DIFFERENCES IN TREATMENT ATTAINMENT AMONG COLLEGE STUDENTS WITH DEPRESSION AND DEPRESSION COMORBID WITH PERFECTIONISM

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Abigail Nicole Eck

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ABSTRACT

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Suicide rates are higher among individuals with depression as well as those with perfectionism. However, the researcher found no studies evaluating the differences in treatment rates among those with depression, perfectionism, and depression comorbid with perfectionism. Participants included 314 college students, predominately female, with a mean age of 21. It was hypothesized that those with perfectionism and those with depression comorbid with perfectionism would attain treatment at a lower rate than those with depression alone. To test these hypotheses, correlations, *t* tests, and a univariate ANOVA were conducted. The data showed that there was no significant relationship between perfectionism scores and mental health treatment. However, those with higher depression scores alone received treatment at a higher rate than those with higher depression scores comorbid with higher perfectionism scores. Since both populations are at a high risk for suicide, future research should investigate methods to help those with perfectionism and depression comorbid with perfectionism attain mental health treatment.

KEY WORDS: Depression, Perfectionism, Treatment, Mental health, Self-esteem, Locus of control, Suicide, College students

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CHAPTER I

Introduction

Based on the concept of equifinality, the idea that multiple origins can result in a particular psychopathology, it is known that there are multiple factors that affect the development of depressive symptoms. One source for the development of depressive symptoms is maladaptive perfectionistic personality characteristics. Broadly, perfectionism can be broken down into three primary subtypes: Self-Oriented Perfectionism, Socially Prescribed Perfectionism, and Other-Oriented Perfectionism (Hewitt & Flett, 1991). The two subtypes that have been deemed maladaptive are defined as having high standards for performance and overly critical evaluations of one's self due to (1) self-imposed demands (self-oriented perfectionism) or due to (2) the belief that other's demand perfection from them (socially-prescribed perfectionism; Ashby, Rice, & Martin, 2006; Blatt, Quinlan, Pilkonis, & Shea. 1995; Flett, Besser, & Hewitt, 2014). Self-Oriented Perfectionism is an internalized predisposition to strive for perfection by pursuing high standards determined by the individual (Gaudreau, Franche, & Gareau, 2016). Socially-Prescribed Perfectionism is a tendency to pursue perfectionistic standards based on mental representations about the actual and/or perceived pressure exerted by others and the social environment (Gaudreau et al., 2016). Other-Oriented Perfectionism consists of beliefs that it is important for others to be perfect, and is characterized by criticism of others who fail to meet expectations (Stoeber, 2014). The research assessed differences in treatment attainment among individuals with depression and depression comorbid with perfectionism (DCP). It was hypothesized that due to an apprehension to accept or disclose shortcomings, those with DCP would seek treatment less often than

those without perfectionism. It is imperative that we reach out to these individuals and provide them treatment if the hypotheses were accurate. Helping these individuals attain effective treatment is especially important being that this population is at an increased risk for suicidality.

CHAPTER II

Literature Review

In this literature review, there will be a discussion on the relationship between perfectionism and depression, treatment outcomes among individuals with depression and perfectionism, and a brief examination of the need for the current research.

Perfectionism and Depression

The primary models supporting the connection between the state-trait (maladaptive) component of perfectionism, and depression is the diathesis-stress model and specific vulnerability model (Cox & Enns, 2003; Hewitt & Flett, 1993; Hewitt, Flett, & Ediger, 1996; Joiner & Schmidt, 1995; Sherry, Richards, Sherry, & Stewart, 2014). According to Joiner and Schmidt (1995), the diathesis-stress model posits that the interactions between perfectionistic tendencies and life stressors increase the likelihood of developing depressive symptoms. Whereas, the specific vulnerability model posits that specific stressors affect specific diatheses. For example, an interpersonal stressor may affect socially prescribed perfectionism, whereas an achievement related stressor may affect self-oriented perfectionism (Hewitt & Flett, 1993). Other popular models are the existential model of perfectionism and depressive symptoms and the social disconnection model. The existential model of perfectionism and depressive symptoms suggests that difficulty accepting the past is the key risk factor for the development of depressive symptoms among those with maladaptive perfectionism. Viewing life as dissatisfying and lacking meaning mediates the relationship between perfectionistic concerns and depression. Moreover, the relationship between socially-prescribed perfectionism and depression is mediated by accepting the past (Park & Jeong, 2016). The Social

