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Evaluating Outcome Factors of Childhood Emotional Neglect: An Exploratory Factor Analysis

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Evaluating Outcome Factors of Childhood Emotional Neglect:

An Exploratory Factor Analysis

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CERTIFICATE OF APPROVAL

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This is to certify that the Clinical Research Project of

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has been approved by the CRP
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Abstract

Experiencing childhood maltreatment has been shown to have major implications on adult outcomes. Less is known about the outcomes of childhood emotional neglect (CEN). The purpose of this study was to identify factors related to psychological outcomes of CEN within the domains of depression, anxiety, and alexithymia as a precursor to the development of an inventory. One hundred and fifty participant responses on the Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), and Toronto Alexithymia Scale-20 (TAS-20) were collected. Exploratory factor analysis was conducted where nine factors yielded significant results and were titled, "Depressive Symptoms," "Difficulty Identifying Feelings," "Usefulness of Feelings," "Difficulty Describing Feelings," "Psychosomatic Symptoms," "Reduced Physical Activation," "Avoidance of Symbolism in Entertainment Preferences," "Externality," and "Anxiety Symptoms," respectively. This study augments prior literature regarding CEN to demonstrate constructs such as the belief in the usefulness of feelings in problem solving (Factor 3), avoiding entertainment that may have deeper meanings (Factor 7), and an avoidance of engaging in introspection (Factor 8). These results demonstrate that outcomes of CEN may be more complex than previously understood.

Keywords: childhood emotional neglect, exploratory factor analysis, outcomes

Chapter 1: Introduction

Over the past 4 decades, there has been a significant increase in research on childhood trauma and its long-term impacts (Grossman et al., 2017). While experiencing any kind of trauma has been shown to have major implications on development and adult outcomes, less is known about the outcomes of the various dimensions of trauma (i.e., physical, sexual, and emotional abuse and physical and emotional neglect). One area where this is particularly prevalent is the area of emotional neglect. The purpose of this research study was to identify factors related to psychological outcomes of childhood emotional neglect (CEN).

Emotional Neglect

It is likely that CEN has only begun to receive attention from researchers over the past few decades because there is not an agreed upon definition. Emotional neglect has been conceptualized under the umbrella terms of childhood maltreatment (CM) and psychological maltreatment (PM). CM includes five domains: sexual abuse, physical abuse, emotional abuse, physical neglect, and emotional neglect (Lueger-Schuster et al, 2018).

Additionally, there is a consensus among researchers that there are two dimensions of PM: abuse and neglect (Baker & Festinger, 2011). The American Professional Society on the Abuse of Children (2019) defines PM as a

repeated pattern of caretaker behavior or extreme incident(s) that thwart the child's basic psychological needs (e.g. safety, socialization, emotional and social support, cognitive stimulation, respect) that convey a child is worthless, defective,

damaged goods, unloved, unwanted, endangered, primarily useful in meeting

another's needs, and/or expendable. (p. 3)

Grossman et al. (2017) defined PM as "children's exposure to recurrent or severe forms

of emotional abuse and emotional neglect including insults, shaming, degradation,

threats, shunning of affection, forced isolation, exploitation and imposition of excessive

and unrealistic demands" (p. 86). While these definitions provide a foundation for

conceptualizing CEN, a definition of what constitutes CEN remains unclear.

Young et al. (2011) provided a definition of CEN based on the conceptual

framework provided by Glaser (2002) as "emotional unresponsiveness, unavailability,

and neglect characterized by lack of interaction between parent and child" (p. 889).

Schimmenti (2017) also attempted to provide a definition based on Glaser's (2002) and

Minty's (2005) research. Schimmenti argued that CEN occurs when

a parent intentionally or unintentionally overlooks signs that a child needs

comfort or attention…a failure or refusal to provide needed psychological care

(e.g., rejection of the child, failure to express positive feelings to the child,

hindering the development of autonomy, withholding love, and denying the child

opportunities for interacting). (p. 97)

Stoltenborgh et al. (2013) defined emotional neglect as the

failure to meet [the] child's emotional needs, and includes for example the failure

to provide adequate nurturance and affection, allowing children to be witness to

domestic violence, to knowingly permit maladaptive behavior by the child, the

failure to seek care for emotional or behavioral problems, and the failure to

provide adequate structure. (p. 346)

While these researchers identified different aspects of CEN, they all indicated some form of emotional unresponsiveness by the primary caregiver(s).

National prevalence rates of CEN are currently unknown as most data related to CM are gathered through state child protective services agencies. Emotional neglect is included under "psychological maltreatment," and it is likely that many cases related to PM are screened out. What is known on prevalence rates of CM is gathered through the National Child Abuse and Neglect Data Systems (NCANDS) which is published by the Children's Bureau at the Health and Human Services Administration for Children and Families. In 2017, there were approximately 673, 830 victims of maltreatment. Of those, approximately 75% were neglected, 18% were physically abused, 9% were sexually abused, 0.6% were psychologically maltreated, and 7% were categorized as "other" if they did not fit into one of the NCANDS categories. Stoltenbrogh et al. (2013) conducted a meta-analytic review of the literature to provide an estimate of the prevalence of physical neglect and emotional neglect. Of the 16 studies related to self-reported physical neglect, they found that the prevalence was 16.3% ($k = 13$, $N = 59,406$; 95% CI 12.1–21.5; $p < 0.01$). Of the 13 studies regarding self-reported emotional neglect, the prevalence was 18.4% ($k = 16$, $N = 59,665$; 95% CI 13.0–25.4; $p < 0.01$). In both domains, sex was not a significant moderator, which implies that physical and emotional neglect occurred at about the same rate for each sex. The researchers also noted that prevalence rates in these studies were almost always reported alongside reports of child physical abuse and/or emotional abuse, which indicates that physical and emotional neglect were by-products and not necessarily the focus of the study. This shows that physical neglect can be a confounding factor when trying to understand emotional neglect

and provides further support for the importance of beginning the process of identifying adult outcome factors unique to CEN.

Throughout the literature, researchers have begun the process of identifying outcomes related to CEN. Some of those factors include an increased risk for depression (Cohen et al., 2017; Jessar et al., 2017; Spinhoven et al., 2010), anxiety (Bruce et al., 2012; Cohen et al., 2017; Spinhoven et al., 2010), and difficulty identifying and describing emotion (Aust et al., 2013; Brown et al., 2018; Jessar et al., 2017; Schimmenti, 2017), to name a few. The purpose of this study was to assist researchers in their process of identifying outcomes unique to CEN by conducting an exploratory factor analysis (EFA) on results collected using previously validated measures among individuals who endorsed CEN, which will ultimately move the field towards empirically validating emotional neglect as a construct.

Attachment Theory

It can be argued that CEN can begin as early as infancy. Thus, it is also important to discuss attachment theory. John Bowlby has generally been considered as the founder of attachment theory, but William Blatz and Mary Ainsworth also made significant contributions to the theory (van Rosmalen et al., 2016). Attachment theory is grounded in the principles of object-relations theory which emphasizes understanding how humans identify and connect with one another (Flanagan, 2011). Object-relations theory posits that people have an internalized world of relationships that is different, and can be even more powerful, than the external world of social interactions (Flanagan, 2011). This also includes interactions with the external world that can shape an individual's sense of self and their ability to relate to others (Flanagan, 2011). It is generally believed that the

mother or primary caregiver is the first object to whom the infant shows relation (Flanagan, 2011).

Attachment theory argues that how the parent provides caregiving to the child, rather than the child's temperament, determines how infants form bonds with their primary caregiver(s) as well as the differences that have been observed in attachment styles (Groh et al., 2017). In 1928–1929, John Bowlby worked as a volunteer at the Priory Gate School, a school for "difficult" children (van Rosmalen et al., 2016). It was working with these children that inspired his work as he believed that the children were deprived of love in childhood, which led to their maladaptive behaviors later (van Rosmalen et al., 2016). From there, he worked at various hospitals and institutions as well as published numerous papers and case studies where he began to refine his model. He concluded that the problematic behavior that was being seen among children could be attributed to separation and neglect (emotional and/or physical; van Rosmalen et al., 2016). His work eventually led him to partner with the World Health Organization, which asked him to do a report on the mental health problems of homeless children, a major problem after World War II. In his report, he concluded that there was significant evidence to show that "prolonged deprivation of the young child of maternal care may have grave and far-reaching effects on his character and so on the whole of his future life" (Bowlby, 1952, p. 46; van Rosmalen et al., 2016).

Around the same time as John Bowlby, William Blatz was working on his security theory. In the 1920s–1930s, Blatz worked with preschool and school-aged children (van Rosmalen et al., 2016). Blatz was very familiar with the work of Freud and used the term *appetites*, which resembled *drives* in psychoanalytic theory. These

appetites included hunger, thirst, sleep, elimination, sex, and play (or change; van

Rosmalen et al., 2016). Blatz was particularly interested in how one fulfills these needs

and how the cycle of appetites repeats as children develop from being dependent to

independent. Blatz recognized the importance of parents' influence on helping children

satisfy these appetites, and Blatz and Bott (1929) argued that "proper management of the

self-tendencies of the child during the earlier pre-school years offers the surest

preparation for satisfactory personality adjustment during the whole of life" (p. 299; van

Rosmalen et al., 2016). These thoughts eventually led to the development of security

theory which suggests that a stable mother during the early years is very important for

healthy child development as the mother can be used as a secure base from which the

child can explore the world (van Rosmalen et al., 2016). Blatz also identified different

types or categories of security including independent security, immature (or infantile)

dependent security, mature (or adult) dependent security, and pseudosecurity (van

Rosmalen et al., 2016). These types of securities inspired the work done by Mary

Ainsworth who developed various types of attachment styles based on the "Strange

Situation" experiment (van Rosmalen et al., 2016).

Mary Ainsworth and colleagues developed the "Strange Situation Procedure"

where 1-year-old children are placed in a room with their mother (Ainsworth et al., 1978;

van Rosmalen et al., 2016). After the child and mother enter, soon thereafter a stranger

will enter and the mother will leave. The mother will then reenter the room and the

stranger will leave. Next, the stranger leaves the child alone in the room. In the last step,

the stranger enters the room and then the mother enters. Throughout this whole process,

experimenters are observing through a one-way mirror and coding the reactions of the

child. There is special attention paid to whether the child seeks contact and is easy to soothe, whether the child avoids the mother, or whether the child is angry and/or acts in a disorganized way upon the mother's return in the last step (van Rosmalen et al., 2016). The results of the coding showed three different groups: a group showing positive feelings toward the mother (but differed in their confidence in the relationship), a group who was ambivalent, and a hostile or indifferent group (van Rosmalen et al., 2016).

Mary Ainsworth then turned her attention towards the sensitivity of the parent as being a predictor of attachment. Ainsworth posited that maternal warmth and sensitivity were different as warmth is a characteristic of the mother and sensitivity refers to the response of the mother to the child's needs (van Rosmalen et al., 2016). Thus, a parent who does not respond to the initiatives of the child may lead the child to form more negative types of attachment with the parent.

It is easy to see how attachment theory can relate to CEN. One could argue that a caregiver who does not respond to the emotional needs of a child could be representative of CEN and thus could lead to certain types of attachment styles to the caregiver(s).

Purpose of the Study

In the literature, there is statistical evidence to support the profound impact of CEN on functioning later in life. Researchers have found support for CEN leading to an increased risk for depression (Cohen et al., 2017; Jessar et al., 2017; Pederson & Wilson, 2009; Spinhoven et al., 2010), anxiety (Bruce et al., 2012; Cohen et al., 2017; Spinhoven et al., 2010), alexithymia (Aust et al., 2013; Brown et al., 2018; Jessar et al., 2017), posttraumatic stress disorder (PTSD; Cohen et al., 2017; Lueger-Schuster et al., 2018;

Pederson & Wilson, 2009), and increased somatic complaints (Aust et al., 2013; Bruce et al., 2012).

Given the scope of the research, this study focused on the assessment of three subdomains: depression, anxiety, and alexithymia. The aim of this project was to identify factors related to psychological outcomes of CEN within the domains of depression, anxiety, and alexithymia as a precursor to the development of a future inventory.

Chapter 2: Review of the Literature

The "neglect of neglect" has been acknowledged in the field since Isabel Wolock's and Howard Dubowitz's article in 1984 (Stoltenborgh et al.,2013). It can be argued that emotional neglect has been even more neglected. The research conducted to date has found evidence that CEN can lead to various psychological difficulties later in life. The following review of the literature will provide support for the importance of developing a measure that assesses the impact of CEN, as it has major implications for functioning in adulthood.

Depression

A common finding in the literature is the impact of CEN on depressive symptoms. Song et al. (2016) analyzed the impact of CM on spirituality among patients with depressive symptoms. Specifically, the relationships between the five types of trauma (i.e., emotional abuse, emotional neglect, physical abuse, physical neglect, and sexual abuse) and three factors of spirituality (i.e., Meaning, Peace, and Faith) were analyzed. The researchers hypothesized that specific types of trauma would relate to difficulties with spirituality among depressed patients but did not specify which traumas. It was also hypothesized that chronic exposure to maltreatment would be more impactful than noninterpersonal and random events. Three hundred and five participants who were diagnosed with depressive disorders completed questionnaires. Of those 305, 43.1% were males, the mean age was 37 ($SD = 13.4$), 26.5% identified as Catholic, 32.1% identified as Protestant, 8.0% identified as Buddhist, and 0.7% identified as other. All participants had to be literate in Korean to participate. Depressive symptoms were assessed using the Beck Depression Inventory (BDI) which was adapted into Korean. CM was assessed

using the Childhood Trauma Questionnaire – Short Form (CTQ-SF). Spirituality was assessed using the Functional Assessment of Chronic Illness Therapy – Spiritual Well-Being Scale (FACIT-Sp-12). Cronbach's alpha and test–retest reliability were not reported.

Results indicated that age was significantly negatively correlated with emotional abuse ($r = -0.23$, $p < 0.001$), physical abuse ($r = -0.15$, $p < 0.01$), emotional neglect ($r = -0.14$, $p < 0.05$), and physical neglect ($r = -0.25$, $p < 0.001$). The BDI was significantly positively correlated with all forms of CM (emotional abuse, $r = 0.26$, $p < 0.001$; physical abuse, $r = 0.21$, $p < 0.001$; sexual abuse, $r = 0.20$, $p < 0.001$; emotional neglect, $r = 0.28$, $p < 0.001$; physical neglect, $r = 0.17$, $p < 0.01$) as well as significantly negatively correlated with spirituality (FACIT-Sp-12, $r = -0.58$, $p < 0.001$; Meaning, $r = -0.58$, $p < 0.001$; Peace, $r = -0.62$, $p < 0.001$; Faith, $r = -0.26$, $p < 0.001$). Additional results yielded that all of the types of trauma were significantly negatively associated with spirituality except physical neglect (emotional abuse, $r = -0.26$, $p < 0.001$; physical abuse, $r = -0.20$, $p < 0.001$; sexual abuse, $r = -0.18$, $p < 0.01$; emotional neglect, $r = -0.28$, $p < 0.001$; physical neglect, $r = -0.06$). This study provides support for the idea that experiencing emotional neglect in childhood can lead to depressive symptoms in adulthood as well as a lowered sense of spirituality.

Lopez-Patton et al. (2016) also conducted a study and sought to examine the relationship between CM and depression among a group of HIV seropositive METH abusing men who have sex with men (MSM). The researchers hypothesized that METH abusing MSM would be more likely to endorse a history of CM compared to those who do not abuse METH. Participants were 38 MSM who were HIV-1 seronegative METH

abusers (M_{age} = 34.1, SD = 9.4), 77 MSM who were HIV-1 seropositive METH abusers

(M_{age} = 41.8, SD = 8.2), and 131 participants who were HIV-1 seronegative non-METH

abusers who did or did not identify as MSM (M_{age} = 35.8, SD = 10.6). Among the MSM

who were HIV-1 seronegative METH abusers, 47% identified as Hispanic, 21% as

African American, 26% as Caucasian, and 0% as Haitian/Caribbean. Among the MSM

who were HIV-1 seropositive METH abusers, 43% identified as Hispanic, 34% as

African American, 21% as Caucasian, and 1.3% as Haitian/Caribbean. Among the HIV-1

seronegative non-METH abusers who did or did not identify as MSM, 65% identified as

Hispanic, 21% were African American, 9% were Caucasian, and 1.5% were

Haitian/Caribbean. The participants were assessed for demographic information,

depression using the Center for Epidemiologic Studies Depression Scale (CES-D),

substance use history using the Structured Clinical Interview for Disorders (SCID), and

CM using the Childhood Trauma Questionnaire (CTQ). Cronbach's alpha and test–retest

reliability were not reported.

Results showed that those who were METH users had higher levels of depression

compared to non-METH users, regardless of HIV status ($p < 0.001$). METH users were

also more likely to experience more incidents of all forms of CM (i.e., emotional,

physical, and sexual abuse, and emotional and physical neglect; $p < 0.001$). Among

METH users, depression was found to be best predicted by a history of emotional neglect

as emotional neglect accounted for 23.5% of the variance ($p < 0.001$). This study

provides support for the influence of CEN on future depressive symptoms among those

who are METH users.

