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Factors Predicting Internalizing And Externalizing Psychopathology In A Sample Of Inner City Minority Women

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FACTORS PREDICTING INTERNALIZING AND EXTERNALIZING PSYCHOPATHOLOGY IN A SAMPLE OF INNER CITY MINORITY WOMEN

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ABSTRACT

Women of minority backgrounds, particularly those of lower socioeconomic status, are vulnerable to a whole host of social and health related problems such as increased rates of depression, incarceration, sexual assault, and premature death. With such vulnerabilities, these women are at increased risk for developing internalizing disorders (i.e., depression and anxiety) and externalizing disorders (i.e., substance abuse, antisocial personality disorder), compared to women of higher socioeconomic status. The purpose of the present research was to examine factors that are predictive of the development of internalizing and externalizing psychopathology in minority women in an effort to construct a comprehensive model of psychopathology in minority women. The present study used archival data that were collected in four samples of inner city women in New York City. A correlational design, using both logistic regression and multiple regression, was used to examine predictors of internalizing and externalizing psychopathology. It was predicted that childhood or adolescence internalizing and externalizing psychopathology, trauma and abuse, and family history of psychiatric problems and substance abuse would predict the presence of these disorders in adulthood. It was also predicted that ethnicity and a history of treatment for these disorders in childhood or adolescence would moderate the relationship between the predictors and current diagnosis. Results of this study partly supported the hypotheses. Current internalizing disorder was predicted by the presence of childhood or adolescent internalizing disorder, trauma and physical/emotional abuse. Current externalizing disorder was predicted by early onset internalizing and externalizing

psychopathology, trauma, and family history of psychiatric problems and substance abuse. Ethnicity and childhood or adolescent treatment were not significant predictors or moderators. Measurement issues and other limitations of the data are discussed. Results of this study will help increase knowledge of the factors that contribute to the development of psychopathology in this under-researched group.

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CHAPTER 1

Introduction

Overview

Women of minority backgrounds, particularly those of lower socioeconomic status, are vulnerable to a whole host of social and health related problems. These women suffer increased rates of depression (Kessler et al., 2003), incarceration (Freudenberg, 2002), and premature death (Piatt, 2011). In addition, women of minority backgrounds living in the inner cities are more likely to be sexually assaulted or become involved in domestic violence (Rennison & Planty, 2003). With such vulnerabilities, these women are at increased risk for developing psychological problems, including internalizing disorders (i.e., depression and anxiety), externalizing disorders (i.e., substance abuse), and personality dysfunction (i.e., borderline personality disorder), compared with women of higher socioeconomic status (Kohn, Dohrenwend, & Mirotznik, 1998; Wadsworth & Achenbach, 2005).

The investigation into the role of the multiple factors that contribute to psychopathology has been well documented. There have been numerous studies examining the specific role of predisposing genetic factors, disturbed family environment, and stressful life events which ultimately lead to the development of internalizing and externalizing disorders and personality dysfunction. Most of these studies have specifically focused on the development of psychopathology such as depression, personality disorders, or substance abuse in women. However, there have been relatively few studies that have examined the development of both

internalizing and externalizing psychopathology, and even fewer focusing on the unique factors for women from minority backgrounds.

Eaton et al. (2012) is one of the few studies that have sought to develop a model of internalizing and externalizing psychopathology. They examined data from a national representative sample of 43,903 individuals collected as part of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) in an effort to identify gender differences in liability for disorders. The study confirmed the previous findings of higher prevalence of mood and anxiety disorders in women and antisocial personality disorder and substance use disorders in men. The study found support for broad internalizing and externalizing dimensions that under-lie the structure of these disorders for both women and men. However, women were higher on the latent internalizing trait dimension whereas men were higher on the externalizing dimension, consistent with the gender differences in prevalence rates for these disorders. The authors speculated that the differences in the latent liability factors might reflect women's tendency to ruminate and higher levels of trait neuroticism, and men's higher levels of disinhibition. These differences in trait liabilities, along with the increased rate of stressful life events reported by women, may explain the gender differences in the development of psychopathology. Although this study was based on self-report of lifetime diagnoses which may be subject to self-report and memory biases, it utilized a very large community sample and oversampled for African American and Hispanic participants.

Kendler, Gardner, and Prescott (2002) proposed a developmental model of major depression in women using data from 1,942 adult female twins. Eighteen risk factors for the development of major depression were considered across the women's lifespan. The results indicated that during childhood, risk factors for depression in adulthood included genetic risk,

disturbed family environment, childhood sexual abuse, and parental loss. In early adolescence, neuroticism, self-esteem, and early-onset anxiety and conduct disorders are risk factors for major depression. In late adolescence, educational attainment, lifetime traumas, social support, and substance misuse become increasingly important. Other risk factors include history of divorce, past history of major depression, marital problems, and stressful life events. The results of the study suggested three distinct pathways for the development of depression in women: an internalizing pathway (neuroticism and early-onset anxiety disorders), an externalizing pathway (conduct disorder and substance misuse), and an adversity pathway (negative environmental factors).

Joyce, McKenzie, Luty, Mulder, Carter, Sullivan, and Cloninger (2003) sought to establish a developmental model for risk factors that contribute to personality dysfunction in a study of depressed male and female outpatients who were evaluated for personality disorders, as well as a history of parental neglect, childhood abuse, temperament, and childhood and adolescent psychopathology. Abuse and neglect during childhood were predictive of increased avoidant and borderline diagnoses, the most frequent personality disorders found among the sample of 180 participants. In terms of temperament, harm avoidance was correlated with avoidant personality whereas borderline was associated with a combination of novelty-seeking and harm avoidance. Furthermore, early onset of anxiety disorders increased the risk of avoidant personality disorder, early onset substance abuse was associated with borderline personality disorder, whereas early onset major depression and conduct problems increased risk for both avoidant and borderline. Agrawal, Gardner, Prescott, and Kendler (2005) investigated the impact of 26 different risk factors in the development of substance abuse and/or dependence in a sample of 1,943 adult female-female twins. These risk factors were classified into several categories

including socio-demographic factors, religiosity measures, personality measures, childhood risk factors, and psychiatric illness. Risk factors that were most positively correlated with drug abuse/dependence included history of divorce, novelty-seeking, extraversion and altruism, childhood sexual abuse, and development of psychiatric disorders such as depression and anxiety. Overall, substance use disorders were associated with personality and environmental risk factors along with premorbid psychopathology.

The purpose of the present research was to examine factors that are predictive of the development of internalizing and externalizing psychopathology among ethnic minority women. The above studies examined antecedents of depression, personality disorders, or substance use in women; however, only the Eaton et al. (2012) study examined both internalizing and externalizing psychopathology in women and their study focused on the structural relationship between disorders. Moreover, none of studies focused on the unique factors that contribute to the development of these disorders in minority women, and two of the studies (Agawal et al., 2005; Kendler et al., 2002) did not include any minority women in their samples. The present research sought to construct a comprehensive model of psychopathology in minority women.

First, the literature on factors associated with the development of internalizing psychopathology (i.e., depression, anxiety) and externalizing psychopathology (i.e., cluster B personality disorders, substance abuse) in women is reviewed. This is followed by a brief review of psychopathology and the challenges faced by individuals from minority backgrounds, with a focus on minority women in particular. Finally, a study examining predictors of internalizing and externalizing psychopathology in ethnic minority women is presented. The present study used archival data that were collected as part of a longitudinal study of interpersonal violence in four samples of inner city women in New York City: a group diagnosed with cocaine abuse, a group

diagnosed with depression, a group with dual diagnosis, and a sample of women with no history of depression or substance abuse. The present study used a correlational design, both logistic regression and multiple regression, to examine predictors of internalizing and externalizing psychopathology in inner city minority women.

Key Terms and Definitions

Several key terms and their definitions for the purposes of this study are presented below:

Minority women refers exclusively to women from ethnic minority backgrounds (i.e., African-American and Hispanic/Latino[a]) and does *not* include women who are considered to be sexual minorities, religious minorities, women who are physically disabled, or part of any other minority social group. At times, the terms "women of color" or "diverse women" were used in this paper to refer to women from ethnic minority backgrounds, depending on its use in a particular study or article being cited. Moreover, reference to a particular ethnic minority group adhered to the terminology used in the source (e.g., African American, Black).

Internalizing disorders refers to psychiatric conditions with primary symptoms that involve inner emotions as opposed to outward behavior (i.e., depression and anxiety). These disorders have been found to cluster together in multivariate studies, to share a common underlying vulnerability, and to frequently co-occur (e.g., Eaton et al., 2012; Watson, 2005).

Externalizing disorders refers to psychiatric conditions with primary symptoms that involve outward behavior as opposed to inner emotions (i.e., substance abuse and antisocial personality disorder). These disorders also tend to cluster in multivariate studies and share common etiological factors (e.g., Eaton et al., 2012).

Depression in Women

It has long been documented in the empirical literature that women are roughly twice as likely as men to suffer from depression (American Psychiatric Association [A.P.A.], 1994, 2000; Kuehner, 2003; McGrath, Keita, Strickland & Russo, 1990; Sprock & Yoder, 1997). Epidemiological research indicates that women have higher rates of major depressive disorder (Kessler et al., 1993) and dysthymic disorder (Bijl et al., 1998; Meyer et al., 2000). Although there is some variability, this difference has been found across cultures and societies (Maier et al., 1999; Weissman et al., 1996).

Many reasons have been offered for this gender difference, from hormonal changes and other biological differences (Angold et al., 1999; Hankon & Abramson, 2001; Hyde, Mezulis & Abramson, 2008), to socialization practices that foster develop of personality and cognitive styles that predispose women to depression (Eaton et al., 2012; Feingold, 1994; Lynn & Martin, 1997; Nolen-Hoeksema et al., 1999), societal inequality and increased rates of poverty (Astbury, 2001), to increased rates of sexual and physical abuse (Golding, 1999; Oddone Paolucci et al., 2001). Because the gender differences in depression emerge in adolescence and lessen with older age, reproductive hormones have been implicated in women's increased risk for depression (Angold et al., 1998; O'Hara & Swain, 1996; McGrath, Keita, Strickland & Russo, 1990; Sprock & Yoder, 1997). Women are subject to hormonal changes that may contribute to the development of postpartum depression. In addition, women have higher rates of thyroid disorder which is associated with depression (O'Keane, 2000) and endocrine dysregulation (e.g., hypothalamus-adrenal-pituitary axis) which increases vulnerability to stressors in the environment (Hyde et al., 2008; Weiss et al., 1999).

The role of genetics in the development of depression has been well documented (Hyde et al., 2008; Kendler et al., 2001; Lau & Eley, 2010; Saveanu & Nemeroff, 2012; Sullivan et al., 2000), and reproductive hormones may interact with a genetic diathesis (i.e., vulnerability) to increase risk of depression in women (Bloch et al., 2000; Hyde et al., 2008). Children born to a depressed mother are more likely to develop depression (Murray et al., 2011), due to heritability as well as other familial factors that increase their vulnerability to depression including insecure attachment and lowered resilience along with increased adversity (Murray et al., 2011).

Comorbid psychopathology may also contribute to higher rates of depression in women, including higher rates of anxiety disorders and eating disorders (Gadalla, 2008). These psychopathologies may be due to shared etiological factors or may be predisposing factors that increase vulnerability to depression (Watson, 2005). Substance abuse disorders are positively correlated with mood disorders, particularly in women (Zilberman et al., 2003). Substance abuse may contribute to the development of mood disorder or may be a maladaptive coping response to depression which in turn has negative consequences of increasing the risk of depression (Kahler, Ramsey, Read, & Brown, 2002). Moreover, women who abuse substances are at an increased risk for becoming involved in abusive relationships and may be susceptible to traumatic events, further elevating the risk of developing depression and anxiety disorder (Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997). Involvement in abusive relationships often leads to increased stressful life events that negatively impact family relationships (Zilberman et al, 2003), thereby creating a cycle of psychopathology from generation to generation.

Women have higher rates of abuse in childhood and adulthood, including sexual and emotional abuse, that contribute to higher rates of depression (Fletcher, 2009; MacMillan et al., 2001). Women also have higher rates of poverty (Gadalla, 2008; Vlachantoni, 2012) and are paid

less for their work than men in comparable positions (Blau & Kahn, 2006; 2007). Gender roles and socialization practices may contribute to the development of personality traits and cognitive styles in women that increase vulnerability to depression (Bebbington, 1996; Hyde et al., 2008; Nolen-Hoeksema, 1990; Sprock & Yoder, 1997; Wolk & Weissman, 1995). For example, women are more likely than men to develop a ruminative cognitive style that focuses attention inward and that may contribute both to the development and maintenance of depression, whereas men tend to utilize distraction in response to negative affect (Nolen-Hoeksema, 1991). In addition, women are socialized to be more dependent on interpersonal relationships, thereby increasing their vulnerability to interpersonal stressors.

It is apparent that there are numerous factors throughout the lifespan that contribute to the development of depression in women. Relatively few studies, however, have attempted to consider the interaction of multiple variables on the development of depression in women. In a study by Kendler et al. (2002), a developmental model was constructed using data from 1,942 adult female twins who were interviewed up to four times over a 9-year period. The study examined 18 distinct risk factors for the development of major depression across the women's lifespan. During childhood, risk factors included genetic risk, disturbed family environment, childhood sexual abuse, and parental loss. As women move into early adolescence, neuroticism, self-esteem, and early-onset anxiety and conduct disorders are risk factors for major depression. In late adolescence, educational attainment, lifetime traumas, social support, and substance misuse become increasingly important. Other risk factors include history of divorce, past history of major depression, as well as marital problems and stressful life events. The results of the study suggested three distinct pathways for the development of depression in women: an internalizing pathway (neuroticism and early-onset anxiety disorders), an externalizing pathway (conduct

disorder and substance misuse), and an adversity pathway. The adversity pathway is the most complex in so far as it includes the environmental factors across the developmental lifespan of women from early childhood (disturbed family environment, childhood sexual abuse, and parental loss) through adulthood (low social support and history of divorce). One important limitation of this study was that the twin pairs interviewed in the study were all Caucasian women from Virginia, and women from minority backgrounds were not included. The authors noted that the model assumed a causal relationship between predictor variables and dependent variables. However, it is difficult to say whether, for example, neuroticism leads to low educational attainment or whether it is a bi-directional relationship.

McBride and Bagby (2006) proposed an integrative model of depression in women that links ruminative cognitive style with interpersonal dependency. Their model was developed based on a review of the literature, particularly the work of Nolen-Hoeksema (e.g., Nolen-Hoeksema, 1990, 1991; Nolen-Hoeksema et al., 1999). In their model, interpersonal dependency, which may be viewed as either adaptive or maladaptive, predisposes women to depression only when it leads to maladaptive rumination. The authors argued that the gender differences in terms of cognitive style may be related to early socialization and inequalities in social power. They also noted that women are at greater risk of emotional and sexual abuse, which has also been linked to a ruminative cognitive style.

Based on an extensive review of the research, Hyde, Mezulis, and Abramson (2008) offered an integrative model that takes into account the affective (temperament), biological (genetic vulnerabilities and hormonal changes), and cognitive (negative cognitive style, objectified body consciousness, and rumination) factors that contribute to gender differences in the development of depression. According to this model, these factors function as vulnerabilities

that, when combined with negative life events (i.e., peer sexual harassment, child sex abuse, and interpersonal events), increase rates of depression for women beginning in adolescence through adulthood. Their conclusions were based on the premise that multiple pathways exist for the development of depression as opposed to a single pathway. The effect size of any single pathway is small because that pathway pertains to only a small subset of women who ultimately develop depression.

In a study using German college students, an integrative model of depression was tested empirically in order to explain the higher incidence of depression in women (Huckert & Krampen, 2010). The study considered the contribution of sex-role orientation (SRO), stressful life events, and locus of control in predicting the level of depression in male and female college students based on a variety of self-report measures. In their path model, gender did not have a direct effect on level of depression, but had an indirect effect through sex role orientation and stressful life events. The results suggested that women experience higher levels of depression due to lower internal locus of control and greater sensitivity to stressful life events compared to men. Furthermore, according to the authors, the lower internal locus of control seen in women results from traditional gender role socialization as opposed to actual gender differences. Limitations of this study include the use of self-report measures rather than clinical diagnoses, a cross-sectional rather than longitudinal design, and lack of diversity among participants.

Depression in minority women. One limitation noted for much of the above research is the lack of inclusion of African American and other minority women in the studies. There are even fewer studies that specifically focus on depression in African American women (Carrington, 2006). Although early trauma and other adverse life events are not unique to this population, minority women are more likely to experience a whole set of psychosocial problems

that make them vulnerable to the development of depression, including poverty, unemployment, single parent families, substance abuse, and untreated mental illness (Brown, Abe-Kim, & Barrio, 2003; Carrington, 2006). Women of minority backgrounds may be especially vulnerable to detrimental societal factors. These women are often left to take care of children on their own, as rates of single-mothers among minority women are exponentially higher compared to Caucasian women. The combination of poverty, lack of access to adequate health care, limited community resources, high rates of unemployment, and dependence on social welfare programs all contribute to increased rates of depression and anxiety, particularly among lower-income women of minority backgrounds (Carrington, 2006; Das et al., 2006; Jackson, 2006). The roles of discrimination, prejudice, racism, and the legacy of slavery continue to negatively influence the socioeconomic status of African American women (Carrington, 2006). African American women also have multiple exposures to community and domestic violence that contribute to the development of depression and other comorbid disorders (Carrington, 2006).