disconnection model states that feelings of insignificance and isolation from others is what leads people with socially-prescribed perfectionism to develop depression (Cha, 2016). These interpersonal issues of social disconnection and social hostility/sensitivity do not need to be based on fact. That is, they may be falsely perceived. Sherry et al. (2013) found that interpersonal discrepancies mediated the effects of perfectionistic concerns (maladaptive perfectionism) on depressive symptoms. Due to this discrepancy between real and perceived social disconnection, individuals high in socially-prescribed perfectionism, which includes the fear of evaluation and need for approval, tend to experience social withdrawal and severe cognitive dissonance. Although individuals with socially-prescribed perfectionism may want to form relationships, their fears deter them and, as a result, they have no way of satisfying their deep need for approval. This inability to satisfy a perceived primary need is a justified reason for the development of depressive symptoms.

It is important to discuss a few of the researched constructs that interact with both depression and perfectionism. They are locus of control, self-esteem, self-handicapping, and the maintenance/reinforcement of perfectionism.

Rotter (1966) defined locus of control as a perceived ability to control the outcomes of life events. He posited that having an internal locus of control, the belief that life events are dependent on one's own actions, produces a more emotionally adjusted individual compared to having an external locus of control, the belief that life events are dependent on factors outside of one's control. In Rotter's (1996) study, he aimed to discern which loci of control are more likely to be attributed to those with adaptive perfectionism, maladaptive perfectionism, and those without perfectionism. He found that

individuals with maladaptive perfectionism tend to have an external locus of control, specifically with the belief that life events are controlled by powerful people, compared to those with adaptive perfectionism. Moreover, those with adaptive perfectionism were more likely to have an internal locus of control compared to those without perfectionism. Mirzairad, Haydari, Pasha, Ehteshamzadeh, and Makvandi (2017) found that perfectionism was negatively correlated to self-esteem. That is, those with maladaptive perfectionism tend to have lower self-esteems compared to those with adaptive perfectionism. Arazzini and De George-Walker (2014) tested a path model that investigated the relationships between self-handicapping, perfectionism, locus of control, and self-efficacy. Self-handicapping has been defined as the creation of impediments or disadvantages that jeopardize optimal performance at a task (Zuckermann & Tsai, 2005). They found that maladaptive perfectionism was positively correlated with an external locus of control and self-handicapping, and negatively correlated with self-efficacy. That is, those with maladaptive perfectionism tend to have an external locus of control and engage in self-handicapping behavior, as well as endorse low self-efficacy.

The maintenance of perfectionism is believed to be explained by the Reinforcement Sensitivity Theory (RST; Stoeber & Corr, 2015; Stoeber & Corr, 2017). RST posits that individual differences in avoidance- and approach-related behaviors are due to three underlying emotional-motivational systems. There is one approach system, the Behavioral Approach System (BAS), and two avoidance systems, the Behavioral Inhibition System (BIS) and the Fight-Flight-Freeze System (FFFS). The BAS is further divided into four categories: reward interest, goal-driven persistence, reward reactivity, and impulsivity. The BIS is activated when one is moving towards a threat and produces

anxiety, whereas the FFFS is activated when one is moving away from a threat and produces fear. Stoeber and Corr (2015) aimed to identify which behavioral system and affect (positive or negative) were related to the three different types of perfectionism (self-oriented, other-oriented, and socially prescribed). It was found that self-oriented perfectionism was positively correlated with all reinforcement sensitivity components, except for the BAS impulsivity. Interestingly, self-oriented perfectionism was also shown to have both positive and negative indirect effects on affect. This means that those with self-oriented perfectionism are more likely to experience both positive and negative affects which puts them at risk for increased ambivalence. Those with other-oriented perfectionism tend to have a higher fight response in the FFFS and a lower BIS. Therefore, these individuals are more likely to become defensive when pressed and experience less negative affect during a threat. Lastly, those with socially prescribed perfectionism were shown to be high in BAS impulsivity and low in BAS goal-driven persistence. Moreover, their behavioral approach system had direct effects on their affect. That is, those with socially prescribed perfectionism are more likely to experience negative affect because they are impulsive in their decision-making and unable to be persistent in their goals.