Depression and Anxiety

   Spinhoven et al. (2010) assessed whether types of childhood adversities (i.e., emotional neglect, psychological, physical and emotional abuse) as well as difficult life events led to different forms of depressive and anxiety disorders. These researchers also assessed how neuroticism contributed to the development of depressive and anxiety disorders. Data were drawn from the Netherlands Study of Depression and Anxiety (NESDA), which is an ongoing 8-year longitudinal study that is measuring the long-term course of depressive and anxiety disorders in various health care settings and phases. A total of 2,981 participants were recruited from primary care settings, specialized mental health care settings, and the community, including controls. All the participants were given a baseline assessment that included demographic information, psychopathology, psychosocial functioning, and biomarkers. Of the total participants, 2,228 had at least one lifetime anxiety or depressive disorder, and the control group was made up of 498 participants who did not have a lifetime depressive or anxiety disorder nor did they have current or lifetime substance abuse or dependence. Depressive and anxiety disorders were measures using the Composite International Diagnostic Interview (CIDI), neuroticism was assessed using the NEO Five-Factor Inventory (NEO-FFI; $\alpha = 0.75$), and childhood life events and trauma were previously assessed in the Netherlands Mental Health Survey and Incidence Study (NEMSIS) where participants were interviewed and asked if they had experienced emotional neglect, physical neglect, physical abuse, and sexual abuse prior to the age 16. Cronbach's alpha was not reported for the CIDI and test–retest reliability was not reported for the NEO-FFI. The researchers also administered the List of Threatening Events Questionnaire (LTE-Q) which assesses stressful events across the

lifespan. The researchers reported that this measure had good test–retest reliability (kappa = 0.78–1.0 on all categories except "something you value was lost or stolen" which was 0.24), high agreement between participant and informant ratings (kappa = 0.70–0.90), and good agreement between with the interview based ratings (sensitivity = 0.89; specificity = 0.74). Cronbach's alpha was not reported.

Results demonstrated that among the control group, 18.9% of the participants endorsed experiencing CEN, 12.7% endorsed sexual abuse, 11.2% endorsed psychological abuse, and 6.4% endorsed physical abuse. Among the anxiety and depressive disorder group, 45.1% experienced emotional neglect in childhood, 29.5% were psychologically abused, 20.6% were sexually abused, and 16.1% were physically abused.

Additionally, emotional neglect was associated with both psychological abuse (r = 0.57, $p < 0.01$) and physical abuse ($r = 0.39$, $p < 0.01$). Psychological abuse and physical abuse were positively associated ($r = 0.54$, $p < 0.01$) and being fired from a job and looking for a job without result were positively associated ($r = 0.42$, $p < 0.01$). The researchers also analyzed the associations (odds ratios [ORs]) of childhood adversity and negative life events with lifetime anxiety and/or depressive disorders while controlling for demographic variables. Multivariate associations demonstrated that emotional neglect was a statistically significantly predictor of dysthymia (OR = 2.28, $p < 0.001$), depression (OR = 1.91, $p < 0.001$), generalized anxiety disorder (OR = 1.52, $p < 0.001$), social phobia (OR = 1.59, $p < 0.001$), agoraphobia (OR = 1.34, $p < 0.05$), any depressive disorder (OR = 2.12, $p < 0.001$), any anxiety disorder (OR = 1.60, $p < 0.001$), and number of disorders (OR = 1.33, $p < 0.001$) when controlling for age, gender, and

education. When the researchers controlled for age, gender, education, and comorbid disorders, they found that emotional neglect was still a statistically significantly predictor of dysthymia (OR = 1.49, $p < 0.001$), depression (OR = 1.63, $p < 0.001$), social phobia (OR = 1.47, $p < 0.001$), any depressive disorder (OR = 2.04, $p < 0.001$), any anxiety disorder (OR = 1.57, $p < 0.001$), and number of disorders (OR = 1.22, $p < 0.001$). Results also demonstrated that emotional neglect had a small positive association with neuroticism ($r = 0.22$, $p < 0.001$) as did psychological and physical abuse (psychological abuse, $r = 0.17$, $p < 0.001$; physical abuse, $r = 0.15$, $p < 0.001$). Overall, the results of this study provided support for the connection between CEN and depressive and anxiety symptoms later in life.

Depression, Anxiety, and PTSD

One comprehensive study addressed depression, anxiety, and PTSD. Cohen et al. (2017) sought to expand the current knowledge of the psychological impact of physical and emotional neglect. The researchers addressed the impact of neglect experienced during the transition from late adolescence into early adulthood which they identified as a critical period in regard to interpersonal and achievement domains as well as a period where childhood trauma-related distress may occur. The prospective impact of physical and emotional neglect in a large and diverse community sample was also analyzed. Finally, the researchers utilized a parallel analytic approach where person-centered and variable-centered were used to examine physical and emotional neglect.

The researchers hypothesized that maltreatment experiences can be predictors of symptoms of anxiety, depression, PTSD, and substance use over the course of 3 years. The researchers expected to obtain two to six maltreatment profiles with at least one

being related to neglect in the absence of abuse. An additional hypothesis included that

Black participants would be overrepresented in the neglect profiles while Latinos would

be underrepresented. Further, it was hypothesized that emotional neglect would lead to

high internalizing symptoms while both physical and emotional neglect would lead to

higher rates of substance use behaviors. The researchers also hypothesized that

psychological outcomes would be greater for females who experienced neglect. The

relationship between neglect and psychological distress varied as a function of race was

also examined.

Participants were pulled from an ongoing longitudinal study in the fourth, fifth,

and sixth waves of the study. A total of 1,042 freshman and sophomores in high school

were recruited from seven Houston-area public schools in 2010 (Wave 1). Five hundred

and eighty of these participants (58.3% female, mean age = 18.3; $SD = 0.59$) at Wave 4

completed inventories administered by the researchers, followed by 446 at Wave 5 and

476 at Wave 6. Thirty-one percent of the participants identified as Hispanic, 28.9%

White, 26.2% Black, 4.3% Asian, and 9.6% biracial or other. Additionally, 45.5% of the

participants reported living with both parents while 24% lived with their mother only. All

of the participants' parents signed written consent forms. Trauma was assessed through

the CTQ-SF. Symptoms of depression were measured through the CES-D (Wave 1, $\alpha =$

0.77; Wave 2, $\alpha = 0.79$; Wave 3, $\alpha = 0.79$). PTSD was assessed using the four-item

Primary Care – PTSD questionnaire (PC-PTSD; Wave 1, $\alpha = 0.81$; Wave 2, $\alpha = 0.81$;

Wave 3, $\alpha = 0.82$). Anxiety symptoms were measured with the Generalized Anxiety

Disorder subscale of the Screen for Child Anxiety Related Emotional Disorders

(SCARED; Wave 1, $\alpha = 0.88$; Wave 2, $\alpha = 0.91$; Wave 3, $\alpha = 0.92$). Test–retest reliability

was not reported. Lastly, substance use was assessed by asking clients to indicate their past year alcohol, cigarette, and illicit substance use by indicating yes or no.

Data analysis was conducted in two phases, with the first phase being a latent profile approach (LPA) where the researchers examined patterns in maltreatment related to physical and emotional neglect. The second phase involved a multilevel modeling approach to assess the impact of maltreatment in late adolescence using the person-centered and variable-centered models. Person-centered analysis results yielded 77.2% of the participants minimally endorsing trauma and labeled as Profile 1 and "no trauma" while Profile 2 was made up of 17.4% of participants who endorsed physical and/or emotional neglect and this group was labeled at "neglect." There was also a Profile 3 group which was made up of the highest rates of sexual abuse, physical abuse, and emotional abuse, with 5.3% of the participants making up this profile. The researchers labeled this profile as "abuse."

Chi-squared analysis revealed significant sex differences, with females being more likely to be represented in the "abuse" group, $X^2(2) = 6.65$, $p < 0.05$. There were also significant racial differences, with Black participants being more likely to be placed in the "abuse" group while Hispanics were less likely to be represented in the "neglect" group, $X^2(8)$ 24.85 = 6.65, $p < 0.01$. Variable-centered analyses were used to test whether clinical outcomes varied as a function of sex and/or race. The results indicated a significant interaction between sex and emotional neglect for GAD symptoms where females who experienced elevated levels of emotional neglect were more likely to experience anxiety symptoms, $t(580) = 5.11$, $p < 0.01$. The researchers also found that physical and emotional neglect predicted symptoms of PTSD, depression, illicit

substance use, and cigarette smoking, with emotional neglect being slightly more predictive than physical neglect. Using the LPA, prospective outcomes were run for the maltreatment subtypes. Results demonstrated that the "neglect" profile exhibited higher levels of depression, $t(576) = 5.50$, $p < 0.001$, $r_{effect} = 0.22$, compared to the "no trauma" profile ($p = 0.006$) and the "abuse" profile ($p = 0.067$). This pattern was also seen when comparing the neglect profile's endorsement of GAD, $t(580) = 2.09$, $p < 0.001$, $r_{effect} = 0.09$), illicit substance use, $t(552) = 2.99$, $p < 0.001$, $r_{effect} = 0.13$, cigarette use, $t(564) = 3.26$, $p < 0.001$, $r_{effect} = 0.14$, and PTSD, $t(570) = 4.33$, $p < 0.001$, $r_{effect} = 0.18$, to the "no trauma" and "abuse" profiles. The results of this research provide support for emotional neglect being a significant risk factor for developing depressive symptoms, GAD, PTSD symptoms, and substance use.

Depression and PTSD

In another study, Pederson and Wilson (2009) addressed the connection between CM, symptoms of PTSD, and adult obesity. Participants were 207 adult women with a mean age of 26.5 ($SD = 6.7$) who were recruited from cities in Ohio through advertisements in the newspaper and fliers placed at local colleges and on community bulletin boards. The participants were screened via telephone and those who reported experiencing no CM, no more than one nontraumatic move, no parental divorce, had current illicit drug use, or serious medical conditions were excluded. CM was assessed using the CTQ (test–retest reliability [TRT] = 0.79–0.81; α = 0.66–0.92). The Millon Clinical Multiaxial Inventory – Third Edition (MCMI) is a 175-item, true-false self-report measure to assess personality and clinical syndromes (TRT = 0.84–0.96; α = 0.67–0.90). The researchers selected the PTSD, Anxiety, Alcohol Dependence, Drug Dependence,

Depressive, and Major Depression subscales to use for statistical analyses. The researchers conducted an analysis of variance (ANOVA) where they divided the participants into four groups based on severity (none-or-minimal, low-to-moderate, moderate-to-severe, severe-to-extreme). Severity was used as the independent variable, and PTSD score on the MCMI was the dependent variable.

Emotional neglect was found to differ significantly among the severity groups ($F_{3,302} = 40.87$, $p < 0.001$; $\eta^2_p = 0.38$). Student-Newman-Keuls post hoc analysis revealed that participants who reported severe-to-extreme emotional neglect had significant higher PTSD scores than those in the other severity groups ($p < 0.001$). This result was also indicated among those who reported severe-to-extreme emotional abuse ($F_{3,302} = 41.07$, $p < 0.001$; $\eta^2_p = 0.38$), sexual abuse ($F_{3,302} = 15.20$, $p < 0.001$; $\eta^2_p = 0.18$), physical abuse ($F_{3,302} = 23.78$, $p < 0.001$; $\eta^2_p = 0.26$), and physical neglect ($F_{3,302} = 20.16$, $p < 0.001$; $\eta^2_p = 0.23$). Additional ANOVA analyses demonstrated that those who endorsed four or more forms of CM had significantly higher PTSD scores than those who reported zero to three types ($F_{5,201} = 27.82$, $p < 0.001$; $\eta^2_p = 0.41$).

In order to parse out the contributions of specific types of CM to PTSD symptoms, a multiple analysis of variance (MANCOVA) was conducted using the severity of emotional neglect as the independent variable and the severity of other types of maltreatment and number of types of maltreatment as cofactors. Also, because CM has been shown to be associated with psychological states in adulthood, the scores on the MCMI subscales of Depressive, Anxiety, Alcohol Dependence, Drug Dependence, and Major Depression were treated as dependent variables with PTSD. When the researchers held the scores for the severity of other types of CM and the number of types of

maltreatment constant, only the severity of emotional neglect ($F_{3,197} = 2.07$, $p < 0.05$; η^2_p = 0.04), emotional abuse ($F_{1,197} = 12.77$, $p < 0.001$; $\eta^2_p = 0.06$), and sexual abuse ($F_{1,197} =$ 9.80, $p < 0.01$; $\eta^2_p = 0.05$) had significant effects on the PTSD score.

The researchers then conducted a one-way ANOVA using severity of abuse as the independent variable and body mass index (BMI) as the dependent variable. BMI differed significantly among the severity of emotional neglect groups ($F_{3,302} = 7.73$, $p <$ 0.001; $\eta^2_p = 0.10$). A Student-Newman-Keuls post hoc analysis indicated that those who reported moderate-to-severe and severe-to-extreme emotional neglect had significantly higher BMIs than participants in the none-to-minimal group ($p < 0.001$). Additionally, those who reported severe-to-extreme emotional abuse also had significantly higher BMIs ($F_{3,302} = 5.73$, $p < 0.001$; $\eta^2_p = 0.08$) than the none-to-minimal group. There were no BMI differences among the sexual abuse severity group ($F_{3,302} = 2.33$, ns), physical neglect severity groups ($F_{3,302} = 1.04$, ns), nor the physical abuse severity groups ($F_{3,302} =$ 3.18, ns).

Further, an ANOVA conducted demonstrated that participants who reported more forms of CM had significantly higher BMI scores than those who reported no or minimal maltreatment ($F_{5,201} = 3.02$, $p < 0.01$; $\eta^2_p = 0.07$). With BMI being associated with severity of emotional neglect, emotional abuse, and the number of different types of maltreatment, the researchers used statistical control to analyze the contribution of specific types of maltreatment to BMI. A MANCOVA was conducted with severity of emotional neglect as the independent variable, and the severity of other types of maltreatment and the number of types of maltreatment were cofactors. As with the MANCOVA for PTSD, Depressive, Anxiety, Alcohol Dependence, Drug Dependence,

and Major Depression were treated as dependent variables with BMI scores. Results

demonstrated that only the severity of emotional neglect had a significant effect on BMI

when the severity of other types of maltreatment and the number of types were held

constant ($F_{3,197} = 2.76$, $p < 0.05$; $\eta^2_p = 0.04$).

Next, the researchers wanted to test whether PTSD was a mediator of emotional

neglect on BMI. Based on suggestions made by other researchers (Kraemer et al., 2001)

and the model they chose to use, they assumed that CEN occurred before the

development of PTSD symptoms. The researchers then ran a Pearson correlation to

determine the relationship between severity of emotional neglect and PTSD scores and

found a significant positive correlation ($r^{206} = 0.61$, $p < 0.001$). A linear regression of the

outcome variable (BMI) was then run which used severity of emotional neglect and

PTSD scores as independent variables.

Lastly, a regression coefficient of severity of emotional neglect with two

independent variables was compared with regression coefficients of severity of emotional

neglect where emotional neglect was the only independent variable. In their first model,

using severity of emotional neglect and PTSD as independent variables, the results

demonstrated that the regression coefficient (β) for severity of emotional neglect was

0.31 ($t = 3.74$, $p < 0.001$) and the regression coefficient (β) for PTSD was 0.03 ($t = 0.41$,

$p = 0.68$). In the second model, where only severity of emotional neglect was the

independent variable, the regression coefficient was 0.33 ($t = 5.06$, $p < 0.001$). Based on

these results, PTSD symptoms did not mediate the relationship between CEN and BMI.

A MANCOVA was then conducted to see if any of the other variables mediated the

relationship with BMI scores among those who reported CEN. The only MCMI scale that

showed to be a significant predictor of BMI was Major Depression ($\beta = 0.32$, $t = 2.96$, $p = 0.003$). Thus, PTSD symptoms did not play a mediating role in obesity in women who endorsed CEN, but rather, depression mediated this relationship in these participants. Overall, this research demonstrates that experiencing CEN can have major implications on the development of PTSD symptoms and obesity later in life.

Depression and Alexithymia

Some research has also addressed the connection between CM, depression and alexithymia. In one study, researchers evaluated whether emotional abuse and neglect predicted decreases in emotional clarity and whether emotional clarity predicted increases in depressive symptoms in adolescents (Jessar et al., 2017). Emotional clarity was defined as "the ability to understand, identify, and differentiate one's emotions" (Jessar et al., 2017, p. 417). These researchers hypothesized that emotional neglect would predict deficits in emotional clarity and emotional abuse would not. It was also hypothesized that emotional clarity would mediate the relationship between emotional neglect and depressive symptoms. A sample of 204 early adolescents were drawn from the Adolescent Cognition and Emotion Project which investigates the development of anxiety and depression during adolescence. The participants were asked to complete four assessments—one baseline and three follow-up sessions approximately 9 months apart. During the baseline visit, the participants completed self-report measures of depressive symptoms and emotional clarity. The participants were administered the Children's Depression Inventory (CDI) which measures the experience of depressive symptoms in children and adolescents over the previous 2 weeks (Time 1, $\alpha = 0.85$; Time 4, $\alpha = 0.91$); the emotional abuse and emotional neglect subscales of the Childhood Trauma

Questionnaire (CTQ-EA/EN) were used at Time 2 to measure emotional abuse and neglect that may have occurred since Time 1 (emotional abuse, $\alpha = 0.74$; emotional neglect, $\alpha = 0.80$), and emotional clarity was assessed using the Emotional Clarity Questionnaire (ECQ; Time 1, $\alpha = 0.81$; Time 3, $\alpha = 0.74$). Test–retest reliability was not reported.