There are also considerable barriers to African American women seeking and receiving treatment for depression (Carrington, 2006; Das, Olfson, McCurtis & Weissman, 2006; Jackson, 2006) which contribute to prolongation of the disorder. Women from these communities often feel neglected by and isolated from the society at large. As a consequence, health care providers may be viewed through a lens of suspicion rather than broad acceptance, particularly if the provider if of another race (Jackson, 2006). African American women also prefer religious and spiritual means of coping with distress rather than mental health resources (Carrington, 2006; Jackson, 2006). Moreover, when African American women seek treatment, they often present with increased pain and somatic symptoms, as well as comorbid diagnoses, resulting in failure to detect depression, under-diagnosis and under-treatment (Carrington, 2006; Das et al., 2006).

African American women also have decreased levels of treatment adherence and follow-up (Das et al., 2006; Shelton, Goldman, Emmons, Sorensen, & Allen, 2011) further contributing to the perpetuation of depression. Moreover, there are few clinical trials examining the effectiveness of antidepressants or therapy for depression in African Americans, and even fewer for African American women (Jackson, 2006).

Cutrona et al. (2005) examined the role that neighborhood context, negative life events, and negative affectivity played in the development of depression in 720 African-American women. Results suggested that neighborhood-level disadvantage (i.e., high rates of poverty and unemployment) and social disorder (i.e., drug use) were predictive of the onset of major depression, irrespective of personal risk factors (i.e., negative affect and negative life events). In this study, the authors described neighborhood economic disadvantage as living in poor neighborhoods where resources are scarce. There are few employment opportunities and residents lack adequate social support leading to frustration and feelings of hopelessness and depression. Social disorder refers to the lack of order and safety found in poor neighborhoods due to neglect including deteriorated housing and inadequate police protection. Under these conditions, illegal activity is often left unchecked leading to feelings of helplessness and depression. This study emphasizes the important role that the environment has on the development of psychiatric disorders in minority women.

In a study by Luke et al. (2009), a total of 546 pregnant African-American women were screened for major depression. The purpose of the study was to determine the risk factors for depression among low-income African-American women prior to giving birth. Results indicated that about a quarter of the participants screened had symptomatology consistent with major depression. Another important finding was that age was a major risk factor in the likelihood of

developing depression. Women were far more likely to present with depression symptomatology after age 30. The authors explained this finding as a function of the cumulative stress (i.e., trauma and discrimination) that low-income African-American women experience over the course of their lifetime.

In another more recent study on the association between social stressors and depression, 119 pregnant African-American women receiving care were studied (Dailey & Humphreys, 2011). Social stress variables included discrimination, trauma exposure, social conflict, and economic stress. Nearly two-thirds of the women in the study had depressive symptomatology. There was also a significant positive relationship between social stress variables and depression. Moreover, discrimination and social conflict taken together accounted for 36% of the variance in prenatal depression symptoms.

Latina women may face some different challenges than African-American women including issues of language, cultural differences and level of acculturation, immigration and immigration status. These concerns may interact with factors such as poverty, unemployment, violence and abuse that contribute to the development of depression in minority women. Diaz et al. (2007) investigated the change in depression symptomatology over the course of pregnancy in a sample of Latina women. In the study, women were categorized into either high-risk group (N =36) or low-risk group (N =33), depending on their scores on a depression screening measure. Women who reported higher levels of social support and better marital quality experienced a decrease in depressive symptoms, regardless of their level of risk. These results suggest that social support and marital quality are important protective factors in the development of depression in Latina women.

In another study, in a sample of 135 Latina women, almost half (48%) scored high enough to suggest possible depression on a screening measure (Fox & Kim-Godwin, 2011). Lack of social support as well as immigration status and marital status were found to be the most reliable predictors of depression in this sample of Latina women. It should be noted that the women in this study were mostly migrant workers of Mexican descent (93%) taken from a rural setting so that the risk factors do not necessarily generalize to all women of Hispanic background.

In addition to immigration status, Latina women, as well as women from other minority groups, are more likely to experience intimate partner violence (IPV) as compared to Caucasian women (Fedovskiy, Higgins, & Paranjape, 2008). The correlation between IPV and symptoms of depression and post-traumatic stress disorder was assessed in a sample of Latina women (Fedovskiy et al., 2008). Nearly 50% of the women recruited ($N = 105$) had depression symptomatology and 19% were diagnosed with PTSD. The women who were abused by their partners were 3 times as likely to have symptoms of PTSD as non-abused women. In addition, the women diagnosed with PTSD were 10 times more likely to also endorse depressive symptoms.

These studies shed light on some of the unique challenges that women from minority backgrounds encounter that increase their vulnerability for the development of depression as well as other comorbid psychiatric conditions, particularly anxiety disorders. Factors such as high rates of unemployment, poverty, racism and prejudice, domestic and neighborhood violence, lack of child care and other resources, as well as inadequate health care all contribute to the development and perpetuation of depression and emotional distress in these women.

Anxiety Disorders in Women

Anxiety disorders are the second most commonly diagnosed psychiatric disorders, following depression (Maier et al., 2000) and are more frequently diagnosed in women (A.P.A., 1994, 2000). Similar to depression, women are about twice as likely as men to be diagnosed with an anxiety disorder (Halbreich, 2003). According to the National Comorbidity Survey (NCS), the lifetime prevalence of generalized anxiety disorder (GAD) is 6.6% for women compared to 3.6% for men (Wittchen et al., 1999). Women also have a higher prevalence of other anxiety disorders, including panic disorder, post-traumatic stress disorder (PTSD), phobias, obsessive-compulsive disorder, and social anxiety disorders (Halbreich, 2003; Kessler et al., 1998; Pigott, 1999; Schmidt & Keough, 2010).

Many factors contribute to the disproportionately higher prevalence rate of anxiety disorders in women compared to men including physiological factors, such as the role of reproductive hormones, increased activity of the hypothalamus-pituitary-adrenal (HPA) axis and increased anxiety sensitivity (Halbreich, 2003; Hearon et al., 2011). Similar to depression, anxiety disorders are more prevalent during pregnancy, suggesting the role of reproductive hormones (Halbreich, 2003; Pigott, 1999). Also like depression, anxiety disorders in the mother may cause problems for a newborn child (Field et al., 2003). Research suggests a considerable degree of heritability for the anxiety disorders; however, anxiety disorders are likely a result of interactions among genes and between genes and environmental factors, rather than any one gene (Smoller, Block & Young, 2009). Personality factors such as the tendency to internalize distress, as well as environmental and social factors, such as higher rates of abuse for women, contribute to increased vulnerability to anxiety disorders in women (Halbreich, 2003). Thus, the higher

rates of anxiety disorders in women are likely due to the interaction of biological factors with personality and environmental factors, such as higher rates of abuse (Halbreich, 2003).

Many of the factors that contribute to higher rates of depression in women are also relevant to anxiety disorders, as there may be common factors in the etiology of these disorders, and they are frequently comorbid (Mineka et al., 1998; Watson, 2005). Women with depression show higher rates of symptoms of anxiety. Depression and anxiety have been conceptualized as sharing a common factor of negative affect and may even be alternative manifestations of the same underlying pathology (Watson, 2005). Both disorders may represent manifestations of an underlying internalizing dimension which is higher for women than men (Eaton et al., 2012).

Research studies have demonstrated a high degree of comorbidity between anxiety disorders and depression (Watson, 2005; Wittchen et al., 1999). For example, a study conducted in Portugal (Alves et al., 2011) examined the prevalence and comorbidity of depression, anxiety, and stress. Participants were recruited from a health clinic that provided services for the urban and rural population. A strong association was found between depression, anxiety, and stress. Women were found to present with higher levels of anxiety and depression compared to men. There was also a high degree of comorbidity between depression and anxiety. In a similar study in Australia, Williams et al. (2010) found that approximately a third of the women surveyed (34.8%) reported a lifetime history of a mood and/or anxiety disorder. A total of 14.4% of women surveyed met criteria for a current mood and/or anxiety disorder, with similar rates for mood (8.9%) and anxiety disorders (8.0%). These results are consistent with other epidemiological studies that have been conducted in a various countries suggesting high rates of mood and anxiety disorders in the general population, and particularly in women (e.g., Watson, 2005; Wittchen et al., 1999).

Mineka and Zinbarg (2006) offered a contemporary learning model for the etiology of anxiety disorders in which genetic and temperamental vulnerabilities, coupled with exposure to stress, leads to the development of anxiety disorders. Although their model was not specific to women, there are a number of aspects of the theory that are relevant to gender differences. Previous experience with a stressor, perceptions of controllability, contextual variables, and post-conditioning factors contribute to the development and maintenance of anxiety disorders. For example, history of childhood abuse, especially repeated abuse, may result in sensitization to the effects of trauma later in life rather than habituation. In addition, prior trauma related to interpersonal violence such as abuse is more predictive of later development of PTSD as compared to trauma stemming from combat or an accident. Trauma that is perceived as uncontrollable and unpredictable is more likely to result in development of PTSD. Thus, women are more likely than men to develop PTSD symptoms as a result of higher rates of sexual and physical abuse (Cortina & Kubiak, 2006). Even when they experience similar traumas, women are more likely to develop PTSD than men (Tolin & Foa, 2008). Social factors including social learning, modeling, social reinforcement, verbal instruction, and gender roles also influence the development of anxiety disorders. For example, women may be more at risk for agoraphobia because it is more acceptable for women to stay at home, whereas those who must leave home for employment may be more likely to be exposed to the feared situation, which would extinguish anxiety (Mineka & Zinbarg, 2006).

Several studies have examined predictors of anxiety disorders in women. A study by Feerick and Snow (2005) sought to investigate the relationship between childhood sexual abuse, social anxiety and symptoms of posttraumatic stress disorder (PTSD) in a sample of over 300 undergraduate women. Participants provided information about family background, childhood

and adolescent experiences with sexual abuse, and current relationships. Their results showed that women with a history of sexual abuse reported significantly more anxiety, distress, and symptoms of PTSD relative to women with no history of sexual abuse. The authors of the study hypothesized that women who experience abuse are likely shaped by the experience in such a way that affects their internal representation of the self. This internalizing, in turn, contributes to a vicious cycle of social anxiety coupled with social incompetence, effectively heightening anxiety over time.

Pico-Alfonso et al. (2006) investigated the impact of intimate partner violence (IPV) on women's mental health, including anxiety and depression. One hundred eighty-two women in Spain participated in the study and were divided into one of three groups: physically/psychologically abused (n = 75), psychologically abused (n = 55), and non-abused (n = 52). The women were interviewed four to six times regarding their life and health as part of a larger project investigating the impact of IPV on mental and physical health. Detailed information was collected regarding violence perpetrated by an intimate male partner and lifetime history of victimization (i.e., childhood abuse and adulthood victimization). A mental health assessment was also conducted to collect data on depressive symptoms, anxiety, PTSD, and suicide attempts. Results indicated that IPV increases the incidence and severity of depressive, PTSD, and anxiety symptomatology. Moreover, results suggested that psychological abuse is just as harmful as physical abuse in terms of effect on depression and anxiety.

Anxiety disorders in minority women. There are also some unique factors that contribute to the development of anxiety disorders in minority women as compared to Caucasian women, including increased exposure to trauma, particularly interpersonal violence, limited social support, low socioeconomic status, and other barriers to receiving treatment (Seng et al.,

2011). In addition, minority women may be further marginalized if they are HIV positive or living with AIDS (Lopez, Antoni, Fekete, & Penedo, 2012). However, research examining anxiety disorders in the minority population is very limited, and even fewer studies have examined anxiety disorders in minority women.

Minority women may be exposed to more trauma than women from majority backgrounds, which may account for the higher rates of PTSD and other anxiety disorders (Roberts et al., 2011). In a recent study using a sample of pregnant women (Seng et al., 2011), African-American women were more likely to have had exposure to trauma and had higher rates of post-traumatic stress disorder symptoms and diagnoses compared to non-African-Americans. The lifetime and current prevalence rates of PTSD among African-American women in the study (24% and 13.5%, respectively) were significantly greater than for other women (17.1% and 3.5%). The differential rates of PTSD were explained as a consequence of the greater trauma exposure within the African American community rather than differences associated with socioeconomic status.

The cycle of trauma and subsequent difficulties that are associated with exposure to traumatic events appears to begin at a young age for those from minority backgrounds. Roberts et al. (2011) analyzed data from structured diagnostic interviews conducted as part of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). The purpose of this analysis was to determine race/ethnic differences in terms of exposure to traumatic events, development of PTSD, and seeking treatment for PTSD. Although Whites were more likely to be exposed to any trauma, Blacks and Hispanics had higher rates of child maltreatment, particularly witnessing domestic violence. Blacks were slightly more likely to develop PTSD

compared to Whites, and all minority groups (i.e., Blacks, Hispanics, and Asians) were less likely to seek treatment for PTSD compared to Whites.

Treatment barriers may contribute to the prevalence of anxiety disorders and other psychiatric illnesses among minority women. In a study highlighting the treatment barriers for low-income African Americans, 22% of the participants met criteria for PTSD (Davis et al., 2008) compared to a range of 9-12% in the US population at-large (Kessler et al, 2005; Resnick et al, 1993). Of the 220 participants in the study, 59.3% were women (N = 130) and nearly all were African American (97.3%). Only a small group of participants with PTSD (13.3%) reported having received PTSD-focused treatment, despite a history of mental health services for other conditions (i.e., depression, schizophrenia, bipolar disorder, or anxiety disorder). The study noted that the most significant barriers to treatment among this sample included limited finances and transportation, family disapproval, negative therapy experiences of others, community disapproval, and ineligibility for services. As a result, minority women who do not seek treatment for anxiety disorders may experience more severe symptoms and life stressors. The under-treatment of anxiety disorders in minority women may also relate to the general findings that anxiety disorders are under-diagnosed and under-treated (Lam, 2006; Unutzer, 2008).

Personality Disorders in Women

According to results of the National Epidemiological Survey on Alcohol and Related Conditions (Grant et al., 2004), 14.8% of the general population meets criteria for at least one personality disorder. The National Comorbidity Survey Replication (Lenzenweger et al., 2007) reported that 9.1% of the population had at least one personality disorder. In terms of gender differences, the prevalence rates of avoidant, dependent, and paranoid personality disorders were significantly greater in women than in men, whereas antisocial personality disorder was

significantly more frequent in men than in women. Historically, histrionic and borderline personality disorder have been diagnosed with greater frequency in women (Trull et al., 2010), although there has been some criticism regarding the validity of the diagnostic criteria used to make such clinical judgments (Jane et al., 2007; Morey, Warner, & Boggs, 2002; Trull et al., 2010).

The revised National Epidemiological Survey of Alcohol and Related Conditions (NESARC-REVISED; Trull et al. 2010) also reported a lifetime prevalence rate of 9.1% for a personality disorder in the United States. They also found gender differences, with paranoid, borderline, avoidant, and dependent personality disorder more common in women, and antisocial and narcissistic personality disorder more frequently diagnosed for men. In addition, the revised NESARC results indicated that histrionic and obsessive compulsive personality disorders were significantly more common in women than men.

Within psychiatric populations, personality disorders are highly prevalent. Newton-Howes et al. (2010) sought to measure the prevalence of personality disorders within a sample of psychiatric patients in the United Kingdom. Results suggested that 40% of the total sample suffered from a personality disorder. Results also suggested that personality disorders accounted for greater degree of dysfunction compared to psychosis or substance abuse.

Personality disorders are also highly comorbid with Axis I disorders. In a family history study, Zanarini et al. (2009) sought to examine the relationship between borderline personality disorder (BPD) and a wide range of Axis I and Axis II disorders. The researchers found that BPD was associated with other conditions including mood disorders, substance abuse disorders, anxiety disorders, and eating disorders in first-degree relatives. In other words, BPD is more likely to emerge in families with a high degree of affective instability and impulsivity.

The revised NESARC results (Trull et al., 2010) also indicated that for comorbidity with alcohol dependence, the highest lifetime prevalence rates were seen in individuals with antisocial, histrionic, and borderline personality disorder, each at approximately 50%. Those individuals with histrionic, dependent, and antisocial personality disorder also had the highest rates of comorbidity with drug dependence at roughly 25%. These patterns of comorbidity may also relate to gender differences in personality disorders and Axis I disorders, with women having higher rates of mood and eating disorders and men having higher rates of substance use disorders.

A variety of factors contribute to the development of personality disorders in women, including genetics, temperament, and childhood experiences. There is increasing evidence for the biological bases of personality disorders and temperament. Research suggests moderate heritability of the major trait dimensions (i.e., negative affect, detachment, antagonism, disinhibition, and psychoticism), and that gene-environment interactions contribute to the development of personality disorders (Jang et al., 2005; South & DeYoung, 2012). There is also increased recognition of the role of stressors, especially abuse, physical and sexual abuse, and neglect in the development of borderline and other personality disorders (Paris, 2001). Parental psychopathology, negative parenting styles, divorce, and cultural/social factors are additional risk factors. However, given that most children are resilient and do not develop a personality disorder in response to negative life events, there appears to be an interaction of vulnerability with environmental factors (Paris, 2001).

Zanarini et al. (1997) sought to assess the adverse childhood experiences of patients who had been diagnosed with borderline personality disorder (BPD) compared to patients with other personality disorders. Patients diagnosed with BPD were significantly more likely to have been

neglected or abused than patients with other personality disorders. Over 90% of the patients diagnosed with BPD had reported that they had been either abused or neglected or both. The researchers concluded that four specific risk factors were found to be significant predictors of BPD: female gender, sexual abuse by male non-caretaker, emotional denial by male caretaker, and inconsistent treatment by female caretaker.