There are also many mediators and moderators connecting depression and perfectionism. These include rumination, rejection sensitivity, validation seeking, coping, trait emotional intelligence, outcome expectancy, and academic satisfaction and motivation.

Rumination. Two types of rumination, abstract-analytical and concrete-experiential, have been studied in the perfectionism literature. Abstract-analytical

rumination is concerned with higher-level meanings, causes, consequences, and implications of an event. Whereas concrete-experiential is concerned with lower-level, specific, contextual, and detailed account of the manner in which an event occurs. Abstract-analytical rumination has been linked with maladaptive perfectionism and depressive symptoms, whereas concrete-experiential rumination has been deemed adaptive (Di Schiena, Luminet, Philippot, & Douilliez, 2012). In Di Schiena et al.'s (2012) study, they found that depression was positively associated with abstract-analytical rumination and negatively associated with concrete-experiential rumination. That is, those who ruminated in an abstract-analytical manner experienced higher levels of depression. Whereas, those who ruminated in a concrete-experiential manner experienced lower levels of depression. Most significantly, rumination fully mediated the relationship between maladaptive perfectionism and depression.

Rejection sensitivity. According to Downey and Feldman (1996), rejection sensitivity is defined as a tendency to anxiously expect, perceive, and overreact emotionally to rejection. It has been shown that rejection sensitivity is significantly associated with depression (Downey & Feldman, 1996). Moreover, socially prescribed perfectionism and rejection sensitivity in conjunction significantly predict depression (Flett et al., 2014).

Validation seeking. According to Flett et al. (2014), validation seeking is defined as, "a fundamental goal seeking orientation that is focused on a need to prove one's worth, competence, and likability."*You need a page number here.* In their study, they found that validation seeking was significantly correlated with both self-oriented and socially-prescribed perfectionism. Notably, it was also found that validation seeking

mediated the relationship between socially-prescribed perfectionism and depression. This mediation makes logical sense when we consider a person who seeks affirmation from people they feel are imposing exceptionally high standards upon them and fails to receive the affirmation. Thus, when a person does not receive that validation, they feel like they have not fulfilled expectations, experience cognitive dissonance, and potentially develop depressive symptoms.

Coping. In Noble, Ashby, and Gnilka's (2014) study, they utilized the Almost Perfect Scale Revised to measure perfectionism. Three subscales comprise the Almost Perfect Scale Revised: Standards, Order, and Discrepancy. The Standards subscale assesses the standards that people set for themselves, the Order subscale measures the desire for order and/or organization, and the Discrepancy subscale measures the reaction when there is a discrepancy between standards and performance. They defined adaptive perfectionists as scoring high on the Standards subscale but not Discrepancy, maladaptive perfectionists as scoring high on both the Standards and Discrepancy subscales, and non-perfectionists as scoring low on the Standards subscale. Two types of coping mechanisms are active task-focused coping and avoidant coping. The Discrepancy subscale correlated positively with avoidant coping and depression. Maladaptive perfectionists scored highest on avoidant coping compared to adaptive perfectionists and non-perfectionists. Avoidant coping mediated the relationship between maladaptive perfectionism and depression. Interestingly, non-perfectionists scored lowest on active task-focused coping compared to both adaptive and maladaptive perfectionists. Lastly, adaptive perfectionists reported the lowest depression score compared to maladaptive perfectionists and non-perfectionists.

Trait emotional intelligence. Trait emotional intelligence is a personality trait that consists of individuals' perceptions of their emotions. Perfectionistic concerns (maladaptive perfectionism) was negatively associated with trait emotional intelligence and life satisfaction, and positively associated with depression, anxiety, and stress. Whereas perfectionistic strivings (adaptive perfectionism) was found to be positively associated with trait emotional intelligence (Smith, Sakofske, & Yan, 2015). Thus, maladaptive perfectionists appear to have difficulty assessing and accurately interpreting emotion-related self-perceptions. This inability to gauge emotions can lead to psychological distress, social isolation, and depressive symptoms.

