental health score for adolescents ages 12-17. Mental health issues and feelings of sadness continue to warrant attention in combination with drug use, particularly with women.

Substance use behaviors initiated from stress may elevate to other psychological conditions and addictive consequences. Hwang and Yun (2015) showed that distress and depression drives not only substance use but also smoking behaviors that are subjected to addiction. The researchers reiterated that dimensions of stress elevate upon initiation of various emotional and physical conditions that could result in harmful or perilous distress (p. 2190). Hwang and Yun used the NSDUH of 70,109 participants to prove the hypothesis that smoking can be addictive. They used the K6 to measure PD such as feeling nervous, hopeless, restless or fidgety, sad or depressed, and worthless, and that everything was an effort, and used a 5-point

scale for frequency (1 = *none of the time*, 5 = *all the time*). The Hwang and Yun research is similar to the study in its use of the K6 and the 5-point scale for frequency.

To continue with the analyses of the study, the research design and findings show PD may be a persuasive factor in the initiation of substance use. Hwang and Yun (2015) further used logistic regression with Caucasian and racial ethnic genders. The final analysis confirmed that cigarette consumption in males represent habitual cigarette use, while smoking consumption in women represent an appeal to smoke. The study demonstrated that stress positively insights urges to smoke (Hwang & Yun, 2015). Based upon the investigations of Hwang and Yun, researchers noted that PD can lead to substance use behavior and smoking initiation. Stress, anxiety, and depression are strong emotions that continually engender modifications in an individual's existence, if he or she succumbs to MA dependence. While researchers have explored the connection between PD and dependence on different drugs of abuse (e.g., Porter et al., 2015; Pritchard et al., 2012; Vecitis, 2011; & Verona et al., 2016), the study narrowed the remaining gap. In this research, the intent is to answer specifically the following research question: Is there an association between PD and MA use among RMW based upon six attributes found in the K6? Additional research questions emanate from this first research question.

Instrumentation

The study conducted by Cokely et al. (2013) is similar to the current study in its methodology. Cokely et al. used similar variables on the Likert-type scale ranging from 0 (*does not apply*) to 5 (*extremely stressful*). He then attached six variables to determine minority status stressors. The six variables were environmental stressors, achievement stressors, race-related stressors, interpersonal stressors with Whites, intrapersonal stressors, and intrapersonal stressors among ethnic minority groups.

The instrument used in the research involve a standard scale by Kessler with six levels (a) *feeling nervous or anxious*, (b) *feeling hopeless*, (c) *feeling restless*, (d) *feeling so sad or depressed that nothing could cheer you up*, (e) *feeling that everything is an effort*, and (f) *feeling down on yourself, feeling no good, or feeling worthless*. These six attributes are included in the PD attributes that may affect minority women who use MA (SAMHSA, 2013). The similarity of the study indicates other researchers used this type of instrumentation to determine if PD is significant in a subgroup population.

Summary and Conclusions

Women deal with PD much more when drugs are a constant threat to individuals in their environment. Over time, various drugs of abuse have consistently emerged on the illicit drug market and have ebbed and flowed throughout history. To counteract negative effects of drug and MA use, the stress and coping theory enlightens and mediates an examination of the deleterious effects of MA abuse and PD placed upon RMW. The theory also includes a means to cope when situations of nervousness arise as well as to foster strategies for avoiding its harm. Government organizations consistently inform the populace of the possibly dangerous health effects of MA and its domination over the community's safety and welfare.

Women use psychoactive stimulants with such frequency that the practice is noted in detailed studies. Ethnic minority mothers who are former substance abusers may lead a more complex lifestyle that contains additional stress as they nurture their infants. Pressure or tension on the human structure involves a level of stress that embodies but is not limited to anxiety, physical trauma, and depression. Understanding the relationship between PD and MA use among RMW may be useful in learning more about the etiology and triggers of MA so more effective treatments can be designed. What is not known is whether PD of RMW predicts MA use. Further

investigations reflect the need to continue the study of psychoactive stimulant use and its associations relative to PD and how it relates to women.

The literature review revealed how RMW who exploit MA were assessed for this study's research, and possible effects acquired from MA use. In this chapter, an exploration and review of the objectives relative to the stress and coping theory as a theoretical foundation was conducted to understand more clearly the ramifications involved in MA use among RMW occurs. Research on substance abuse and its vital context initiating the user to MA and the user's dependence on the drug culture was also incorporated into this chapter. To do this, the literature review was organized into five main categories: the introduction, the literature search strategy, the theoretical foundation vital to pertinent publications associated with RMW and MA, and the actual topics of study. Some of the topics covered in the literature review included Drug Abuse in the United States, Drug Abuse, Women, and Hopelessness, MA Use, Pharmacological Effects of MA Use, and Clandestine Laboratories.

Chapter 3 includes the purpose, research design and rationale, methodology, population, sampling, and sampling procedures. The processes of data collection and data analyses are delineated. The chapter concludes with concerns of privacy and confidentiality.

Chapter 3: Research Method

The purpose of the quantitative logistic regression study was to determine the relationship between psychological distress (PD) and methamphetamine (MA) use among racial minority women (RMW) in the United States and whether PD predicts MA use among this subgroup population. This study was conducted using a correlational measure for archival information from the 2013 National Survey of Drug Use and Health (NSDUH). To achieve this goal, the 2013 NSDUH data were used to obtain archival information from the survey of RMW participants who used MA. The RMW in the NSDUH represent a sample of women who reside in the United States who have used MA.

Chapter 3 includes the research design and rationale along with the methodology, the background, and foundation for the statistical organization of the dissertation and study. The research design consisted of independent and dependent variables and their connection to the research questions. The design choice needed to advance knowledge in the discipline was also discussed. Following is the methodology defining the target population, sampling, and procedures for gaining access to the data set. Operation of variables PD and MA were discussed. The data analysis involved explanation of cleaning and screening procedures, research questions and hypotheses, along with the statistical test used to test the hypotheses. The interpretation of results followed. Procedures to strengthen validity and ensure ethical standards, a means of providing confidentiality of data and maintenance of data will be discussed. Chapter 3 will conclude with a summary and a transition to Chapter 4.

Research Design and Rationale

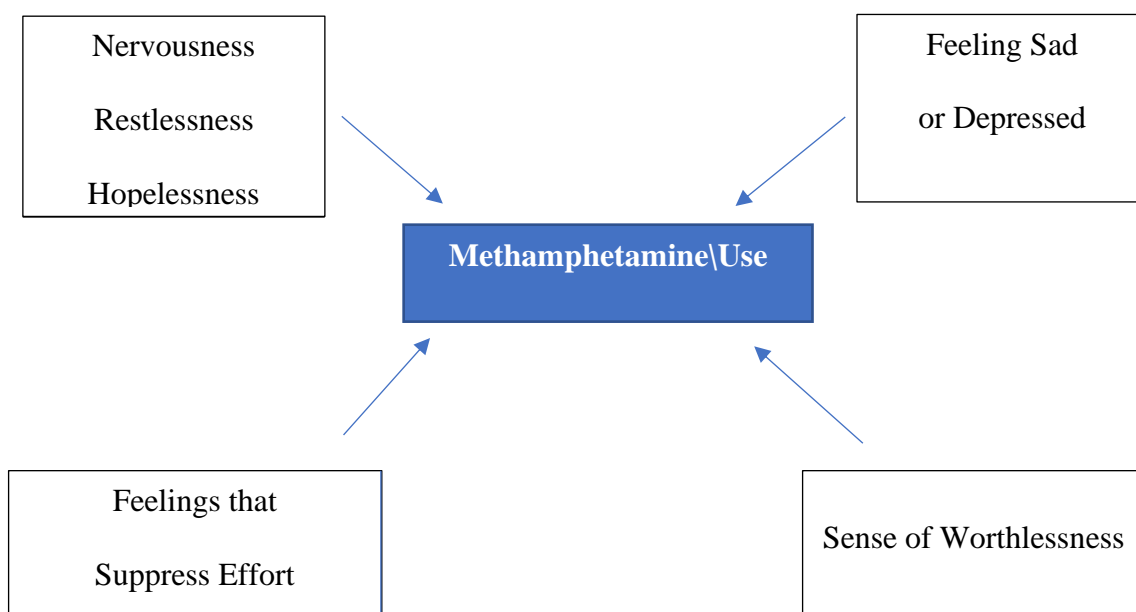
The study variables incorporate the independent and dependent variables, with no covariate or mediating or moderating variables pertinent to the study. The data set yielded scores

from the Kessler 6 Psychological Distress Scale, also referred to as the Kessler 6 Screening Instrument (K6), of all the attributes including feelings of nervousness, hopelessness, restlessness, feelings of sadness or depression, feelings that suppress effort, and a sense of worthlessness, which comprise the predictor variable of PD. These six attributes served to have some predictive power with regard to the criterion variable of MA use among U.S. women who are members of racial minorities.