Kasen et al. (1999) conducted a prospective study in which children between 9-16 years old were assessed at three distinct points over a 10 year period. The purpose of the study was to examine the relationship between childhood psychopathology and development of personality disorders in young adults. In this study, children who had a history of disruptive disorders, anxiety disorders, and major depression all were significantly more likely to develop a personality disorder as a young adult. Results suggest that early onset of psychiatric disorders may cause more persistent psychopathology over time.

Joyce et al. (2003) sought to establish a developmental model for risk factors that contribute to personality dysfunction. In this study, 180 depressed outpatients were evaluated for personality disorders. Patients completed a series of self-report questionnaires at baseline clinical assessment, including the Structured Clinical Interview for DSM-III-R-personality questionnaire (SCID-PQ; Spitzer, Williams, & Gibbon, 1987) and the Structured Clinical Interview for DSM-III-R- Axis II (SCID-II; Spitzer, Williams, & Gibbon, 1987). In addition, risk factors for personality disorders were assessed by using a variety of instruments designed to measure parental neglect, childhood abuse, temperament, and childhood and adolescent psychopathology. The most common personality disorders found in the study were avoidant (24%) and borderline (17%). With respect to childhood environmental risk factors, increasing levels of abuse and neglect during childhood were predictive of increased avoidant and borderline diagnoses. In

terms of temperamental risk factors, harm avoidance was correlated with avoidant personality whereas borderline was associated with a combination of novelty-seeking and harm avoidance. Furthermore, the results showed a relationship between childhood and adolescent psychopathology and development of personality disorders. Not surprisingly, early onset of anxiety disorders increased the risk of avoidant personality disorder whereas early onset substance abuse increased the rate of borderline. Increased rates of both avoidant and borderline were seen in patients with early onset of first major depression and childhood conduct problems. Overall, anxious temperament and childhood anxiety disorders, coupled with parental neglect, were most predictive of avoidant personality disorder, and the interaction between childhood abuse and neglect, high novelty-seeking and harm avoidance, and childhood and adolescent psychopathology were associated with borderline personality disorder.

Pico-Alfonso, Echeburua, and Martinez (2008) examined personality disorder symptoms of women who were victims of intimate partner violence (IPV) in Spain. In the study, women who had been victims of physical and psychological violence were compared with women who had no history of abuse. The women were interviewed about their lives and health over several sessions and were asked about physical, sexual, and psychological violence perpetrated by an intimate partner and experiences of childhood abuse. Personality was assessed using a Spanish version of the Millon Clinical Multiaxial Inventory-II (MCMI-II; Millon, 1987), a self-report inventory that measures personality styles, severe personality disorders, and clinical syndromes. Results showed that women who were victims of IPV had higher scores on the personality disorder scales than the non-abused control group. It is important to note that the researchers controlled for experiences of childhood abuse. Nevertheless, both physical and psychological IPV were strongly associated with personality disorder symptomatology.

Although antisocial personality disorder is less common in women, Hicks, Vaidyanathan, and Patrick (2010) sought to test whether the related constructs of primary and secondary psychopathy, subtypes found in men, were also present in women. The primary psychopathy subtype is consistent with an emotionally stable personality style whereas the secondary subtype is consistent with more severe emotional disturbance and personality disorder, as determined on the broad trait construct of Negative Emotionality (NEM; Hicks & Patrick, 2006; Watson & Clark, 1984). According to the authors of the study, secondary psychopathy in women manifests similarly to borderline personality disorder insofar as it is characterized by a cluster of symptoms including extreme negative emotion and impulsivity; substance abuse; reactive anger, aggression, and violence; trauma; and suicidal behavior (Trull, 2001). In contrast, women with primary psychopathy were more psychologically stable and exhibited later onset of antisocial and criminal behavior.

Personality disorders in minority women. Few studies have examined the prevalence of personality disorders for different ethnic groups (Chavira et al., 2003; McGilloway et al., 2010), and there are no known studies examining the rate of personality disorders specific to minority women. Utilizing data from the Collaborative Longitudinal Personality Disorder Study, Chavira et al. (2003) examined the prevalence of four personality disorders (borderline, schizotypal, avoidant, obsessive-compulsive) in three ethnic groups (African American, Caucasian, Hispanic) based on structured interviews of over 500 patients. The researchers found higher rates of borderline in Hispanic than in Caucasian and African American patients, and higher rates of schizotypal in African American than Caucasian patients.

Based on a meta-analysis of the literature on ethnic variations in the prevalence, etiology and treatment of personality disorders, McGilloway et al. (2010) concluded that the one

consistent finding was that Black participants had a small but statistically significant lower prevalence of personality disorders compared to Whites. Few studies focused on the etiology of personality disorders in ethnic minorities. Their review also indicated that individuals from ethnic minority groups are less likely to seek treatment for personality disorders compared to their white counterparts and may be under-diagnosed and under-treated. Overall, the data on ethnicity and personality disorders is limited due to the small number of studies.

Perez-Benitez et al. (2010) examined data from the Collaborative Longitudinal Personality Disorder Study (CLPS) to compare adverse childhood experiences and lifetime traumatic events among different ethnic groups for individuals with personality disorders. They were also interested in whether ethnicity affected rates of psychiatric disorders among individuals exposed to trauma. The study compared 506 non-Hispanic Whites, 108 Latinos, and 94 African American participants, and women comprised 63% of the participants. Like other studies, they found a high rate of comorbid major depression, PTSD and substance use disorders among these individuals with personality disorders. Results suggested that non-Hispanic Whites were exposed to more negative and traumatic events compared to other ethnic groups, whereas African Americans were more likely to report having witnessed someone being injured or killed. However, there did not appear any significant interaction between ethnicity, trauma exposure, and development of psychiatric disorders. Results suggested a high rate of adverse and traumatic events across all ethnic groups in individuals with personality disorders suggesting that environmental factors play an important role in the development of personality disorders.

Substance Abuse in Women

According to the Epidemiologic Catchment Area (ECA; Regier et al., 1990) study, it is estimated that nearly 1 in 5 adults in the United States will meet criteria for a substance use

disorder at some point in their life, with 13.5% alcohol abuse/dependence and 6.1% for other drug abuse/dependence. Research studies on gender and substance abuse have shown that women are less likely to develop problems related to drugs and alcohol compared to men (A.P.A., 1994, 2000; Brady & Randall, 1999). In the National Comorbidity Survey (NCS; Kessler et al., 1994), 5.9% of women ages 15-54 were found to meet the criteria for a diagnosis of lifetime dependence on an illicit or psychoactive drug, and lifetime prevalence rate of alcohol dependence for women was 8.2 %. However, women who develop substance abuse problems often report a greater severity of problems compared to men (Fuchs et al., 1995) and do so at a much more accelerated rate than their male counterparts (Randall et al., 1999). Also, women are far less likely than men to seek specialized substance abuse treatment, preferring to seek mental health services instead (Weisner & Schmidt, 1992).

Many reasons have been offered for the gender difference in rates of alcohol and drug abuse disorders, from biological differences (Marshall et al., 1983), to socialization practices that foster the development of personality and cognitive styles that predispose women to depression and other internalizing disorders and men to develop externalizing disorders such as substance abuse and antisocial personality disorder (Cornelius et al., 1995; Eaton et al., 2012; Nolen-Hoeksema et al., 1999).

Like the other disorders that have been reviewed, genetics play a significant role in the vulnerability to developing substance use disorders; vulnerability is likely due to multiple genes that interact with environmental factors (Kreek et al., 2005; Velleman et al., 2005). Research on the interaction of genetics and environment in substance use disorders has consistently found that environments that exert more social control (i.e., higher parental monitoring) tend to reduce genetic influences (Dick & Kendler, 2012). Furthermore, Baker and colleagues (2012) found that

substance use in the household during childhood, and parental attitudes towards substance use, account for a significant proportion of shared environmental effects**.**

There is also a high rate of comorbid psychopathology in substance abuse disorders (Kessler et al., 1997), and comorbid psychopathology may also play a role in the development of substance abuse disorders (Schutte, Hearst, & Moos, 1997). According to the self-medication hypothesis, individuals may use substances as a way of coping with the discomfort associated with other mental disorders, such as mood and anxiety disorders (Khantzian, 2003; Suh et al, 2008) and to cope with trauma (Haller & Chassin, 2012). For example, Gil-Rivas, Prause, and Grella (2009) examined the association of depression and anxiety symptoms and trauma exposure to substance abuse among individuals with co-occurring disorders. This longitudinal study followed substance abuse patients at the beginning of residential treatment and at 6-month and 12-month follow-up. Nearly all of the study participants reported lifetime trauma exposure, and more than one-third met criteria for PTSD. Trauma exposure and depression and anxiety symptoms were associated with increased likelihood of substance abuse at follow-up. The researchers concluded that the results support the self-medication hypothesis of substance abuse, particularly among individuals with co-occurring disorders.

Comorbid psychopathology may also contribute to the differential rates of substance use disorders in men and women. Zilberman, Tavares, Blume and el-Guebaly (2003) reviewed the psychiatric comorbidity of individuals with substance abuse disorders. Women with alcohol and other drug use disorders were more likely to present with psychiatric comorbidity compared to men. More specifically, women presented with higher rates of mood and anxiety disorders compared to men. It is also interesting to note that for women, the mood or anxiety disorder

diagnosis was more often the primary condition whereas the substance abuse disorder was considered secondary.

More recently, Grella et al. (2009) examined the association between other mental disorders and substance use disorders among individuals with opioid use disorders. The study sample was taken from the National Epidemiological Study on Alcohol and Related Conditions (NESARC). Study results indicated that 70% of the sample had another lifetime diagnosis of an Axis I mental disorder and 50% had a personality disorder. Individuals with Axis I mental disorders were nearly three times as likely to be dependent on other substances, regardless of their gender. However, women were about twice as likely to have a mood or anxiety disorder, whereas men were more likely to be diagnosed with antisocial personality disorder.

Ruiz et al. (2012) examined the association between co-occurring mental health and substance abuse disorders in a sample of male and female offenders. Results suggested that offenders with substance abuse disorders were more likely to have increased mental health problems and risk factors for suicide compared to other offenders. Also, women with substance abuse disorders were more likely to be depressed and to have suffered traumatic stress compared to male offenders.

A number of studies have examined risk factors in the development of substance use disorders. Logan et al. (2002) proposed an integrated model of the development of victimization and substance abuse in women. The authors divided the risk factors into four broad categories: trauma and coping factors, lifestyle factors, sociological factors, and contextual factors. Trauma and coping factors consisted of several risk factors, including child and adolescent victimization (i.e., abuse and/or neglect), substance abuse as coping (i.e., self-medication hypothesis), mental health problems (i.e., comorbid depression and anxiety), and biological vulnerability and

changes due to substance use. Lifestyle factors identified by the authors included environment, impaired decision-making, and revictimization. In terms of sociological factors, the authors incorporated poverty, cultural norms, family environment, and assortative mating patterns (i.e., choosing partners with similar problems). Finally, contextual factors included structural barriers, psychological barriers, and relationship dynamics.

Agrawal et al. (2005) investigated 26 risk factors for the development of substance abuse and/or dependence in adult female-female twins (monozygotic and dizygotic).These risk factors were classified into various sub-headings including socio-demographic factors, religiosity measures, personality measures, childhood risk factors, and psychiatric illness. Participants in the study were female same-sex twins recruited from an ongoing longitudinal study on risk factors and drug use. The study was conducted in four separate waves of interviews and follow-ups. The same-sex twins selected for the study were interviewed and given a self-report questionnaire that measured personality traits during the first wave of interviews. Follow-up interviews collected information regarding socio-demographic risk factors, level of religiosity, and parental warmth. In addition, Axis I psychiatric disorders and lifetime use of an illicit drug were also included as part of the study. Risk factors that were most positively correlated with drug abuse/dependence included history of divorce, novelty-seeking, extraversion and altruism, childhood sexual abuse, and development of psychiatric disorders such as depression and anxiety. It is important to note that the specific causal relationships between risk factors and drug use were not examined in this study as the measures used in the study were not repeated at follow-up. Also, all of the participants in the study were Caucasian limiting the generalizability of the findings to a specific demographic.

A prospective study conducted by Measelle, Stice, and Hogansen (2006) sought to examine the developmental trajectory of depression, eating disorder, antisocial, and substance abuse symptoms in a community sample of female adolescents. Results suggested that increases in each individual symptom domain were associated with increases in all the others. In other words, initial depressive symptoms at early adolescence were predictive of increased eating disorder and substance abuse symptoms at later adolescence. These results support the hypothesis that women may use substances to self-medicate negative affective states, suggesting an internalizing pathway to substance abuse.

Another prospective study sought to examine the relationship between aggression, social withdrawal, and likeability in childhood, and substance use disorders in adulthood (Martin-Storey et al., 2011). Participants in the study were 676 individuals from the original Concordia Project, who were recruited as children in elementary school (grades 1,4, or 7) in 1976-78, and agreed to participate in a detailed follow-up regarding mental health and general health in adulthood (ages 28-40). During the initial phase of the study, the children participated in a behavioral screen that assessed peer and self-perceptions of aggression, social withdrawal, and likeability. The follow-up, in which participants were now adults, consisted of a structured clinical interview that assessed for history of drug and alcohol abuse and dependence. Results suggested that higher levels of both self- and peer-reported aggression were associated with higher levels of substance use disorders in women, supporting an externalizing pathway for later substance abuse. In addition, higher self-perceived likeability was a protective factor against development of substance use disorders.

Hussong and colleagues (2011) proposed two different pathways for the development of substance use disorders: an internalizing pathway and an externalizing pathway. The

externalizing pathway posits that problems begin to appear early in children with difficult temperament and behavioral problems (i.e., aggressive acting-out). These individuals often experiment with drugs and/or alcohol at an early age and exhibit antisocial behavior. This pathway emphasizes a combination of genetic factors (i.e., proclivity towards behavioral disinhibition) and a high-risk environment (i.e., poverty, inadequate parenting, lack of social support). On the other hand, an internalizing pathway emphasizes the role of negative affect and internalizing symptoms in the development of substance use disorders. From this perspective, problems arise in children who are behaviorally inhibited and have difficulty adjusting socially. As a result, these individuals tend to experience increased levels of social rejection and respond by withdrawing and using substances as a means of coping.

Several studies have examined the role of trauma and other factors as predictors of substance use disorders in women. A longitudinal study by Gilbert et al. (2012) examined the association between substance abuse and intimate partner violence (IPV) in women. The participants in the study were a representative sample of 241 low-income women receiving emergency care in an urban setting. Results suggested that women who reported using heroin in the past 6 months were twice as likely as non-heroin-using women to report IPV of any form (i.e., physical or sexual) at subsequent follow-up. In addition, women who reported crack cocaine use in the past 6 months were almost 3 times as likely to report an injury due to IPV. Sexual IPV was also strongly associated with continued crack cocaine use during follow-up visits. Related, Asberg and Renk (2012) found that substance abuse was a significant predictor of incarceration among survivors of childhood sexual abuse (CSA), and that incarcerated survivors had experienced more severe CSA and psychological problems and endorsed more problems with family functioning compared to higher functioning survivors (i.e., college students).

Overall, the research provides support for externalizing and internalizing pathways to the development of substance abuse disorders in general, and specifically for women. Research suggests that temperament along with environmental and social factors, history of trauma, IPV, and CSA are associated with the development of substance abuse disorders in women, as well as depression and anxiety disorders, which are frequently comorbid conditions. Pre-existing internalizing and externalizing disorders (e.g., depression, anxiety, personality disorders) are risk factors for substance abuse. Studies also suggest that the combination of trauma, substance abuse, and comorbid psychopathology are associated with incarceration and legal problems.

It is important to note that results of many of the studies are limited due to lack of inclusion of women from minority backgrounds, or ethnicity of the participants was not specified or examined. Although one study of women from diverse ethnic backgrounds found that ethnicity did not moderate the relationship between psychosocial risk factors and substance abuse disorders (i.e., Myers et al., 2009), all of the women in the study came from similar low SES backgrounds. Minority women have a higher rate of poverty compared to Caucasian women, putting them at increased risk for experiencing a variety of psychosocial stressors.

Substance abuse in minority women. The higher incidence of maltreatment and witnessing domestic violence experienced by minority children compared to majority children (e.g., Roberts et al., 2011) may also be a factor in increased rate of alcohol and other substance use disorders among minority women. Minority women are also more likely to use drugs and alcohol to cope with life stressors, which in turn may lead to other problems. Minority women may self-medicate with drugs and alcohol as a way of coping with abusive partners and difficult living conditions (Logan, Walker, Cole, & Leukefeld, 2002).

In a study employing both quantitative and qualitative data (Curtis-Boles & Jenkins-Monroe, 2000), African American women with substance abuse histories ($N = 30$) were compared to non-abusing African American women ($N = 30$). The women were assessed on a number of dimensions including childhood trauma (i.e., parental substance abuse and childhood abuse), spirituality, social support, trauma exposure and significant losses, and racism/discrimination. Results of the study suggested that although all women reported exposure to high level of violence and personal losses, African-American women with substance abuse histories were significantly more likely to experience domestic violence, homelessness, and other traumatic events.

Amaro et al. (2005) sought to study racial/ethnic differences in social vulnerability among women with co-occurring mental health and substance use disorders. The participants of this study were 2,534 women enrolled in the Women, Co-occurring Disorders, and Violence Study (WCDVS), sponsored by the Substance Abuse and Mental Health Services Administration. The sample was comprised of Hispanics (19.6%), non-Hispanic Blacks/African-Americans (28.6%), and non-Hispanic Whites (51.7%). With respect to major substance problem, Hispanics (21.5%) identified heroin as the major problem more often than Whites (17.3%) or Blacks (12.4%). In contrast, Blacks (47.9%) reported crack/cocaine was a major problem more often than all other racial groups.