Outcome expectancy. Although most of the literature deems perfectionism as primarily maladaptive, outcome expectancy appears to play a significant role in determining the adaptation of perfectionism. The valence of outcome expectancy can be positive or negative. Positive outcome expectancy is characterized as an alignment of goals and abilities, whereas negative outcome expectancy is characterized by a misalignment of goals and abilities. Cheng et al. (2015) found that those with Major Depressive Disorder (MDD) experienced higher levels of negative outcome expectancy, especially among those with high standards of performance.

Academic satisfaction and motivation. Gaudreau et al. (2016) created a model of perfectionism that incorporates motivation and academic satisfaction. The model consists of four subtypes of perfectionism which are combinations of high and low levels of self-oriented perfectionism and socially-prescribed perfectionism. Pure self-oriented perfectionism is high self-oriented perfectionism and low socially-prescribed perfectionism, and pure socially-prescribed perfectionism is high socially-prescribed

perfectionism and low self-oriented perfectionism. Mixed perfectionism is high self-oriented perfectionism and high socially-prescribed perfectionism, *I don't undersWtand the capitalization here.* Non-perfectionism is low self-oriented perfectionism and low socially-prescribed perfectionism. Pure self-oriented perfectionism is associated with higher reports of academic satisfaction than both non- and mixed perfectionism. Conversely, pure socially-prescribed perfectionism is associated with less academic satisfaction compared to non- and mixed perfectionism. Academic self-determination has been shown to significantly mediate the interaction of self-oriented perfectionism and socially-prescribed perfectionism on academic satisfaction. That is, self-determined motivation significantly affects how perfectionism interacts with academic satisfaction.

Treatment Outcomes

Multiple studies have revealed that individuals with both perfectionism and depression have considerably poorer outcomes in brief treatment (Blatt et al., 1995; Blatt, Zuroff, Bondi. Sanislow, & Pilkonis, 1998; Cheng et al., 2015). It has been found that elevated reports of pretreatment perfectionism predicted worse depression and more impaired adjustment at treatment termination across four treatment groups: Cognitive Behavioral Therapy (CBT), Interpersonal Therapy (IPT), pharmacotherapy (imipramine), and a pill placebo (Blatt et al., 1995; Blatt, et al., 1998). Therefore, self-oriented and socially-prescribed perfectionism seem to be inhibiting the brief treatment of depression.

Since perfectionistic cognitions play a significant role in depressive symptomology, it is imperative that psychologists evaluate this feature to conduct successful treatments. Without the correction of cognitive errors, rewiring of thoughts towards a positive valence, and the acceptance of one's past and mistakes, patients with

perfectionism and depression will not succeed in treatment (Blatt, et al., 1998; Zeifman et al., 2015). Therefore, counselors, therapists, and psychologists should take perfectionism into account when working with patients dealing with depression.

Need for Research

There is a strong need for this research due to the increased likelihood of suicidality among individuals with perfectionism and depression (Blatt, 1995; Hewitt, Flett, & Turnbulll-Donovan, 1992). Considering the immense amount of hopelessness and perceived failure that accompanies individuals with socially-prescribed and self-oriented perfectionism, the development of depressive symptoms, and possibly suicide, seems intuitive. Hewitt, Flett, and Weber (1994) found that psychiatric patients with moderate and high levels of suicidal ideation reported elevated perfectionism scores compared to those with low levels of suicidal ideation. They also found that life stressors interacted with perfectionism to predict suicidal ideation. The link between perfectionism and suicidality is significant for this study. If, according to our hypothesis, individuals with comorbid perfectionism and depression attain treatment less often than those with solely depression, we are looking at a population that is at high risk for suicide and not receiving the treatment they need.

Conclusion

Perfectionistic characteristics greatly affect multiple domains of the self, life satisfaction, and psychiatric well-being. Various constructs have been shown to mediate and moderate the effects of perfectionism on depression. Moreover, it has been shown that there are two dimensions of perfectionism, self-oriented and socially-prescribed, that incorporate internal and external sources of perfectionistic cognitions. Treatment

outcomes are greatly affected by the presence of perfectionism, such that higher levels of perfectionism hinder the brief treatment of depression regardless of the type of treatment (i.e., CBT, IPT, pharmacotherapy). There is a strong need for individuals with comorbid perfectionism and depression to attain treatment due to their elevated risk for suicide.