Consequently, to address the relationship between the predictor and criterion variables, this empirical research study involved the use of a standard logistic regression design (see Figure 1). This type of statistical design yielded probability values that estimate how well the predictor variable would distinguish between two categories: RMW succumbing to MA and those not succumbing to MA.

Figure 1

Logistic Regression Design



The logistic regression design as a correlation framework has three advantages: first, the identification of variables highly relates for determining statistical and theoretical connections such as Lazarus' theory of stress and coping (Warner, 2008). The other two advantages included standardized and unstandardized variables and their relationships as well as goodness-of-fit indices to indicate how well the empirical data are consistent with the hypothesized model (Warner, 2008). Thus, the regression design's suitability is the most proficient and well-organized prototype to examine whether selected PD attributes predict MA use among RMW. The logistic regression statistical design connects to the research questions because the predictor and criterion variables may show a relationship to the RMW subgroup population based upon the six attributes in the K6. No lack of time or resource constraints existed with this design choice.

The logistic regression research design is consistent with research designs to advance knowledge in the clinical psychology discipline. This design approach used data taken from the NSDUH that features participants who retrospectively reported MA use as well as stress and PD experienced. The NSDUH provided a short scale of the K6 to participants that measured PD and functional impairment (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013).

The K6 accurately determined whether a participant had mental health conditions. The logistic regression statistical model can be used to predict if PD is a major factor for the initiation of drug use. Resultant information can be used by the clinical psychologist to mediate prevention strategies for individuals who use MA. The scholar practitioner can tailor training and instruction specific for the RMW, who are the main focal subgroup population of this study.

Methodology

In this study, the target population represented civilians and noninstitutionalized individuals aged 12 or older with an inclusion rate of 98% of the total U.S. population (SAMHSA, 2013). The sample population was separated into specific categorical numbers in order to proceed with the methodological process. As a result, the sampling frame for this study included the list of 105 RMW who fit the criteria and were surveyed by NSDUH in 2013.

Population

The target population represented a large segment of the U.S. general public with a specified number of exclusions. Although a high inclusion rate was present in the study, exclusions existed. Individuals who were part of the exclusions included active military personnel; persons living in institutional group quarters, for example, prisons; and homeless persons who do not reside in a shelter.

Some communities in the states may be considered more like a metropolitan area than small towns. The target population for this study included approximately 595,000 individuals from all 50 states who used illicit drugs during 2013 and were part of the NSDUH data set. Of the participants, 3,729 resided in California, Florida, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas. The remaining target population came from the other 43 states.

To separate data as a statistical system, the SPSS software, which is a powerful statistical program (George & Mallery, 2016), was used to conduct the statistical analyses. The logistic regression yielded the statistical analyses to show an influence of two or more variables (in this case, attributes) by using a designated criterion variable (George & Mallery, 2016). In this study, 28,949 women generated from the target population used drugs and participated in the 2013 NSDUH. Of the female drug users, 5,071 were Hispanic, 3,617 were Black, 17,458 were White,

while 5,520 identified as Other. The total population of RMW consisted of 8,688. Of these RMW, 105 were MA users who were the focal point of the investigation.

Sampling and Sampling Procedures

In this study, to respond to the research questions, criteria were established for the sample: the participant was (a) be a racial minority female and (b) reside in the United States. To qualify, the participant also (c) admitted MA use, (d) have experienced some type of PD, and (e) have participated in the 2013 NSDUH. Because the study involved the use of archival data, the sample consisted of all data from the data set that complied with the sample requirements. As a result, in this study, no consent forms were required.

Procedures for Recruitment, Participation, and Data Collection of Main Study

The archival NSDUH data supplied information for the study as well as the data collection used for the survey. The survey researchers adapted actions that integrated an increase in cooperation of the participants' willingness to report honestly concerning the behaviors relative to unlawful drug use and functional impairment issues (SAMHSA, 2013). Letters of explanation were sent to various addresses, and then monitored by a field individual (FI) and finally followed up with a visit. The FI needed to speak with an adult resident who could serve as the screening participant. The demographic data were entered into the computer to furnish necessary statistical analyses of sample sizes needed for the empirical study.

As part of the NSDUH, the K6 was administered to all women who initiated MA use. In this study, the researcher included only the minority women who used MA to be able subsequently to use logistic regression to determine if PD predicted MA use. All other individuals would have no effect on the investigation.

Using Archival Data and Data Collection

During the fall semester of 2016, the U.S. Department of Health and Human Services gave permission to analyze statistical and mathematical data from the 2013 NSDUH. After completing all the necessary documentation, identification of those variables needed for the investigation were secured. The U.S. Department of Health and Human Services mailed a copy of the computerized disk representing the data set from the 2013 NSDUH. Once the data were received, the researcher downloaded the data to a file. A portion of the data was recorded to fit the purpose of the present study. The codes were then entered into a computer data program for analysis purposes.

Instrumentation and Operationalization of Constructs

One of the most efficient methods of analyzing PD was through a screening instrument involving stressors specific to psychological factors. One vehicle used to analyze stress is called the K6 (SAMHSA, 2013), developed by Kessler and Mroczek (Department of Health, n.d.). They first produced documentation for the test in 1994 for the Institute of Social Research at the University of Michigan (Department of Health, n.d.). The study by NSDUH involved the K6 in order to evaluate the levels of each attribute in the women included in the study. To assess the stressors that affect women, K6 was supplied by the NSDUH that categorizes despair and its connection to mental health.

The Kessler 10 (K10) was the first scale created followed by the K6, which represents six questions embedded within the K10 (Kessler, et al., 2002). From the initial questions located on the K10, Kessler found six questions he believed to be significantly affiliated with PD, thus creating the K6. Both the K10 and the K6 have been used extensively in population health surveys, mental health surveys, and in relation to the DSM-V to detect nervousness and mood

disorders (Sunderland et al., 2012). The psychometric properties of the Kessler represent an appropriate instrument for analyzing various levels of PD.

The K6 screening instrument contains reliability and validity properties. Because of its reliability and its determinants of mental distress, the K6 was used to verify psychological conditions relevant to RMW and their use of MA. Mitchell and Beals (2011) discovered a .86 prediction rate of psychological disorders equivalent to mental illnesses found in the DSM-V. The K6 features predictability of psychological symptoms used in epidemiological populations, such as that used in the NSDUH. The utility of the K6 has been shown to have an effective screening measure of PD severity as well (Mitchell & Beals, 2011). In another study, the K10 had a Cronbach's alpha of .84 and a predictive power of indicating the presence of affective disorders (Hides et al., 2007). The K6 is a scale commensurate with detection of mental health conditions that may help enlighten individuals who suffer with hopelessness and despair.

The K6 has been used in previous studies as illustrated by Houston, Gomes, and Naccarato (2016). Researchers Houston et al. (2016) conducted a study in which they used the K6 to determine PD. The researchers found 59% of the women had a disability and, of that percentage, 64% of them suffered from PD, indicating that PD is prevalent among minority women. The study is reflective of the planned exploration in that it used minority women, an epidemiological population study, and the K6 instrument to determine PD. The scale is a self-report test that measures PD experienced in the previous 30 days (Sunderland et al., 2012). Permission is not required for the use of the K6 in this study because the advisor of the NSDUH selected the K6 to screen women for the research, not the researcher.

The test was designed for individuals to furnish answers to structured questions. The NSDUH used the K6 for its ability to determine facets of mental illnesses associated with

feelings of despair. This instrument was used to help define PD attributes to include feelings of nervousness, restlessness, or hopelessness; feelings of sadness or depression; feelings that suppress effort; and feelings of worthlessness (SAMHSA, 2013).

Recent studies supported the premises that individuals start to use drugs to cope with stress (Sudraba et al., 2015) and that PD is an essential component in recognizing those women who were most likely to use MA. Researchers also posited that RMW may develop mental health as well as substance use problems (Green et al., 2012). The central theme of the study represented MA use among RMW and whether stress might initiate MA use in RMW within the United States.

Operationalization of Variables

The criterion variable used for this investigation was MA drug use. This variable was measured by the items *Have you ever, even once, used methamphetamine?* and *Have you ever, even once, used a needle to inject methamphetamine?* Responses for both items were *Yes* and *No*. For analytical purposes, *Yes* was coded 1 and *No* was coded 2.