Boyd et al. (2009) examined predictors of alcohol and drug problems (Boyd et al., 2009) in a sample of 142 African-American women. The women were assessed using a diagnostic instrument and alcohol and drug abuse screeners. Several predictors were also measured including stressors and positive events, coping, beliefs about alcohol, childhood and adult violence, and self-esteem. Forty-three percent (N = 61) of the women in the sample met criteria

for an alcohol or drug use disorder. The best predictors for alcohol abuse were beliefs about alcohol use and having experienced violence whereas self-esteem predicted drug abuse.

Myers et al. (2009) sought to determine the contributions of psychosocial risk factors such as trauma, chronic stress, depression, anxiety, social support, and social undermining (i.e., social conflict or negative social interactions) in predicting alcohol and drug abuse in a sample of low SES women from diverse ethnic backgrounds. The study also sought to determine whether ethnicity moderated the relationship between these psychosocial risk factors and alcohol and drug dependence. The sample consisted of a total of 288 HIV-positive and HIV-negative women self-identified as African American (N = 122), European American (N = 119), or Latina (N = 47). Results suggested that greater drug dependence was associated with being HIV+, less depression, and higher perceived chronic burden. Meanwhile, alcohol dependence was associated with more depression and more social undermining. Another important finding was that ethnicity appeared to moderate the relationship between social support and risk for alcohol dependence. In other words, the relationship between social support and development of substance use disorder was influenced by ethnicity. Furthermore, the effects of chronic social and interpersonal stress were mediated by elevated levels of depression, such that depressed women were more likely to be drug and alcohol dependent. Interestingly, ethnicity did not appear to be a factor in predicting alcohol and drug dependence, as the effects were not different across ethnic groups. The results of this study are particularly relevant to the proposed study because of the similarity of the samples and the focus on trauma and life events as predictors of later psychopathology.

Issues Specific to Minority Women

Ethnic minority women face specific challenges that cannot be overstated. Unlike women from more privileged backgrounds, minority women, particularly those from the inner-city, are exposed to many environmental stressors that are unique to their experience including high rates of poverty, unemployment, violence, abuse and trauma. There are also some unique factors that contribute to the development of mental disorders in minority women, particularly racism and racial discrimination. These factors have an immeasurable influence in shaping the environment and socio-cultural milieu of minority women. In addition to the effects on employment and housing opportunities, racism contributes to the development of mental disorders by negatively affecting self-image and self-confidence (A.P.A., 2006). According to the position statement by the American Psychiatric Association, racism is also a primary factor in the racial disparity in mental health treatment (A.P.A., 2006).

Minority women also face increased exposure to trauma, particularly interpersonal violence. For example, Hien and Bukszpan (1999) investigated the rates of interpersonal violence and trauma in a sample of 98 urban, minority women. These women were considered to be part of a control group of a larger study of violence and substance abuse, as they were screened for the absence of any current Axis I psychiatric disorders. Results of the study suggested that minority women from the inner-city were much more likely to experience childhood sexual and physical abuse and trauma compared to the general population. Although none of the women met criteria for any current Axis I psychiatric disorders, the women in this group were more likely to experience trauma (10-20%) and nearly 25% met diagnostic criteria for lifetime or history of PTSD.

Similarly, in a study on the racial/ethnic differences in exposure to traumatic events, African-Americans and Hispanics had higher rates of child maltreatment and were more likely to witness domestic violence in the household compared to their White counterparts. African-Americans were also found to have the highest prevalence rates of PTSD at 8.7%. Further, all minority groups were less likely to receive trauma-specific treatment (Roberts et al., 2011). Although these findings were not specific to minority women per se, results are illustrative of the unique challenges faced by individuals from ethnic minorities as a whole.

Minority women are also more vulnerable to HIV/AIDS infection. According to the Centers for Disease Control and Prevention (2001), African Americans and Hispanics accounted for more than 75% of AIDS cases in females, despite representing only 25% of women in the United States. Minority women may be further marginalized if they are HIV positive or living with AIDS, contributing to the development of psychopathology.

Myers et al. (1999) assessed the prevalence of psychiatric disorders among African-American men and women living with HIV/AIDS. While only 9% of African American women met criteria for a panic disorder within the past year, the overall prevalence of PTSD symptoms among the same group of African American women was significantly greater at 50%. In addition, 21% of the African-American women met criteria for major depression. The results of the study were significant in several ways. The prevalence rates of anxiety and depression in this population were significantly greater than those in epidemiological studies of the community at-large, suggesting that African-American women living with HIV/AIDS are at greater risk of developing psychiatric disorders. The study also suggested that socioeconomic factors (i.e., low income and limited education) as well as limited social support were the two most important risk factors associated with psychiatric risk within this population of African-American women. A

study by Catz, Gore-Felton, and McClure (2002) also found that minority women receiving treatment for HIV had higher levels of depression and anxiety relative to the community at large. Factors associated with these increased levels of psychopathology included higher levels of stress, fewer coping strategies, and less social support.

In addition, numerous studies have shown that minority women underutilize mental health treatment services due to a host of psychosocial stressors including inadequate health care, lack of childcare or transportation, as well as negative perceptions of health care services and preferences for primary care or other sources of support (e.g., Carrington, 2006; Cutrona et al., 2005; Das et al., 2006; Jackson, 2006; Seng et al., 2011). These barriers to treatment often lead ethnic minority women to defer seeking help for psychological distress until overwhelmed by stress and experiencing serious problems in their lives.

Overall, this review suggests that there are many factors that are predictive of psychopathology in minority women, including increased exposure to trauma and IPV, limited social support, low socioeconomic status, and living in economically disadvantaged and socially disorganized neighborhoods. There is a lack of necessary resources in these low SES communities such as transportation, child care, and police protection from crime. Minority women have higher rates of HIV and comorbid mental and physical conditions that increase the prevalence of mental health disorders. Moreover, minority women also underutilize services and are often under-diagnosed and under-treated due to a variety of factors, such as the barriers noted above, as well as insufficient healthcare and attitudes towards mental health treatment. Finally, minority women also face racial discrimination and oppression which have innumerable psychosocial and environmental consequences that cannot be overstated. However, the present

study will not focus on racial discrimination as a predictor of psychopathology in minority women.

The Present Study

The above studies examined predictors of depression, anxiety disorders, personality disorders, and substance use disorders in women; however, none of the studies examined antecedents of both internalizing and externalizing psychopathology in minority women. It is apparent from the above review that many etiological factors contribute to the development of these psychopathologies in women, and that they cannot be viewed in isolation. Further, the psychopathologies represented interact with each other, acting as predisposing factors or different pathways to the development of adult psychopathologies. Thus, the purpose of the present research was to examine factors that are predictive of the development of internalizing and externalizing psychopathology in women. Moreover, the present study focused on the unique factors that contribute to the development of these disorders in minority women, as this is an area that has been neglected in the previous studies, and many of the studies did not include any minority women in their samples.

The present research sought to construct a comprehensive model of psychopathology in minority women using archival data that were collected as part of a longitudinal study of interpersonal violence in four samples of inner city women (i.e., women diagnosed with cocaine abuse, women diagnosed with depression, women with a dual diagnosis, and women with no history of depression or substance abuse) seen in treatment centers at a major hospital in New York City. The samples included women with a broad range of internalizing psychopathology (depression and anxiety) and externalizing psychopathology (antisocial personality disorder and substance use disorders) that were assessed using a structured diagnostic interview.

Retrospective data were collected on childhood history of abuse, trauma and adverse events, as well as early onset of psychopathology and treatment, and family psychopathology, that served as the focus of the present study. Additional data were collected on family environment, including parenting behaviors, coping styles, personality characteristics, social support, victimization in current relationships and partner violence, perpetration of violence and criminal arrest records that were not considered in the present study. The data were collected as part of a funded study that sought to examine psychopathology and psychosocial predictors of domestic abuse and perpetration of domestic violence. The present study used a correlational design, both logistic regression and multiple regression, to examine predictors of internalizing and externalizing psychopathology in inner city minority women, with the goal of developing a comprehensive model of developmental psychopathology in this population.

Hypotheses

Based on the review of the literature, the following hypotheses were proposed for this study:

1. Physical/emotional abuse and sexual abuse experienced during childhood and/or adolescence (i.e., prior to age 18) would be predictive of both internalizing disorders (i.e., depression and anxiety) and externalizing disorders (i.e., antisocial personality and substance abuse/dependence) in adult women (i.e., age 18 and older).
2. Exposure to other trauma (i.e., witness of domestic violence, other traumatic events), during childhood and/or adolescence would be predictive of both internalizing and externalizing disorders in adult women.

3. Early onset of internalizing disorders (i.e., depression or anxiety during childhood and/or adolescence) would be predictive of internalizing disorders (i.e., depression or anxiety) in adult women.
4. Early onset of externalizing disorders (i.e., drug or alcohol abuse during childhood and/or adolescence) would be predictive of externalizing disorders (i.e., drug or alcohol abuse or antisocial personality disorder) in adult women.
5. Family history of psychiatric problems (i.e., severe depression, psychiatric hospitalizations, and suicide) would be predictive of internalizing disorders in adult women.
6. Family history of substance use disorders (i.e., alcoholism and drug abuse) would be predictive of externalizing disorders in adult women.
7. There would be a significant difference based on ethnicity in terms of physical abuse, sexual abuse, and other trauma experienced during childhood or adolescence, with African-American and Hispanic women exposed to a greater incidence of abuse and/or other trauma compared to Caucasian women.
8. Ethnicity would moderate the relationship between specific predictor variables (i.e., history of physical abuse, sexual abuse, or other trauma experienced during childhood or adolescence; childhood or adolescent internalizing or externalizing disorders; family history of psychiatric or substance use disorders) and the outcome variables (i.e., current diagnosis of internalizing or externalizing disorder). Specifically, it was predicted that the relationship between trauma, abuse, and the other childhood and family psychopathology predictors would be stronger for African American and Hispanic women than for Caucasian women.

9. Treatment history would moderate the relationship between early onset psychopathology and psychopathology during adulthood. However, a more specific hypothesis was not proposed, as it was unclear whether early treatment would be preventative in the development of adult psychopathology or would serve as a marker of more severe early onset psychopathology.

CHAPTER 2

Method

Design

The current study employed a retrospective correlational design utilizing a portion of the archival data that were previously collected as part of a larger longitudinal study investigating predictors of interpersonal violence in a sample of inner-city women. The original study was supported by a grant from the National Institute on Drug Abuse, and the data were collected over the course of 5 years (1994-1999). The present study examined childhood/adolescent and family risk factors as predictors of internalizing and externalizing psychopathology in adulthood. The independent variables included self-report measures of childhood/adolescent physical abuse, sexual abuse, general trauma, and psychopathology, as well as family history of psychopathology. The primary dependent variable was adult DSM-IV diagnoses based on a semi-structured interview. A secondary independent variable was current level of depression, as another measure of internalizing psychopathology. In addition, the role of patient race/ethnicity was examined to determine if it moderated the relationship between the early risk factors and the diagnosis of psychopathology in adulthood. Another potential moderating variable was child/adolescent treatment history.

Participants

The present study used an archival data set from a larger, longitudinal study investigating predictors of interpersonal violence in a sample of inner-city women. The participants in the

original longitudinal study were 338 women presenting for treatment at one of several settings within a major urban hospital system: psychiatric outpatient clinic, psychiatric inpatient unit, substance abuse outpatient clinic, inpatient detoxification unit, and outpatient gynecology/family planning clinic. The study divided the women into four subgroups based on a structured diagnostic interview: 1) women with comorbid depression and cocaine abuse; 2) women with cocaine abuse and no history of major depression or dysthymia; 3) women with major depression or dysthymia and no history of substance abuse; and 4) women with no history of depression or substance use disorders.

The inclusion criteria for the original longitudinal study for the women with depression and/or cocaine use disorders included the following: 1) willingness to participate; 2) having a mailing address or family contact person; 3) being between the ages of 18 and 45; and 4) having positive prescreens for lifetime depression or cocaine use. The women in the control group also met criteria 1, 2 and 3, but were excluded if they were found to have any history of lifetime psychiatric disorder or history of lifetime substance use disorder. Exclusion criteria for all groups included a clear history of severe organic symptomatology and active AIDS (patients who were HIV+ were not excluded). In addition, women with serious medical or chronic diseases were excluded from the study.

The population served by this hospital system is almost exclusively composed of ethnic/racial minorities, as approximately 80% of the patients are from either African-American or Hispanic background. In addition, a large percentage of the patients served by this institution live at or below the poverty level. Therefore, these women are a representative sample of minority women from the lowest socioeconomic status. As mentioned previously, minority

women from low income background are particularly susceptible to negative life events, violent trauma, depression, and substance abuse.

The participants in the present study were the women who participated in the original longitudinal study with sufficient data for the variables of interest in the present study. Initially, the data were examined for outliers (i.e., more than 2 standard deviations from the mean) and excessive missing data (i.e., more than 20% missing data for the variables of interest or missing data for the primary outcome variable - current diagnosis based on the structured interview). No participants were outliers on the variables of interest. Five participants were eliminated due to excessive missing data. These participants were missing nearly all of the data across the variables in the study.

The final sample consisted of 333 participants. Table 1 contains frequencies and percentages for participant demographic information. All of the participants in the study were women, and the majority of the participants were from ethnic minority backgrounds (i.e., Black and Hispanic). For the purposes of this study, the 11 ethnic groups reported in the original study (various biracial and multiracial combinations) were re-categorized according to the participant's self-identified primary ethnic identification. The participants were generally fairly young (M = 33.54 years, SD = 8.62), and most were either single (never married) or separated/divorced. Level of education was approximately equally divided between partial high school, high school degree, and some college. The most frequently reported highest level of occupation was clerical or sales work followed by semi-skilled positions.

Measures

A large number of measures were administered as part of the comprehensive longitudinal study. The purpose of the current study was to identify factors during childhood

that are predictive of the development of internalizing and externalizing psychopathology in adulthood. To this end, the measures and variables used were selected from among those used in the original study that would appropriately test the hypotheses. The predictors included childhood/adolescent physical abuse, sexual abuse, and trauma; early onset psychopathology and treatment; as well as family history of psychopathology. Diagnoses indicative of internalizing (i.e., depression and anxiety disorders) and externalizing psychopathology (i.e., substance abuse and antisocial personality disorder) in adulthood were used as outcome variables. The present study utilized demographic, diagnostic and symptom measures collected during the screening phase (Phase I) and retrospective data on childhood trauma collected during the initial baseline assessment (Phase IIA). Longitudinal prospective data (Phase IIB) and follow-up assessment data (Phase III) were not included. See Procedures for further information on the phases of the study. The following measures were selected from the database for use in the present study (see the Appendix for copies of the measures).

Structured Clinical Interview for DSM-III-R- Substance Abuse Comorbidity (SCID-SAC). The SCID-SAC (Spitzer, Williams, Gibbon, & First, 1993; revised by Nunes et al., 1996) is a modified version of the SCID developed for detection of mood and anxiety disorders among substance abusers and vice-versa, based on lifetime history. It is a semi-structured clinical interview that is used to evaluate Axis I disorders and differential diagnoses. The following modules were used in the original study: Depression (i.e., Major Depressive Disorder), Dysthymia, PTSD, Other Diagnoses (i.e., Antisocial Personality Disorder), Alcohol Dependence/Abuse, Cocaine Dependence/Abuse, Crack Dependence/Abuse, and Lifetime Drug Dependence/Abuse (other than crack/cocaine). The scores from the SCID summary sheet entered into the database included lifetime diagnoses, diagnoses in the past six months, current

diagnoses, as well as age of onset and severity for each. Nunes et al. (1996) found the measure has good inter-rater reliability ($K = 0.74$ within major depression; $K = 0.67$ within any depressive syndrome; and $K = 0.43$ within panic disorder) in a study evaluating 31 methadone maintenance patients.

For the purposes of this study, current diagnoses of depressive disorders, PTSD and other anxiety disorders, antisocial personality disorder, alcohol dependence/abuse, and other substance dependence/abuse were used for the outcome measures. However, for the diagnosis of substance use disorders, it was necessary to include dependence in the past 6 months as well as current regular use with or without dependence, because the DSM-IV uses a one-year time frame for diagnosis of substance use disorders. Therefore, the prevalence of these diagnoses might have actually been higher, as those women who met criteria for a substance use disorder during the first 6 months of the year, but not the last 6 months, would not have been identified. Also, dysthymic disorder is assessed for the past 6 months on the SCID-SAC, rather than 2 years as defined in the DSM-IV. As a result, the prevalence might be overestimated as some women may not have experienced symptoms for at least 2 years. Current diagnosis is a categorical variable that was coded dichotomously in the present study (i.e., presence/absence of a depressive disorder; presence/absence of an anxiety disorder; presence/absence of a substance use disorder; presence/absence of antisocial personality disorder). In addition, the internalizing disorders (i.e., depression and anxiety) were combined to create a superordinate variable (i.e., presence/absence of an internalizing disorder), and the externalizing disorders (i.e., substance use disorder and antisocial personality disorder) were combined to create a superordinate variable (i.e., presence/absence of an externalizing disorder).

Early onset of these same diagnoses served as predictor variables in the study. The lifetime diagnoses and age of onset variables were used to establish whether each of these diagnoses were present during childhood and/or adolescence (i.e., before 18). These predictor variables were also coded as dichotomous categorical variables (i.e., presence/absence of a depressive disorder before age 18; presence/absence of an anxiety disorder before age 18; presence/absence of a substance use disorder before age 18; presence/absence of an internalizing disorder before age 18; presence/absence of an externalizing disorder before age 18). Note that the interview did not assess for antisocial personality disorder (or conduct disorder) before age 18.