The current study hypothesized that individuals with perfectionism and those with comorbid perfectionism and depression will report less or no treatment history compared to those with only depression. This was expected since those with perfectionism generally continue to perform well, maintain a healthy façade, and appear highly successful despite their depressive symptoms (Gaudreau et al., 2016; Noble, et al., 2014).

CHAPTER III

Methodology

Participants

Undergraduate students at Sam Houston State University between the ages of 18 and 50, with a mean age of 21, were recruited using Psychology Experimental Research Participation (PeRP) to participate in the current study. The sample included 328 participants of which 314 were used in the analyses. Thirteen participants were not included because they did not complete the study, and one participant was not included because the person was 17 years old. Of the participants, 258 were female and 56 were male. Additionally, 38% of the participants identified as White or Caucasian, 23% identified as Black or African American, and 23% identified as Hispanic or Latino.

College students were recruited for the current study because the age range of traditional college students is the prime age range for developing psychiatric symptoms (Bogren, Bradvik, Holmstrand, Nobbelin, & Mattisson, 2018). In addition to their age, college students are in a life transition which produces new forms of stress concerning classroom competition, social expectations, and independent living. These added stressors can impact the development of psychopathology including depression and perfectionism (Posselt & Lipson, 2016).

Design

The data were analyzed using correlational statistics, *t*-tests, and an Analysis of Variance (ANOVA). These statistics assessed treatment attainment rates among those with depression and those with depression comorbid with perfectionism (DCP). Locus of

control and self-esteem scores and age were also considered in reference to differences in treatment attainment.

Materials

The study used six scales: Frost Multidimensional Perfectionism Scale (FMPS), Hewitt and Flett Multidimensional Perfectionism Scale (HMPS), Center for Epidemiological Studies Depression Scale (CESD-r), Rosenberg's Self-Esteem Scale (SE), Rotter's Locus of Control Scale (LoC), and a treatment history questionnaire. A simple demographics survey was also used according to standard research procedure.

Frost Multidimensional Perfectionism Scale. The FMPS is a 35-item scale consisting of six subscales: concern over mistakes, personal standards, parental expectations, parental criticism, doubts about actions, and organization. These subscales have Cronbach's alpha coefficients of .88, .83, .84, .77, and .93 respectively. The overall perfectionism measure has a Cronbach's alpha coefficient of .90. The FMPS had a Cronbach's alpha coefficient of .90 in the current study. There are strong correlations between the FMPS and other perfectionism scales; thus, concurrent validity exists. The correlated scales are as follows: Burns' Perfectionism Scale (Burns, 1980), the Self-Evaluative (SE) Scale from the Irrational Beliefs Test (IBT; Jones, 1968), the Perfectionism Scale from the Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983), and the Self-Oriented Perfectionism and Socially-Prescribed Perfectionism scales on Hewitt and Flett's (1991) Multidimensional Perfectionism Scale.

Hewitt and Flett Multidimensional Perfectionism Scale. The HMPS is a 45-item Likert-type scale (1 = disagree to 7 = agree) that asses self-oriented, other-oriented, and socially prescribed perfectionism. Studies have confirmed that the HMPS is

multidimensional and that the subscales have adequate internal consistency and validity (Flett, Hewitt, Blankenstein, & Koledin, 1991; Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991). Moreover, there is adequate evidence for subscale validity (Hewitt et al., 1991). The HMPS had a Cronbach's alpha coefficient of .84 in the current study.

Self-esteem. This measure consists of 10 Likert-type questions assessing one's degree of self-esteem on a 4-point scale (1 = strongly disagree to 4 = strongly agree). The scores range from 0 to 10, where scores closer to 10 indicate a higher degree of overall self-esteem (Rosenberg, 1965; Rosenberg, 1979). Robins, Hendin, and Trzesniewski (2001) showed that Rosenberg's scale has strong validity and reliability. Rotter's self-esteem scale had a Cronbach's alpha coefficient of .90 in the current study.