Results of the study indicated that both emotional abuse and emotional neglect were negatively correlated with emotional clarity, with emotional clarity being measured at baseline and emotional abuse and neglect being measured at Time 2 (Emotional Abuse, $r = -0.166$, $p < 0.05$; Emotional Neglect, $r = -0.261$, $p < 0.01$). The researchers also found that emotional abuse and emotional neglect were positively correlated with each other ($r = 0.524$, $p < 0.01$). Emotional abuse was positively correlated with depressive symptoms measured at baseline ($r = 0.421$, $p < 0.01$) as was emotional neglect ($r = 0.332$, $p < 0.01$). Emotional clarity was negatively correlated to depressive symptoms at baseline ($r = -0.396$, $p < 0.01$) as well as at Time 4 ($r = -0.413$, $p < 0.01$). Further analyses were conducted to determine whether variables differed by gender and race. The only significant gender difference was at Time 3 where adolescent girls reported lower emotional clarity than boys ($t = 3.44$, $p < 0.01$). It was also found that at Time 2, more Caucasians reported higher levels of emotional neglect ($t = 2.64$, $p < 0.01$). There were no other gender or racial differences.

To assess whether emotional neglect and emotional abuse predicted decreases in emotional clarity, two hierarchical linear regressions were performed. The researchers used Time 3 emotional clarity scores as the dependent variable in both regressions. Time 1 emotional clarity and gender were controlled for in the first step of the regressions. The

researchers then entered the main effects for both emotional abuse and emotional neglect, doing so independently and then combining the effects. Support for the researcher's hypothesis was demonstrated such that emotional neglect significantly predicted decreases in emotional clarity (β = -0.18, t = 2.94, $p < 0.01$) and emotional abuse did not (β = -0.08, t = 1.20, p = 0.23). Emotional neglect remained significant even when both predictors were entered simultaneously (β = -0.19, t = -2.68, $p < 0.01$).

The researchers also performed the same regression analyses with emotional neglect, emotional abuse, and depressive symptoms. Depression scores at Time 4 were used as the dependent variable in both analyses. In the first step, Time 1 depressive symptoms and gender were controlled for. In the second step, the predictors of emotional neglect and emotional abuse were entered. Results indicated that both emotional abuse and emotional neglect significantly predicted increases in depressive symptoms (Emotional Abuse, β = 0.31, t = 4.59, $p < 0.001$; Emotional Neglect, β = 0.18, t = 2.59, $p < 0.01$). Lastly, bootstrapping mediation analyses were conducted to assess whether deficits in emotional clarity lead to depressive symptoms and if they mediate the relationship between emotional maltreatment and depressive symptoms. Emotional clarity at Time 3 was evaluated as the mediator of the relationship between Time 2 emotional abuse and emotional neglect and Time 4 depressive symptoms. Emotional clarity was found to have a significant effect on depression (β = -0.30, t = -4.39, $p < 0.001$). An indirect effect was found of Time 2 emotional neglect on Time 4 depressive symptoms, with decreases in emotional clarity being significant (Indirect effect = 0.08, $p < 0.05$, SE = 0.03, CI [lower] = 0.02, CI [upper] = 0.15). Overall, the researchers demonstrated that emotional neglect significantly predicted deficits in emotional clarity

and deficits in emotional clarity significantly mediated the relationship between emotional neglect and increases in depressive symptoms.

Alexithymia

Brown et al. (2018) analyzed the relationship between emotional abuse and neglect on externally oriented thinking, difficulty describing feelings, and difficulty identifying feelings among emerging adults, as well as if sex would moderate these relationships. The researchers hypothesized that emotional abuse and neglect would be positively associated with difficulty identifying feelings but not statistically related to externally oriented thoughts. There was not a hypothesis regarding emotional maltreatment being related to difficulty describing feelings as existing evidence is mixed regarding this relationship. Additionally, the researchers hypothesized that sex would indeed moderate the relationship between emotional abuse and neglect and difficulty identifying feelings among females but not males.

Five hundred undergraduate participants between the ages of 18–25 years old were recruited from a large Midwestern university. Two hundred and forty-eight of the participants were male and the rest were female. 71.6% of the participants were Caucasian, 10.2% were Asian, 7.4% were mixed or other, 6% were Hispanic/Latino, 3.6% were Black, and 1.2% were Native American. The participants were administered the CTQ to measure the occurrence of trauma in childhood on five subscales as previously described ($\alpha > 0.81$). Alexithymia was assessed using the Toronto Alexithymia Scale (TAS-20) which assesses alexithymia in three domains: externally oriented thinking, difficulties describing feelings, and difficulty identifying feelings

(externally oriented thinking, $\alpha = 0.58$; difficulty describing feelings, $\alpha = 0.76$; difficulty identifying feelings, $\alpha = 0.87$).

The results of the research indicated that 57.8% of the participants endorsed at least one item on the emotional abuse subscale and 63.2% endorsed an item on the emotional neglect subscale of the CTQ. Male participants reported higher levels of emotional neglect than female participants. Difficulty describing and identifying feelings were more strongly associated with each other than they were with externally oriented thinking. Female participants endorsed more difficulty identifying feelings than male participants. Racial/ethnic minorities reported greater exposure to emotional abuse and neglect as well as more difficulty identifying feelings than Caucasian participants. The researchers also found that older participants endorsed greater exposure to all child maltreatment types except for sexual abuse. Overall, participants who reported more emotional abuse and neglect also reported more difficulties with identifying and describing feelings.

The researchers also performed multiple hierarchical regression models. Externally oriented thinking was regressed on sex, age, race/ethnicity, and all five maltreatment types. The model was significant, $F(8, 464) = 2.21$, $p = 0.03$, and accounted for 3.7% of the variance. Age, sex, and race/ethnicity were not significantly related to externally oriented thinking. Emotional abuse was the only maltreatment type significantly related to externally oriented thinking, but emotional abuse and emotional neglect were not found to be moderated by sex on externally oriented thinking. The same model was applied to difficulty describing feelings and was also significant, $F(8, 463) = 2.09$, $p = 0.04$, with the variables accounting for 3.5% of the variance. The same results

were found for difficulty describing feelings as were for externally oriented thinking. When the same model was applied to difficulty identifying feelings, the results indicated that the model was significant, $F(8, 463) = 5.09$, $p < 0.001$, with the variables accounting for 8.1% of the variance. Age was negatively associated with difficulty identifying feelings but sex and race/ethnicity were positively associated to difficulty identifying feelings.

The only maltreatment type that was positively related to difficulty identifying feelings was emotional neglect. The researchers also found a significant interaction between sex and emotional abuse and emotional neglect in terms of difficulty identifying feelings (emotional abuse, $\beta = 0.12$, $p = 0.01$; emotional neglect, $\beta = 0.11$, $p = 0.03$). This indicates that sex did indeed moderate the associations between emotional abuse and emotional neglect and difficulty identifying feelings. Simple slope analyses indicated that sex and emotional abuse have a significant relationship for females ($\beta = 0.22$, $p < 0.01$) but not for males ($\beta = 0.08$, $p = 0.24$). However, for emotional neglect, there were significant associations for both females ($\beta = 0.40$, $p < 0.01$) and males ($\beta = 0.19$, $p < 0.01$). Additionally, higher levels of emotional neglect were associated with greater difficulty identifying feelings regardless of sex, but the magnitude of the effect was stronger for females than for males. The results of this study provide support for emotional neglect having a significant negative impact on people's ability to identify feelings as well as that males may experience greater levels of emotional neglect than females.

Aust et al. (2013) evaluated the impact of CM on the development of alexithymia in the absence of psychological disorders. In other words, the researchers wanted to

investigate if early CM and the development of alexithymia are interdependent among individuals who perceive themselves as physically and psychologically healthy. Ninety German participants whose ages ranged from 20–65 years old ($M = 35.5$) participated in the study. Of those, 48 were males and 42 were females. These participants were selected out of 2,500 volunteers who completed the TAS-20 online. Of the 2,500 volunteers, 100 who indicated high scores on the TAS-20 and 100 who scored low on the same measure were chosen to be interviewed face-to-face. One hundred and eighty-two came for the in-person interview and the researchers then excluded participants with any current or lifetime psychological disorder as well as participants whose scoring from the "minimization and denial" subscale of the CTQ was high.

The researchers then divided the 90 participants into a high alexithymia group (h-ALEX) and a low alexithymia group (l-ALEX) with 46 falling into the h-ALEX category and 44 falling into the l-ALEX category. As already mentioned, participants were administered the TAS-20 ($\alpha = 0.62$–0.88); the CTQ ($\alpha > 0.83$); the Bermond-Vorst Alexithymia Questionnaire (BVAQ), which consists of five subscales including the ability to verbalize emotion, identify emotion, analyze feelings, emotionalizing, and fantasizing, ($\alpha > 0.85$); and the Emotional Experiences Scale (EES), which assesses the degree of emotional dysfunction and impairment as well as alexithymia ($\alpha = 0.70$–0.86). Test–retest reliability was not reported.

Results demonstrated that within the h-ALEX group, there were no gender differences regarding the TAS-20 and BVAQ total and subscale scores. However, among the l-ALEX group, males tended to endorse slightly higher levels of alexithymia on both

the TAS-20 (difficulty identifying feelings, $p < 0.01$) and the BVAQ (total score, $p <$ 0.05; emotionalize, $p < 0.001$).

Early emotional neglect was the only subscale on the CTQ that was significantly higher among those who endorsed higher levels of alexithymia (h-ALEX, $M = 13.0$, $SD =$ 4.3; l-ALEX, $M = 9.4$, $SD = 4.5$; $t = 4.0$, $df = 88$, $p < 0.001$, $d = 0.8$). The researchers reported that there were no gender differences on the CTQ total score or the subscale scores regarding early emotional neglect and experiencing alexithymia. However, there was a significant correlation between age and emotional neglect ($r = 0.29$, $p < 0.01$). The researchers then controlled for age and found a significant correlation between emotional neglect and alexithymia in the TAS-20 and BVAQ total score (BVAQ total score = 0.370, $p < 0.001$; TAS-20 total score = 0.408, $p < 0.001$). Linear regression analysis indicated that scores on the BVAQ accounted for 13% of the variance with emotional neglect as a predictor variable ($\beta = 0.37$, $p < 0.001$, $R^2 = 0.127$, corrected). When the researchers included age into the model, it did not significantly increase the amount of explained variance ($R^2 = 0.130$, corrected).

Additionally, only the h-ALEX group was found to have positive correlations between emotional neglect and alexithymia in the BVAQ ($r = 0.32$, $p < 0.05$; controlled for age) and the TAS-20 ($r = 0.19$, $p < 0.05$; controlled for age). The researchers reported that no other CTQ subscales had significant correlations with alexithymia. Further analyses were conducted by the researchers to explore the relationship between emotional neglect and emotional dysfunction when controlling for alexithymia as alexithymia could be a confounding factor in assessing emotional dysfunction. Through Bonferroni adjusted alpha levels of 0.007 per test (0.05/7), the results indicated that emotional neglect was

significantly correlated with a lower acceptance of one's emotions ($r = - 0.32$, $p < 0.007$),

with physical symbolization of emotions ($r = 0.33$, $p < 0.007$), and with perceived

deficits in emotion regulation ($r = 0.29$, $p < 0.007$). This suggests that those who

experienced CEN with alexithymia have stronger impairments compared to alexithymic

individuals without a history of emotional neglect. This study demonstrates that CEN has

significant implications for the development of alexithymia as well as how these

symptoms impact other areas of emotional functioning.

      In another study, the researchers wanted to examine the relationship between

physical and emotional neglect in childhood, alexithymia, and eating patterns among

college-aged men and women. Eating patterns included binge eating and drive for

muscularity (Minnich et al., 2017). It was hypothesized that childhood emotional and

physical neglect and eating disorder symptoms would be mediated by alexithymia. A

total of 1,344 participants participated in the study, 863 of whom were female and 481 of

whom were male. Twenty-nine cases were removed using listwise deletion. The

participants were recruited from undergraduate psychology courses at a Midwestern

university. Mean age of the sample was 18.97 years old ($SD = 1.24$) and the participants

were primarily White (89.7%, $N = 1,205$). The participants' BMI was measured by

examining one's height relative to mass through self-reported weights and heights. The

participants were also asked to complete the following measures: the Drive for

Muscularity Scale (DMS), which is a 15-item self-report measure that assesses

dysfunctional attitudes and behaviors regarding muscularity ($\alpha = 0.91$); the Binge Eating

Scale (BES), which is a 16-item self-report measure of binge eating symptoms ($\alpha = 0.92$);

the TAS-20, which is a 20-item self-report measure that assesses difficulty identifying

and describing feelings and externally oriented thinking ($\alpha = 0.83$); the CTQ, from which

the physical and emotional neglect subscales were selected (physical neglect, $\alpha = 0.70$;

motional neglect, $\alpha = 0.92$); the Beck Depression Inventory – II (BDI-II), which

measures depressive symptoms ($\alpha = 0.92$); and the Beck Anxiety Inventory (BAI), which

assesses cognitive and somatic symptoms of anxiety ($\alpha = 0.92$). Test–retest reliability

was not reported.

    The researchers used a moderated mediational analysis to identify indirect effects

of childhood neglect on disordered eating patterns through alexithymia. The researchers

also wanted to determine if gender moderated these relationships. Results demonstrated

that 27% of the sample endorsed emotional neglect whereas 14% endorsed physical

neglect and 13% of the sample endorsed both. The results also indicated that women's

mean score on the BES was 25.22 ($SD = 7.37$), mean score on the DMS was 29.54 ($SD =$

9.08), mean score on the emotional neglect subscale of the CTQ was 8.32 ($SD = 4.10$),

mean score on the physical neglect subscale was 6.12 ($SD = 2.27$), and mean score on the

TAS-20 was 45.51 ($SD = 10.44$). For men, their mean score on the BES was 21.48 ($SD =$

5.85), mean score on the DMS was 44.96 ($SD = 13.61$), mean score on the CTQ

emotional neglect subscale was 9.05 ($SD = 4.36$) and on the physical neglect subscale

6.55 ($SD = 2.60$), and mean score on the TAS-20 was 45.51 ($SD = 10.44$).

    Bivariate correlations indicated that emotional neglect was significantly correlated

with binge eating ($r = 0.19, p < 0.01$) and drive for muscularity ($r = 0.11, p < 0.01$).

Physical neglect was also significantly correlated with binge eating ($r = 0.18, p < 0.01$)

and drive for muscularity ($r = 0.11, p < 0.01$). The researchers also analyzed whether men

and women differed significantly on their endorsement of CM as well as binge eating and

drive for muscularity. The results demonstrated that men reported higher levels of childhood physical neglect, $t(1313) = 3.14$, $p < 0.01$, CEN, $t(1313) = 3.06$, $p < 0.01$, and drive for muscularity, $t(1313) = 24.57$, $p < 0.01$. Women reported higher levels of binge eating, $t(1313) = -9.50$, $p < 0.001$, and there were no gender differences on alexithymia, $t(1313) = -0.04$, $p = 0.97$.

Regression coefficients were conducted on various models. Results indicated that childhood physical and emotional neglect had significant positive effects on alexithymia. The results also demonstrated an indirect effect of childhood physical neglect on binge eating through alexithymia for women (indirect effect = 0.02, BCCI = 0.003, 0.04) but not for men (indirect effect = 0.001, BCCI = -0.01, 0.02). In terms of emotional neglect, there was an indirect effect on binge eating for women (indirect effect = 0.01, BCCI = 0.004, 0.03) but not for men (indirect effect = 0.002, BCCI = -0.01, 0.02). The researchers posited that this pattern could be due to the fact that the relationship between binge eating and alexithymia was significant for women ($b = 0.05$, $p = 0.01$, $b = 0.05$, $p = 0.01$) but not men ($b = 0.004$, $p = 0.87$, $b = 0.01$, $p = 0.75$). It was discussed that even though the association between alexithymia and binge eating was not significantly larger for women than men, the association was larger and significantly different from 0. Thus, physical neglect and emotional neglect significantly and indirectly related to binge eating behaviors through alexithymia for women.