Hamilton Depression Rating Scale (HDRS). The HDRS (Hamilton, 1960) is a widely used clinician rating scale to assess clinical depression, including severity and the presence of specific symptoms (e.g., depressed mood, sleep disturbance, changes in appetite). It is often considered the "gold standard" for the assessment of depression (Bagby, Ryder, Schuller & Marshall, 2004). A review of the literature by Bagby et al. (2004) suggested that the scale has adequate internal consistency, convergent validity and discriminant validity overall. However, content validity is poor, as a number of the items do not contribute to the measurement of depression severity, and/or have poor test-retest or inter-rater reliability. Similarly, based on a meta-analysis of the literature from 1960-2008, López-Piña, Sánchez-Meca, and Rosa-Alcázar (2009) concluded that the HDRS has good internal consistency, inter-rater and test–retest reliability overall, although the reliability of some individual items is unsatisfactory. Nevertheless, the HRDS is the most commonly used measure of depression (Bagby et al., 2004). The HDRS score is a continuous measure of severity of depression symptoms, with scores ranging from 0 to 3 for each item. Several modifications of the original scale have been

developed with varying numbers of items. The 21 item and 25 item versions were both used in the original longitudinal study to assess depressive symptomatology to complement the diagnostic information obtained from the SCID-SAC. For the more commonly used 21 item version, total scores range from 0-63, with higher scores indicating more severe levels of depression. Only the total scores were available in the database. For the purposes of the present study, the total score for the 21 item version was used as a secondary outcome measure of internalizing psychopathology (i.e., depression symptom severity).

Trauma Life History. The Trauma Life History (Hien & Scheier, 1996) is an 8-item interview-based inventory used to assess the degree to which participants have been exposed to a number of traumatic experiences. The interviewer asks a series of dichotomous, yes/no questions (e.g., Have you ever witnessed a murder or mutilation?) followed by questions regarding the number of times the traumatic events have occurred during the past 6 months and over the course of lifetime. In addition, the participant is asked for their age at the time of the traumatic event. There is no information available on the validity and reliability of this measure due to its limited use. There is no summary score but individual items identify the presence of each of the traumatic events across the lifespan. For the present study, a total score (number of the 8 types of traumatic events endorsed as experienced prior to age 18) was used as an indicator of traumatic events experienced during childhood or adolescence. Thus, the total score is a continuous measure that ranges from 0 to 8, with higher scores indicating a greater number of traumatic experiences. The total score on the Trauma Life History was used as a predictor variable.

Childhood Sexual Abuse Interview (CSAI). The CSAI (modified from Finkelhor, 1979 and Sgroi, 1982) is an 11-item interview that evaluates the history of specific sexual experiences prior to the age of 18. Sexual abuse is defined by experiences ranging from an invitation to do

something sexual, to sexually-oriented touching and intercourse. There are 6 follow-up questions for any items that were reported as having occurred. The CSAI is scored as the total number of items that were endorsed. The CSAI was modified by Hien and Bukszpan (1999) to incorporate three subscales that are generated by summing scores of individual items: exposure (e.g., invitation or person showing genitals), touching (e.g., manual or oral sexual touching), and penetration (e.g., intercourse or penetration). For the purposes of this study, the total summary score was used as a measure of childhood sexual abuse. Scores on the individual items were evaluated to determine internal consistency of the scale. The CSAI is a continuous measure with a range of scores from 0 to 11, with higher scores indicating a greater incidence of sexual abuse. It was used as a predictor of psychopathology in adulthood.

Childhood Trauma Questionnaire (CTQ). The CTQ (Bernstein, Fink, Handelsman, & Foote, 1994) is a 23-item self-report scale that assesses the frequency of experiences of physical and emotional abuse during childhood (i.e., prior to age 18). This interview-based measure prompts the participant to answer a series of questions on a Likert-type scale of 1-5, with 1 indicating 'never true' and 5 'very often true.' If a participant answers any question in the affirmative, follow up questions are asked to screen for abuse as well as PTSD. The CTQ is scored by summing the responses to each item and arriving at a total sum score of childhood trauma. Among patients in treatment for substance abuse, the CTQ demonstrated high internal consistency and good test-retest reliability over a 2-6 month period (Bernstein et al., 1994). For the purposes of this study, the total (summary) score was used as a measure of childhood physical and emotional trauma. Scores on the individual items were evaluated to determine internal consistency of the scale. The individual items on the CTQ demonstrated high internal consistency ($\alpha = .95$). The CTQ is a continuous measure with a range of scores from 23 to 115,

with higher scores indicating greater incidence of physical/emotional abuse. The total score was used as a predictor of psychopathology in adulthood.

Demographic and Treatment History Form. The Demographic and Treatment History Form (Hien & Zimberg, 1991) is a self-report measure designed to elicit basic demographic and life history information, as well as treatment history and family history. The form also includes a second part that obtains information on sexuality and reproductive health. For the purposes of this study, the following items were used: demographic variables (i.e., age, ethnicity, marital status, education, occupation), psychiatric treatment history, substance abuse treatment history, and family history of psychopathology. The information on sexuality and reproductive health was not used in the current study. Demographic variables were used for descriptive purposes and to categorize participants by ethnicity, which is a predictor. Psychiatric treatment history and substance abuse treatment history were coded as dichotomous categorical variables (i.e., presence/absence of treatment for depression or internalizing psychopathology prior to age 18; presence/absence of treatment for substance abuse prior to age 18). Both of these variables were used as a potential moderator of the relationship between early-onset psychopathology and psychopathology during adulthood. The information on family history was used to determine the presence of psychopathology in the family, including both internalizing and externalizing disorders. These variables were also coded as dichotomous categorical variables (i.e., presence/absence of family history of psychiatric disorder; presence/absence of family history of substance abuse). Family history of psychiatric disorder and family history of substance abuse were used as predictors of adult psychopathology.

Procedure

As mentioned previously, the data used for this study were part of a larger, longitudinal study investigating predictors of interpersonal violence in a sample of inner-city women. All of the data were collected by psychology graduate students who were previously trained to administer the assessments. The data collection in the study consisted of three distinct phases that included: screening and diagnosis (Phase I); collection of descriptive data, retrospective data, and prospective data (Phase II-A and Phase II-B); and 6 month follow-up (Phase III). A selected set of measures from Phase I and Phase IIA were used for the present study. None of the longitudinal or follow-up data were examined. The phases in the original longitudinal study are detailed below.

During Phase I, participants in the study were screened from one of several substance abuse, psychiatric, or gynecological clinics located within a major urban hospital system. The women were given a battery of diagnostic assessments, including the SCID-SAC, HDRS, demographic questionnaire, and drug use questionnaire. Based on the Phase I diagnostic interviews, the women were then divided into four groups: comorbid depressed cocaine abusers; cocaine abusers with no history of depression or dysthymia; depressed women with no history of substance abuse; and women with no history of depression or substance use disorders.

The aim of Phase II-A was to collect retrospective data from participants in regards to child/adolescent and adult trauma and interpersonal violence and to compare the prevalence of interpersonal violence among the four groups. A variety of measures were used to determine childhood and diagnostic factors that were associated with violent behaviors. The measures used during this phase included those designed to evaluate the potential/history of parent-to-child violence in adults, partner-to-partner violence, victimization, and parenting styles, as well as

overall violence and criminal records. The Trauma Life History, CSAI, and CTQ were also administered during this phase of the study.

Phase II-B was the longitudinal, prospective part of the study in which several diagnostic, psychosocial, and family/environmental factors were assessed using self-report measures. The purpose of this phase of the study was to determine the factors most predictive of violent behaviors in the four groups. Measures used in this phase included those designed to evaluate strategies used to manage stressful events, personality characteristics, family adaptability and cohesion, and social support. It should be noted that Phase II-A and II-B were conducted at baseline on two separate visits. Phase III was the follow-up conducted 6 months after baseline. During this phase of the study, several measures were repeated in an attempt to evaluate the reliability and validity of the instruments, particularly those that were self-reported diagnostic assessments. The SCID-SAC, HDRS, and all of the other measures that were initially completed during Phase I and II were among the measures repeated during this final phase of the study.

The entire de-identified database was made available for secondary analysis for the present study. As noted above, only a selected set of measures administered during the initial assessment phases (Phase I and Phase IIA) were used for the present study. Prior to any analyses, the database was reduced from over 900 variables to the variables of interest in the current study. The predictor variables included: childhood or adolescent physical abuse, sexual abuse, and exposure to trauma; childhood or adolescent psychopathology and treatment; family history of psychopathology; and race/ethnicity. The outcome variables included: current diagnosis of internalizing and externalizing disorders in adulthood; current depression as a secondary measure of internalizing psychopathology.

CHAPTER 3

Results

Descriptive statistics, including the means, standard deviations, and frequencies, were calculated for the information on the demographic questionnaire, each of the independent variables, and the dependent variables. For the primary hypotheses, correlations and logistic regression analyses were conducted to examine the predictive value of each independent variable for adult psychopathology (i.e., current internalizing or externalizing disorder). All of the independent variables were included in the logistic regression to examine their unique variance in predicting adult internalizing psychopathology or externalizing psychopathology, as well as the total variance explained by the predictors. Race/ethnicity was included in the regression analysis in a second step to determine whether it moderated the relationship between the predictors and adult psychopathology. Treatment history prior to adulthood was also included in the regressions in a second step to determine whether it moderated the relationship between the predictors and adult psychopathology. Between-group analyses (MANOVA) were conducted in order to determine if there were differences in childhood trauma and abuse based on race/ethnicity.

Descriptive Statistics

Table 2 presents current diagnoses of internalizing and externalizing psychopathology for the participants. Diagnoses were based on the current SCID-SAC diagnosis. However, for the diagnosis of substance use disorders, it was necessary to include dependence in the past 6 months

as well as current regular use with or without dependence, because the DSM-IV uses a one-year time frame for diagnosis of substance use disorders. Therefore, the prevalence of these diagnoses might have actually been higher, as those women who met criteria for a substance use disorder during the first 6 months of the year but not the last 6 months would not have been identified. Also, dysthymic disorder is assessed for the past 6 months on the SCID-SAC, rather than 2 years as defined in the DSM-IV. As a result, the prevalence might be overestimated as some women may not have experienced symptoms for at least 2 years. Current diagnoses were examined individually and by diagnostic group (i.e., depressive disorders, anxiety disorders, substance use disorders, antisocial personality disorder). Substance use disorders were grouped into alcohol use disorders and other substance use disorders. Finally, the current diagnoses were categorized into four groups: internalizing disorders (i.e., anxiety and depression), externalizing disorders (i.e., substance abuse and antisocial personality disorder), comorbid internalizing and externalizing disorders, and no diagnosis. As seen in Table 2, the most frequent diagnoses included major depression, post-traumatic stress disorder, and other substance use disorder. More than half of the sample had comorbid internalizing and externalizing disorder diagnoses, and only a quarter of the sample did not have a current diagnosis.

Table 3A presents the means and standard deviations for the three trauma and abuse scales. The total number of reported types of childhood/adolescent general trauma and sexual abuse were relatively low; for each, participants reported an average of about two incidents out of a possible eight types of general trauma and eleven types of sexual abuse. For physical and emotional abuse, participants were moderately low in terms of overall frequency of the different types of abuse.

Table 3B presents the frequency and percent of participants who reported childhood/adolescent general trauma by total number of items endorsed on the Trauma Life History scale. Table 3B indicates that approximately 86% of the participants experienced at least one type of childhood/adolescent general trauma, with the majority of the participants reporting 1-3 traumatic experiences, and 12% reporting 4 or more traumatic experiences.

Table 3C presents the frequencies and percentages of participants that reported childhood/adolescent physical and emotional abuse. For the purposes of this study, physical abuse was considered to have occurred if the participant endorsed item #15 (i.e., "I believe that I was physically abused") on the Childhood Trauma Questionnaire with a rating of 3 ("Sometimes True"), 4 ("Often True"), or 5 ("Very Often True"). Emotional abuse was considered to have occurred if the participant endorsed item #22 (i.e., "I believe that I was emotionally abused") with a rating of 3 or greater. Table 3C indicates that over a quarter of the sample believed they had been physically abused as a child and/or adolescent, and nearly forty percent of the sample believed they had been emotionally abused.

Table 3D presents the frequency and percentage of participants who reported childhood/adolescent sexual abuse by the total number of items endorsed on the Childhood Sexual Abuse Inventory. Table 3D indicates that approximately 43% of participants endorsed at least one instance of sexual abuse during childhood or adolescence. Most of these participants endorsed multiple experiences of sexual abuse and one participant endorsed all of the items.

Table 4 presents frequency data for the categorical predictors. Onset of psychopathology in childhood or adolescence was determined through SCID-SAC lifetime diagnoses with onset prior to age 18. For the purposes of these analyses, childhood psychopathology was grouped into two categories: childhood internalizing psychopathology and substance use disorders. Antisocial

personality disorder was not diagnosed under 18 and conduct disorder and other externalizing psychopathology in childhood was not assessed by the SCID-SAC. About one-third of the sample had childhood onset of internalizing disorders but only one-fifth reported childhood substance use. Family history of psychiatric problems, family history of substance use disorders, and childhood history of treatment were based on self-report on the demographic questionnaire. About half of the sample had a family history of psychiatric problems and more than half had a family history of substance abuse problems. Few participants in the sample had a history of childhood treatment for psychological problems and there were very few instances of treatment for substance abuse prior to age 18.

Correlations

Table 5 present the correlations between the predictor variables. Significant correlations were found between almost all of the predictor variables. Note that higher values represent the presence of trauma for the three trauma/abuse scales, whereas the presence of childhood/adolescent psychopathology, family psychopathology, and childhood/adolescent treatment was reverse-coded in the data base (i.e., 1 = present, 2 = absent). As expected, the three trauma variables were negatively correlated with the other predictor variables. Childhood general trauma, physical/emotional abuse, and sexual abuse were all significantly correlated with each other. The most highly correlated variables were childhood internalizing disorders and childhood physical abuse (r = -.525). The predictors that were not correlated were family history of psychiatric problems and childhood general trauma (r = -.050), and family history of psychiatric problems and childhood substance abuse (r = .067). Childhood treatment for substance abuse was not correlated with either childhood general trauma (r = -.058) or childhood sexual abuse

(r = -.080). None of the predictors were redundant (i.e., highly correlated) and there was no evidence of multicollinearity.

Table 6 presents the correlations between the predictor variables and the criterion variables. All of the predictors were significantly correlated with current internalizing disorder. The variable that was most highly correlated with internalizing psychopathology was childhood physical/emotional abuse (r = -.436). Many of the predictor variables were significantly correlated with current externalizing disorder. However, childhood internalizing disorders (r = .016), family history of psychiatric problems (r = -.044), childhood history of treatment for psychological problems (r = .023), and childhood history of treatment for substance abuse (r = .093) were not related to current externalizing disorder. Childhood substance abuse was most highly correlated with the presence of an adult externalizing disorder (r = .528). All of the predictor variables were significantly correlated with the Hamilton Depression Rating Scale (HDRS). The variable that was most highly correlated with the HDRS was childhood physical/emotional abuse (r = .409).

Multivariate Analyses

Multivariate analyses were used to determine whether a current diagnosis of internalizing or externalizing psychopathology was predicted by childhood/adolescent exposure to general trauma, physical/emotional abuse, or sexual abuse. Additional predictors included a history of childhood internalizing disorders, childhood externalizing psychopathology (i.e., diagnosis of a substance use disorder before age 18), family history of psychiatric disorders, and family history of substance use disorders. A second step in the regressions added participant ethnicity and childhood history of treatment for internalizing psychopathology and externalizing psychopathology (i.e., substance use) to examine whether these variables moderated the

relationship between the predictor variables and the current diagnoses. Multiple regression was used to examine the predictive value of the same variables for current level of depression (i.e., HDRS score).

Logistic Regression. Logistic regression was used to determine which factors during childhood were most predictive of current internalizing and externalizing psychopathology. Separate analyses were conducted for prediction of internalizing psychopathology and externalizing psychopathology. The tables provide the β coefficients, the Wald statistic, associated degrees of freedom, and level of significance for each of the predictor variables.

Table 7 presents the results for prediction of internalizing psychopathology. The model successfully predicted current internalizing disorders ($\chi^2 = 76.462$; $df = 7$, $p < .001$), and accounted for between 22.4% and 30.3% of the variance (Cox and Snell *R* Square = .224; Negelkerke *R* Square = .303). Childhood or adolescent physical/emotional abuse, exposure to general trauma, and history of an internalizing disorder were all strong predictors of current internalizing psychopathology. The model correctly predicted a current internalizing disorder 72.4% of the time, which represented an improvement over a model in which none of the predictors were used (i.e., base rate = 60.1%).

A second step added participant ethnicity as a predictor of current adult internalizing psychopathology. When participant ethnicity was added, the model successfully predicted current internalizing disorders ($\chi^2 = 76.518$; $df = 8$, $p < .001$), and accounted for between 22.4% and 30.4% of the variance (Cox and Snell *R* Square = .224; Negelkerke *R* Square = .303). The overall model correctly predicted current internalizing disorders 72.4% of the time, which did not represent a change from the first step. Participant ethnicity was not a significant predictor and

did not increase the accuracy of prediction. There also were no changes in the predictive value of childhood/adolescent trauma, physical abuse or childhood history of an internalizing disorder.