Center for Epidemiologic Studies Depression Scale-Revised. The CESD-r is a 20-item scale that measures symptoms of depression in nine categories consistent with the American Psychiatric Association Diagnostic and Statistical Manual, fifth edition. The categories are as follows: Sadness (Dysphoria), Loss of Interest (Anhedonia), Appetite, Sleep, Thinking/Concentration, Guilt (Worthlessness), Tired (Fatigue), Movement (Agitation), and Suicidal Ideation. The range of possible scores is between 0 (responds with 'not at all or less than one day' for all 20 questions) and 60 (responds with '5-7 days' or 'nearly every day for 2 weeks' for all 20 questions). The Cronbach's alpha coefficient is 0.925 (Van Dam & Earleywine, 2011). The CESD-r had a Cronbach's alpha coefficient of .90 in the current study. There are strong correlations between the CESD-R and other scales such as the State-Trait Inventory for Cognitive and Somatic Anxiety (STICSA), Positive Affect (PA) and Negative Affect (NA) subscales of the Positive and

Negative Affect Schedule (PANAS), and the Schizotypal Personality Questionnaire – Brief (SPQ-B) showing that concurrent validity exists.

Locus of control. This measure consists of 29 forced-choice items, with six filler items. Scores range from 0 to 23 with higher scores indicating an external locus of control and lower scores indicating an internal locus of control. The scale has been found to have acceptable reliability and validity with strong test–retest correlations ranging from .49 to .78 (Rotter, 1966). Rosenberg's locus of control scale had a Cronbach's alpha coefficient of .84 in the current study.

Treatment history questionnaire. The treatment history questionnaire is a five-item survey that assesses type, reason, length, and outcome of treatment with medical and psychiatric interventions.

Procedure

The author submitted an application to the Institutional Review Board (IRB) at Sam Houston State University and gained approval for conducting the current research. Participants completed the study online by registering through PeRP. First, they read and responded to an informed consent document. Then, the study was divided into seven sections: CESD-r, Rosenberg Self-Esteem Scale, Rotter's Locus of Control Scale, FMPS, HMPS, a treatment history questionnaire, and a demographics survey. Once each participant completed all seven phases, they were debriefed and granted one credit towards the course of their choosing.

CHAPTER IV

Results

An independent *t* test was used to determine the difference in treatment attainment regarding depression using participant scores on the CESD-r. It was found that participants with higher depression scores (M = 19.30, SD = 10.74) received mental health treatment more often than participants with lower depression scores (M = 12.98, SD = 8.89), $t(308) = 5.65$, $d = 0.6412$, $p < .001$. Regarding perfectionism scores on both the FMPS and HMPS, there were no statistically significant differences in treatment attainment among perfectionism scores. That is, participants with higher perfectionism scores did not receive treatment at a significantly different rate than participants who had lower perfectionism scores.

In order to investigate treatment attainment rates among participants with higher DCP scores, the scores on the CESD-r were combined with the scores on both the FMPS and HMPS. The summed scores were averaged to attain a standard DCP score. It was found that participants with higher DCP scores (M = 162.66, SD = 28.016) received mental health treatment more often than participants with lower DCP scores (M = 155.09, SD = 20.63), $t(272) = 2.58$, $d = 0.31$ $p = .011$. However, bivariate correlations were used to assess the relationship between scores and treatment attainment which showed that depression scores ($r = .307$, $d = 0.65$, $p < .001$) were more significantly correlated with mental health treatment than DCP scores ($r = .154$, $d = 0.31$, $p = .011$). Due to this finding, an ANOVA was conducted to assess treatment attainment rates and DCP scores controlling for the CESD-r score. The results of this statistic revealed that the significant correlation between the DCP scores and treatment attainment rates were caused by the

CESD-r scores. That is, DCP scores were not significantly related to treatment attainment. Therefore, participants with perfectionism and DCP were less likely to receive mental health treatment than participants with depression alone which was consistent with both hypotheses.