Once the researchers controlled for alexithymia, the direct effects of physical neglect (direct effect = 0.12, BCCI = -0.01, 0.25) and emotional neglect (direct effect = -0.01, BCCI = -0.08, 0.07) on binge eating were no longer significant. In regards to drive for muscularity, the researchers found that alexithymia mediated the relationship when

childhood physical neglect was endorsed for both men (indirect effect = 0.05, BCCI = 0.01, 0.12) and women (indirect effect = 0.02, BCCI = 0.001, 0.05). This mediated relationship between alexithymia and drive for muscularity when CEN was endorsed was also found for both men (indirect effect = 0.05, BCCI = 0.02, 0.10) and women (indirect effect = 0.02, BCCI = 0.001, 0.04). When the researchers controlled for alexithymia, the direct effects of physical (direct effect = -0.03, BCCI = -0.28, 0.23) and emotional neglect (direct effect = -0.06, BCCI = -0.20, 0.09) were no longer significant. The results of this study provide support for the notion that CEN can contribute to various difficulties including alexithymia which can further lead to binge eating and drive for muscularity eating behaviors.

Anxiety and Somatization

Bruce et al. (2012) sought to provide support for the idea that experiencing CM leads to increases in severity of social anxiety, which negatively impacts quality of life and increases disability. The relationship between CM and response to and discontinuing medication, specifically paroxetine, after a 12-week trial was also analyzed. The researchers hypothesized that the participants who endorsed a history of CM would be more likely to discontinue the paroxetine trial. One hundred and fifty-six participants with a primary diagnosis of social anxiety disorder (SAD) participated in the study. The mean age of the participants was 32.5, 58% of the participants were male, 53% were White, 19% were Black, 15% were Hispanic, 11% were Asian/Pacific Islander, and 17% were other. Data from 127 of these participants were collected for the psychopharmacology analysis. Participants' SAD diagnosis was assessed using the Anxiety Disorders Interview Schedule for DSM-IV: Lifetime Version and the Structured

Clinical Interview for the DSM-IV (SCID-IV). Severity of social anxiety was assessed

using the Liebowitz Social Anxiety Scale ($\alpha = 0.96$). Quality of life and disability was

measured using the Quality of Life Inventory (QOLI) and the Liebowitz Self-Rated

Disability Scale (LSRDS). CM was assessed using the CTQ-SF. Cronbach's alpha and

test–retest reliability were not reported for the SCID-IV and the QOLI and test–retest

reliability was not reported for the Liebowitz Social Anxiety Scale. Lastly, those who

participated in the 12-week paroxetine trial received six weekly appointments followed

by three biweekly appointments with a psychiatrist. Dosages were titrated up from 10 mg

to 20–50 mg dependent upon patient's response and side effect profile.

Results indicated that 36.5% of the participants endorsed experiencing CEN,

35.9% were physically neglected, 68.4% were sexually abused, 34.6% were physically

abused, and 50.6% were emotionally abused. Greater emotional neglect (β [SE] = -0.27

[0.08]), emotional abuse (β [SE] = -0.33 [0.08]), and physical abuse (β [SE] = -0.21

[0.08]) predicted lower quality of life. Additionally, higher scores on the emotional abuse

and emotional neglect subscales predicted higher levels of self-reported disability

(emotional abuse, β [SE] = 0.26 [0.46]; emotional neglect, β [SE] = 0.22 [0.48]). The

researchers noted the significance of a lack of findings for the impact of sexual abuse,

especially given the high percentage of participants who endorsed experiencing sexual

abuse. It was also found that emotional abuse and physical abuse predicted early

termination of paroxetine ($p < 0.0001$). This study's findings indicate that experiencing

CEN can lead to lower quality of life and higher disability among those with SAD.

PTSD

In this study, the researchers focused only on the impact of CM on PTSD. Lueger-Schuster et al. (2018) wanted to examine the long-term psychological impacts of those who were survivors of institutional abuse (IA). Two hundred and twenty participants, who were a part of the Vienna Institutional Abuse study, volunteered to participate, and there was a comparison group of 234 participants who were from the general Vienna population. Of the survivors of IA, 88 (40%) were female, whereas in the comparison group, 151 (65%) were female. The age range of the survivors was between 29–87 years old ($M = 57.9$; $SD = 9.5$) and the age range of the comparison group was between 40–86 years old ($M = 59.8$; $SD = 10.5$).

One measure utilized by the researchers was the Brief Symptom Inventory 18 (BSI-18; plus paranoid ideation subscale of the BSI) which is the shortest version of the SCL-90 R and was adapted for German-speaking populations. This measure assesses for anxiety ($\alpha = 0.82$), depression ($\alpha = 0.86$), somatization ($\alpha = 0.80$), and paranoid ideations ($\alpha = 0.74$). The CTQ was also used to assess severity of CM. These researchers used the German version of the CTQ ($\alpha \geq 0.89$). The Life Events Checklist for DSM-5 (LEC-5) was used to measure possible traumatic events that occurred throughout a participant's life. The German version for this measure was also used ($\alpha = 0.70$). The International Trauma Questionnaire (ITQ) was derived by using symptoms from the ICD-11 PTSD and Complex PTSD sections. The first seven items in this measure assess ICD-11 PTSD symptoms on three dimensions including reexperiencing, sense of threat, and avoidance ($\alpha = 0.84$). The rest of the items assess these three categories in self-organization dimensions which include affect dysregulation, negative self-concept, and relationship

disturbances ($\alpha = 0.90$). Test–retest reliability was not reported for these measures. The researchers also used the German version of the PTSD Checklist for DSM-5 (PCL-5) which is a self-report questionnaire that includes all 20 PTSD symptoms listed in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013; test–retest reliability [TRT], $r = 0.91$; $\alpha = 0.95$). Lastly, the Structured Clinical Interview for DSM-IV (SCID I + II) shortened German version was used to determine the presence or absence of psychiatric disorders.

Results of the study demonstrated that survivors of IA reported higher severity levels of CEN than the comparison group, with 59% of survivors endorsing the highest severity of CEN prior to entering the foster care system and 87% endorsing CEN after entering the foster care system (Comparison = 12% at highest severity). Survivors of IA also endorsed more instances of emotional neglect experiences compared to the comparison group on the CTQ (Survivors, $M = 4.00$, $SD = 0.83$, $p < 0.001$; Comparison, $M = 2.19$, $SD = 1.02$, $p < 0.001$). The researchers also conducted mediation models to determine if certain types of trauma can predict PTSD symptoms later in life. The results also indicated that CEN was the only type of trauma that predicted PTSD in the comparison group (but not the survivor group) and the total effect of emotional neglect was significant (estimator = 0.28, 95% CI = [0.025, 0.281]). This study suggests that CEN may be predictive of PTSD symptoms among those not in the foster care system who may be less likely to experience multiple types and more severe forms of trauma. Therefore, it may be possible that CEN experienced in isolation from other forms of trauma may have significant impacts on adult outcomes.

These research studies provide support for the impact of CEN on experiencing symptoms of depression, anxiety, PTSD, alexithymia, and somatization later in life. Given the implications of these results, it is clear why it is important to begin the process of developing a measure that provides empirical validation to emotional neglect as a distinct construct.

Chapter 3: Method

Introduction to Factor Analysis

As described by Paul Kline (1994), the aim of factor analysis is to take complex data sets and identify patterns, or factors, in the data set by applying statistical analyses. In other words, factor analysis helps the researcher identify which variables "cluster" together (Mertler & Vannatta, 2005). Factor analysis originated with the work of Charles Spearman in 1904 (Kline, 1994). Spearman's work was inspired by the question of why human abilities are always positively correlated, which led to the development of the two-factor theory (Cuddy, 2014; Kline, 1994; Rector, 2006; Young & Pierce, 2013). Spearman's research led to a whole new area of statistical analyses that single-handedly altered the way statistics can be performed.

Since Spearman's discovery, researchers such as Thurstone (1938) have been proposing more efficient methods of factor analysis, such as a new method of rotating factors (Cuddy, 2014; Rector, 2006). Thurstone posited that the two-factor model originally proposed by Spearman did not apply to a group of factors except in indirect ways (Cuddy, 2014; Rector, 2006). This new method of rotating factors in combination with the original method of factor analysis allows researchers the opportunity to make further advances in the understanding of complex psychological phenomenon (Cuddy, 2014; Kahn, 2006; Rector, 2006). In order to better understand factor analysis, a review of terminology, types, and when to use factor analysis is warranted.

Factor analysis uses statistical procedures to identify constructs within a set of correlations in a measure (Cuddy, 2014; Fabrigar & Wegener, 2012; Rector, 2006). Factors are the relationships between a set of variables and factor loadings are

representative of the correlations between those variables (Kline, 1994). There are two main types of factor analysis: EFA and confirmatory factor analysis (CFA). EFA is used when researchers want to identify complex patterns among a set of data while CFA is used when a researcher wants to confirm their hypotheses and will represent the factors via path analysis diagrams (Cuddy, 2014; Kline, 1994; Pearce & Young, 2013; Rector, 2006). EFA is the recommended procedure when the goal of the research is to identify the underlying constructs and latent traits of a given set of variables (Cuddy, 2014; Fabrigar et al., 1999; Rector, 2006). Thus, this study utilized EFA to uncover underlying traits (i.e., factors) among items pulled from various inventories in order to begin validating CEN as a distinct construct from other forms of CM.

When the choice has been made to conduct a factor analysis, the researcher must then decide which factor model and procedure will be used to estimate the model's parameters (Cuddy, 2014; Rector, 2006; Schmidt, 2011). Within EFA, there are two main models that are used to identify factors: the common factor model and the component model (Cuddy, 2014; Rector, 2006). These models differ in terms of measurement error, with the common factor model emphasizing measurement error and the component model assuming no measurement error (Cuddy, 2014; Rector, 2006; Schmidt, 2011). There are also differences regarding variance; the common factor model attempts to explain variance among common sets of variables based on the original factor matrix whereas the component model uses a mixture of common and unique variance (Cuddy, 2014; Henson & Roberts, 2006; Rector, 2006).

Principal component analysis (PCA) is the most commonly utilized component-based factor extraction method (Conway & Huffcutt, 2003; Cuddy, 2014; Rector, 2006).

Despite its popularity, there is a debate in the field about using PCA as opposed to other

methods as many do not consider PCA as a true factor analytic protocol. These opponents

of PCA argue that PCA is a method of summarizing variables into fewer components,

which is only one aspect of factor analysis (Cuddy, 2014; Henson & Roberts, 2006;

Rector, 2006). There are two other major approaches to factor extraction: principal-axis

factoring (PAF) and maximum likelihood method (ML; Cuddy, 2014; Kahn, 2006;

Rector, 2006). As noted by Cuddy (2014) and posited by Fabrigar et al. (1999), if the

goal of the study is to reduce the data, then PCA is the appropriate method. However,

PCA does not differentiate between common or unique variance whereas PAF does

analyze common variance among variables (Cuddy, 2014; Fabrigar et al., 1999; Kahn,

2006; Rector, 2006). Additionally, it has been argued that when researchers use

measurements in psychological research, it is likely that there is some random error that

lies within the instrument itself (Cuddy, 2014; Fabrigar et al., 1999; Rector, 2006). Thus,

PAF and ML methods within EFA procedures are the more realistic methods to use to

examine the structure or correlations among variables than PCA (Cuddy, 2014; Rector,

2006).

Another aspect that needs to be considered when using factor analysis is the

appropriate sample size needed for significant data analysis (Cuddy, 2014; Rector, 2006).

Within the field, it seems that there are many "rules of thumb" when considering the

sample size, but there seems to be a lack of consistency among these recommendations

(Cuddy, 2014; Rector, 2006; Roberts, 2006). It is important that researchers exercise

caution when using the recommendations made by those in the field given this

inconsistency (Cuddy, 2014; Rector, 2006). Klein (1994) suggested that researchers use a

minimum of 100 participants as 200 may not be feasible and 100 participants is usually

sufficient. Another researcher suggested that there should be at least five participants per

variable within the instrument and a minimum of 100 participants (Gorsuch, 1983).

An additional challenge that researchers face when choosing to perform factor

analytic procedures is determining how many factors to retain (Cuddy, 2014; Rector,

2006). One must be careful not to overextract as that can lead to unwanted error variance;

however, underextracting is even more detrimental to the research (Cuddy, 2014; Rector,

2006; Schmitt, 2011; Young & Pearce, 2013). Fortunately, there are three commonly

used methods that can help researchers determine the best fit for the number of factors to

retain. One of the methods is based on "Kaiser's rule" which was developed in 1960 and

posits that only those components whose eigenvalues are greater than 1 should be

retained (Mertler & Vannatta, 2005). An eigenvalue is the amount of total variance

explained by each factor; thus, when a variable's eigenvalue is 1, it suggests that the

variable explains as much variance among multiple variables as a single variable would

(Cuddy, 2014; Kahn, 2006; Rector, 2006). Commonly, researchers will retain factors that

have eigenvalues greater than 1, which is the default method in popular statistical

analysis software (Cuddy, 2014; Kahn, 2006; Rector, 2006). However, there are critics of

this method. One critic posited that this should only be used when utilizing a PCA

approach (Cuddy, 2014; Rector, 2006; Russell, 2002). Another criticism of this method

argues that this procedure can be considered arbitrary given how one decides to include a

factor based on its nominal eigenvalue of greater than 1 but excludes factors with a

eigenvalue of 0.99 (Cuddy, 2014; Fabrigar et al., 1999; Rector, 2006). Further, there is

concern regarding overfactoring and underfactoring with this method, which was

supported by Zwick and Velicer's (1986) research (Cuddy, 2014; Fabrigar et al., 1999; Rector, 2006).

Another method used to determine how many factors to retain is by examining a scree test of the eigenvalues. This involves plotting the eigenvalues of factors that have been extracted from a correlation matrix or a reduced correlation matrix in descending order (Cuddy, 2014; Rector, 2006; Russell, 2002). When factors are above the scree plot line, which indicates an eigenvalue of more than 1, it is suggested that the factor should be retained (Cuddy, 2014; Rector, 2006; Russell, 2002). The researcher should then look for a break in the eigenvalues and identify the number of factors prior to the drop which can determine how many factors should be retained (Cuddy, 2014; Rector, 2006; Russell, 2002). However, there are also concerns when using this method as when the scree line is not clear, subjectivity on the part of the researcher may need to be used to determine how many factors to retain (Cuddy, 2014; Kahn, 2006; Rector, 2006; Russell, 2002).

As posited by researchers, the most accurate and effective method for determining how many factors to retain is parallel analysis (PA; Cuddy, 2014; Hayton et al., 2004; Kahn, 2006; Rector, 2006). Parallel analysis can produce eigenvalues and a random set of data which is drawn from the same number of variables (Cuddy, 2014; Rector, 2006). These random eigenvalues are plotted with actual eigenvalues and the factors whose actual eigenvalues are greater than the random eigenvalues are retained (Cuddy, 2014; Rector, 2006). This decision to retain actual eigenvalues greater than the random eigenvalues is based on the idea that the retained factors will be more meaningful than those based on chance. However, this method should not be used for nonnormal distributions (Cuddy, 2014; Hayton et al., 2004; Rector, 2006). Thus, some researchers

have proposed additional methods to help in the decision of factor retention (Cuddy 2014; Preacher et al., 2013; Rector, 2006). A shift from there being a "correct" number of factors to retain to an optimal number of factors has been suggested by various researchers as well as applying a model selection strategy to achieve this optimal number of factors that will represent a more parsimonious model (Cuddy, 2014; Preacher et at., 2013; Rector, 2006).

Another important aspect of factor analysis is the concept of rotation. Rotation is a process by which factor solutions are made more interpretable without changing the underlying mathematical structure (Mertler & Vannatta, 2005). Kline (1994) explained that rotations are used, especially in social sciences, because large loadings are difficult to identify and because there is no one perfect or ideal solution for factor analysis. Simple factor rotation's primary purpose is to minimize the number of variables that will load onto a factor (Cuddy, 2014; Gorsuch, 1997; Rector, 2006). There are two main approaches of factor rotation: oblique rotation and orthogonal rotation. Oblique rotations allow correlations among factors whereas orthogonal rotations do not (Cuddy, 2014; Rector, 2006). Some researchers may prefer to use the orthogonal approach as it is considered to be more simplistic; however, some have argued that the orthogonal method may not thoroughly examine constructs (Cuddy, 2014; Fabrigar et al., 1999; Rector, 2006). Oblique rotation may provide more information and can produce estimates of correlations among factors (Cuddy, 2014; Rector, 2006).

Participants

One hundred and fifty participants were acquired through Survey Monkey and only those who were 18 years old and older were allowed to complete the measure.

Participants responded to either to a posting on Survey Monkey or Facebook which brought them to a page that has the informed consent form (see Appendix B). If the participant agreed to participate, they confirmed that they understood what was being asked of them and then they were able to access the inventory. The first question that the participants were asked was a screener question that provided the definition of CEN and asked whether they believed they experienced emotional neglect based on the definition provided (see Appendix A). Participants who indicated they have not experienced CEN were asked to discontinue the survey.

Security and Data Destruction

Responses were kept anonymous as no identifying information was requested and the IP address was turned off to maintain anonymity. All data are kept on an encrypted USB drive and in a locked storage unit at my residence to which only I have access. After 3 years, the data will be electronically destroyed.

Measures

The participants were administered the TAS-20 (Bagby et al., 1994), Patient Health Questionnaire-9 (PHQ-9; Spitzer et al., n.d.), and Generalized Anxiety Disorder-7 (GAD-7; Spitzer et al., n.d.).