When childhood/adolescent treatment of internalizing psychopathology and treatment of externalizing psychopathology were added in the second step, the model successfully predicted current internalizing disorders ($\chi^2 = 76.931$; $df = 9$, $p < .001$), and accounted for between 22.6% and 30.5% of the variance (Cox and Snell *R* Square = .226; Negelkerke *R* Square = .305). The overall model correctly predicted current internalizing disorders 71.8% of the time. Childhood treatment of internalizing psychopathology and treatment of externalizing psychopathology were not significant predictors and did not increase the accuracy of prediction nor modify the predictive value of the significant predictors in the first step.

The next logistic regression examined predictors of externalizing psychopathology (see Table 8). The model successfully predicted a current externalizing disorder ($\chi^2 = 118.379$; $df = 7$, $p < .001$), and accounted for between 32.3% and 46.2% of the variance (Cox and Snell *R* Square = .323; Negelkerke *R* Square = .462). Childhood/adolescent general trauma was a significant predictor of current externalizing disorders, but physical abuse and sexual abuse were not significant. Childhood/adolescent internalizing psychopathology, externalizing (substance abuse) psychopathology, and a family history of substance use disorders were significant predictors of a current externalizing disorder. The model correctly predicted a current externalizing disorder 81.5% of the time, which represented an improvement over a model in which none of the predictors was used (i.e., base rate = 71.0%).

When participant ethnicity was added in the second step, the model remained significant in predicting a current externalizing disorder ($\chi^2 = 118.802$; $df = 8$, $p < .001$), and accounted for between 32.4% and 46.3% of the variance (Cox and Snell *R* Square = .324; Negelkerke *R* Square

= .463) The overall model correctly predicted current externalizing disorders 81.8% of the time. Ethnicity was not a significant predictor of externalizing psychopathology and its inclusion in the model resulted in little change in the significant predictors or the accuracy of the model. When childhood/adolescent treatment of psychological disorders and treatment of substance use disorders were added as a second step, the model was successful in predicting a current externalizing disorder (χ^2 =120.920; df = 9, p < .001), and accounted for between 32.9% and 47.0% of the variance (Cox and Snell R Square = .329; Negelkerke R Square = .470). The overall model predicted a current externalizing disorder 82.2% of the time. Neither childhood treatment variable was a significant predictor of externalizing psychopathology. The addition of these variables to the model generally had little effect on the predictive value of the model or the other variables. Early onset of an internalizing disorder was slightly less strong of a predictor of adult externalizing psychopathology when the childhood treatment variables were considered.

Multiple Regression. Linear regression was used to determine which factors were most predictive of the Hamilton Depression Rating Scale (HDRS) score, a secondary outcome measure of current internalizing psychopathology (i.e., depression). As in the logistic regression, the predictors included childhood/adolescent exposure to general trauma, physical/emotional abuse, and sexual abuse, early onset internalizing psychopathology and externalizing psychopathology (i.e., substance abuse), and family history of psychiatric disorder and substance use disorders. Participant ethnicity and childhood treatment for psychiatric problems and substance abuse were added in a second step to determine their predictive value in the regression. Table 9 presents the results for prediction of HDRS scores. Childhood physical/emotional abuse (p < .001) and exposure to general trauma (p = .005) were both strong predictors of HDRS scores. None of the other variables were significant predictors of HDRS scores.

Between Groups Analyses

A MANOVA was conducted for participant ethnicity and the trauma and abuse scales in order to test the hypothesis that ethnic minority participants would have histories of more childhood physical/emotional abuse, sexual abuse, and exposure to trauma compared to other participants (see Table 10). There were significant differences between the ethnic groups for both childhood general trauma and childhood physical/emotional abuse. *Post-hoc* analyses (Bonferoni) indicated that African-American participants reported a significantly greater incidence of childhood general trauma and physical/emotional abuse compared to Hispanic participants. There were no significant differences between groups with respect to childhood sexual abuse.

CHAPTER 4

Discussion

The current study used data from a larger, longitudinal study investigating predictors of interpersonal violence in a sample of inner-city women. Over 900 variables were made available and reduced to the variables of interest for secondary analysis. The present study examined predictors of current internalizing and externalizing disorders diagnosed by a structured diagnostic interview. The predictors included childhood or adolescent onset of these disorders, based on the structured interview, and self-report measures of: childhood or adolescent general trauma, physical/emotional abuse, sexual abuse, treatment for psychological problems or substance use; and family history of psychiatric problems or substance abuse. The study was unique in that the sample consisted of mostly minority women, a group greatly under-represented in the research literature. In addition, the study examined childhood/adolescence and familial predictors of both internalizing and externalizing disorders in adulthood, whereas most previous research has focused on a more limited domain of psychopathology.

The women in the sample were predominantly from ethnic minority backgrounds. There were high levels of current internalizing and externalizing disorders, as well as comorbid internalizing and externalizing disorder diagnoses. Although the average frequency of childhood or adolescence trauma, physical/emotional abuse, and sexual abuse was low, nearly all experienced at least one type of trauma or abuse. Early-onset psychopathology was present in a sizable minority of the participants, but few participants reported receiving treatment during

childhood or adolescence. About half of the sample reported a family history of psychiatric problems or substance abuse. Thus, the women in the sample reported a number of factors that have been found to be associated with adult psychopathology.

The first two hypotheses stated that physical/emotional abuse, sexual abuse and other trauma during childhood or adolescence would be predictive of current internalizing and externalizing disorders. These hypotheses were partially supported in that general trauma and physical/emotional abuse were predictive of internalizing disorders, whereas only general trauma was predictive of externalizing disorders. These findings are consistent with previous studies suggesting the enormous impact of childhood physical/emotional abuse and exposure to trauma on the development of adult psychopathology (Cortina & Kubiak, 2006; Fletcher, 2009; Gil-Rivas, Prause, & Grella, 2009; Halbreich, 2003; MacMillan et al., 2001; Paris, 2001). On the other hand, sexual abuse was not predictive of either internalizing or externalizing disorders. This may be explained by the lower rates of sexual abuse in the sample relative to trauma and physical/emotional abuse. However, it should be noted that the reported prevalence of abuse in this sample was quite high compared to national norms, particularly for sexual abuse. According to national data collected in 2011 on child abuse and neglect reported in the United States, 17.6% of children suffered physical abuse and 9.1% suffered sexual abuse ("Child Maltreatment," 2012). The National Comorbidity Survey (Sachs-Ericsson et al., 2005) found that 9.5% of participants reported a history of childhood abuse, with 2.8% reporting physical abuse and 5.3% reporting sexual abuse. The findings in the present study may also suggest that although general trauma and physical/emotional abuse have some significant predictive value, other childhood factors (i.e., early-onset psychopathology) and familial factors may also play a significant role in the development of adult psychopathology.

The next set of hypotheses proposed that early onset of internalizing disorders (i.e., anxiety and depression) and early onset of externalizing disorders (i.e., substance use) would be predictive of these same disorders in adulthood, respectively. The hypotheses were partly supported. The presence of an internalizing disorder prior to 18 predicted current internalizing and current externalizing psychopathology, whereas a childhood or adolescent externalizing disorder only predicted a current externalizing disorder. Results of this study were consistent with previous findings that early onset of psychopathology is predictive of adult psychopathology, but not with previous findings of multiple pathways to the development of internalizing and externalizing disorders. For example, Kendler et al. (2002) found that depression in women can result from internalizing or externalizing pathways, and Hussong et al. (2011) proposed internalizing and externalizing pathways for the development of substance use disorders. One possible explanation for the present findings is that early-onset externalizing disorder was measured narrowly and only considered substance use disorders, not conduct disorder, oppositional defiant disorder, or other externalizing disorders. In addition, other factors, such as childhood/adolescent trauma, family psychopathology, or environmental factors may have a greater impact on adult psychopathology, obscuring the influence of other predictors.

It was also hypothesized that family history of psychiatric problems and substance abuse would be predictive of internalizing and externalizing disorders in adulthood. These hypotheses were partially supported in that family history of substance abuse was found to be a strong predictor of current externalizing disorders. However, a family history of psychiatric problems was not predictive of adult internalizing disorders. Results are partly consistent with previous findings that genetic and familial factors play a significant role in the development of psychopathology (e.g., Jang et al., 2005; Kreek et al., 2005; Saveneau & Nemeroff, 2012;

Smoller et al., 2009; South & DeYoung, 2012). However, there may be other factors that had a stronger influence in the present study (i.e., trauma and abuse, early onset psychopathology). Moreover, there were important limitations in the measurement of the family history variables. In the present study, the categories were broad and based on several items on the self-report questionnaire, whereas the previous research used structured diagnostic interviews of family members to assess specific diagnostic categories.

The Hamilton Depression Rating Scale (HDRS) was used as a secondary measure of current internalizing psychopathology. Similar to the results for prediction of an internalizing disorder, childhood/adolescent trauma and physical/emotional abuse were significant predictors of the HDRS score. However, onset of an internalizing disorder in childhood or adolescence was not significant. One reason that results may differ is that the HDRS is a measure of current distress and dysphoric mood and is not specific to a diagnostic category. Previous diagnoses in childhood/adolescence or in the family would not be expected to directly correspond with the score.

The next two hypotheses proposed that there would be significantly more childhood and adolescent trauma and abuse for the minority women than the Caucasian women, and that race/ethnicity would moderate the relationship between the predictors and adult psychopathology. Due to the small number of Caucasian women in the sample, comparisons between majority and minority women were not possible. Instead, between group analyses were conducted with four ethnic groups (i.e., African American, Hispanic, Caucasian, Other). There was a significant effect for ethnicity for trauma and physical/emotional abuse; *post-hoc* analyses indicated that African-Americans reported a higher number of traumatic events and incidents of physical/emotional abuse compared to Hispanic women. Results are consistent with previous

findings of higher rates of childhood/adolescent trauma and abuse in ethnic minorities, particularly African women (Carrington, 2006; Hien and Bukszpan, 1999; Logan, Walker, Cole, & Leukefeld, 2002; Roberts et al., 2011; Seng et al., 2011). However, ethnicity was not a significant predictor of internalizing or externalizing psychopathology and it did not moderate the relationships between the other predictors and current psychopathology. It is possible that race/ethnicity was not a significant predictor because it was correlated with the other risk factors (i.e., higher levels of exposure to trauma and abuse in African American women) so that it did not contribute any unique variance. In addition, most of the literature has addressed differences between minority (primarily African American) and majority (Caucasian) women and there were only a small number of Caucasian women in the present study. Moreover, all of the women in the present study sought treatment at a hospital in the inner city that serves women from low socio-economic backgrounds. Regardless of ethnicity, it is likely that the women were exposed to similar negative life events and a lack of resources.

The final hypothesis proposed that childhood/adolescent treatment history would moderate the relationship between early onset psychopathology and development of adult psychopathology. Results indicated that childhood/adolescent treatment history for psychological problems or substance use problems were not significant predictors of current psychopathology and did not act as moderators. One explanation is that early treatment may have failed to adequately address the pathology and therefore had little influence on adult psychopathology. In addition, the number of women who reported childhood or adolescent treatment was very low, minimizing its value as a predictor. This finding is consistent with the literature that individuals from minority and low socioeconomic backgrounds are underserved and often fail to receive

adequate mental health treatment or any treatment at all (Carrington, 2006; Cutrona et al., 2005; Das et al., 2006; Jackson, 2006; Seng et al., 2011).

Limitations

The current study has a number of limitations. Most importantly, the data were cross-sectional, self-report and retrospective, making them susceptible to response biases and unreliable recall of information from participants' childhood. Additionally, the participants were all patients at one particular hospital in an urban setting and the data were collected nearly 20 years ago. The results of the study may not be generalizable to other settings, non-urban locales, or other parts of the country. It should also be noted that majority of the participants were of African-American or Hispanic background and only women were included in the samples. Therefore, results are limited to the experience of this particular group of women. Finally, the study used a correlational design. Therefore, a causal relationship between the predictors and outcome variables cannot be established.

Additional methodological limitations noted above include the low number of majority women, which precluded comparisons between majority and minority women, and reducing the 11 biracial and multiracial groups in the database to 4 groups based on their reported primary ethnic identification, as described in the Methods. Although it was necessary to collapse the groups to have sufficient power to conduct the analyses, this may have obscured findings with regard to ethnicity as there may be differences between biracial and multiracial individuals and those from a single racial background. Moreover, even with the smaller number of groups, there were not enough Caucasian participants to adequately test differences between Caucasians and the other ethnic groups (i.e., Hispanics and African Americans).

The lack of stringent criteria for measuring the family history variables was noted above. Most research examining family history utilizes structured diagnostic interviews for family members as well as probands. Although current and childhood/adolescent diagnoses were determined by a structured diagnostic interview with good reliability and validity, the assessment of externalizing disorders was narrow and included only substance use disorders and antisocial personality disorder in adulthood, and only substance use disorders prior to 18. The absence of data on other common externalizing disorders in childhood and adolescence (e.g., conduct disorder, oppositional defiant disorder) may have limited the usefulness of the early onset externalizing disorders variable. Also, as noted in the Methods, the structured interview assessed symptoms of dysthymic disorder for the past 6 months, whereas the DSM-IV requires symptoms to be present for at least 2 years for dysthymic disorder, which might have resulted in an overestimation of this diagnosis in the study. Substance use disorders were also assessed for the past 6 months, yet a diagnosis of a substance use disorder can be assigned if the symptoms are manifested at any time during the past year, suggesting the possibility of under-diagnosis of the these disorders in the sample. Moreover, the present study collapsed diagnostic categories within the depressive disorders, anxiety disorders, and substance use disorders, which may have obscured diagnosis-specific relationships.

Finally, the role of comorbidity was not examined; women with comorbid psychopathology were combined with those with only internalizing or only externalizing psychopathology in the analyses since separate analyses were conducted for prediction of internalizing psychopathology and externalizing psychopathology. There may be some unique factors that predict comorbid disorders. For example, women may use substances and develop substance use disorders in an effort to provide relief from depression, anxiety, or other

internalizing psychiatric conditions (Khantzian, 2003; Suh et al., 2008), as well as to cope with difficult environmental conditions (i.e., poverty and unemployment) and/or interpersonal violence and trauma (Haller & Chassin, 2012).

Strengths

One of the strengths of the study is that the population studied is a unique sample of women that are not ordinarily captured in the research literature. These women are from low-income neighborhoods and are often exposed to trauma to a greater degree than the average female participants in research (Hien & Bukszpan, 1999; Roberts et al., 2011). In addition, the current study focused on the antecedents of both internalizing and externalizing psychopathology concurrently. Previous studies have focused on either internalizing or externalizing disorders separately (e.g., Agrawal et al., 2005; Joyce et al., 2003; Kendler et al., 2002). Moreover, the current study examined the predictors simultaneously using regression analyses, which allowed examination of the unique variance contributed by each of the predictors. This design is advantageous given the complex histories that contribute to the development of internalizing and externalizing pathologies (Eaton et al., 2012).

Another strength of this study is that current and early onset psychopathology were determined using a structured diagnostic interview (i.e., SCID-SAC). The advantage of using a structured diagnostic interview is that a more reliable and accurate diagnosis can be ascertained. The sample showed a high rate of diagnoses and there was a good balance between internalizing disorders, externalizing disorders, and no diagnosis. The other variables also showed a good range of scores, so that there were no concerns of restricted range. Although the data were collected over 20 years ago, the study used DSM-IV criteria. Although the DSM-5 was published this year (A.P.A., 2013), nearly all current research is based on the DSM-IV. It is also likely that

the issues faced by minority women (i.e., trauma, abuse, low SES) at the time the data were originally collected are still relevant today.

Implications

Given that the first sets of hypotheses were mostly supported, results suggest that similar factors contribute to the development of internalizing and externalizing psychopathology in minority women as in other research samples that are mainly comprised of Caucasian women. Thus, efforts at prevention and early intervention may target these same risk factors identified in other research. However, results from studies with other samples may not generalize to these women, and future research may need to look for other factors that contribute to psychopathology in this group. Moreover, findings of differences based on race/ethnicity suggest the need for efforts to reduce the level of trauma and abuse experienced by minority children and adolescents, especially African-Americans, and for research to include more diverse samples. Inclusion of minorities, and expansion of efforts to recruit them in research, is likely to increase participation in treatments and interventions that are aimed at prevention in these communities as well as improve overall outcomes. Greater inclusion would also serve to reduce suspicion among women within communities that have experienced racism and discrimination from treatment providers.

Minority women from the inner city represent a group of individuals who are in greater need of treatment services compared to women from more privileged social and economic backgrounds. The results of this present study offer insights into the struggles these women face and provide potential clues into the areas for intervention. For example, nearly all of the women experienced childhood or adolescent trauma and abuse and these were significant predictors of adult psychopathology. Although a sizable minority met criteria for internalizing or externalizing

disorders prior to 18, very few of the women received mental health and/or substance abuse treatment at an early age. It is important to provide minority women with information regarding the impact of the social environment on their mental health and to make resources available to address these issues. It is also important for minority women, especially those from the inner city, to feel empowered and demand better treatment options in their local communities. As part of these efforts, it is essential to address the barriers to seeking treatment faced by these women, such as inadequate transportation and childcare, and negative perceptions of health care services (i.e., Carrington, 2006; Cutrona et al., 2005; Das et al., 2006; Jackson, 2006; Seng et al., 2011). In addition, future research should focus on developing culturally appropriate treatments and intervention strategies that increase the likelihood of positive outcomes in disadvantaged communities that lack the resources necessary to participate and flourish in the broader society.