The predictor variable of PD consisted of six attributes measured by the K6 in the NSDUH. Items asking the participants if they have feelings of nervousness, restlessness, hopelessness; feelings of sadness or depression; feelings that suppress effort; and feelings of worthlessness were used to measure PD. A dichotomous measure of whether RMW had scores for each of the six PD attributes of less than 13 or 13 and higher indicated the form of PD.

Data Analysis Plan

The Statistical Package for the Social Sciences (SPSS) yielded the statistical analyses of the data. This specialized software is used especially for analyzing mathematical and statistical concepts connected to the social sciences, natural sciences, and the business world (George &

Mallery, 2016). The archival data were coded and then entered into SPSS for specific applications to test the data. With computer-assisted procedures, numeric codes were assigned to variables, thus strengthening the reliability.

Before the appropriate statistical tests for this study were conducted, the data were screened for missing data. The variables within the NSDUH's data file were cleaned and re-coded to fit the regression model. Linear regression was then run to check for collinearity diagnostics, and the Mahalanobis Chi Square test was run to test for multivariate outliers. Once the data were screened, the logistic regression procedure was conducted. This statistical procedure was employed to examine the relationship and predictability of a criterion variable relative to two or more dichotomous predictor variables. The logistic regression technique produced probability values ranging from 0 to 1, which specified particular outcomes for each participant involved in the study (Anderson et al., 2003).

Research Questions and Hypotheses

In the study, the objective is to answer five research questions and test five related hypotheses as part of the research investigation. The research questions with the associated hypotheses follow:

RQ1: Is there an association between PD and MA use among RMW based upon six factors found in the K6?

H₀1: There is no association between PD and MA use by RMW based upon the K6.

H₁1: There is an association between PD and MA use by RMW based upon the K6.

RQ2: Do feelings of nervousness, restlessness, or hopelessness correlate with MA use by U.S. racial minority women?

H₀2: Feelings of nervousness, restlessness, or hopelessness do not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁2: Feelings of nervousness, restlessness, or hopelessness correlate with MA abuse by U.S. racial minority women as measured by the K6.

RQ 3: Does feeling so sad or depressed that nothing could cheer up a person correlate with MA abuse by U.S. racial minority women?

H₀3: Feeling so sad or depressed that nothing could cheer up a person does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁3: Feeling so sad or depressed that nothing could cheer up a person correlates with MA abuse by U.S. racial minority women as measured by the K6.

RQ 4: Does feeling that everything was an effort correlate with MA abuse by U.S. racial minority women?

H₀4: Feeling that everything was an effort does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁4: Feeling that everything was an effort correlates with MA abuse by U.S. racial minority women as measured by the K6.

RQ 5: Does feeling down on oneself, feeling no good, or feeling worthless correlate with MA abuse by U.S. racial minority women?

H₀5: Feeling down on oneself, feeling no good, or feeling worthless does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁5: Feeling down on oneself, feeling no good, or feeling worthless correlates with MA abuse by U.S. racial minority women as measured by the K6.

Logistic regression analysis would produce a regression equation to accurately predict the probability of whether an individual would fall into one category or the other. The following was the logistic regression model used in this investigation: $L_i = B_0 + B_1X_1 + \dots + B_kX_k$ where B_0 was the regression constant and $x_1 \dots x_k$ were the several attributes of the predictor variables of PD. The parameters generated from logistic regression would separate into three components.

The first component was the statistics for overall model fit. This included the -2 Log Likelihood, Cox and Snell *R* Square, Nagelkerke *R* Square, and the Chi Square Test (see Tables 3, 6, 8, and 10). The second component was the classification table. This table applied the generated regression model to predicting group membership. The third component is the summary of model variables. This entailed the regression constant, unstandardized regression coefficient, the Wald test, and odd ratios. The Wald test is a measure of significance for the regression coefficient and represents the significance of each variable in its ability to contribute to the model (Anderson et al., 2003). The results were interpreted using all of the above components. and hypotheses were tested at the .05 confidence level of significance.

Threats to Validity

Research strategies were available for improving the credibility of regression research, although none of them can adequately compensate for the inherent weakness of such investigation, namely, lack of a true cause and effect relationship. To strengthen this type of research, the variables selected should be based on a theory, on previous research, or on the researcher's observation. The threat of multicollinearity, straight lines, were tested using the tolerance statistics as well as the variance inflation factor. As a result, any threats to validity were eliminated.

Ethical Procedures

Following institutional permission from the IRB, the data for this study were gathered from the National Survey on Drug Use and Health stored in the databank of the U.S. Department of Health and Human Services. A signed consent letter from the U.S. Department of Health and Human Services to use the data was unnecessary because all data issued in the NSDUH is free to the public. As with any archival study, an informed consent letter for each participant listed in the database was not necessary. All participants' identities were removed from the database by the U.S. Department of Health and Human Services. Confidentiality and anonymity were not issues of concern. No risks were attributed to the participants because the study involved only archival data. In any publication of this study, all data would be presented in aggregate.

Confidentiality of Data

The archival data from the 2013 NSDUH represents all data and associated materials completed by the researcher. The data and all associated material were securely maintained on a computer disk and managed by the researcher. The computer disk shall be preserved in a locked drawer and housed within a homestead equipped with an office. After a three-year period and after the culmination of the planned study, all information relative to the research were extricated and demolished by the researcher.

Summary

The purpose of the proposed quantitative logistic regression study was to determine the relationship between PD and MA use among RMW in the United States and whether PD predicted MA use among this population, using archival information from the 2013 NSDUH. The predictor variable of PD incorporated six attributes, feelings of anxiety, hopelessness, restlessness, feelings of sadness or depression, feelings that suppress effort, and a sense of

worthlessness. These six attributes were assumed to have some predictive power with regard to the criterion variable of MA use among women who were members of minority groups in the U.S. To address the relationship between the two variables, a standard logistic regression design was used. The NSDUH issued a short scale of the K6 to respondents that had been tested for PD.

Of the population of RMW who used drugs in 2013, 105 were MA users. Specified criteria was used to collect the sample. The Statistical Package for the Social Sciences (SPSS) was the statistical analyses used for the intended research. The archival data generated from the 2013 NSDUH was coded by the researcher.

Before the logistic regression was conducted, test of assumptions was run. The variables within the NSDUH's data file were cleaned and re-coded to fit the regression model. A regression equation accurately predicted the probability of whether an individual fell into one category or the other. The results were interpreted using the above components and the hypotheses tested at the .05 confidence level of significance.

The NSDUH is a public use survey; therefore, permission is not required. Informed consent will not be necessary as the NSDUH collected the specified information. Concerns of privacy and confidentiality were discussed.

Chapter 4 included the introduction, data collection, and results. After the explanation of results, the chapter culminated with a summary. The final segment concluded with confidence intervals and effect sizes, as appropriate.

Chapter 4: Results

The purpose of the quantitative logistic regression study was to determine the relevancy between each of the attributes comprising psychological distress, a composite of six attributes as measured by the K6 instrument, and MA use among racial minority women across the United States. This information was obtained using archival information from the 2013 NSDUH. The K6 was a self-report catalyst with six items intended to extract mental disorders such as depression and anxiety. This testing apparatus was used to help define PD attributes to include feelings of hopelessness, worthlessness, nervousness, restlessness, and feeling sad or depressed (SAMHSA, 2013). Recent studies illuminated the premise that individuals start to use drugs to cope with stress (Sudraba et al., 2015). Feelings of PD may take the form of any specific mental illness with any of the six attributes permeating the internal environment.

Research Questions and Hypotheses

In the investigative study, the objective was to answer five research questions and test five related hypotheses as part of the research investigation. The research questions with the associated hypotheses follow:

RQ1: Is there an association between PD and MA use among RMW based upon six factors found in the K6?

H₀1: There is no association between PD and MA use by RMW based upon the K6.

H₁1: There is an association between PD and MA use by RMW based upon the K6.

RQ2: Do feelings of nervousness, restlessness, or hopelessness correlate with MA use by U.S. racial minority women?

H₀2: Feelings of nervousness, restlessness, or hopelessness do not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁₂: Feelings of nervousness, restlessness, or hopelessness correlate with MA abuse by U.S. racial minority women as measured by the K6.

RQ 3: Does feeling so sad or depressed that nothing could cheer up a person correlate with MA abuse by U.S. racial minority women?

H₀₃: Feeling so sad or depressed that nothing could cheer up a person does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁₃: Feeling so sad or depressed that nothing could cheer up a person correlates with MA abuse by U.S. racial minority women as measured by the K6.

RQ 4: Does feeling that everything was an effort correlate with MA abuse by U.S. racial minority women?