Data Analysis and Statistical Procedures

EFA using the principal factors approach (PFA) was conducted on the items using the Statistical Package for Social Sciences 24 (SPSS). EFA was chosen over principal components analysis (PCA) as EFA is used when the goal of the study is to identify patterns and associations among items, EFA can distinguish between common and unique error variance whereas PCA does not include unique variance, EFA and PCA will

produce different results when there are three or less measured variables for each factor, and EFA is generally chosen over PCA when the number of variables is less than 30–40 (Cuddy, 2014; Fabrigar et al., 1999; Gorsuch, 1983, 1990; Kline, 2000; Rector, 2006).

In addition, EFA is the recommended statistical procedure when there is "relatively little theoretical or empirical basis to make strong assumptions about how many common factors exist or what specific measured variables these common factors are likely to influence" (Fabrigar et al., 1999, p. 277; Rector, 2006, p. 36). In contrast, CFA would be utilized to specify a structural model of factors only when there are strong theoretical and empirical bases (Fabrigar et al., 1999; Kline, 2000; Rector, 2006). Given the exploratory nature of the research question, EFA rather than PCA was the recommended statistical procedure.

Data collected from participants' responses were inputted into SPSS. From there, a statistical procedure was conducted to convert the 4-point Likert scale of the GAD-7 and PHQ-9 to the 5-point Likert scale of the TAS-20. In order to perform EFA, the scores needed to be converted to a common scale (Kline, 1994). This conversion was done by inputting the following equation into SPSS and executing the calculation of the participants' scores from the GAD-7 and PHQ-9 items: COMPUTE $x2 = (4/3) * x - (1/3)$. EXECUTE (IBM Support, n.d.).

After the data were inputted into SPSS and this conversion to a common scale was complete, the data were assessed for multicollinearity (Hinton et al., 2014). It is important to assess for multicollinearity because when two or more variables are colinear, this indicates they are highly correlated and may be measuring the same construct (Hinton et al., 2014). This is done by computing the Kaiser-Meyer-Olkin (KMO) test of

sampling adequacy and the Bartlett test of sphericity (Hinton et al., 2014). If the KMO is

.5 or higher and the Bartlett test of sphericity is statistically significant (p < .05), this

indicates that the data are suitable for EFA.

Further, an analysis of the scree plot was conducted to determine how many

factors to retain. Factors with eigenvalues of 1 or more were retained. Parallel analysis

was also conducted to confirm whether the factors that yielded more than one eigenvalue

should be retained when compared to a randomly generated list of eigenvalues when

using the same number of variables. Brian O'Connor's syntax was used for this analysis

in SPSS (O'Connor, 2000). The factors in the data collected that demonstrate having at

least one eigenvalue or more as well as higher eigenvalues than the randomly generated

were retained.

Choice of Model Fitting Procedures

Principal axis factoring (the SPSS statistical PFA) was used rather than the

maximum likelihood (ML) method. The ML procedure is used when the assumptions of

multivariate normality are supported through analysis of the distributions of each variable

(Fabrigar et al., 1999; Rector, 2006). This has not been found in a majority of the studies

examined in this project and therefore ML was ruled out.

Factor Identification

As posited by Fabrigar et al. (1999) and Kline (2000), two methods were used for

the factor identification process (Rector, 2006). The first method was the Kaiser criterion

of identifying all eigenvalues equal or greater to 1 and the second method was a Scree

Plot analysis (Rector, 2006). Using both of these methods helped balance the tendency to

overfactor.

Factor Rotation

Oblique rotation of factors using the direct oblimin method was used (Rector, 2006). Oblique was selected over orthogonal rotation because oblique rotations are used when there is a conceptual basis for expecting constructs to be correlated (Rector, 2006; Fabrigar et al., 1999). For example, previous research has shown that experiencing CEN is correlated with depressive symptoms (Cohen et al., 2017; Jessar et al., 2017; Spinhoven et al., 2010). Another reason why oblique rotation was selected over orthogonal rotation was because oblique rotations produce estimates of correlations among common factors, which was helpful when interpreting the meaning of the factors that were identified (Fabrigar et al., 1999; Gorsuch, 1983; Rector, 2006).

Chapter 4: Results

Participants

Two hundred and eighty-one participants responded to the survey. Of those, 200 responses from participants were purchased through Survey Monkey and 81 responded to a posting on social media. Of the 281 responses, 192 indicated that they did experience CEN and 56 indicated that they did not experience CEN, leaving 248 responses. It is unclear what happened with 33 of those participants. It is likely that they closed the survey before continuing. Of the 192 who indicated they did experience CEN, 163 provided informed consent and 12 indicated that they did not provide consent and were asked to discontinue the survey. Again, it is unclear what happened with the additional 29 participants, but it appears that they closed the survey before indicating an answer on the informed consent page. Of the 163 remaining participants, 150 completed the survey, leaving 13 individuals who did not answer the first question of the survey and exited the survey.

Descriptive Statistics

Table 1 includes a full depiction of the descriptive statistics (Appendix I). One hundred and fifty participants' responses were analyzed. Mean scores on each item range from 2.07 ("I prefer to analyze problems rather than just describe them") to 3.65 ("It is difficult for me to reveal my innermost feelings, even to close friends") Note that for items from the PHQ-9 and the GAD-7, the mean scores are based on converting all items to a common scale. Thus, the PHQ-9 and GAD-7 mean and standard deviation scores reflect this conversion from a 4-point Likert scale to a 5-point Likert scale for the items from these two measures.

Table 1

Descriptive Statistics

Item	Mean	*SD*	*N*
Little interest or pleasure in doing things	2.76	1.16	150
Feeling down, depressed, or hopeless	2.85	1.15	150
Trouble falling or staying asleep, or sleeping too much	3.22	1.27	150
Feeling tired or having little energy	3.31	1.16	150
Poor appetite or overeating	3.07	1.33	150
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	3.04	1.33	150
Trouble concentrating on things, such as reading the newspaper or watching television	2.75	1.35	150
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	2.17	1.28	150
Thoughts that you would be better off dead or hurting yourself in some other way	2.10	1.35	150
Feeling nervous, anxious or on edge	3.28	1.25	150
Not being able to stop or control worrying	3.24	1.28	150
Worrying too much about different things	3.15	1.21	150
Trouble relaxing	3.06	1.30	150
Being so restless that it is hard to sit still	2.59	1.29	150
Becoming easily annoyed or irritable	3.01	1.23	150
Feeling afraid as if something awful might happen	2.77	1.38	150
I am often confused about what emotion I am feeling.	3.15	1.24	150
It is difficult for me to find the right words for my feelings.	3.49	1.25	150
I have physical sensations that even doctors don't understand.	2.89	1.45	150
I am able to describe my feelings easily.	3.02	1.39	150
I prefer to analyze problems rather than just describe them.	2.07	0.99	150
When I am upset, I don't know if I am sad, frightened, or angry.	3.18	1.27	150
I am often puzzled by sensations in my body.	2.98	1.31	150
I prefer to let things happen rather than understand why they turned out that way.	2.68	1.35	150
I have feelings that I can't quite identify.	3.48	1.22	150
Being in touch with emotions is essential.	2.10	1.13	150
I find it hard to describe how I feel about people.	3.34	1.18	150
People tell me to describe my feelings more.	3.04	1.31	150
I don't know what's going on inside me.	3.25	1.34	150
I often don't know why I am angry.	3.29	1.33	150

Item	Mean	*SD*	*N*
I prefer talking to people about their daily activities rather than their feelings.	3.24	1.24	150
I prefer to watch light entertainment rather than psychological dramas.	3.23	1.33	150
It is difficult for me to reveal my innermost feelings, even to close friends.	3.65	1.32	150
I can feel close to someone, even in moments of silence.	2.31	1.16	150
I find examination of my feelings useful in solving personal problems.	2.57	1.19	150
Looking for hidden meanings in movies or plays distracts from their enjoyment.	2.69	1.31	150

Test of Sampling Adequacy

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.829 (Table 2, Appendix J). The Bartlett's Test of Sphericity also indicated that the data are statistically significant ($\chi^2 = 2678.22$, $df = 630$, $p < 0.001$; Appendix K). These results indicate that there is no multicollinearity in the data and thus is appropriate for conducting EFA.

Table 2

KMO and Bartlett Test

Kaiser-Meyer-Okin Measure of Sampling Adequacy		0.83
Bartlett's Test of Sphericity	Approximate Chi-Square	2678.23
	Df	630
	Significance	0.000

Principal Component Analysis and Rotation

Examination of the scree plot (Figure 1, Appendix L) indicated nine factors that were revealed as having eigenvalues greater than 1. These nine factors accounted for 66.11% of the variance (Table 3, Appendix K). Factor 1 accounted for 26.81% of the variance, Factor 2 accounted for 10.33% of the variance, Factor 3 accounted for 7.12% of

the variance, Factor 4 accounted for 4.75% of the variance, Factor 5 accounted for 4.18% of the variance, Factor 6 accounted for 3.47% of the variance, Factor 7 accounted for 3.41% of the variance, Factor 8 accounted for 3.12% of the variance, and Factor 9 accounted for 2.93% of the variance.

Figure 1

Scree Plot
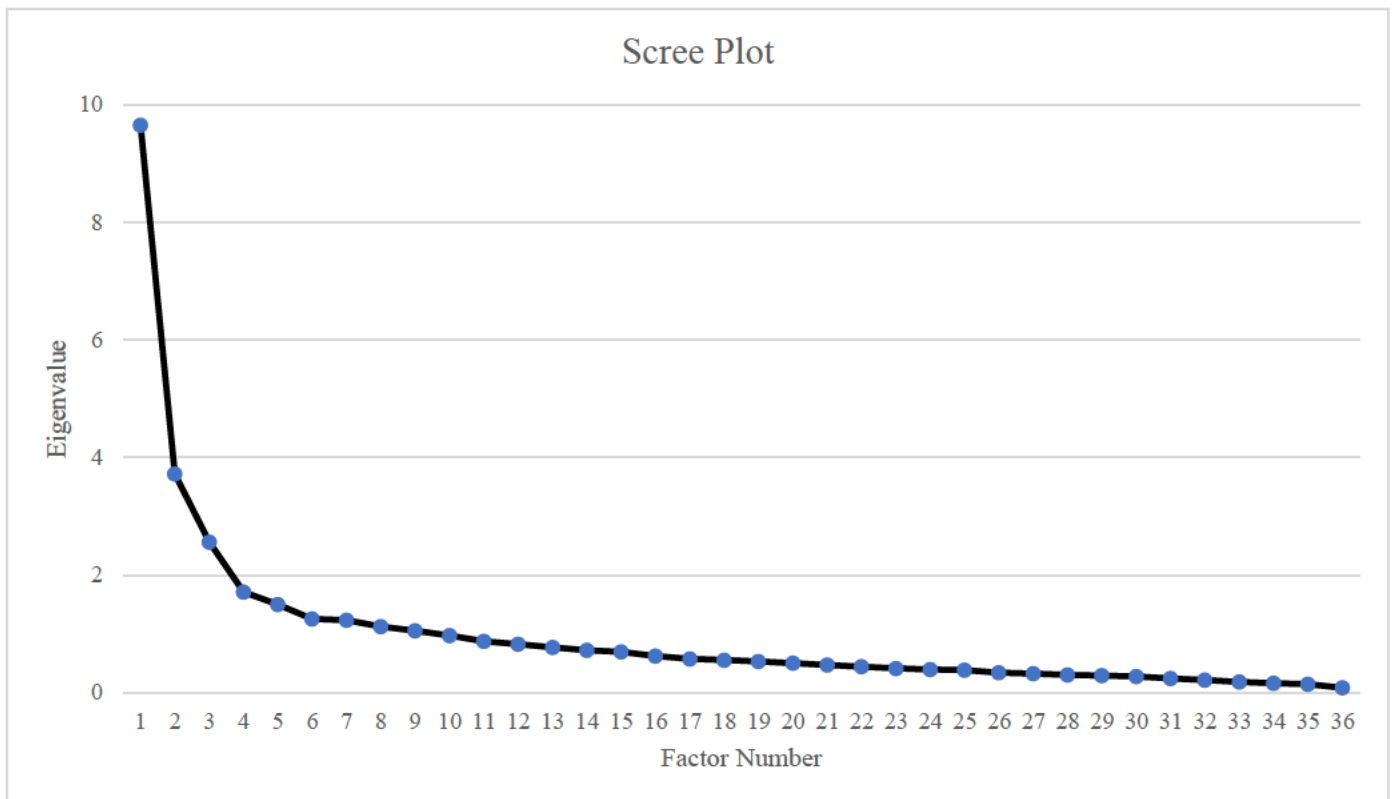
Table 3

Total Variance Explained

	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.65	26.81	26.81	9.24	25.66	25.66	5.61
2	3.72	10.33	37.14	3.31	9.19	34.85	5.37
3	2.56	7.12	44.26	2.12	5.85	40.70	2.18
4	1.71	4.75	49.01	1.25	3.46	44.16	1.38
5	1.50	4.18	53.18	1.11	3.09	47.25	2.45
6	1.25	3.47	56.66	0.85	2.36	49.61	4.29
7	1.23	3.41	60.06	0.74	2.06	51.66	2.34
8	1.12	3.12	63.18	0.63	1.76	53.42	2.40
9	1.05	2.93	66.11	0.60	1.67	55.09	5.62
10	0.97	2.69	68.80				
11	0.87	2.41	71.21				
12	0.82	2.29	73.50				
13	0.77	2.15	75.65				
14	0.72	1.20	77.64				
15	0.69	1.93	79.57				
16	0.62	1.73	81.30				
17	0.57	1.58	82.88				
18	0.55	1.51	84.39				
19	0.53	1.46	85.86				
20	0.50	1.37	87.23				
21	0.47	1.30	88.53				
22	0.44	1.23	89.75				
23	0.41	1.13	90.88				
24	0.39	1.08	91.96				
25	0.38	1.04	93.00				
26	0.34	0.94	93.94				
27	0.32	0.89	94.83				
28	0.30	0.83	95.65				
29	0.29	0.80	96.45				
30	0.27	0.74	97.19				
31	0.24	0.67	97.87				
32	0.21	0.58	98.45				
33	0.18	0.50	98.94				
34	0.16	0.44	99.38				
35	0.14	0.83	99.77				
36	0.08	0.23	100.00				

Extraction Method: Principal Axis Factoring

a. When factors are correlated, sum of squared loadings cannot be added to obtain a total variance.

Further, after conducting parallel analysis utilizing O'Connor's (2000) syntax, which generated a list of random eigenvalues based on the same amount of variables, these nine factors demonstrated that they were larger than the randomly generated eigenvalues. Thus, all nine eigenvalues were retained.

Communalities before and after extraction are demonstrated in a Table 4 (Appendix M). Communality estimates indicate the variance measured in each variable explained by all the common factors in the model (Fabrigar & Wegener, 2011). There are initial communality estimates, which are the squared multiple correlations based on the other variables that are measured, and there are final (extraction) communalities, which demonstrate the variance in items accounted for by the extracted factors (Fabrigar & Wegener, 2011). Most of the items have moderate to high communalities with the exception of "Poor appetite or overeating," "I am able to describe my feelings easily," "I prefer to analyze problems rather than just describe them," "I often don't know why I am angry," and "I prefer to watch 'light' entertainment shows rather than psychological dramas." Fabrigar and Wegener (2011) suggested that variables with low communalities may reflect higher levels of random error, which could possibly be due to wording of the items or that the variables may not be in the same domain as the other variables. It is important to note that the communalities are based on all of the items. Thus, with have multiple constructs being measured together through three different measures (i.e., depression, anxiety, and alexithymia), it can be expected that some of the items may have demonstrated lower communalities.

Table 4

Communalities

Item	Initial	Extraction
Little interest or pleasure in doing things	.65	.62
Feeling down, depressed, or hopeless	.72	.67
Trouble falling or staying asleep, or sleeping too much	.56	.54
Feeling tired or having little energy	.60	.48
Poor appetite or overeating	.39	.26
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	.62	.54
Trouble concentrating on things, such as reading the newspaper or watching television	.59	.59
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	.58	.58
Thoughts that you would be better off dead or hurting yourself in some other way	.55	.60
Feeling nervous, anxious or on edge	.72	.72
Not being able to stop or control worrying	.83	.86
Worrying too much about different things	.81	.78
Trouble relaxing	.66	.61
Being so restless that it is hard to sit still	.57	.68
Becoming easily annoyed or irritable	.51	.41
Feeling afraid as if something awful might happen	.53	.46
I am often confused about what emotion I am feeling.	.64	.67
It is difficult for me to find the right words for my feelings.	.58	.56
I have physical sensations that even doctors don't understand.	.69	.61
I am able to describe my feelings easily.	.38	.37
I prefer to analyze problems rather than just describe them.	.41	.32
When I am upset, I don't know if I am sad, frightened, or angry.	.58	.49
I am often puzzled by sensations in my body.	.73	.80
I prefer to let things happen rather than understand why they turned out that way.	.47	.49
I have feelings that I can't quite identify.	.58	.57
Being in touch with emotions is essential.	.53	.56
I find it hard to describe how I feel about people.	.53	.50
People tell me to describe my feelings more.	.55	.50
I don't know what's going on inside me.	.64	.60
I often don't know why I am angry.	.44	.35
I prefer talking to people about their daily activities rather than their feelings.	.43	.46

Item	Initial	Extraction
I prefer to watch light entertainment rather than psychological dramas.	.35	.42
It is difficult for me to reveal my innermost feelings, even to close friends.	.48	.61
I can feel close to someone, even in moments of silence.	.51	.53
I find examination of my feelings useful in solving personal problems.	.56	.60
Looking for hidden meanings in movies or plays distracts from their enjoyment.	.43	.43

After computing the oblique rotation, SPSS generated two different matrices that can be used for interpretation of the factors: a pattern matrix and a structure matrix. The pattern matrix is the preferred matrix to be used for interpretation as the loadings on this matrix represent the impact of the factor on the item while controlling for the impact of other factors in the model on the same item (Fabrigar & Wegener, 2011). The structure matrix does not control for the impact of other factors on the same items so the same item may load onto multiple factors (Fabrigar & Wegener, 2011). Tables 5 and 6 include results from the pattern matrix and Tables 7 and 8 include results from the structure matrix (note that Tables 5 and 7 include Factors 1–4 and Tables 6 and 8 include factors 5–9). These tables can also be found in Appendices N, O, P, and Q, respectively. Note that only the pattern matrix was used to interpret and name the factors, although a discussion of significant results from the structure matrix will be addressed when considering recommendations for future research.