Future Directions

The present study attempted to build a model for the development of psychopathology in minority women. To this end, the study focused on the factors during childhood and adolescence that contribute to the development of internalizing and externalizing disorders in adulthood. Although results of the study supported findings that trauma and abuse are significant predictors of adult psychopathology, further research is needed to parse out the biopsychosocial determinants that lead to psychopathology in women. Also, more research is needed to explore interventions that may be effective in breaking the cycle of trauma and abuse that contributes to the development of psychopathology.

Although the present study focused on several predictors of psychopathology in women, there are a number of other variables that were not considered that might be directions for future research. Factors such as family environment, SES, comorbid psychopathology, and racism and

discrimination all play a role in the diathesis-stress model of psychopathology. A prospective, longitudinal study following a sample of women along a developmental trajectory from infancy through childhood/adolescence and into adulthood would be ideal. This kind of study would use structured interviews for diagnosis of family members and use external validators (e.g., police reports of abuse and trauma) to provide support for the validity of the self-report measures. Also, a wider range of diagnoses would be considered as well as comorbid conditions. Although this kind of longitudinal prospective study would be a very ambitious undertaking, the potential benefits of the study would ultimately offset the costs as a more comprehensive developmental model of psychopathology for minority women would serve to guide efforts at prevention and treatment.

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Table 1

Demographic Characteristics of the Participants (*n* = 333)

Demographic Variable	Frequency	(Percent)
Ethnicity		
Black	155	(46.5)
Hispanic	149	(44.7)
White	19	(5.7)
Other	10	(3.0)
Marital Status		
Single (Never Married)	143	(42.9)
Divorced/Separated	101	(30.3)
Married	64	(19.2)
Widowed	9	(2.7)
Living w/ Partner	16	(4.8)
Highest Level of Education		
Partial High School	105	(31.5)
Attended College (No Degree)	93	(27.5)
Completed High School/Trade School	82	(24.6)
Attended Grade School	18	(5.4)
Completed College (Four-Year Degree)	17	(5.1)
Completed 8th Grade	14	(4.2)
Completed Post-Graduate Training	2	(0.6)
No Schooling	1	(0.3)
Highest Level of Occupation		
Clerical/Sales Worker	104	(31.2)
Machine Operator (Semi-Skilled Employee)	97	(29.1)
Unskilled Employee	39	(11.7)
Skilled Manual Employee	36	(10.8)
Administrative Personnel	29	(8.7)
Never Worked In Paid Employment	23	(6.9)
Business Manager (Lesser Professional)	3	(0.9)

Note: For the purposes of this study, the 11 ethnic groups from the original study were re-categorized according to primary ethnic identification.

Table 2

Current Diagnoses of Internalizing and Externalizing Disorders

Diagnosis	Frequency	(Percent)
Major Depression	75	(22.5)
Dysthymia	32	(9.6)
Total Depressive Disorders	96	(28.8)
Post-Traumatic Stress Disorder	66	(19.9)
Panic Disorder	15	(4.5)
Social Phobia	12	(3.6)
Total Anxiety Disorders	80	(24.0)
Total Internalizing Disorders	149	(44.7)
Alcohol Use Disorders	38	(11.4)
Other Substance Use Disorders	91	(27.3)
Total Substance Use Disorders	84	(25.2)
Antisocial Personality Disorder	53	(15.9)
Total Externalizing Disorders	95	(28.5)
Total Internalizing and Externalizing Disorders	244	(73.3)
Comorbid Internalizing & Externalizing Disorders	187	(56.2)
No Diagnosis	89	(26.7)

Note: The diagnosis of Other Substance Use Disorders includes current regular use with or without dependence as well as dependence in the past 6 months for the following substances: cocaine, crack, and/or any other substance(s) (i.e., sedatives/hypnotics, stimulants, opioids, etc.). Dysthymia is assessed for the past 6 months (rather than 2 years) on the SCID.

Table 3

Descriptive Data for Trauma and Abuse Scales

A. Means and Standard Deviations

Variable	Mean	SD	Range
Childhood General Trauma	1.91	1.31	0-6
Childhood Physical and Emotional Abuse	50.75	22.53	23-111
Childhood Sexual Abuse	1.82	2.68	0-11

Note: For Childhood General Trauma, total possible scores ranged from 0-8, with higher scores indicating a greater number of traumatic experiences. Scores for Childhood Physical Abuse were calculated using the sum of items rated on a 5 point Likert-type scale (1 = 'Never True' to 5 = 'Very Often True'). Total possible scores ranged from 23-115, with higher scores indicating greater incidence of physical/emotional abuse. Total possible scores for Childhood Sexual Abuse ranged from 0-11, with higher scores indicating a greater incidence of sexual abuse.

B. Frequencies and Percentages of Childhood General Trauma Items Endorsed

Total Number of Items Endorsed	Frequency	Percent
0	45	(13.5)
1	96	(28.8)
2	89	(26.7)
3	62	(18.6)
4	28	(8.4)
5	10	(3.0)
6	2	(0.6)

C. Frequencies and Percentages of Childhood Physical and Emotional Abuse

1. Item #15: I believe that I was physically abused

Response	Frequency	Percent
1- "Never True"	227	(68.2)
2- "Rarely True"	14	(4.2)
3- "Sometimes True"	25	(7.5)
4- "Often True"	18	(5.4)
5- "Very Often True"	49	(14.7)

Note: For the purposes of this study, physical abuse was considered to have occurred if the participant endorsed item #15 on the Childhood Trauma Questionnaire with a 3 or above.

2. Item #22: I believe I was emotionally abused

Response	Frequency	Percent
1- "Never True"	197	(59.3)
2- "Rarely True"	10	(3.0)
3- "Sometimes True"	42	(12.7)
4- "Often True"	17	(5.1)
5- "Very Often True"	66	(19.9)

Note: For the purposes of this study, emotional abuse was considered to have occurred if the participant endorsed item #22 on the Childhood Trauma Questionnaire with a 3 or above.

D. Frequencies and Percentages of Sexual Abuse Items Endorsed

Total Number of Items Endorsed	Frequency	Percent
0	187	(56.2)
1	26	(7.8)
2	20	(6.0)
3	24	(7.2)
4	10	(3.0)
5	23	(6.9)
6	9	(2.7)
7	14	(4.2)
8	10	(3.0)
9	3	(0.9)
10	4	(1.2)
11	1	(0.3)

Table 4

Frequencies and Percentages for Categorical Predictor Variables

Variable	Frequency	(Percent)
Childhood History of Internalizing Disorder	122	(36.6)
Childhood History of Substance Abuse	65	(19.5)
Family History of Psychiatric Problems	160	(48.0)
Family History of Substance Abuse	187	(56.2)
Childhood History of Treatment for Psychological Problems	45	(13.5)
Childhood History of Treatment for Substance Abuse	7	(2.1)

Table 5

Pearson Correlations between Predictor Variables

Variable	1	2	3	4	5	6	7	8
1) Childhood General Trauma	___							
2) Childhood Physical/Emotional Abuse	.389**	___						
3) Childhood Sexual Abuse	.363**	.507**	___					
4) Childhood Internalizing Disorder	-.258**	-.525**	-.393**	___				
5) Childhood Substance Abuse	-.370**	-.268**	-.195**	.113*	___			
6) Family History of Psychiatric Problems	-.050	-.229**	-.137*	.204**	.067	___		
7) Family History of Substance Abuse	-.316**	-.310**	-.275**	.180**	.266**	.246**	___	
8) Childhood Treatment for Psychological Problems	-.195**	-.332**	-.221**	.374**	.182**	.136*	.136*	___
9) Childhood Treatment for Substance Abuse	-.058	-.145*	-.080	.149**	.139*	.109*	.129*	.248**

**p<.05; **p<.001.*

Table 6

Pearson Correlations between Predictor Variables and Criterion Variables

Variable	Internalizing Disorders	Externalizing Disorders	Hamilton Depression Rating Scale
Childhood General Trauma	-.309**	-.390**	.327**
Childhood Physical/Emotional Abuse	-.436**	-.224**	.409**
Childhood Sexual Abuse	-.300**	-.205**	.213**
Childhood Internalizing Disorders	.379**	.016	-.264**
Childhood Substance Abuse	.242**	.528**	-.220**
Family History of Psychiatric Problems	.135*	-.044	-.175**
Family History of Substance Abuse	.190**	.297**	-.185**
Childhood History of Treatment for Psychological Problems	.137*	.023	-.191**
Childhood History of Treatment for Substance Abuse	.120*	.093	-.197**

**p<.05; **p<.001.*

Table 7

Logistic Regression Analysis Predicting Internalizing Disorders

A. With Participant Ethnicity Added in the Second Step

Variable	*β*	SE	Wald	*df*	*p*
Step 1					
Childhood General Trauma	-.278	.123	5.066	1	.024
Childhood Physical/Emotional Abuse	-.028	.008	11.973	1	.001
Childhood Sexual Abuse	.010	.059	.028	1	.867
Childhood Psychological Problems	.669	.306	4.777	1	.029
Childhood Substance Abuse	.495	.367	1.818	1	.178
Family History of Psychological Problems	.270	.282	.913	1	.339
Family History of Substance Abuse	.173	.302	.330	1	.566
Step 2					
Childhood General Trauma	-.274	.125	4.828	1	.028
Childhood Physical/Emotional Abuse	-.028	.008	11.914	1	.001
Childhood Sexual Abuse	.011	.059	.033	1	.855
Childhood Psychological Problems	.674	.307	4.818	1	.028
Childhood Substance Abuse	.484	.370	1.709	1	.191
Family History of Psychological Problems	.274	.283	.938	1	.333
Family History of Substance Abuse	.168	.302	.307	1	.579
Participant Ethnicity	.051	.217	.056	1	.812

B. With Childhood Treatment Variables Added in the Second Step

Variable	*β*	SE	Wald	*df*	*p*
Step 2					
Childhood General Trauma	-.283	.124	5.219	1	.022
Childhood Physical/Emotional Abuse	-.029	.008	12.210	1	<.001
Childhood Sexual Abuse	.010	.059	.027	1	.869
Childhood Psychological Problems	.711	.316	5.054	1	.025
Childhood Substance Abuse	.495	.368	1.810	1	.179
Family History of Psychological Problems	.275	.283	.944	1	.331
Family History of Substance Abuse	.161	.303	.282	1	.596
Childhood Treatment for Psychological Problems	-.288	.439	.430	1	.512
Childhood Treatment for Substance Abuse	.342	1.044	.107	1	.743

Table 8

Logistic Regression Analysis Predicting Externalizing Disorders

A. With Participant Ethnicity Added in the Second Step

Variable	β	SE	Wald	*df*	*p*
Step 1					
Childhood General Trauma	-.356	.142	6.268	1	.012
Childhood Physical/Emotional Abuse	-.008	.009	.708	1	.400
Childhood Sexual Abuse	-.065	.066	.948	1	.330
Childhood Internalizing Disorder	-1.090	.419	6.764	1	.009
Childhood Substance Abuse	2.488	.406	37.541	1	<.001
Family History of Psychiatric Problems	-.700	.349	4.037	1	.045
Family History of Substance Abuse	1.228	.391	9.852	1	.002
Step 2					
Childhood General Trauma	-.340	.144	5.559	1	.018
Childhood Physical/Emotional Abuse	-.008	.009	.732	1	.392
Childhood Sexual Abuse	-.061	.066	.853	1	.356
Childhood Internalizing Disorder	-1.080	.421	6.588	1	.010
Childhood Substance Abuse	2.465	.408	36.568	1	<.001
Family History of Psychiatric Problems	-.685	.350	3.838	1	.050
Family History of Substance Abuse	1.206	.392	9.446	1	.002
Participant Ethnicity	.167	.256	.424	1	.515

B. With Childhood Treatment Variables Added in the Second Step

Variable	*β*	SE	Wald	*df*	*p*
Step 2					
Childhood General Trauma	-.363	.143	6.400	1	.011
Childhood Physical/Emotional Abuse	-.009	.009	.949	1	.330
Childhood Sexual Abuse	-.064	.067	.915	1	.339
Childhood Internalizing Disorder	-.975	.433	5.076	1	.024
Childhood Substance Abuse	2.561	.423	36.704	1	<.001
Family History of Psychiatric Problems	-.712	.352	4.088	1	.043
Family History of Substance Abuse	1.254	.398	9.926	1	.002
Childhood Treatment for Psychological Problems	-.782	.545	2.062	1	.151
Childhood Treatment for Substance Abuse	.921	1.050	.769	1	.381

Table 9

Linear Regression Predicting Hamilton Depression Rating Scale Score

A. With Participant Ethnicity Added in the Second Step

Variable	*β*	*t*	*p*
Step 1			
Childhood General Trauma	1.101	2.807	.005
Childhood Physical/Emotional Abuse	.113	4.387	<.001
Childhood Sexual Abuse	-.124	-.663	.508
Childhood History of Internalizing Disorder	-.305	-.290	.772
Childhood History of Substance Abuse	-1.300	-1.075	.283
Family History of Psychiatric Problems	-1.357	-1.502	.134
Family History of Substance Abuse	.095	.099	.921
Step 2			
Childhood General Trauma	1.096	2.756	.006
Childhood Physical/Emotional Abuse	.113	4.379	<.001
Childhood Sexual Abuse	-.125	-.665	.507
Childhood History of Internalizing Disorder	-.311	-.294	.769
Childhood History of Substance Abuse	-1.292	-1.062	.289
Family History of Psychiatric Problems	-1.359	-1.501	.134
Family History of Substance Abuse	.102	.105	.916
Participant Ethnicity	-.050	-.073	.942

Note: R = .461, R^2 = .213, Adjusted R^2 = .193.

B. With Childhood Treatment Variables Added in the Second Step

Variable	β	t	p
Step 2			
Childhood General Trauma	1.152	2.958	.003
Childhood Physical/Emotional Abuse	.108	4.211	<.001
Childhood Sexual Abuse	-.119	-.641	.522
Childhood History of Internalizing Disorder	.115	.107	.915
Childhood History of Substance Abuse	-.863	-.712	.477
Family History of Psychiatric Problems	-1.232	-1.374	.171
Family History of Substance Abuse	.227	.238	.812
Childhood Treatment for Psychological Problems	-.864	-.618	.537
Childhood Treatment for Substance Abuse	-6.862	-2.387	.018

Note: R = .461, R^2 = .213, Adjusted R^2 = .193.

Table 10

Between Group MANOVA for Participant Ethnicity and Trauma and Abuse Scales

	Participant Ethnicity						
	African American	Hispanic	Caucasian	Other			
Variable	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*F*	*df*	*p*
Childhood General Trauma	2.342 (.104)	1.474 (.109)	1.882 (.306)	1.600 (.399)	11.235	3, 302	<.001
Childhood Physical/ Emotional Abuse	54.151 (1.832)	45.526 (1.919)	54.118 (5.368)	59.900 (6.999)	4.314	3, 302	.005
Childhood Sexual Abuse	2.233 (.224)	1.451 (.235)	2.471 (.656)	1.100 (.855)	2.488	3, 302	.061

APPENDIX A: STRUCTURED CLINICAL INTERVIEW FOR AXIS I DSM-IV DISORDERS

STRUCTURED CLINICAL INTERVIEW FOR AXIS I DSM-IV DISORDERS

Patient Edition

S C I D - SAC (Version 2.0)

1994 DRAFT

Michael B. First, M.D.; Robert L. Spitzer, M.D.;
Miriam Gibbon, M.S.W.; and Janet B.W. Williams, D.S.W.

Study: _____ Study No.: _ _ _ _

Subject: _____ I.D. No.: _ _ _ _

Rater: _____ Rater No.: _ _ _

Date of Interview: _ _ _ _ _ _
Mo. Day Year

Sources of information (check all that apply):
__ Subject
__ Family/friends/associates
__ Health professional/chart/ referral note

Edited and checked by: _____ Date: _____

The development of the SCID was supported in part by
NIMH Contract #278-83-0007(DB) and NIMH Grant #1 R01 MH40511.