H₀₄: Feeling that everything was an effort does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁₄: Feeling that everything was an effort correlates with MA abuse by U.S. racial minority women as measured by the K6.

RQ 5: Does feeling down on oneself, feeling no good, or feeling worthless correlate with MA abuse by U.S. racial minority women?

H₀₅: Feeling down on oneself, feeling no good, or feeling worthless does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

H₁₅: Feeling down on oneself, feeling no good, or feeling worthless correlates with MA abuse by U.S. racial minority women as measured by the K6.

Logistic regression analysis produced a regression equation that accurately predicted the probability of whether an individual would fall into one category or the other. The following is the logistic regression model used in this investigation: $L_i = B_0 + B_1X_1 + \dots + B_kX_k$ where B_0 is

the regression constant and $x_1 \dots x_k$ are the several attributes of the predictor variable PD. The parameters generated from logistic regression was divided into three components. The first component was the statistics for overall model fit. This includes the -2 Log Likelihood, Cox and Snell R Square, Nagelkerke R Square and the Chi Square Test. The second component was the classification table. This table applied the generated regression model to predicting group membership. The third component was the summary of model variables. This entailed the regression constant, unstandardized regression coefficient, the Wald test, and odd ratios. The Wald test was a measure of significance for the regression coefficient and represented the significance of each variable in its ability to contribute to the model (Anderson et al., 2003). The results were interpreted using the above components and hypotheses tested at the .05 confidence level of significance.

Chapter 4 included the introduction, data collection, results, and summary for the research investigation. The introduction consisted of purpose of the quantitative logistic regression study, a presentation of the research questions and hypotheses, and logistic analyses and components. Data collection comprised the timeframe, discrepancies, and descriptive statistics for demographic characteristics of the sample, and how representative the sample was of the population of interest. The results include descriptive statistics that characterize the sample, statistical assumptions, statistical analysis findings relative to hypotheses, exact statistics and probability values, confidence intervals, effect sizes, and included tables and figures to illustrate results as appropriate, and per the current edition of the *Publication Manual of the American Psychological Association*. The summary included answers to findings of the data analysis to support the null hypotheses using archival data, and findings to determine which of the six PD attributes had an effect on the MA use or abuse among RMW.

The timeframe for the data collection as well as actual recruitment was for a period of one year, 2013 with a release date of November 18, 2014. The NSDUH used strategies to ensure high rates of participation that resulted in a weighted screening response rate of 83.93% and a weighted interview response rate for the CAI of 71.69% (SAMHSA, 2013).

Discrepancies in data collection from the plan presented in Chapter 3 were not discovered or uncovered. The research design, methodology, and threats to validity were not compromised during this study. Archival data were collected and analyzed with no presentation of obstacles.

Demographic characteristics of the participants were RMW, exclusive of Caucasian women. Data for the present investigation were collected from the NSDUH (2013) developed by U.S. Department of Health and Human Services. A total of 8,688 RMW (Black and Hispanic Americans) were identified in the NSDUH Study. It is interesting to note that other racial minority women in the NSDUH data were grouped with their male counterparts and could not be identified individually for analysis purposes.

For the present study, all 8,688 RMW participated in the study. The RMW for this study were described descriptively by their race and age when first used MA. Regarding the variable race, there were 3,617 or 41.6% of the women who identified their racial identity as Black American. By contrast, there were 5,071 or 58.4% of the minority women who identified their racial identity as Hispanic American. See Table 1 for these analyses.

Table 1*Frequency Distribution of the Participants by Race*

Variable: Race	Number	%
Black	3617	41.60
Hispanic	5071	58.40
Total	8688	100.0

Study Results

According to the variable age when the RMW first used MA, 51 or 0.6% of them reported they were 18 years of age or less when they first used MA. Twenty-three or 0.3% of the RMW indicated they were between the ages of 19-25 and 25 years of age when they first used MA. On the other hand, 13 or 0.1% of the RMW revealed they were 26 years old or above when they first used MA. Finally, 8,601 or 98.9% of the RMW expressed that they did not know, refused to answer, or left item blank when responded to the age statement. See Table 2 for these results.

Table 2*Frequency Distribution of Participants by Age when First Using Methamphetamines*

Variable: Age	Number	%
18 or Less	51	0.60
19 to 25	23	0.30
26 and Up	13	0.10
Did not know/Refused to Answer/Leave Blank	8601	98.90
Total	8688	100.00

Assumptions

Three major assumptions were associated with logistic regression. They are as follows:

1. Ratio of case to variables. An examination of Ratio of case to variables were conducted using cross tabulations tables. Based on the crosstabs results, there were more than five expected frequencies per category for each discrete variable in the study.
2. Multicollinearity. An investigation of the multicollinearity assumption was done utilizing the tolerance statistics. Based on the tolerance statistics, each predictor variable has a tolerance value above .10 indicating low intercorrelations among the predictors.
3. Outliers. An assessment of outliers was conducted by employing standardized residual plots. Based on the residual plots, no cases in the data had values greater than three.

Examination of Hypotheses

Five null hypotheses were tested in this investigation.

H₀₁: There is no association between PD attributes and MA use by RMW based upon the K6.

A binary logistic regression procedure was calculated to examine the association between the six PD attributes and MA use among RMW. Regression results indicated the overall model fit of six predictors were questionable ($-2 \log \text{Likelihood} = 2647.386$), but was statistically reliable in distinguishing between RMW who used MA and those who did not use MA ($X^2(6) = 21.360, P < .01$) (see Table 3).

Table 3*Overall Model Fit Results Regarding the Association Between PD Attributes and MA Use*

Model	Chi Square	<i>df</i>	<i>P</i>
Final	21.360	6	.002

Note. -2 loglikelihood=2647.386; Nagelkerke *R* Square =.009.

** Significant at the .01 level.

The prediction of MA use was accurate in terms of correctly classifying those RMW who would not use MA (100%), but not so in terms of those RMW who would use MA (0.0%) for an overall classification of MA use of 96.4% (see Table 4).

Table 4*Classification Table Results Regarding MA Abuse*

MA Abuse	Yes	No	% Correct
Yes	0	309*	
No	0	8379	100.00

Note. *Overall Correct = 96.4

The Wald Statistics was used to measure the contribution of each individual predictor on the MA use among RMW. The Wald test revealed that the variable feeling down on oneself, feeling no good, or feeling worthless ($Z = 4.791, P < .05$) was a significant independent predictor of MA use among RMW. Based on the odd ratios RMW who felt down on themselves or who felt worthless most or all the time were 26% more likely to use MA than those who did not feel this way (see Table 5).

Table 5

Regression Coefficient Regarding the Association between Psychological Distress Attributes and Methamphetamine Use

Variable	B	SE	Wald	df	P	Exp(B)
Nervousness	-.113	.083	1.880	1	.170	.893
Hopelessness	-.157	.107	2.163	1	.141	.855
Restlessness	.112	.085	1.723	1	.189	1.118
Sad/Depressed	.016	.106	.024	1	.876	1.017
Effort	.083	.061	1.892	1	.169	.920
Feeling	.232	.106	4.791	1	.029	1.261*
Constant	3.124	.073				

Note. *Significant at the .05 level.

H₀2: Feelings of nervousness, restlessness, or hopelessness do not correlate with MA abuse by U.S. racial minority women as measured by the K6.

Shown in Table 6 are the binary logistic regression analyses pertaining to the predictability of the variables' nervousness, hopelessness, and restlessness on MA abuse among RMW. The regression results reported that the overall model fit of the three predictors (nervousness, hopelessness, and restlessness) was questionable (-2 log Likelihood =2654.278); it was statistically reliable in predicting those RMW who abused MA and those who did not ($X^2(3) = 14.468, P < .01$) (see Table 6).

Table 6

Overall Model Fit Results Regarding the Predictability Between Feeling of Nervousness, Hopelessness, and Restlessness and MA Abuse

Model	Chi Square	<i>df</i>	<i>P</i>
Final	14.468	3	.002**

The Wald statistically reported that not one of the variables: nervousness ($Z = 9.1356$, $P > .05$), restlessness ($Z = 2.846$, $P > .05$) or hopelessness ($Z = .192$, $P > .05$), or were independent predictors of MA abuse among RMW. The data (odd ratio) further revealed that even though restlessness was not an independent predictor of MA abuse, RMW who felt restless most or all of the time were 14% more likely to abuse MA (see Table 7).