Table 5

Pattern Matrix Factors 1–4

Item	Factor 1	Factor 2	Factor 3	Factor 4
Little interest or pleasure in doing things	**.73**	.07	.03	.03
Feeling down, depressed, or hopeless	**.67**	.04	.06	.01
Trouble falling or staying asleep, or sleeping too much	**.47**	-.08	-.37	-.10
Feeling tired or having little energy	.33	-.06	-.10	-.12
Poor appetite or overeating	.31	-.07	-.09	-.02
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	**.50**	.01	.08	-.14
Trouble concentrating on things, such as reading the newspaper or watching television	.33	.03	-.19	-.07
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	.15	.10	-.05	-.02
Thoughts that you would be better off dead or hurting yourself in some other way	**.65**	.10	.21	.20
Feeling nervous, anxious or on edge	.23	.05	-.22	-.00
Not being able to stop or control worrying	.19	.03	.12	.10
Worrying too much about different things	.05	-.01	-.01	-.02
Trouble relaxing	.00	-.02	-.02	-.21
Being so restless that it is hard to sit still	-.06	-.04	.12	-.02
Becoming easily annoyed or irritable	.02	.16	-.01	-.08
Feeling afraid as if something awful might happen	.17	.10	.03	.01
I am often confused about what emotion I am feeling.	.32	**.65**	-.05	-.14
It is difficult for me to find the right words for my feelings.	-.02	**.61**	-.01	-.26
I have physical sensations that even doctors don't understand.	.14	.19	-.14	-.09
I am able to describe my feelings easily.	-.06	.07	.14	**-.57**
I prefer to analyze problems rather than just describe them.	.05	-.13	.28	-.06
When I am upset, I don't know if I am sad, frightened, or angry.	-.14	**.40**	-.07	-.14
I am often puzzled by sensations in my body.	.03	.13	-.10	.04
I prefer to let things happen rather than understand why they turned out that way.	.03	.25	.03	.24
I have feelings that I can't quite identify.	-.03	**.63**	-.09	-.02
Being in touch with emotions is essential.	.03	-.01	**.76**	.07

Item	Factor 1	Factor 2	Factor 3	Factor 4
I find it hard to describe how I feel about people.	.03	**.53**	.03	-.06
People tell me to describe my feelings more.	-.07	**.60**	-.00	.13
I don't know what's going on inside me.	.14	**.55**	.03	-.14
I often don't know why I am angry.	.07	**.47**	.05	.12
I prefer talking to people about their daily activities rather than their feelings.	-.02	.02	.19	-.02
I prefer to watch light entertainment rather than psychological dramas.	.10	-.09	-.03	-.01
It is difficult for me to reveal my innermost feelings, even to close friends.	.08	.15	-.03	-.40
I can feel close to someone, even in moments of silence.	-.01	-.14	**.66**	-.19
I find examination of my feelings useful in solving personal problems.	.12	.16	**.66**	-.12
Looking for hidden meanings in movies or plays distracts from their enjoyment.	.02	.15	.04	.17

Note. Coefficients with values of .40 or greater that were used in interpretation are in bold type.

Table 6

Pattern Matrix Factors 5–9

Item	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Little interest or pleasure in doing things	-.03	-.04	.10	.00	.01
Feeling down, depressed, or hopeless	.07	.05	.04	.04	.24
Trouble falling or staying asleep, or sleeping too much	-.13	-.15	-.13	.13	.05
Feeling tired or having little energy	-.12	-.25	.06	.09	.22
Poor appetite or overeating	.09	-.13	.07	.11	.12
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	.10	-.03	-.03	.06	.27
Trouble concentrating on things, such as reading the newspaper or watching television	-.19	-.30	-.19	.28	.12
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	.15	**-.61**	-.07	.08	-.02
Thoughts that you would be better off dead or hurting yourself in some other way	.12	-.07	.06	-.13	.07

Item	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Feeling nervous, anxious or on edge	-.05	.08	-.12	.21	**.64**

Item	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Not being able to stop or control worrying	.07	-.06	-.06	-.01	**.82**
Worrying too much about different things	.00	-.05	.05	-.12	**.83**
Trouble relaxing	.04	-.28	.06	-.01	**.55**
Being so restless that it is hard to sit still	.01	**-.78**	.07	-.08	.16
Becoming easily annoyed or irritable	-.17	-.20	-.03	.12	**.41**
Feeling afraid as if something awful might happen	.02	-.20	.06	-.06	**.43**
I am often confused about what emotion I am feeling.	-.03	-.06	.16	-.09	-.17
It is difficult for me to find the right words for my feelings.	-.04	-.01	.10	.07	.05
I have physical sensations that even doctors don't understand.	**.60**	-.08	.12	.01	-.10
I am able to describe my feelings easily.	.04	-.06	-.05	-.04	-.02
I prefer to analyze problems rather than just describe them.	.08	.01	-.35	.12	-.20
When I am upset, I don't know if I am sad, frightened, or angry.	.29	-.03	.14	.03	.18
I am often puzzled by sensations in my body.	**.79**	-.07	-.03	.18	.04
I prefer to let things happen rather than understand why they turned out that way.	.07	-.16	.12	**.42**	-.17
I have feelings that I can't quite identify.	.15	-.21	-.01	-.12	.05
Being in touch with emotions is essential.	.01	-.01	.05	.03	.02
I find it hard to describe how I feel about people.	.03	-.08	.04	.24	-.05
People tell me to describe my feelings more.	.06	.04	-.07	.27	.04
I don't know what's going on inside me.	.28	-.02	.01	-.06	.09
I often don't know why I am angry.	.09	.03	.03	.01	.18
I prefer talking to people about their daily activities rather than their feelings.	.18	.02	.14	**.56**	.03
I prefer to watch light entertainment rather than psychological dramas.	.19	.02	**.59**	.06	-.06
It is difficult for me to reveal my innermost feelings, even to close friends.	-.12	.20	.39	.32	.12
I can feel close to someone, even in moments of silence.	-.03	-.09	-.05	.05	.05
I find examination of my feelings useful in solving personal problems.	-.25	.02	-.13	.05	-.07
Looking for hidden meanings in movies or plays distracts from their enjoyment.	-.16	-.24	**.45**	.15	-.07

Note. Coefficients with values of .40 or greater that were used in interpretation are in bold type.

Table 7

Structure Matrix Factors 1–4

Item	Factor 1	Factor 2	Factor 3	Factor 4
Little interest or pleasure in doing things	**.77**	.27	-.03	-.04
Feeling down, depressed, or hopeless	**.78**	.27	-.02	-.10
Trouble falling or staying asleep, or sleeping too much	**.57**	.05	-.37	-.13
Feeling tired or having little energy	**.55**	.16	-.16	-.19
Poor appetite or overeating	**.44**	.15	-.13	-.06
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	**.66**	.24	.02	-.24
Trouble concentrating on things, such as reading the newspaper or watching television	**.56**	.19	-.19	-.16
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	**.45**	.35	-.07	-.09
Thoughts that you would be better off dead or hurting yourself in some other way	**.69**	.26	.12	.11
Feeling nervous, anxious or on edge	**.54**	.24	-.31	-.15
Not being able to stop or control worrying	**.57**	.24	-.02	-.09
Worrying too much about different things	**.42**	.17	-.15	-.18
Trouble relaxing	.39	.22	-.12	-.33
Being so restless that it is hard to sit still	.31	.19	.05	-.12
Becoming easily annoyed or irritable	.34	.29	-.07	-.21
Feeling afraid as if something awful might happen	**.46**	.29	-.07	-.11
I am often confused about what emotion I am feeling.	**.43**	**.74**	-.09	-.19
It is difficult for me to find the right words for my feelings.	.19	**.69**	-.03	-.34
I have physical sensations that even doctors don't understand.	.25	**.46**	-.17	-.07
I am able to describe my feelings easily.	-.01	.11	.19	**-.58**
I prefer to analyze problems rather than just describe them.	-.09	-.22	.37	-.04
When I am upset, I don't know if I am sad, frightened, or angry.	.12	**.58**	-.12	-.19
I am often puzzled by sensations in my body.	.20	**.44**	-.13	.04
I prefer to let things happen rather than understand why they turned out that way.	.18	**.43**	.01	.20

Item	Factor 1	Factor 2	Factor 3	Factor 4
I have feelings that I can't quite identify.	.21	**.70**	-.13	-.10
Being in touch with emotions is essential.	.01	.00	**.74**	-.00
I find it hard to describe how I feel about people.	.23	**.66**	.02	-.14
People tell me to describe my feelings more.	.12	**.65**	-.02	.04
I don't know what's going on inside me.	.33	**.69**	-.01	-.22
I often don't know why I am angry.	.25	**.54**	-.01	.01
I prefer talking to people about their daily activities rather than their feelings.	.14	.28	.16	-.06
I prefer to watch light entertainment rather than psychological dramas.	.14	.19	-.12	.03
It is difficult for me to reveal my innermost feelings, even to close friends.	.23	.39	-.06	**-.44**
I can feel close to someone, even in moments of silence.	.00	-.13	**.68**	-.25
I find examination of my feelings useful in solving personal problems.	.07	.06	**.70**	-.20
Looking for hidden meanings in movies or plays distracts from their enjoyment.	.18	.33	-.03	.13

Note. Coefficients with values of .40 or greater are in bold type.

Table 8

Structure Matrix Factors 5–9

Item	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Little interest or pleasure in doing things	.07	-.38	.20	.22	.37
Feeling down, depressed, or hopeless	.15	-.35	.15	.23	**.54**
Trouble falling or staying asleep, or sleeping too much	-.12	-.36	-.04	.21	.37
Feeling tired or having little energy	-.07	**-.48**	.13	.22	**.50**
Poor appetite or overeating	.13	-.32	.16	.22	.32
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	.14	-.36	.07	.22	**.53**
Trouble concentrating on things, such as reading the newspaper or watching television	-.14	**-.52**	-.05	.38	**.42**
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	.22	**-.71**	.10	.24	.32

Thoughts that you would be better off dead or hurting yourself in some other way	.21	-.36	.15	.08	.34
Item	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Feeling nervous, anxious or on edge	.01	-.30	.04	.29	**.76**
Not being able to stop or control worrying	.13	**-.44**	.05	.12	**.89**
Worrying too much about different things	.05	.37	.12	-.03	**.87**
Trouble relaxing	.08	**-.51**	.14	.10	**.71**
Being so restless that it is hard to sit still	.06	**-.80**	.13	.06	**.41**
Becoming easily annoyed or irritable	-.08	**-.42**	.08	.23	**.54**
Feeling afraid as if something awful might happen	.11	**-.46**	.17	.10	**.60**
I am often confused about what emotion I am feeling.	.21	-.32	.38	.22	.17
It is difficult for me to find the right words for my feelings.	.16	-.23	.31	.29	.24
I have physical sensations that even doctors don't understand.	**.69**	-.22	.33	.18	.11
I am able to describe my feelings easily.	.02	-.07	-.07	.00	.08
I prefer to analyze problems rather than just describe them.	-.04	.13	**-.41**	.01	-.26
When I am upset, I don't know if I am sad, frightened, or angry.	**.43**	-.20	.35	.19	.28
I am often puzzled by sensations in my body.	**.84**	-.21	.24	.28	.16
I prefer to let things happen rather than understand why they turned out that way.	.21	-.24	.31	**.54**	-.05
I have feelings that I can't quite identify.	.34	-.38	.24	.11	.26
Being in touch with emotions is essential.	.00	-.01	-.34	.07	-.08
I find it hard to describe how I feel about people.	.21	-.27	.28	**.44**	.13
People tell me to describe my feelings more.	.25	-.14	.19	**.42**	.11
I don't know what's going on inside me.	**.45**	-.28	.26	.18	.30
I often don't know why I am angry.	.25	-.19	.22	.19	.28
I prefer talking to people about their daily activities rather than their feelings.	.25	-.12	.27	**.61**	.06
I prefer to watch light entertainment rather than psychological dramas.	.29	-.07	**.61**	.18	.04
It is difficult for me to reveal my innermost feelings, even to close friends.	.01	-.06	**.48**	**.46**	.25
I can feel close to someone, even in moments of silence.	-.10	-.05	-.18	.04	-.01
I find examination of my feelings useful in solving personal problems.	-.24	-.00	-.20	.10	-.09

Looking for hidden meanings in movies or plays distracts from their enjoyment.	.00	-.32	**.53**	.31	.07

Note. Coefficients with values of .40 or greater are in bold type.

Five items did not load onto a factor. These items included "Feeling tired or having little energy," "Poor appetite or overeating," "Trouble concentrating on things, such as reading the newspaper or watching television," "It is difficult for me to reveal my innermost feelings, even to close friends," and "I prefer to analyze problems rather than just describe them."

Factor 1 was composed of the five following items which loaded positively: "Little interest or pleasure in doing things," Feeling down, depressed, or hopeless," "Trouble falling or staying asleep, or sleeping too much," "Feeling bad about yourself – or that you are a failure or have let yourself or your family down," and "Thoughts that you would be better off dead or hurting yourself in some other way." This factor was labeled "Depressive Symptoms."

Factor 2 was composed of the following eight items which loaded positively: "I am often confused about what emotion I am feeling," "It is difficult for me to find the right words for my feelings," "When I am upset, I don't know if I am sad, frightened, or angry," "I have feelings that I can't quite identify," "I find it hard to describe how I feel about people," "I don't know what's going on inside me," "I often don't know why I am angry," and "People tell me to describe my feelings more." This factor was labeled "Difficulty Identifying Feelings."

Factor 3 was composed of the following three items which loaded positively: "Being in touch with emotions is essential," "I can feel close to someone, even in moments of silence," and "I find examination of my feelings useful in solving personal problems." This factor was labeled "Usefulness of Feelings."

Only one item loaded onto Factor 4: "I am able to describe my feelings easily." This factor was labeled "Difficulty Describing Feelings."

Two items loaded positively onto Factor 5: "I am often puzzled by sensations in my body" and "I have physical sensations that even doctors don't understand." This factor was labeled "Psychosomatic Symptoms."

Factor 6 had two items that loaded negatively: "Being so restless that it is hard to sit still" and "Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual." This factor was labeled "Reduced Physical Activation." Given that the item of "Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual" includes two experiences of physical activation that could be considered opposites, the item of "Being so restless that it is hard to sit still," which demonstrated a higher loading at -.78, was the primary item utilized to label this factor.

Factor 7 was composed of two items that loaded positively: "Looking for hidden meanings in movies or plays distracts from their enjoyment" and "I prefer to watch 'light' entertainment rather than psychological dramas." This factor was labeled "Avoidance of Symbolism in Entertainment Preferences."

Factor 8 had two items that loaded positively: "I prefer to let things happen rather than understand why they turned out that way" and "I prefer talking to people about their daily activities rather than their feelings." This factor was labeled "Externality."

Factor 9 had six items that loaded positively: "Feeling nervous, anxious, or on edge," "Not being able to stop or control worrying," "Worrying too much about different

things," "Trouble relaxing," "Becoming easily annoyed or irritable," and "Feeling afraid

as if something awful might happen." This factor was labeled "Anxiety Symptoms."

Chapter 5: Discussion

This study demonstrated that upon conducting EFA on participants' responses to the PHQ-9, GAD-7, and TAS-20 who also endorsed experiencing CEN, nine factors yielded significant results. These nine factors were titled, "Depressive Symptoms," "Difficulty Identifying Feelings," "Usefulness of Feelings," "Difficulty Describing Feelings," "Psychosomatic Symptoms," "Reduced Physical Activation," "Avoidance of Symbolism in Entertainment Preferences," "Externality," and "Anxiety Symptoms," respectively. These factors accounted for 66.11% of the total variance. All but five of a total of 36 items loaded onto a factor.