Self-esteem, locus of control, and age were also assessed when looking at differences in treatment rates. Participants with lower self-esteem scores (M = 18.71, SD = 6.21) received mental health treatment more often than participants with higher self-esteem scores (M = 20.72, SD = 5.44), $t(306) = -3.01$, $d = -0.34$, $p = .003$. There was no statistically significant difference in treatment attainment rates among locus of control scores. That is, a participant's locus of control, whether internal or external, was not related to attaining mental health treatment. Regarding age, older participants were more likely to have received mental health treatment than younger participants ($r = .179$, $d = 0.36$, $p = .001$).

Additional analyses were conducted using the participants' demographics. It was shown that Hispanic participants were less likely to receive mental health treatment than non-Hispanic participants, $t(306) = 2.516$, $d = 0.36$, $p = .012$. Black participants were less likely to receive mental health treatment than White participants, $t(261) = 2.48$, $d = 0.35$, $p = .014$. The research shows that Black participants (M = 21.33, SD = 5.16) were more likely to have higher self-esteem than White participants (M = 19.55, SD = 5.60), $t(256) = -2.36$, $d = -0.32$, $p = .020$. The relationship between Black participants (M = 13.47, SD = 9.54) and White participants (M = 15.98, SD = 10.00) and depression scores were marginally significant, $t(123) = 1.84$, $d = 0.26$, $p = 068$.

Table 1

Mean scores (M), Standard Deviation (SD), and t-Scores (t) for Mental Health Treatment Attainment Rates

Scale	Treatment		No treatment		*t*
	M	*SD*	*M*	*SD*	
CESD-r	19.30	10.74	12.98	8.89	5.69***
SE	18.71	6.21	20.72	5.44	-2.94**
LoC	11.99	3.74	12.23	3.52	-.57
FMPS	109.29	20.97	108.14	16.19	.53
HMPS	179.47	26.91	176.31	23.67	1.05
DCP	162.66	28.02	155.09	20.63	2.58*

*Note. *p < .05, **p < .01, ***p < .001*

Consistent with previous research, it was found that many of the scales used were significantly correlated as shown in Table 2. The CESD-r scale was negatively correlated with the SE scale and positively correlated with the LoC, FMPS, and HMPS scales. The SE scale was negatively correlated with the LoC, FMPS, and HMPS scales. The LoC scale was not significantly correlated with either of the perfectionism scales. Lastly, the two perfectionism scales were correlated with one another.

CHAPTER V

Discussion

The current study was used to investigate the relationship between mental health treatment rates among people with depression, perfectionism, and DCP. To the author's knowledge, the current research was the only study to assess this relationship. It was found that the two primary hypothesizes were correct. That is, those with depression alone receive treatment at a higher rate than those with perfectionism and those with DCP. Recall that individuals with depression and perfectionism are at a higher risk for suicidality. These results suggest that a population of people who are at a high risk for suicide are not receiving mental health treatment (Blatt, 1995; Hewitt, Flett, & Turnbulll-Donovan, 1992; Hewitt, et al., 1994).

In addition to assessing mental health treatment rates pertaining to depression, perfectionism, and DCP scores, self-esteem, locus of control, and age were evaluated. It was found that self-esteem scores were negatively related to mental health treatment. That is, those with lower self-esteem scores received treatment more often than those with higher self-esteem scores. Participant age was found to be positively related to mental health treatment. That is, older participants were more likely to have received mental health treatment than younger participants.

Other demographic findings include a significant relationship between ethnicity, Hispanic and non-Hispanic participants, and mental health treatment. It was found that non-Hispanic participants were more likely to have received mental health treatment than Hispanic participants. There was also a significant relationship between participant race, specifically Black and White participants, and mental health treatment. The data suggests

that White participants were more likely to have received mental health treatment compared to Black participants which is consistent with previous research (Broman, 2012). Possible explanations for the differences in treatment attainment among race and ethnicity include socioeconomic status, stigma concerning psychiatric disorders, cultural beliefs and values, and the presentation of symptoms, whether cognitive or physiological. Moreover, finding a therapist that is similar to the client and therefore more relatable may be easier for White individuals since more than 70% of psychiatric professionals are White according to the Bureau of Labor Statistics. Self-esteem was significantly related to race, specifically Black and White participants such that Black participants tended to have a higher self-esteem than White participants. Therefore, the higher self-esteem among Black participants may reduce their need for treatment since depression scores and self-esteem scores were negatively related.