Table 7

Regression Coefficients Regarding the Predictability Between Nervousness, Restlessness, or Hopelessness

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>P</i>	Exp(<i>B</i>)
Nervousness	-.093	.079	1.356	1	.244	.912
Restlessness	.133	.079	2.846	1	.092	1.142
Hopelessness	.035	.080	.192	1	.661	.965
Constant	3.177					

H₀₃: Feeling so sad or depressed that nothing could cheer up a person does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

Reported in Table 8 are the Binary Logistic Regression findings regarding the predictability of the variable: feeling so sad or depressed, on the MA abuse among RMW in the United States. Regression results revealed that the overall model fit of the variable feeling so sad or depressed was questionable ($-2 \log \text{Likelihood} = 2657.105$), it was statistically reliable in predicting those RMW in the United States who would abuse MA and those who would not ($X^2(1) = 11.641, P < .001$).

Table 8

Overall Model Fit Results Regarding the Predictability Between Feeling so Sad or Depressed and MA Abuse

Model	Chi Square	<i>df</i>	<i>P</i>
Final	14.468	3	.002*

Note. * $2 \log \text{likelihood} = 2657.105$; Nagelkerke *R* Square = 0.005.

The Wald Statistics (see Table 9) revealed that feeling sad or depressed was an independent predictor ($Z = 10.460, P < .001$) of MA abuse among RMW in the United States. The odd ratio for this variable indicated little change in the likelihood of increasing MA abuse in this female population.

Table 9

Regression Coefficient Regarding the Predictability between Feeling Sad or Depressed and MA Abuse

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>P</i>	Exp(<i>B</i>)
Feeling Sad or Depressed	0.005	0.002	10.460	1	0.001	1.005*
Constant		3.176				

Note. *Significant at the 0.001 level

H₀4: Feeling that everything was an effort does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

Presented in Table 10 are the Binary Logistic Regression results regarding the predictability of the variable feeling that everything was an effort on the MA abuse among RMW residing in the United States. Regression results indicated that the overall model fit of the predictor (feeling that everything was an effort) was questionable ($-2 \log \text{Likelihood} = 2657.379$); it was statistically reliable in distinguishing those RMW who would abuse MA and those who would not: MA ($X^2(1) = 11.367, P < .001$).

Table 10

Overall Model Fit Results Regarding the Predictability Before Felling that Everything was an Effort and MA Abuse

Model	Chi Square	<i>df</i>	<i>P</i>
Final	11.367	1	0.001*

Note. *-2 loglikelihood = 2657.379; Nagelkerke *R* Square =.005

The Wald Statistics (see Table 11) reported that the variable feeling that everything was an effort ($Z = 10.232, P < .001$) had significantly predictive power relative to MA abuse among RMW. The odd ratio for feeling everything was an effort revealed little increase in the likelihood of MA abuse when this variable increased by 1.

Table 11

Regression Coefficient Regarding the Predictability Between Feeling Everything was an Effort and MA Abuse

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>P</i>	Exp(<i>B</i>)
Effort	0.005	0.002	10.232	1	0.001	1.005
Constant	3.180					

H₀5: Feeling down on oneself, feeling no good, or feeling worthless does not correlate with MA abuse by U.S. racial minority women as measured by the K6.

A standard binary logistic regression technique was computed (see Table 12) to evaluate the predictive power of the variable feeling down on oneself, feeling not good or feeling worthless on the MA abuse among RMW in the United States. Regression results reported the overall model fit of the predictor (feeling down on oneself, feeling no good, or feeling worthless) were questionable (-2 Log Likelihood = 2656.975); it was statistically reliable in distinguishing those RMW who would abuse MA and those who would not ($X^2(1) = 11.771, P < .001$).

Table 12

Overall Model Fit Results Regarding the Predictability Between Feeling Down, No Good or Worthless and MA Abuse

Model	Chi Square	<i>df</i>	<i>P</i>
Final	11.771	1	0.001*

Note. *- Log Likelihood=2656.975; Nagelkerke R Square =.005

The Wald Statistics (see Table 13) indicated the variable feeling down on oneself, feeling no good, or feeling worthless ($Z = 11.777, P < .001$) was an independent predictor of MA abuse

among RMW in the United States. The odd ratio for this variable revealed little change in the likelihood of increasing MA abuse among RMW.

Table 13

Regression Coefficient Regarding the Predictability Between Feeling Down on Oneself, or no Good or Worthless and MA Abuse

Variable	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>P</i>	Exp(<i>B</i>)
Feeling down, no good or worthless	0.005	0.002	10.568	1	1.005	0.001
Constant	3.175	0.067				

Summary

There were five null hypotheses tested in this empirical investigation. All five hypotheses were tested to determine the level of relationship of selected PD attributes on the MA use and abuse among RMW in the United States. Each one of the five hypotheses was found to be significant.

The results of the tests of analysis indicated a difference on the effects of the attributes on MA use. The variable in H₀₁: feelings of nervousness, restlessness, or hopelessness as measured by the K6, indicated a statistical positive relationship with MA abuse by U.S. racial minority women. The variable consisting of nervousness, restlessness, or hopelessness combined (H₀₂) was found to be statistically relevant in indicating those RMW who would abuse MA from those who would not. Because the null hypothesis was accepted; the alternate was not accepted. The variable: feeling sad or depressed (H₀₃) was found to be statistically relevant in indicating those RMW who would abuse MA from those who would not.

Similar findings were found between the variable feeling that everything was an effort and MA abuse (H₀₄) and feeling down on oneself, feeling no good or feeling worthless and MA abuse (H₀₅) among RMW residing in the United States. See Table 14 for these results. Six PD attributes: nervousness, hopelessness, restlessness, sad/depressed, feeling everything was an effort, and feeling down, no good or worthless were found to be statistically related to MA use among RMW.

Table 14

Summary of Hypotheses Tested

Hypotheses	Chi Square	<i>df</i>	<i>P</i>
H ₀₁	21.360	6	0.002*
H ₀₂	14.468	3	0.002*
H ₀₃	11.641	1	0.0001**
H ₀₄	11.367	1	0.001**
H ₀₅	11.771	1	0.001**

Note. *Significant at the 0.01

**Significant at the 0

In Chapter 4, a review of the present study was provided to form the basis for the analytical work to follow. The assumptions and tests used to analyze the hypotheses were discussed along with the results from the analyses. Chapter 4 included transitional materials and inflexible information for Chapter 5. The latter chapter included the final synopsis of the empirical analysis relative to MA use and abuse among RMW. Chapter 5 consisted of an introduction, interpretation of the findings, limitations of the study, recommendations, implications of the study, summary, and conclusions.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of the investigative quantitative logistic regression study is to determine the relevancy between each of the attributes comprising psychological distress and use of methamphetamine among racial minority women across the United States. Because individuals began to take drugs when they feel stressed (SAMHSA, 2013), feelings of PD may take the form of any specific mental illness with any of the six attributes permeating the internal environment. Those six attributes include feelings of nervousness, restlessness, or hopelessness; feelings of sadness or depression; feelings that suppress effort; and feelings of worthlessness.

The nature of the study involves a logistic regression paradigm to predict the values on the dependent variable (MA use: yes or no), which is categorical in nature. The sample design for the NSDUH was an extension of a coordinated 5-year study distributed to civilian, noninstitutionalized population aged 12 years old or older residing within the United States and the District of Columbia (SAMHSA, 2013). By doing so, the researcher was investigating the possibility of predicting group membership of the independent variable of minority women.

To comprehend more clearly the predictors of PD, attempts were made to review feelings of despair and the stigmatization of traumatic lifestyles. The scores of the women who completed the K6 were pulled from the SPSS software and used for the logistic regression. In the present study, only women who are 18 years old and above participated.

The operationalized predictor variable was PD and its various levels associated with symptoms of distress, which augmented the influence of MA drug use in the minority female community. The criterion variable “if minority women have used MA” was used as a dichotomous variable (yes or no) in the logistic regression model. The operationalized criterion variable was used to measure responses on the K6 for predictors of PD.

The study was conducted as a result of limited studies available on MA use by RMW who suffer from PD. Despite the findings of researchers that MA abuse causes harmful effects to cognitive functioning (Kaushal & Matsumoto, 2011), no documentation exists to show why the RMW subgroup population resorts to MA use. MA affects the entire body, causing physiological as well as psychological harm.

A second weakness in research on MA use, consisted of not knowing if PD is a major contributor to drug abuse. Previous researchers have examined MA use combined with other drugs and mental distress among minority women (Hwang & Yun, 2015), but a gap remained in the literature that this study aimed to fill. Because of this gap, the present study was conducted to examine MA independently with the specified RMW subgroup population. No study to date has examined the six components that make up PD as measured by the K6 among minority women as a unit and MA use; the study was warranted.