These results indicate that individuals who experience CEN may experience a broader range of difficulties, experiences, and beliefs than present studies have been able to demonstrate. These results clearly indicate that depression and anxiety symptoms, difficulty identifying and describing feelings, and experiencing psychosomatic symptoms may be a common experience for individuals who experience CEN, which is also reflected in the current literature. However, what the current research has neglected are constructs such as the belief in the importance of and usefulness of feelings in problem solving (Factor 3 "Usefulness of Feelings"), avoiding entertainment that may have deeper meanings and messages (Factor 7 "Avoidance of Symbolism in Entertainment Preferences"), and an avoidance of engaging in introspection as well as engaging with individuals about their feelings (Factor 8 "Externality").

These constructs demonstrated that the experiences of individuals who endorse CEN may be very complex and possibly cause a significant amount of distress later in life. For example, an individual who believes in the importance of emotions as well as

believes it is useful to examine feelings when problem solving (Factor 3), but struggles to identify and describe their feelings (Factors 2 and 4) may experience a significant amount of distress. Also, it is possible that given how difficult it can be for these individuals to engage with their own and others' emotions, it might be more difficult for them to enjoy entertainment that has deeper meanings and messages (Factor 7). Furthermore, these individuals may experience less satisfaction in relationships and may have increased interpersonal conflict. Given the difficulties they may experience in engaging with their own and others' emotions, it is possible that they may feel disconnected from relationships, and the individuals with whom they have relationships may also feel a sense of disconnection, which may lead to conflict and loss of relationships. However, these speculations are hypotheses that demand further research to support or reject.

There are limitations to this study that future research can address. The sample acquired is a convenience sample and thus is not representative of the general population. Further, it is typically recommended that three to five variables load onto a factor in order for it to be interpreted as a common factor (Fabrigar et al., 1999). Thus, Factors 4, 5, 6, 7, and 8 would typically not be included as part of creating a measure. However, for the purposes of this study, the factors were retained and interpreted as they had significant implications for the experiences of individuals who endorsed CEN. Further, these factors were also retained based on analyzing the scree plot which demonstrates which factors have an eigenvalue of 1 or more. It is suggested that factors with more than one eigenvalue be retained (Cuddy, 2014; Rector, 2006; Russell, 2002). Also, a break in the scree plot line at the point where factors no longer hold an eigenvalue of 1 indicates that factors above that point should be retained (Cuddy, 2014; Rector, 2006; Russell, 2002).

Additionally, when parallel analysis was conducted, the randomly generated eigenvalues based on the same number of variables within the present study demonstrated that all nine of these factors were larger than the randomly generated list (O'Connor, 2000). Thus, these factors were retained as they proved to be more meaningful than those based on chance (Cuddy, 2014; Rector, 2006).

Future research should include acquiring more participant responses, creating more items related to these constructs, and a reanalysis utilizing EFA to determine whether these factors are significant enough to retain into a comprehensive measure. Subsequent to this additional analysis, further research could involve CFA to build construct validity evidence of CEN as a multifactorial condition that could have a polymorphic clinical presentation across individuals.

This study provided further support that individuals who experience CEN may also experience depression and anxiety symptoms, difficulty identifying and describing feelings, and psychosomatic symptoms. This study also highlighted potential neglected constructs, such as the belief in the importance and usefulness of feelings, avoiding symbolism in entertainment, and avoiding engaging in deeper thought as well as conversations with others about their feelings that may reflect more complex and broader outcomes of experiencing CEN.

It is imperative that future research demonstrate whether these constructs hold true across samples as well as create more items that reflect these constructs in order to provide further support of whether these constructs may be a common occurrence among those who experience CEN. These results hold deep implications for the field of psychology and are particularly important to consider when assessing clients' functioning

and forming treatment plans in therapy. While a clinician may be able to use current measures to indicate whether their client is having difficulties with depression and anxiety symptoms, difficulty identifying and describing feelings, and psychosomatic symptoms, the current measures will likely fail to indicate other constructs that this study demonstrated as possibly being integral to the difficulties that individuals who experience CEN may have to cope with later in life. Those constructs include whether a client holds a belief regarding the importance and usefulness of feelings, may be avoiding entertainment with symbolism, and may avoid deeper thought as well as conversations with others that include discussing feelings.

These constructs, if demonstrated in future research, may assist clinicians in the formation of conceptualizations and treatment plans. It will be important for clinicians to consider the internal conflict a client may possess if they believe in the importance and usefulness of feelings but struggle to identify and describe them. Further, if a client's behavior is reflecting avoidance of engaging with feelings across various domains in their life, including intra- and interpersonally, and even in their entertainment preferences, it is possible that these behaviors will reinforce the difficulties they are experiencing and thus impede the client's progress. In conclusion, while this study provided support for constructs that have been demonstrated in current research, future research may need to explore the constructs that this study indicated as potentially being additional outcomes of CEN as they hold deep implications for the field of psychology's ability to assess, conceptualize, and treat the complex outcomes of experiencing emotional neglect in childhood.

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APPENDIX A

Description of the Survey

My name is Taylor Levitt and I am a doctoral student at the Illinois School of Professional Psychology at National Louis University. Part of my requirements for graduation is to conduct a research study. The purpose of this study is to examine mental health outcomes among individuals who believe they experienced childhood emotional neglect. The answers you provide will be anonymous. If you are 18 years or older and are interested in participating, please select "yes" below. Thank you for your time.

APPENDIX B

Screener Question

Childhood emotional neglect is defined as, "emotional unresponsiveness, unavailability, and neglect characterized by lack of interaction between parent and child; failure of a parent to meet child's emotional needs."

Please select "yes" if you believe that you experienced emotional neglect in childhood.

Please select "no" if you believe that you have not experienced emotional neglect in childhood

APPENDIX C

Informed Consent Online Survey

You are being asked to participate in an online survey for a research project being carried out by Taylor Levitt, doctoral student, from the Illinois School of Professional Psychology at National Louis University. The study is called "Evaluating the Outcomes of Childhood Emotional Neglect: The Development of a New Inventory," and is occurring from 08-2020 to 07-2022.

The purpose of this study is to develop a new inventory that evaluates how experiencing childhood emotional neglect can lead to various difficulties later in life. Participation in this study will include: Completion of the following online inventory, expected to take approximately 30 to 45 minutes to complete. Your participation is voluntary and can be discontinued at any time without penalty or bias. The results of this study will be used to meet graduation requirements for a doctoral degree in Clinical Psychology and may be published and presented at conferences in the future.

Participants' identities will in no way be revealed (data will be reported anonymously and bear no identifiers that could connect data to individual participants). To ensure confidentiality, this researcher will keep results on a password encrypted file that will be kept in a locked, secure location. Only Taylor Levitt and Dr. Christopher Rector will have access to data. Your participation in this study may contribute to knowledge in the field of clinical psychology in the service of future assessment and treatment of emotional neglect. An anticipated risk of participating in this study includes experiencing psychological discomfort.

Should you experience psychological discomfort, please utilize the following resources that can provide you with confidential support: Substance Abuse and Mental Health Services Administration (SAMHSA) Hotline – (800) 662-4357, the National Alliance on Mental Illness (NAMI) Hotline – (800) 950-6264, and the National Suicide Prevention Lifeline – (800) 273-8255.

Upon request, you may receive a summary of the aggregated data from this study and copies of any publications that may occur. Please note that individual results will not be able to be distributed to maintain anonymity of participants. Please email the researcher, Taylor Levitt, at   to request results from this study. In the event that you have questions or require additional information, please contact the researcher, Taylor Levitt, by email or by phone at   . If you have any concerns or questions before or during participation that has not been addressed by the researcher, you may contact the cochairs of NLU's Institutional Research Board: Dr. Shaunti Knauth; email: Shaunti.Knauth@nl.edu; phone: (312) 261-3526; or Dr. Kathleen Cornett; email: kcornett@nl.edu; phone: (844) 380-5001. Co-chairs are located at National Louis University, 122 South Michigan Avenue, Chicago, IL. Thank you for your consideration.

Consent: I understand that by checking 'Agree" below, I am agreeing to participate in the study, "Evaluating the Outcomes of Childhood Emotional Neglect: The Development of a New Inventory". My participation will include completing an online survey that will take approximately 30 to 45 minutes to complete.

ELECTRONIC CONSENT: Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that • You have read the above information • You voluntarily agree to participate • You are 18 years of age or older.

APPENDIX D

Permissions to Use Assessments

PHQ-9 & GAD-7: https://www.phqscreeners.com/select-screener
     *This website includes a blub that specifies it is not necessary to obtain formal
       permission to use these measures.

TAS-20: Dr. Taylor, the author and copyright owner of the measure, requires payment
via check to be sent to his office in Toronto, Canada in the amount of $40. The check was
sent on 6-15-2020. As of 6-30-2020, I have received a copy of the manual from Dr.
Taylor and can now legally distribute the TAS-20.

APPENDIX E

Patient Health Questionnaire – 9 Items

https://www.phqscreeners.com/images/sites/g/files/g10060481/f/201412/PHQ-9_English.pdf

1. Little interest or pleasure in doing things

2. Feeling down, depressed, or hopeless

3. Trouble falling or staying asleep, or sleeping too much

4. Feeling tired or having little energy

5. Poor appetite or overeating

6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down

7. Trouble concentrating on things, such as reading the newspaper or watching television

8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgedty or restless that you have been moving around a lot more than usual

9. Thoughts that you would be better off dead or of hurting yourself in some other way

APPENDIX F

Generalized Anxiety Disorder – 7 Items

https://www.phqscreeners.com/images/sites/g/files/g10060481/f/201412/GAD-7_English.pdf

1. Feeling nervous, anxious or on edge

2. Not being able to stop or control worrying

3. Worrying too much about different things

4. Trouble relaxing

5. Being so restless that it is hard to sit still

6. Becoming easily annoyed or irritable

7. Feeling afraid as if something awful might happen

APPENDIX G

Toronto Alexithymia Scale – 20

Factor 1: Difficulty Identifying Feelings

1. I am often confused about what emotion I am feeling.
3. I have physical sensations that even doctors don't understand.
6. When I am upset, I don't know if I am sad, frightened, or angry.
7. I am often puzzled by sensations in my body.
9. I have feelings that I can't quite identify.
13. I don't know what's going on inside me.
14. I often don't know why I am angry.

Factor 2: Difficulty Describing Feelings

2. It is difficult for me to find the right words for my feelings.
4. I am able to describe my feelings easily.
11. I find it hard to describe how I feel about people.
12. People tell me to describe my feelings more.
17. It is difficult for me to reveal my innermost feelings, even to close friends.

Factor 3: Externally-Oriented Thinking

5. I prefer to analyze problems rather than just describe them.
8. I prefer to just let things happen rather than to understand why they turned out that way.
10. Being in touch with emotions is essential.
15. I prefer talking to people about their daily activities rather than their feelings.
16. I prefer to watch "light" entertainment shows rather than psychological dramas.
18. I can feel close to someone, even in moments of silence.

19. I find examination of my feelings useful in solving personal problems.

20. Looking for hidden meanings in movies or plays distracts from their enjoyment.

APPENDIX H

Debriefing Summary

You have completed the survey. Thank you for your time and your contributions. These questions addressed symptoms of depression and anxiety as well as difficulty identifying and describing feelings and experiencing shame. These are all possible outcomes of experiencing childhood emotional neglect. You may be experiencing emotional reactions upon completing the survey. Please utilize these resources if you need support: Substance Abuse and Mental Health Services Administration (SAMHSA) Hotline – (800) 662-4357, the National Alliance on Mental Illness (NAMI) Hotline – (800) 950-6264, and the National Suicide Prevention Lifeline – (800) 273-8255.

APPENDIX I

Descriptive Statistics Table

Item	Mean	SD	N
Little interest or pleasure in doing things	2.76	1.16	150
Feeling down, depressed, or hopeless	2.85	1.15	150
Trouble falling or staying asleep, or sleeping too much	3.22	1.27	150
Feeling tired or having little energy	3.31	1.16	150
Poor appetite or overeating	3.07	1.33	150
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	3.04	1.33	150
Trouble concentrating on things, such as reading the newspaper or watching television	2.75	1.35	150
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	2.17	1.28	150
Thoughts that you would be better off dead or hurting yourself in some other way	2.10	1.35	150
Feeling nervous, anxious or on edge	3.28	1.25	150
Not being able to stop or control worrying	3.24	1.28	150
Worrying too much about different things	3.15	1.21	150
Trouble relaxing	3.06	1.30	150
Being so restless that it is hard to sit still	2.59	1.29	150
Becoming easily annoyed or irritable	3.01	1.23	150
Feeling afraid as if something awful might happen	2.77	1.38	150
I am often confused about what emotion I am feeling.	3.15	1.24	150
It is difficult for me to find the right words for my feelings.	3.49	1.25	150
I have physical sensations that even doctors don't understand.	2.89	1.45	150
I am able to describe my feelings easily.	3.02	1.39	150
I prefer to analyze problems rather than just describe them.	2.07	0.99	150
When I am upset, I don't know if I am sad, frightened, or angry.	3.18	1.27	150
I am often puzzled by sensations in my body.	2.98	1.31	150
I prefer to let things happen rather than understand why they turned out that way.	2.68	1.35	150
I have feelings that I can't quite identify.	3.48	1.22	150
Being in touch with emotions is essential.	2.10	1.13	150
I find it hard to describe how I feel about people.	3.34	1.18	150
People tell me to describe my feelings more.	3.04	1.31	150
I don't know what's going on inside me.	3.25	1.34	150

I often don't know why I am angry.	3.29	1.33	150
I prefer talking to people about their daily activities rather than their feelings.	3.24	1.24	150
I prefer to watch light entertainment rather than psychological dramas.	3.23	1.33	150
It is difficult for me to reveal my innermost feelings, even to close friends.	3.65	1.32	150
I can feel close to someone, even in moments of silence.	2.31	1.16	150
I find examination of my feelings useful in solving personal problems.	2.57	1.19	150
Looking for hidden meanings in movies or plays distracts from their enjoyment.	2.69	1.31	150

APPENDIX J

KMO and Bartlett Test Table

Kaiser-Meyer-Okin Measure of Sampling Adequacy		0.83
Bartlett's Test of Sphericity	Approximate Chi-Square	2678.23
	df	630
	Significance	0.000

APPENDIX K

Total Variance Explained Table

Initial Eigen Values				Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.65	26.81	26.81	9.24	25.66	25.66	5.61
2	3.72	10.33	37.14	3.31	9.19	34.85	5.37
3	2.56	7.12	44.26	2.12	5.85	40.70	2.18
4	1.71	4.75	49.01	1.25	3.46	44.16	1.38
5	1.50	4.18	53.18	1.11	3.09	47.25	2.45
6	1.25	3.47	56.66	0.85	2.36	49.61	4.29
7	1.23	3.41	60.06	0.74	2.06	51.66	2.34
8	1.12	3.12	63.18	0.63	1.76	53.42	2.40
9	1.05	2.93	66.11	0.60	1.67	55.09	5.62
10	0.97	2.69	68.80				
11	0.87	2.41	71.21				
12	0.82	2.29	73.50				
13	0.77	2.15	75.65				
14	0.72	1.20	77.64				
15	0.69	1.93	79.57				
16	0.62	1.73	81.30				
17	0.57	1.58	82.88				
18	0.55	1.51	84.39				
19	0.53	1.46	85.86				
20	0.50	1.37	87.23				
21	0.47	1.30	88.53				
22	0.44	1.23	89.75				
23	0.41	1.13	90.88				
24	0.39	1.08	91.96				
25	0.38	1.04	93.00				
26	0.34	0.94	93.94				
27	0.32	0.89	94.83				
28	0.30	0.83	95.65				
29	0.29	0.80	96.45				
30	0.27	0.74	97.19				
31	0.24	0.67	97.87				
32	0.21	0.58	98.45				
33	0.18	0.50	98.94				
34	0.16	0.44	99.38				
35	0.14	0.83	99.77				
36	0.08	0.23	100.00				

Extraction Method: Principal Axis Factoring.
[a]When factors are correlated, sum of squared loadings cannot be added to obtain a total variance.