Limitations and Recommendations for Future Research

The primary limitation of this study was that the data analyses were not conducted using scales with diagnostic cutoffs. Due to this, the data was assessed on a continuum and does not represent a clinical sample that meets diagnostic criteria for depression, perfectionism, or DCP. Moreover, the sample consisted primarily of female (82.2%) participants which may have affected the data. Therefore, extending the research to encompass a more diverse sample would be beneficial. Another limitation of the current study was the use of scales based on self-report. Self-report does ensure accurate and truthful responses or histories.

Future studies should consider using a sample that meets diagnostic levels for depression and perfectionism. Attaining a larger sample with an enhanced treatment

history questionnaire could increase the likelihood for attaining participants that meet diagnostic criteria and allow for a better background and treatment history. Determining factors that lead an individual to pursue and attain mental health treatment will also be valuable in explaining the differences in treatment attainment among different ethnicities and races. For example, the availability of therapists that have similar characteristics to the client such as ethnicity, race, gender, and age. Additionally, future studies should assess how mediators and moderators of the connection between depression and perfectionism affect treatment attainment. That is, how constructs such as rumination, coping style, and trait emotional intelligence affect treatment attainment. Lastly, using information sources other than self-report could enhance future studies. Possible alternatives are official medical and psychiatric documents, family member reports, teacher reports, as well as other external sources of information.

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APPENDIX

Table

Correlations for the Depression (CESD-r), Self-Esteem (SE), Locus of Control (LoC), and Perfectionism (FMPS and HMPS) Scales

Scale	CESD-r	SE	LoC	FMPS	HMPS
CESD-r	———				
SE	-.55**	———			
LoC	.24**	-.28**	———		
FMPS	.33**	-.32**	.09	———	
HMPS	.24**	-.19**	.10	.63**	———

*Note. **p < .01*

VITA

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EDUCATION

Sam Houston State University – 2016 - present
Master's in Clinical Psychology

Stephen F Austin State University – 2012 - 2015
B.S. in Psychology and Mathematics
Magna Cum Laude
School of Honors

PRESENTATIONS

Eck, A., & Conlon, K. E. (2016, January). Students' perceptions of the role of textbooks in psychology and mathematics courses. Poster session to be presented at the 14th annual Teaching Preconference of the Society for Personality and Social Psychology, San Diego, CA.

SCHOLARLY WORK

Eck, A. (2018). Differences in treatment attainment among college students with depression and those with depression comorbid with perfectionism. (Unpublished master's thesis). Sam Houston State University, Huntsville, Texas.

PRACTICUM

TEAM Forensic Services – January – Present
Co-led group therapy sessions for sex offenders
Conducted intakes, scored assessments, and wrote intake reports

TDCJ Prison, Estelle Unit – October - December 2017
Shadowed individual therapy sessions with inmates
Went cell-side to evaluate suicide risk and other inmate concerns

VOLUNTEERSHIPS

Rusk State Hospital – January - June 2016
Shadowed mental health specialists
Administered, scored, and wrote reports for clinical assessments

EMPLOYMENT

Stephen F Austin State University – 2013 - 2015
Pre-Calculus Supplemental Instructor
Led classroom tutoring
Developed lesson plans

HONORS AND AWARDS

College of Humanities and Social Sciences Special Graduate Scholarship Award 2016
Joe Neel Math Scholarship 2015 - 2015
Chris Teague Scholarship 2015 - 2015
Carl Monk Jr. and Dr. Corinne Monk-Jones Scholarship 2014 - 2015
Study Abroad Scholarship 2014
Who's Who Award 2013 - 2014
President's List 2013
Dean's List 2012 - 2013
Academic Excellence Scholar 2012 - 2015
Regents Scholarship 2012 - 2015
Memberships
Graduate Student Psychology Organization 2016 - present
Pi Mu Epsilon Honor Society 2013 - 2015
Psi Chi Honor Society 2013 - 2015
Phi Eta Sigma Honor Society 2012 - 2015
Mathematical Association of America 2012 – 2015