To summarize key findings from the analytical inquiry concisely included an examination to determine the relevancy and predictability of selected PD attributes on MA use and abuse among RMW in the United States. The focus of each of the five hypotheses was MA use by RMW, and all were found to be significant. Six PD attributes consisting of the following six dispositions: nervousness, hopelessness, restlessness, sad/depressed, feeling everything was an effort, and feeling down, no good, or worthless (H_01) were found to be statistically related to MA use among RMW. As a result, H_01 was not accepted as true and the alternative hypothesis was accepted. RMW who tend to feel nervousness, hopelessness, restlessness, sad/depressed, feeling everything was an effort, and feeling down, no good, or worthless are likely to abuse MA.

The variable consisting of nervousness, hopelessness, and restlessness (H₀₂) combined was found to be statistically reliable in distinguishing those RMW who would abuse MA and those who would not. Although Wald statistically indicated none of the variables were independent predictors of MA abuse, the odd ratio showed RMW who felt restless most or all of the time exhibited a higher percentage rate that predicted they were more likely to display a potential to abuse MA.

The variable feeling sad or depressed (H₀₃) independently was found to be a good predictor of MA abuse among RMW in the United States. RMW who tend to feel sad or depressed are likely to abuse MA. The Wald Statistics revealed that feeling sad or depressed was an independent predictor of MA abuse among RMW. The odd ratio for this variable indicated little change in the likelihood of increasing MA abuse in this female population.

The variable feeling that everything was an effort (H₀₄) predicts MA abuse by U.S. RMW as measured by the K6. RMW who tend to feel that everything was an effort are likely to abuse MA. Wald Statistics indicated that the variable feeling that everything was an effort had significant predictive power with regard to MA abuse among RMW was true.

The fifth hypothesis (H₀₅) feeling down, no good, or worthless, indicated a predictive attitude to MA abuse by RMW. The fifth null hypothesis H₀₅ presented as an independent predictor for MA use among RMW. Racial minority women who tend to feel down, no good, or worthless revealed a greater likelihood to abuse MA.

Interpretation of the Findings

Scholarly practitioners and behavioral healthcare experts in the field can influence RMW who use MA based upon the findings of this exploratory study. Understanding the significance of the relationship between PD and MA use among RMW would indicate whether PD affects

RMW in the same way as the general female population. These insights provide guidance to therapists and professional specialists who work with RMW in determining the role of each set of variables in MA use and abuse. Insights also indicate that drug abuse counselors need clinical training in psychology.

Conceptualization of cultural MA abuse of RMW and their social beliefs can extend benefits of the psychological research into generally accepted knowledge of prevalent values relative to drug issues. Clinical psychologists and health care professionals could then potentially improve diagnosing and interpreting symptoms as distinct from normal functioning. They could also devise intervention and prevention strategies to translate more effectively into high-quality mental healthcare to reduce or eliminate MA use.

Interpretation of findings relative to specified hypotheses also help mental healthcare specialists mitigate PD of MA users among RMW described in the study. Researchers who assessed the needs of RMW consistently showed extensive histories of depression and suicidal ideation (Carbone-Lopez et al., 2012). MA offers chemical relief from reality and the feelings of hopelessness and depression. Apparently, if another means of either offering relief from reality or resolving the depression could be offered, MA use would decrease.

With the current inspective research, clinical psychologists can confirm illicit MA drug use of RMW and distress in women. Initiation into the drug culture can produce negative behaviors and feelings, while imminent risk factors may possibly be associated with drug use. Drug abusive women may suffer more PD than other women and more than what is considered normal. The six variables may appear in different degrees or in different dimensions in an individual suffering PD.

Analyze and Interpret Findings

Analysis and interpretation of findings of the investigative study prompted the rationalization of the theoretical framework produced by Richard Lazarus. The theoretical framework used for this investigation was the theory of psychological stress and coping originally developed by Lazarus (2006) in the 1950s. According to Lazarus (2006), coping is a major factor when an individual experiences stress because both constructs could lead to adaptation outcomes such as non-somatic illnesses to include “depression, hopelessness, and despair” (p. 149). When stressful situations arise, such as feelings of nervousness, restlessness, or hopelessness, individuals can learn to cope, which could either increase or decrease the likelihood of substance abuse. One form of coping may ameliorate the thought that substance use is commensurate with a form of dealing with the immediate problem.

The cognitive appraisal process, which signifies thought processes relevant to decision making. The second process is referred to as coping, which is an “effort to manage psychological stress” (Lazarus, 2006, p. 111). Stress may appear as an overwhelming factor, but coping helps to alleviate sources of frustration. Both processes are crucial in understanding how a person should respond to environmental scenarios, and both could have long-range outcomes (Lazarus, 2006). When stress is imminent, a coping process involved enhanced positive results. Application of the theory offers guidance on ways to initiate the coping process, thus allowing for the clinical psychological dimension to surface (Boden et al., 2014).

Clinical professionals thrive on providing therapeutic services for clients in a state of psychological distress. RMW may do one of two things: (a) prepare to manage the stress or survive feelings of hopelessness, restlessness, or nervousness before embarking on the never-ending trail of MA use, or (b) succumb to the challenges and risks of the illicit substance. When

experiencing stressful situations, people feel the need to cope, which increases the likelihood of substance abuse.

Lazarus uses his coping approach to elaborate on a person's environmental factors. Based upon the theory of psychological stress and coping, violence can be stressful and may increase the likelihood of substance use (Kliewer & Zaharakis, 2013). Minority women may do one of two things: (a) prepare to manage or (b) survive feelings of hopelessness, restlessness, or nervousness before engaging in MA use.

In accordance with the theory, an individual must choose either cognitive appraisal or coping when stressful situations arise to formulate a positive preference. The individual sets out to determine if the stressor might create potential harm or benefit while considering other options such as possibly altering the stressful event. RMW may involve coping strategies such as appraising the encounter as taxing or exceeding the person's resources. If an individual feels stressed, the decision would permit a person to either advance to useful strategies to avoid the negative outcome or succumb to the pressure and possibly initiate use of illegal substances or MA.

The stress and coping theory embellish the idea that stress may also be useful because society needs a fraction of stress to maintain the lifestyle in which contemporary individuals become accustomed. To realize that stress tends to dictate behaviors commensurate with illicit substances is important.

Stress is a factor that may initiate and predict substance use behaviors as well as other addictive actions. Stress, anxiety, and depression are strong emotions that continually engender modifications in an individual's existence if he or she succumbs to MA dependence.

Limitations of the Study

Understanding the relationship between PD and MA use among minority women may be useful in learning more about the etiology and triggers of MA use so that more effective treatments can be designed to alleviate MA abuse. One limitation of previous investigations into the relationship between MA use and PD is that no studies were found that examined mental distress of minority women and MA use independently of other drugs. During the literature review, no sources that contained information on the relationship between the six attributes comprising PD as measured by the K6 among RMW and MA use surfaced. Ideally, the clinical psychologist would be the most salient professional to assist the MA user with possible treatment and prevention.

The investigation had a limitation that involves the participants who were minority women used to test the hypotheses. All participants used in the NSDUH survey were selected from a population that sought the use of MA at some point within the year. When testing the hypotheses, a portion of the participants could not be separated. Participants were grouped together with the male participants and could not be separated from other minority women. As a result, only Hispanics and African American Women could be used in the investigation.

Recommendations

Recommendations for further research include studies on other minority groups on all minority women who use or abuse MA who may have suffered from PD as opposed to using only two ethnicities in the study. Researchers might also include in their studies the other socio-economic groups using the same criteria or variables as the present study adding depth and breadth to the investigation. The focus of further research could be on keeping all participants in a separate category so the study can involve all minority women who use or abuse MA. The

present study should not limit the study to only a portion of women, but rather an inclusion of all women participants on all socio-economic levels. Qualitative researchers could conduct studies on the perceptions, attitudes, and beliefs of women of different racial, ethnic, and socio-economic groups to add strength to our understanding of MA use among women.

Implications

The implications for positive social change for RMW resulting from the analytical study include a conscious awareness of self that translates into healthy living involving psychological well-being and the physiological structure of the human anatomy. Another potential advantage gained from awareness of MA drug exploitation can encourage society to educate abusers on the possible stressors and mental distress associated with illicit drug culture. By focusing on a subgroup population of minority women, research findings may be used to improve diagnostic taxonomy or treatment effectiveness. Subsequently, using results of the study, psychologists and therapists may support more programs racially and ethnically tailored for treatment and prevention of MA use.