APPENDIX L

Scree Plot Graph
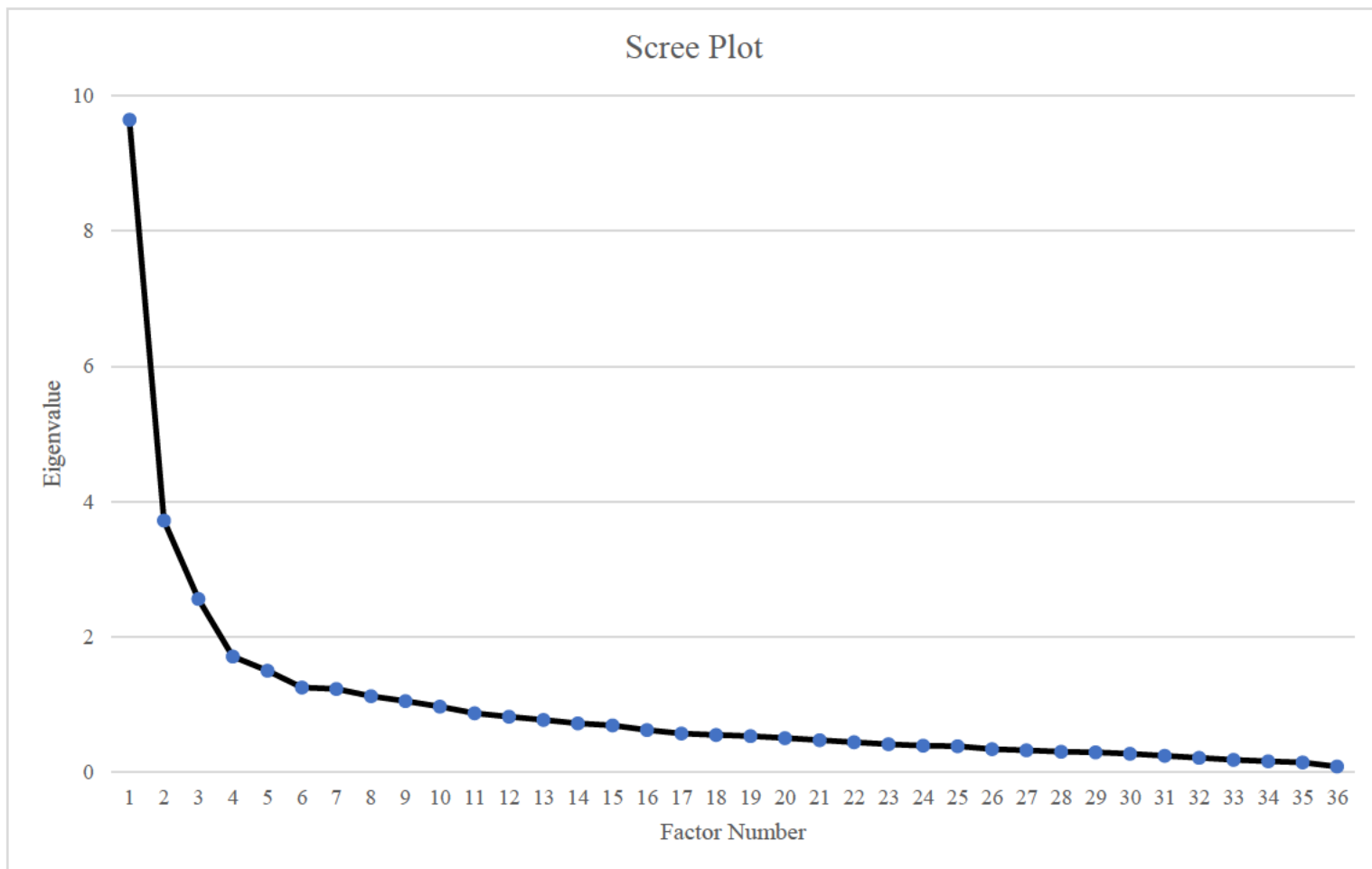
APPENDIX M

Communalities Table

Item	Initial	Extraction
Little interest or pleasure in doing things	.65	.62
Feeling down, depressed, or hopeless	.72	.67
Trouble falling or staying asleep, or sleeping too much	.56	.54
Feeling tired or having little energy	.60	.48
Poor appetite or overeating	.39	.26
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	.62	.54
Trouble concentrating on things, such as reading the newspaper or watching television	.59	.59
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	.58	.58
Thoughts that you would be better off dead or hurting yourself in some other way	.55	.60
Feeling nervous, anxious or on edge	.72	.72
Not being able to stop or control worrying	.83	.86
Worrying too much about different things	.81	.78
Trouble relaxing	.66	.61
Being so restless that it is hard to sit still	.57	.68
Becoming easily annoyed or irritable	.51	.41
Feeling afraid as if something awful might happen	.53	.46
I am often confused about what emotion I am feeling.	.64	.67
It is difficult for me to find the right words for my feelings.	.58	.56
I have physical sensations that even doctors don't understand.	.69	.61
I am able to describe my feelings easily.	.38	.37
I prefer to analyze problems rather than just describe them.	.41	.32
When I am upset, I don't know if I am sad, frightened, or angry.	.58	.49
I am often puzzled by sensations in my body.	.73	.80
I prefer to let things happen rather than understand why they turned out that way.	.47	.49
I have feelings that I can't quite identify.	.58	.57
Being in touch with emotions is essential.	.53	.56
I find it hard to describe how I feel about people.	.53	.50
People tell me to describe my feelings more.	.55	.50
I don't know what's going on inside me.	.64	.60
I often don't know why I am angry.	.44	.35
I prefer talking to people about their daily activities rather than their feelings.	.43	.46
I prefer to watch light entertainment rather than psychological dramas.	.35	.42

It is difficult for me to reveal my innermost feelings, even to close friends.	.48	.61
I can feel close to someone, even in moments of silence.	.51	.53
I find examination of my feelings useful in solving personal problems.	.56	.60
Looking for hidden meanings in movies or plays distracts from their enjoyment.	.43	.43

APPENDIX N

Pattern Matrix Factors 1–4 Table

Item	Factor 1	Factor 2	Factor 3	Factor 4
Little interest or pleasure in doing things	**.73**	.07	.03	.03
Feeling down, depressed, or hopeless	**.67**	.04	.06	.01
Trouble falling or staying asleep, or sleeping too much	**.47**	-.08	-.37	-.10
Feeling tired or having little energy	.33	-.06	-.10	-.12
Poor appetite or overeating	.31	-.07	-.09	-.02
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	**.50**	.01	.08	-.14
Trouble concentrating on things, such as reading the newspaper or watching television	.33	.03	-.19	-.07
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	.15	.10	-.05	-.02
Thoughts that you would be better off dead or hurting yourself in some other way	**.65**	.10	.21	.20
Feeling nervous, anxious or on edge	.23	.05	-.22	-.00
Not being able to stop or control worrying	.19	.03	.12	.10
Worrying too much about different things	.05	-.01	-.01	-.02
Trouble relaxing	.00	-.02	-.02	-.21
Being so restless that it is hard to sit still	-.06	-.04	.12	-.02
Becoming easily annoyed or irritable	.02	.16	-.01	-.08
Feeling afraid as if something awful might happen	.17	.10	.03	.01
I am often confused about what emotion I am feeling.	.32	**.65**	-.05	-.14
It is difficult for me to find the right words for my feelings.	-.02	**.61**	-.01	-.26
I have physical sensations that even doctors don't understand.	.14	.19	-.14	-.09
I am able to describe my feelings easily.	-.06	.07	.14	**-.57**
I prefer to analyze problems rather than just describe them.	.05	-.13	.28	-.06
When I am upset, I don't know if I am sad, frightened, or angry.	-.14	**.40**	-.07	-.14
I am often puzzled by sensations in my body.	.03	.13	-.10	.04
I prefer to let things happen rather than understand why they turned out that way.	.03	.25	.03	.24
I have feelings that I can't quite identify.	-.03	**.63**	-.09	-.02
Being in touch with emotions is essential.	.03	-.01	**.76**	.07
I find it hard to describe how I feel about people.	.03	**.53**	.03	-.06

People tell me to describe my feelings more.	-.07	**.60**	-.00	.13
I don't know what's going on inside me.	.14	**.55**	.03	-.14
I often don't know why I am angry.	.07	**.47**	.05	.12
I prefer talking to people about their daily activities rather than their feelings.	-.02	.02	.19	-.02
I prefer to watch light entertainment rather than psychological dramas.	.10	-.09	-.03	-.01
It is difficult for me to reveal my innermost feelings, even to close friends.	.08	.15	-.03	-.40
I can feel close to someone, even in moments of silence.	-.01	-.14	**.66**	-.19
I find examination of my feelings useful in solving personal problems.	.12	.16	**.66**	-.12
Looking for hidden meanings in movies or plays distracts from their enjoyment.	.02	.15	.04	.17

Note. Coefficients with values of .40 or greater that were used in interpretation are in bold type.

APPENDIX O

Pattern Matrix Factors 5–9 Table

Item	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Little interest or pleasure in doing things	-.03	-.04	.10	.00	.01
Feeling down, depressed, or hopeless	.07	.05	.04	.04	.24
Trouble falling or staying asleep, or sleeping too much	-.13	-.15	-.13	.13	.05
Feeling tired or having little energy	-.12	-.25	.06	.09	.22
Poor appetite or overeating	.09	-.13	.07	.11	.12
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	.10	-.03	-.03	.06	.27
Trouble concentrating on things, such as reading the newspaper or watching television	-.19	-.30	-.19	.28	.12
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	.15	**-.61**	-.07	.08	-.02
Thoughts that you would be better off dead or hurting yourself in some other way	.12	-.07	.06	-.13	.07
Feeling nervous, anxious or on edge	-.05	.08	-.12	.21	**.64**
Not being able to stop or control worrying	.07	-.06	-.06	-.01	**.82**
Worrying too much about different things	.00	-.05	.05	-.12	**.83**
Trouble relaxing	.04	-.28	.06	-.01	**.55**
Being so restless that it is hard to sit still	.01	**-.78**	.07	-.08	.16
Becoming easily annoyed or irritable	-.17	-.20	-.03	.12	**.41**
Feeling afraid as if something awful might happen	.02	-.20	.06	-.06	**.43**
I am often confused about what emotion I am feeling.	-.03	-.06	.16	-.09	-.17
It is difficult for me to find the right words for my feelings.	-.04	-.01	.10	.07	.05
I have physical sensations that even doctors don't understand.	**.60**	-.08	.12	.01	-.10
I am able to describe my feelings easily.	.04	-.06	-.05	-.04	-.02
I prefer to analyze problems rather than just describe them.	.08	.01	-.35	.12	-.20
When I am upset, I don't know if I am sad, frightened, or angry.	.29	-.03	.14	.03	.18
I am often puzzled by sensations in my body.	**.79**	-.07	-.03	.18	.04

I prefer to let things happen rather than understand why they turned out that way.	.07	-.16	.12	**.42**	-.17
I have feelings that I can't quite identify.	.15	-.21	-.01	-.12	.05
Being in touch with emotions is essential.	.01	-.01	.05	.03	.02
I find it hard to describe how I feel about people.	.03	-.08	.04	.24	-.05
People tell me to describe my feelings more.	.06	.04	-.07	.27	.04
I don't know what's going on inside me.	.28	-.02	.01	-.06	.09
I often don't know why I am angry.	.09	.03	.03	.01	.18
I prefer talking to people about their daily activities rather than their feelings.	.18	.02	.14	**.56**	.03
I prefer to watch light entertainment rather than psychological dramas.	.19	.02	**.59**	.06	-.06
It is difficult for me to reveal my innermost feelings, even to close friends.	-.12	.20	.39	.32	.12
I can feel close to someone, even in moments of silence.	-.03	-.09	-.05	.05	.05
I find examination of my feelings useful in solving personal problems.	-.25	.02	-.13	.05	-.07
Looking for hidden meanings in movies or plays distracts from their enjoyment.	-.16	-.24	**.45**	.15	-.07

Note. Coefficients with values of .40 or greater that were used in interpretation are in bold type.

APPENDIX P

Structure Matrix Factors 1–4 Table

Item	Factor 1	Factor 2	Factor 3	Factor 4
Little interest or pleasure in doing things	**.77**	.27	-.03	-.04
Feeling down, depressed, or hopeless	**.78**	.27	-.02	-.10
Trouble falling or staying asleep, or sleeping too much	**.57**	.05	-.37	-.13
Feeling tired or having little energy	**.55**	.16	-.16	-.19
Poor appetite or overeating	**.44**	.15	-.13	-.06
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	**.66**	.24	.02	-.24
Trouble concentrating on things, such as reading the newspaper or watching television	**.56**	.19	-.19	-.16
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	**.45**	.35	-.07	-.09
Thoughts that you would be better off dead or hurting yourself in some other way	**.69**	.26	.12	.11
Feeling nervous, anxious or on edge	**.54**	.24	-.31	-.15
Not being able to stop or control worrying	**.57**	.24	-.02	-.09
Worrying too much about different things	**.42**	.17	-.15	-.18
Trouble relaxing	.39	.22	-.12	-.33
Being so restless that it is hard to sit still	.31	.19	.05	-.12
Becoming easily annoyed or irritable	.34	.29	-.07	-.21
Feeling afraid as if something awful might happen	**.46**	.29	-.07	-.11
I am often confused about what emotion I am feeling.	**.43**	**.74**	-.09	-.19
It is difficult for me to find the right words for my feelings.	.19	**.69**	-.03	-.34
I have physical sensations that even doctors don't understand.	.25	**.46**	-.17	-.07
I am able to describe my feelings easily.	-.01	.11	.19	**-.58**
I prefer to analyze problems rather than just describe them.	-.09	-.22	.37	-.04
When I am upset, I don't know if I am sad, frightened, or angry.	.12	**.58**	-.12	-.19
I am often puzzled by sensations in my body.	.20	**.44**	-.13	.04
I prefer to let things happen rather than understand why they turned out that way.	.18	**.43**	.01	.20
I have feelings that I can't quite identify.	.21	**.70**	-.13	-.10
Being in touch with emotions is essential.	.01	.00	**.74**	-.00
I find it hard to describe how I feel about people.	.23	**.66**	.02	-.14

People tell me to describe my feelings more.	.12	**.65**	-.02	.04
I don't know what's going on inside me.	.33	**.69**	-.01	-.22
I often don't know why I am angry.	.25	**.54**	-.01	.01
I prefer talking to people about their daily activities rather than their feelings.	.14	.28	.16	-.06
I prefer to watch light entertainment rather than psychological dramas.	.14	.19	-.12	.03
It is difficult for me to reveal my innermost feelings, even to close friends.	.23	.39	-.06	**-.44**
I can feel close to someone, even in moments of silence.	.00	-.13	**.68**	-.25
I find examination of my feelings useful in solving personal problems.	.07	.06	**.70**	-.20
Looking for hidden meanings in movies or plays distracts from their enjoyment.	.18	.33	-.03	.13

Note. Coefficients with values of .40 or greater are in bold type.

APPENDIX Q

Structure Matrix Factors 5–9 Table

Item	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Little interest or pleasure in doing things	.07	-.38	.20	.22	.37
Feeling down, depressed, or hopeless	.15	-.35	.15	.23	**.54**
Trouble falling or staying asleep, or sleeping too much	-.12	-.36	-.04	.21	.37
Feeling tired or having little energy	-.07	**-.48**	.13	.22	**.50**
Poor appetite or overeating	.13	-.32	.16	.22	.32
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	.14	-.36	.07	.22	**.53**
Trouble concentrating on things, such as reading the newspaper or watching television	-.14	**-.52**	-.05	.38	**.42**
Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	.22	**-.71**	.10	.24	.32
Thoughts that you would be better off dead or hurting yourself in some other way	.21	-.36	.15	.08	.34
Feeling nervous, anxious or on edge	.01	-.30	.04	.29	**.76**
Not being able to stop or control worrying	.13	**-.44**	.05	.12	**.89**
Worrying too much about different things	.05	.37	.12	-.03	**.87**
Trouble relaxing	.08	**-.51**	.14	.10	**.71**
Being so restless that it is hard to sit still	.06	**-.80**	.13	.06	**.41**
Becoming easily annoyed or irritable	-.08	**-.42**	.08	.23	**.54**
Feeling afraid as if something awful might happen	.11	**-.46**	.17	.10	**.60**
I am often confused about what emotion I am feeling.	.21	-.32	.38	.22	.17
It is difficult for me to find the right words for my feelings.	.16	-.23	.31	.29	.24
I have physical sensations that even doctors don't understand.	**.69**	-.22	.33	.18	.11
I am able to describe my feelings easily.	.02	-.07	-.07	.00	.08
I prefer to analyze problems rather than just describe them.	-.04	.13	**-.41**	.01	-.26
When I am upset, I don't know if I am sad, frightened, or angry.	**.43**	-.20	.35	.19	.28
I am often puzzled by sensations in my body.	**.84**	-.21	.24	.28	.16
I prefer to let things happen rather than understand why they turned out that way.	.21	-.24	.31	**.54**	-.05

I have feelings that I can't quite identify.	.34	-.38	.24	.11	.26
Being in touch with emotions is essential.	.00	-.01	-.34	.07	-.08
I find it hard to describe how I feel about people.	.21	-.27	.28	**.44**	.13
People tell me to describe my feelings more.	.25	-.14	.19	**.42**	.11
I don't know what's going on inside me.	**.45**	-.28	.26	.18	.30
I often don't know why I am angry.	.25	-.19	.22	.19	.28
I prefer talking to people about their daily activities rather than their feelings.	.25	-.12	.27	**.61**	.06
I prefer to watch light entertainment rather than psychological dramas.	.29	-.07	**.61**	.18	.04
It is difficult for me to reveal my innermost feelings, even to close friends.	.01	-.06	**.48**	**.46**	.25
I can feel close to someone, even in moments of silence.	-.10	-.05	-.18	.04	-.01
I find examination of my feelings useful in solving personal problems.	-.24	-.00	-.20	.10	-.09
Looking for hidden meanings in movies or plays distracts from their enjoyment.	.00	-.32	**.53**	.31	.07

Note. Coefficients with values of .40 or greater are in bold type.