For citation: First, Michael B., Spitzer, Robert L., Gibbon, Miriam,
and Williams, Janet B.W.: "Structured Clinical Interview
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Version 2.0)"
Biometrics Research Department
New York State Psychiatric Institute
722 West 168th Street
New York, New York 10032

APPENDIX B: DEMOGRAPHIC HISTORY FORM

Date of Interview: _____ Subject Number: _____
Interviewer: _____ Program Name: _____

DEMOGRAPHIC HISTORY FORM

Age: _____

Ethnicity
(1) White Only (4) Black Only (7) Amerasian
(2) White & Hispanic (5) Black & Hispanic (8) Asian _____
(3) White & Other (6) Black & Other (9) Hispanic Only
(10) Native American (11) Other

-ALWAYS SPECIFY Country/Countries:_____
-ALWAYS ASK:
A. Father's Ethnicity..... _____
B. Mother's Ethnicity..... _____
C. If you had to choose, would you say you identify more as "A" or "B?"..... _____

-Were You Born On Mainland USA ..... (1) Yes (2) No
If No, How Many Years Have You Been Living In U.S.?..... _____years

-Primary Languages Spoken: 1 = English 2 = Spanish _____
3 = Other (Specify) _____
4 = Both English and Spanish

Religion
1 = Catholic
2 = Protestant
3 = Jewish _____
4 = Other
5 = None

-Do you attend church / temple? 1 = YES 2 = NO
If yes, how many times a year?..... _____

Marital Status:
1 = Single (Never Married)
2 = Legally Married
3 = Divorced / Separated _____
4 = Widowed
5 = Living With Partner (Or Sustained Conjugal Situation)

Patient's Living Arrangement (Current):

1 = Alone (Own Home)	6 = Household Shared With Others (Non-Relative)
2 = Own Or Spousal Household	7 = Halfway House
3 = Parent Household	8 = Welfare Hotel / SRO _____
4 = Children's Household	9 = Shelter
5 = Relative's Household	10 = Homeless

Composition Of Patient's Household During Month Prior To Assessment:
(Circle 1 = 'Yes'; 2 = 'No')

Yes	No		
1	2	Patient	
1	2	Mother	
1	2	Father	
1	2	Siblings	# = _____
1	2	Spouse	
1	2	Children	# = _____
1	2	Other Relatives	# = _____
1	2	Non Relatives	# = _____

Total Number Of Persons In Patient's Household (Including Patient) _____

2

Highest Level Of Education Achieved:

1 = Completed Post- Graduate Training
2 = Completed College, Received Four Year Academic Degree
3 = Attended College, But Did Not Receive Four Year Degree
4 = Completed High School Or Trade School Or Other Non- Academic Training Requiring High-School Completion For Admission
5 = Partial High-School
6 = Completed 8th Grade
7 = Attended Grade School
8 = No Schooling
99 = Does Not Apply / Info Not Available

_____

Highest Level Of Occupation Achieved:

1 = Higher Executive, Proprietor Of Large Concern, Major Professional
2 = Business Manager Of Large Concern, Proprietor Of Medium Sized Business, Lesser Professional
3 = Administrative Personnel, Owner Small Independent Business Minor Professional, Owner Of Medium Sized Farm
4 = Clerical Or Sales Worker, Technician, Owner Of A Small Business
5 = Skilled Manual Employee, Owner Of A Small Farm
6 = Machine Operator, Semi-Skilled Employee, Tenant Farmer
7 = Unskilled Employee, Share Cropper
8 = Never Worked In Paid Employment
99 = Does Not Apply / Info Not Available

_____

What Has Been Your Usual Employment Pattern Over The Past Three Years:

(1) Full-Time (40 Hours/Wk)	(4) Retired / Disability	(7) Student
(2) Part-Time (Reg. Hours)	(5) Unemployed	(8) Military Service
(3) Part-Time (Irregular)	(6) In Institution	(9) Homemaker

_____

How Many Days Were You Paid For Working In The Past 30 Days?
(Include Under The Table Work.) ..... __ __ Days

How Much Money Did You Receive From The Following Sources In The Past 30 Days?

$ __ , __ __ __. Employment: Net Income

$ __ , __ __ __. Unemployment Compensation

$ __ , __ __ __. Public Assistance (Including Food Stamps)

$ __ , __ __ __. Pension, Benefits, Social Security

$ __ , __ __ __. Spouse, Family, Friends

$ __ , __ __ __. Illegal Sources

PSYCHIATRIC TREATMENT HISTORY

Have You Ever Been In Psychiatric Outpatient Treatment? 1 = Yes 2 = No
(i.e., Individual Psychotherapy, Day Program, Family Therapy)
If Yes: How Old Were You The First Time You Went For Outpatient Tx?.....____
About How Many Years In Your Life Have You Received Outpatient Tx?.....____
How Many Months Over The Past Year?.....____

Have You Ever Been Hospitalized For Psychiatric Problems? 1 = Yes 2 = No
How Old Were You The First Hospitalization?.....____
How Many Times Have You Been In A Psychiatric Hospital?.....____
How Many Times Over The Past Year?.....____

Have You Ever Tried To Kill Yourself? 1 = Yes 2 = No
If Yes, # Of Times:.....____
How (Describe Method)? _____
_____
_____

Have You Ever Had to Visit the Emergency Room For Any Medical Problems? 1 = Yes 2 = No
If Yes, Then Ask About Medical Problems: _____

SUBSTANCE ABUSE TREATMENT HISTORY

Have You Ever Received Outpatient Treatment For Drug / Alcohol Abuse? (Do Not Include Self-Help Groups) 1 = Yes 2 = No
How Old Were You The First Time You Received Any Substance Abuse Treatment: .....____
How Many Times Have You Had Outpt Substance Abuse Tx:.....____
How Many Times Over Past Year: .....____

Have You Ever Attended Self-Help Groups? 1 = Yes 2 = No
How Old Were You When You First Attended Self-Help Groups: .....____

Have You Ever Been Hospitalized For Drug / Alcohol Problems? 1 = Yes 2 = No
Detox? 1 = Yes 2 = No
Drug Rehab? 1 = Yes 2 = No
TC - Drug-Free Program? 1 = Yes 2 = No

(If Yes to Any of the Above:)
How Old Were You The First Time You Attended:
.....Detox Hospitalization .....____
.....Alcohol / Drug Rehab Stay: .....____
.....TC - Drug-Free Program: .....____

How Many Times Have You Had Drug / Alcohol Hospitalizations .....____
How Many Times Over The Past Year: .....____

Have You Ever Been Arrested ? 1 = Yes 2 = No
What For? _____
Incarcerated? 1 = Yes 2 = No

FAMILY HISTORY

Has Either Of Your Parents Ever Had Any Of The Following Problems Because Of Alcohol Or Deliberate Use Of Drugs:

Marital Separation Or Divorce?	1 = Yes	2 = No
Laid Off From Work Or Fired?	1 = Yes	2 = No
Two Or More Drunk Driving Arrests?	1 = Yes	2 = No
Repeatedly Unable To Care For Home Or Family?	1 = Yes	2 = No
Doctor Said Alcohol Or Drugs Had Harmed Their Health?	1 = Yes	2 = No

	Mother	Father	Sibling	Children	Others
Severe Depression?	_____	_____	_____	_____	_____
Psych Hosp?	_____	_____	_____	_____	_____
Medications?	_____	_____	_____	_____	_____
Alcoholism?	_____	_____	_____	_____	_____
Drug Abuse?	_____	_____	_____	_____	_____
Suicide?	_____	_____	_____	_____	_____

Is There A Family History Of Alcoholism?	1 = Yes	2 = No
Is There A Family History Of Drug Abuse?	1 = Yes	2 = No
Is There A Family History Of Depression?	1 = Yes	2 = No

SEXUALITY AND REPRODUCTIVE HEALTH

* Sexuality and pregnancy are important parts of a woman's life, often called "reproductive health." In the next series of questions, we are interested in learning about your reproductive health. Let's start by talking about the pregnancies you've had.

(WHERE APPROPRIATE: Y = YES N = NO)

1. Are You Currently Pregnant?..... _____
2. Have You Been Pregnant Before?..... _____
3. How Many Times Have You Been Pregnant?..... _____
4. When You Had The First Pregnancy, How Old Were You? ..... _____
5. When You Had The Last Pregnancy, How Old Were You?..... _____
6. How Many Of Your Children Are Living Now? ..... _____
7. Have They Ever Lived With You? ..... _____
8. How Many Live With You Now? ..... _____
9. Have You Had Any Abortions? (Response should be # of abortions or N.)..... _____
10. Have You Had Any Miscarriages? (Response should be # of miscarriages or N.) ..... _____
11. Did You Ever Have A Stillbirth? (Response should be # of stillbirths or N.)..... _____
12. Where Any Babies Born Prematurely? (Response should be # of premies or N.)..... _____
13. Were Any Babies Born Alive But Later Died? (Response should be # of babies or N.)..... _____

APPENDIX C: TRAUMA LIFE HISTORY

Date of Interview: _____ Subject Number _____

A. GENERAL TRAUMA

People often have traumatic experiences. By traumatic, I mean terrible, frightening events. I'm going to read a list of potentially traumatic events. Please tell me if you have ever experienced any of these.

TRAUMATIC EXPERIENCE	YES = 1 NO = 2	# times in life	# times past 6 mos	AGES
1. Have you ever been in a large fire or explosion?				
2. Were you ever in a fire or serious accident in a car, at home, or at work?				
3. As a child (before age 18), did you witness violence between your parents (e.g., see your mom be hit or beaten)?				
4. When you were a child, did any of your closest family members (e.g., parent, brother, sister, grandparent) die?				
5. As an adult (after age 18), did any of your close family members die?				
6. Have any of your children died or have you lost them through placement?				
7. Have you ever witnessed a murder or mutilation?				
8. Has there ever been a period of time when you were homeless?				

9. PTSD SCREEN: If yes to any items above, ask:
Did any of these events keep coming back to you in some way, like in dreams, flashbacks, or thoughts that you couldn't get rid of -- like that you could have died or been seriously hurt?

YES = 1 NO = 2

f YES, return to PTSD module of SCID and gather additional data.
If already have this information, move on to next section.

APPENDIX D: CHILDHOOD TRAUMA QUESTIONNAIRE

D. CHILDHOOD PA

These questions ask about some of your experiences growing up **as a child and a teenager, up until you turned 18.** For each question, tell me the number that best describes how you feel. Although some of these questions are of a personal nature, please try to answer as honestly as you can. Please turn to P.2, ITEM 8 of your booklet and tell me the number that most describes how the item I read was true for you.

Never True Rarely True Sometimes True Often True Very Often True
--------1----------2----------3----------4----------5----------

CODE

1. When I was growing up, people in my family criticized me. _____
2. When I was growing up, people in my family argued or fought with each other. _____
3. ....., someone in my family yelled and screamed at me. _____
4. ....., I saw my mother or one of my brothers or sisters get hit or beaten. _____
5. ....., people in my family called me things like "stupid" or "lazy" or "ugly". _____
6. ....., I rarely got the love or attention that I needed. _____
7. ....., I had to protect myself from someone in my family by fighting, hiding or running away. _____
8. ....., my parents tried to treat all of us children the same. _____
9. ....., I thought that my parents wished I had never been born. _____
10. ....., I got hit so hard by someone in my family that I had to see a doctor or go to the hospital. _____
11. .....,people in my family hit me so hard that it left me with bruises or marks. _____
12. ....., I was punished with a belt, a board, or cord, or some other hard object. _____
13. ....., people in my family got drunk or high. _____
14. ....., people in my family said hurtful or insulting things to me. _____
15. ....., I believe that I was physically abused. _____
16. ....., I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor. _____
17. ....., people in my family seemed out of control. _____
18. ....., the punishments I received seemed cruel. _____
19. ....., I felt that someone in my family hated me. _____
20. ....., people in my family pushed me or shoved me. _____
21. ....., I was frightened of being hurt by someone in my family. _____
22. ....., I believe I was emotionally abused. _____
23. ....., people in my family didn't seem to know or care what I was doing. _____

APPENDIX E: CHILDHOOD SEXUAL ABUSE INVENTORY

E. CHILDHOOD SA

It is now generally realized that many women, while they were children or adolescents, have had sexual experience with an adult or someone older than themselves. By sexual, I mean behaviors ranging from exposing his/her genitals to you, to someone having intercourse with you. These experiences may have involved a relative, a friend of the family, or a stranger. Some experiences are very upsetting and painful, others are not, and some may have occurred without your consent.

Now I'd like you to think back to your childhood and adolescence -- that is, when you were 18 or younger -- and remember if you had any sexual contact with a relative, a family friend, or stranger who was more than 5 years older that your were? Or, if closer to you own age, someone who forced you to have sex. INTERVIEWERS: ANY SEX, EVEN CONSENSUAL, WITH SOMEONE MORE THAN FIVE YEARS OLDER, SHOULD BE CODED HERE.

CODES: Yes = 1 No = 2 Don't Know = 0

During childhood and adolescence.....

1. .....did anyone ever show you their sexual private parts? ..... _____

2. .....did anyone masturbate (get off) in front of you? ..... _____

3. .....did anyone ever touch your body, including your breasts or private parts, or attempt to get you off sexually? ..... _____

4. .....did anyone try to have <u>you</u> get them off, or touch <u>their</u> body in a sexual way? ..... _____

5. .....did anyone rub against your body in a sexual way? ..... _____

6. .....did anyone attempt to have sex with you? ..... _____

7. .....did anyone have intercourse with you? ..... _____

8. .....did anyone ever put their penis in your mouth, or put their mouth on your private parts? ..... _____

9. .....did anyone ever put their penis or another object in your butt or behind? ..... _____

10. .....did anyone ever take pictures of you while you were naked or having sex with someone? .. _____

11. .....did you have any other sexual contact other than what I've asked you about? ..... _____

IF YES TO ANY OF THE ABOVE, ENTER <u>Y</u> AND ASK THE FOLLOWING QUESTIONS: ..... _____ **Y/N**

12. Did the abuse happen on one or more than one occasion?
Code: 1 = Once 2 = 2 or 3 Times 3 = 3 to 10 Times 4 = Over 10 Times 5 = Chronic ... _____

13. Were you abused by one person, or more than one? (Enter # of abusers) ..... _____

14. Who was the person? (Name all if more than one) What was the relationship that he/she/them had with you? _____
_____

15. How old were you when the abuse started? (Age/s) ..... _____

16. How long did the abuse go on? (Estimate total number of months) ..... _____

17. What kind of pressure was used? _____

APPENDIX F: HAMILTON DEPRESSION RATING SCALE

Patient's Name

Date of Assessment

To rate the severity of depression in patients who are already diagnosed as depressed, administer this questionnaire. The higher the score, the more severe the depression.

For each item, write the correct number on the line next to the item. (Only one response per item)

1. **DEPRESSED MOOD** (Sadness, hopeless, helpless, worthless)

_____

0= Absent
1= These feeling states indicated only on questioning
2= These feeling states spontaneously reported verbally
3= Communicates feeling states non-verbally—i.e., through facial expression, posture, voice, and tendency to weep
4= Patient reports VIRTUALLY ONLY these feeling states in his spontaneous verbal and non-verbal communication

2. **FEELINGS OF GUILT**

_____

0= Absent
1= Self reproach, feels he has let people down
2= Ideas of guilt or rumination over past errors or sinful deeds
3= Present illness is a punishment. Delusions of guilt
4= Hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations

3. **SUICIDE**

0= Absent
_____ **1=** Feels life is not worth living
2= Wishes he were dead or any thoughts of possible death to self
3= Suicidal ideas or gesture
4= Attempts at suicide (any serious attempt rates 4)

4. **INSOMNIA EARLY**

0= No difficulty falling asleep
1= Complains of occasional difficulty falling asleep—i.e., more than 1/2 hour
_____
2= Complains of nightly difficulty falling asleep

5. **INSOMNIA MIDDLE**

0= No difficulty
_____ **1=** Patient complains of being restless and disturbed during the night
2= Waking during the night—any getting out of bed rates 2 (except for purposes of voiding)

6. INSOMNIA LATE

_____ **0=** No difficulty
1= Waking in early hours of the morning but goes back to sleep
2= Unable to fall asleep again if he gets out of bed

7. WORK AND ACTIVITIES

_____ **0=** No difficulty
1= Thoughts and feelings of incapacity, fatigue or weakness related to activities; work or hobbies
2= Loss of interest in activity; hobbies or work—either directly reported by patient, or indirect in listlessness, indecision and vacillation (feels he has to push self to work or activities)
3= Decrease in actual time spent in activities or decrease in productivity
4= Stopped working because of present illness

8. RETARDATION: PSYCHOMOTOR (Slowness of thought and speech; impaired ability to concentrate; decreased motor activity)

_____ **0=** Normal speech and thought
1= Slight retardation at interview
2= Obvious retardation at interview
3= Interview difficult
4= Complete stupor

9. AGITATION

_____ **0=** None
1= Fidgetiness
2= Playing with hands, hair, etc.
3= Moving about, can't sit still
4= Hand wringing, nail biting, hair-pulling, biting of lips

10. ANXIETY (PSYCHOLOGICAL)

_____ **0=** No difficulty
1= Subjective tension and irritability
2= Worrying about minor matters
3= Apprehensive attitude apparent in face or speech
4= Fears expressed without questioning

11. ANXIETY SOMATIC: Physiological concomitants of anxiety, (i.e., effects of autonomic overactivity, "butterflies," indigestion, stomach cramps, belching, diarrhea, palpitations, hyperventilation, paresthesia, sweating, flushing, tremor, headache, urinary frequency). Avoid asking about possible medication side effects (i.e., dry mouth, constipation)

_____ **0=** Absent
1= Mild
2= Moderate
3= Severe
4= Incapacitating

12. SOMATIC SYMPTOMS (GASTROINTESTINAL)

_____ **0=** None
1= Loss of appetite but eating without encouragement from others. Food intake about normal
2= Difficulty eating without urging from others. Marked reduction of appetite and food intake

13. SOMATIC SYMPTOMS GENERAL

_____ **0=** None
1= Heaviness in limbs, back or head. Backaches, headache, muscle aches. Loss of energy and fatigability
2= Any clear-cut symptom rates 2

14. GENITAL SYMPTOMS (Symptoms such as: loss of libido; impaired sexual performance; menstrual disturbances)

_____ **0=** Absent
1= Mild **2=**
Severe

15. HYPOCHONDRIASIS

_____ **0=** Not present
1= Self-absorption (bodily)
2= Preoccupation with health
3= Frequent complaints, requests for help, etc.
4= Hypochondriacal delusions

16. LOSS OF WEIGHT

_____ **A.** When rating by history:
0= No weight loss
1= Probably weight loss associated with present illness
2= Definite (according to patient) weight loss
3= Not assessed

17. INSIGHT

_____ **0=** Acknowledges being depressed and ill
1= Acknowledges illness but attributes cause to bad food, climate, overwork, virus, need for rest, etc.
2= Denies being ill at all

18. DIURNAL VARIATION

_____ **A.** Note whether symptoms are worse in morning or evening. If NO diurnal variation, mark none
0= No variation
1= Worse in A.M.
2= Worse in P.M.
_____ **B.** When present, mark the severity of the variation. Mark “None” if NO variation
0= None
1= Mild
2= Severe