Positive Social Change

While MA use was portrayed as a negative consequence by society, another merit of this study is that it could translate into increased awareness of the MA problem for clinicians and scholar practitioners. The positive social change that this study could contribute to is potentially substantial. Clinical psychologists and healthcare professionals could use its results to potentially better connect with clients, and better diagnose and interpret symptoms distinct from clients with normal functioning. The professionals could also provide intervention and prevention strategies that may convert into high-quality mental healthcare to reduce or eliminate the initiation of MA's illicit use in minority women. Public health organizations could collaborate with agencies such

as schools, rehabilitation centers, and healthcare professionals to strategize and develop objectives and associated actions to curtail the initiation of drug use among the minority female population. Finally, the outcomes of this inspective study could be associated with decreased psychological distress, reduced drug-related harm, improved judgement, overall better physiological and psychological health, problem-focused coping in a healthy way, greater employment opportunities, improved socioeconomic status, and reduced suicidal ideation, just to name a few.

Empirical Implications

Empirical implications for the undergoing study was generated to examine MA effects and motivations as well as relevancy for its use and abuse by RMW who suffer from PD. All 8,688 RMW participated in the study with 3,617 of the women identified as Black American and 5,071 of the women identified as Hispanic American. The majority of RMW reported they used MA in response to depressive symptoms indicating they experienced an elevation in mood modification. Although MA abuse to relieve depressive symptoms was far more likely in men, the NSDUH suggests that MA abuse to relieve depressive symptoms was equally common in racial minority women.

Among the women who make the conscious decision to use the illicit drug MA are ethnic minority women who may succumb to the pressures of life and these pressures can be impacted positively. RMW have long suffered numerous struggles throughout the years. In fact, RMW have a long history of experiencing multitudes of despair throughout domains of work, education, and physical and mental health (Cokley, McClain, Enciso, & Martinez, 2013). Consequently, RMW have a long history of insecurities in virtually every aspect of life. The implications of positive social change relative to the pressures of life can be seen in the Lazarus'

stress and coping theory. As previously mentioned, this theory uses coping skills as a factor to aid in relieving the pressures of life.

A major aspect of the present study involves MA and mental health of socially disadvantaged women. To understand more clearly the symptoms that contribute to PD in RMW, attempts are made to identify several social disadvantages and chronic adversities that increased illicit drug behaviors (Green et al., 2012). Since the turn of the century, researchers highlighted the premise that stress can result in the development of various neurotoxins that encourage individuals to use drugs to help manage the stress of daily living (Sudraba et al., 2015). Researchers highlighted the phenomenon of PD as an essential component in women who are most likely to use MA (Green et al., 2012). Positive social change can be impacted by being armed with an arsenal of coping strategies which offer guidance in stressful situations.

Impairment of health could result from numerous sources that might reflect the stress and strain in the environment (Messina & Calhoun, 2014). Franklin (2008) suggested a plausible theory that women who suffer traumatic and physical abuse may intentionally choose to segregate themselves to dull the pain and to survive. They may resort to using drugs for comfort and as a coping mechanism for a quick fix. These individuals may find the immediate gratification of MA use to be only a temporary means of escape from the intensities of life's stressors. The implications of positive social change for the above scenario may be impacted by the use of a clinical psychologist, a professional who studies the mind and behavior.

To expound further on the trajectory of ills affiliated with traumatic experiences of women, childhood negative experiences are believed to be a source of unwanted stress. In one study, investigators acknowledge the prevalence of sexual assault and mental distress of most African American RMW offenders who were raped as children and are currently homeless and

psychologically dependent on MA (Lutnick et al., 2015). These women offenders most likely suffered overwhelming PD as a child and possibly at the hands of family members with little or no compassion for their traumatic encounters.

The risk factors and stress associated with MA use may overwhelm women to the point that they willingly yield to the dangers of violence (Lutnick et al., 2015). Regrettably, women who are victimized from childhood and adulthood may suffer physical and psychological damage that could translate into a dimension of mental illness. Integrating of stress and coping strategies into one's life may attenuate a less stressful lifestyle with the hope that these women attempt different strategies until one emerges as successful (Lutnick et al., 2015). Positive social change may be impacted by a licensed clinical professional to assist in changing how bad thoughts may turn into good thoughts.

Another aspect of drug use is the economic influence affiliated with the sale of drugs. Economic pressures affect the use of the psychoactive stimulant as an income-producing agent to earn revenue. Although drug dealing has historically been considered a male activity, women now seek the opportunity to sell drugs (Semple, Strathdee, Zians, & Patterson, 2012). Investigators of the study maintained the idea that certain social disadvantages, such as poverty, lack of education, and limited employment opportunities, force many MA-using women to participate in the illicit drug economy (Semple et al., 2012). Consequently, when an economic downturn occurs, female drug users simply use whatever resources are available. Selling drugs becomes a means of placing food on the table for their children and themselves. Economic pressures result in strain and taking precautions and could reverse itself by alleviating its challenging urgency through the use of stress and coping strategies to create positive social change.

Women may seriously ponder stressful situations when despair arises with no sign of relief. Torchalla et al. (2015) conducted a study on the challenges of stress and found that MA's illegal consequences coincide with stress in women. When faced with stress, women may not foresee anything positive for the future other than to seek relief in illegal substances. Other researchers established MA use is associated with depressed mood and stress in women (Darke et al., 2011). When hopelessness is imminent, women's needs transform to help counter stress. Researchers Carbone-Lopez, Owens, and Miller (2012), who assess the needs of minority women and adolescent offenders, consistently showed extensive histories of depression and suicidal ideation. One accepted premise in the Black culture is that RMW tend to endure more hardships at an escalated pace than do women in mainstream society. A positive social change in this situation can be impacted by using stress and coping strategies by Lazarus.

Women may encounter numerous feelings of despair at times. To comprehend the feelings invoked in PD, a definition of the term was provided. Survey findings from 2013 NSDUH consisted of predictors of PD to include feelings of nervousness, restlessness, and hopelessness; feelings of sadness or depression; feelings that suppress effort; and feelings of worthlessness (SAMHSA, 2013). Stress is a factor that tends to become an unwelcomed part of life with a disproportionate amount passed on to the adolescent population. As part of another description, *hopelessness* is defined as a state of having increased negative expectancies for the future and has been shown to be strongly associated with suicidal ideation (Huen, Ip, Ho, & Yip, 2015). SAMHSA (2013) and Huen et al. (2015) referred to a sense of desolation and hopelessness with women in mind. Suicidal ideation is another factor related to stress. Despite how women may suffer negative feelings, to deter advancement of suicidal tendencies, a clinical professional is an immediate necessity.

Feelings of desolation and belonging have been affiliated with PD in young people of racial minorities. Researchers Corrales et al. (2016) showed a connection between childhood adversities and a lack of feeling loved along with amplified grief, resulting in a form of PD in young individuals who are racial minorities. Findings show that individuals with PD often experienced hopelessness, depression, or degrees of unhappiness. Hopelessness has been demonstrated to have an association with forms of stress that could encourage substance use.

The stress and coping theory may shed light on the construct of hopelessness. Johnson, Wood, Gooding, Taylor, and Tarrrier (2011) argued that PD affected and strengthened the attributional style of coping to cushion hopelessness. The attributional style refers to the ways in which a person explains events in terms of causes. External causes are often used to buffer the negative effect of an action, while internal causes are often used to receive credit for the positive effect of an action (Johnson et al., 2011). This style of coping is helpful for the person feeling sadness and sorrow when encountering bouts of strain and tension (Johnson et al., 2011). For this reason, the stress and coping theory may help shield detrimental risks such as suicidality and hopelessness and are a welcomed concept that could influence individuals who experience feelings of dejection.

Equally important, as part of a drug abuser's life, psychological challenges that mitigate the stresses of substance use emerge. Nervousness may tend to be a natural component of daily life and drug use. Dobry, Rice, and Sher (2013) stated that nervousness may influence the use of stimulants such as ecstasy (MDMA). In general, nervousness affects PD, possibly leading to the use of psychoactive stimulants. Positive social change influenced this scenario by the use of Lazarus' stress and coping strategies.

Along with everyday life stressors, anxiety may be more common for those who abuse drugs. Feelings of nervousness indicate a need for a remedy if the individual chooses to continue a chosen lifestyle. Li et al. (2016) suggested that numerous studies have been influential regarding coping strategies that generated healthy lifestyles. Problem-focused coping, for instance, is associated with decreased somatic illness and engenders social support seeking (Li et al., 2016) that may be a better fit for individuals experiencing feelings of nervousness. Individuals prefer positive health outcomes if drug abuse is problematic.

Recommendations for Practice

Recommendations for practice of social change entail the ideology of being able to readily counsel with a clinical psychologist or mental healthcare provider when strain and stress presents itself. Clinical psychologists and healthcare professionals could also use its results to potentially connect with client and diagnose and interpret more effectively symptoms distinct from clients with normal functioning. The professionals could also provide intervention and prevention strategies that may convert into high-quality mental healthcare to reduce or eliminate the initiation of MA's illicit use in minority women.

Summary

The extent and enormity of methamphetamine and amphetamine (MA) use among RMW generated crucial and paramount health concerns for more than three decades in the United States. Researchers found the effects of powerful psychoactive stimulants, like MA, resulted in internal and external harm (Abdul-Khabir et al., 2014; Chen et al., 2014; Mackey et al., 2014; NIDA, 2015). The effect of these drugs impaired the body's ability to function and weakened an individual's mental functions. The alarming account of women's upsurge in drug use highlighted

an atypical trend in the number of women's applications for MA treatment and an incredible shift that warranted observation.

Exposure to sources of tension and strain may be only one challenge to the vulnerabilities of the internal system in women. Numerous reports surfaced linking MA's illegal consequences to stress in women. Additionally, women of color suffered more stressful encounters, which force disorders to surface. The neurotoxin's path of destruction led to internal feelings of hopelessness and depression that necessitated remediation by clinical psychological professionals.

The purpose of the present quantitative logistic regression study was to determine the relevancy between each of the attributes comprising psychological distress (PD) and MA use among RMW across the United States, and if distress predicted MA use among this group. This information was obtained using archival information from the 2013 NSDUH. The K6 is a self-report catalyst with six items intended to extract mental disorders such as depression and anxiety. The test was used to help define the six PD attributes to include feelings of nervousness, restlessness, hopelessness; feeling sad or depressed; feelings that suppress effort; and feelings of worthlessness (SAMHSA, 2013). Positive social change for RMW resulting from the study included a conscious awareness of self that translates into healthy living involving psychological well-being and the physiological structure of the human anatomy. Another potential advantage gained from awareness of MA drug exploitation encouraged society to educate abusers on the possible stressors and mental distress associated with illicit drug culture. By focusing on a sub-population of minority women, research findings were used to improve diagnostic taxonomy or treatment effectiveness.

The theoretical framework of Lazarus gleaned insight for women experiencing PD when drugs are a constant threat to their environment. To counteract negative effects of drug and MA use, the stress and coping theory enlightened and mediated an examination of the deleterious effects of MA abuse and PD placed upon RMW. The theory also included a means to cope when anxious situations arise as well as to foster strategies for avoiding its harm. Shielding individuals from detrimental risks such as suicidality and hopelessness is helpful and a welcomed concept that influenced individuals who experience feelings of dejection.

For the present study, a quantitative logistic regression was conducted. The predictor variable of PD incorporates six attributes: feelings of nervousness, restlessness, or hopelessness; feelings of sadness or depression; feelings that suppress effort; and feelings of worthlessness. These six attributes were assumed to have some predictive power with regard to the criterion variable of MA use among women who are members of minority groups in the United States. To address the relevancy between the two variables, a standard logistic regression design was used. The NSDUH issued a short scale of the K6 to participants that had been tested for PD.

Specified criteria were used to collect the sample. The Statistical Package for the Social Sciences (SPSS) was used to supply the statistical analyses for the intended research. The archival data generated from the 2013 NSDUH was coded and run by the researcher. A regression equation accurately predicted the probability of whether an individual fell into one category or the other. The results were interpreted, and the hypotheses were tested at the .05 confidence level of significance.

Conclusions

Understanding the relevancy between PD and MA use among RMW and if PD predicts MA use among that population was the central focus for the analytical study. The investigative

quantitative logistic regression study determined the relevancy between each of the attributes comprising psychological distress, a composite of six attributes as measured by the K6 instrument, and methamphetamine use among racial minority women across the United States. For decades, health concerns impacted the illumination of MA use and abuse of RMW who prevail in the use of illicit drugs within the United States. The creation of psychological distress within minority women tended to predict the use of psychoactive stimulants as a means of escape from the reality dimensions of stressors such as nervousness, hopelessness, restlessness, sadness, or depression, suppressing effort, and feeling down, no good, or worthless. Stress is a powerful cognitive force that should be recognized as soon as possible to help prevent mental illness and the loss of enjoyment and happiness in daily life.

Analysis of the investigative study tested for the possibility of MA abuse by RMW and if PD was an important factor that predicted its abuse. The results of the null hypothesis (H_01) that tested for the association of six attributes relative to PD indicated RMW who tend to feel nervousness, hopelessness, restlessness, sad/depressed, feeling everything was an effort, and feeling down, no good, or worthless are likely to abuse MA. As findings suggested, the RMW have an MA abuse potential that could expose them to a life of dependence on the psychoactive stimulant. As a result of MA's highly addictive nature, the neurotoxin may affect pathological pathways as it infiltrates the central nervous system and could create far-reaching internal and physical consequences, resulting in irreparable harm to an individual for a lifetime.

Findings from the exploration of the second hypothesis (H_02) tested specifically for the combined feelings of nervousness, hopelessness, or restlessness and whether the instrument predicts MA abuse by RMW showed the recent outcomes of the inspective research advocated RMW who have feelings of nervousness, hopelessness, or restlessness have tendencies to

descend to MA use or abuse. Individuals who abuse substances appear to be influenced by subconscious states of pleasure that place them in a dimension of sustained gratification and allow them to escape from reality. Research found that the effects of powerful psychoactive stimulants, like MA, might result in internal and external harm. Not only do these drugs impair the body's ability to function, but they also weaken an individual's mental acuity (Panenka et al., 2013). The alarming account of women's upsurge in drug use highlight an atypical trend in the number of women's applications for MA treatment and an incredible shift that warrants observation.

Discoveries from the assessment of the null hypothesis (H_03) examined the variable feeling sad or depressed independently and found it to be a good predictor of MA abuse among RMW in the United States. The hypothesis forecasts a robust prediction of RMW who tend to feel sad or depressed are likely to abuse MA. The hypothesis demonstrated that RMW produced a stronger likelihood to gravitating toward dependence of the illicit drug. Exposure to sources of tension and strain may be only one challenge to the vulnerabilities of the internal system in women. The neurotoxin's path of destruction may lead to internal feelings of hopelessness and depression that necessitate remediation by psychological clinical professionals. In the past, studies underscored the premise that individuals started to use drugs to cope with stress. RMW who exhibit prolonged stress or sadness sustain increases in blood pressure and heart rate that can put a person at risk for hypertension, heart attacks, and premature death.

The present analytical study highlighted the fact that RMW tested for the variable feeling that everything was an effort (H_04) predicts MA abuse by U.S. racial minority women as measured by the K6. When RMW view life as everything was an effort, they fall into the category of increasing the likelihood of the premise that individuals use drugs to help manage the

stress of daily living. Researchers underscored PD as an essential component in women who are most likely to abuse MA. Stress is known to invoke strain and tension on an individual's psyche that undermines an appraisal of an urgent event. Initiation in the drug culture can result in negative behaviors, feelings, and imminent risk factors possibly associated with MA use.

Based on research results, the final and fifth variable appraised is the hypothesis feeling down, no good, or worthless (H_05) were found as an independent predictor for MA use among RMW. Racial minority women who tend to feel down, no good, or worthless are likely inclined toward abuse of MA. Minority women may seriously ponder stressful situations when despair arises with no sign of relief. They may not foresee anything positive for the future when faced with stress than to seek relief in illegal substances. When feelings of worthlessness are imminent and more robust as presented in the tested hypothesis, women's needs may transform to help counter stress. Individuals could start to illuminate the premise that MA can be used to cope with stress (Sudraba et al., 2015).

The overview for the analytical document presented factual analyses on the relevancy between PD and MA use among RMW and determined if PD predicts MA abuse among that population stimulated the pivotal nucleus for the investigative assessment. The six psychological attributes taken from the 2013 NSDUH archival information were tested using the null hypotheses to measure levels of PD trajectories that answered questions regarding RMW and if PD predicts MA abuse. The psychological distress premise dictate that all hypotheses were rejected making the answer to the questions reflective of RMW likely to use MA. Psychological distress does indeed predict use and abuse of MA by RMW.

Recommendations for Future Research

Recommendations for future research extended to providing research on all minority women who used and abused MA. The focus of the present study was only on African American and Hispanic American women. NSDUH studied minority women with male counterparts; other scores did not allow separation of women from men. Only African American and Hispanic women could be separated from the men. Future research should allow for the revelation of all minority women comprised in the public survey to include all ethnicities. This inclusiveness of categorized participants might show a possible higher rate of variables and their significance to MA use and abuse in the future.

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