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# Relationship Between Perceived Social Support, Phase of Program, and General Health in PhD CES Students

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This is to certify that the doctoral dissertation by

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has been found to be complete and satisfactory in all respects,
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Walden University
2021

Abstract

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MS, Nova Southeastern University, 2014

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Counselor Education and Supervision

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Abstract

Counselor education and supervision (CES) doctoral students face various challenges throughout their doctoral journey. A quantitative, correlational study was conducted to determine if there is a predictive relationship between the independent variables of perceived social support and phase of program (core courses, internship, or dissertation) and dependent variables general health, somatic symptoms, anxiety/insomnia, social dysfunction, and severe depression in PhD CES students (N = 73). The goal of the study was to contribute to a greater understanding of the general health of CES PhD students. Self-Determination theory and basic psychological need theory were applied as the theoretical framework of this study. A cross-sectional data collection method was used, and data were collected through anonymous online surveys that included the *Interpersonal Support Evaluation List Shortened Version (12 item)* and *General Health Questionnaire (GHQ-28)*. Data analyses methods included correlations, ANOVAs, and multiple linear regressions. Results indicated that all CES PhD students are struggling with general health regardless of phase of program and there is a statistically significant predictive relationship between perceived social support and general health, perceived social support and somatic symptoms, perceived social support and anxiety/insomnia, perceived social support and social dysfunction. Further research is recommended to investigate other variables that predict general health in CES PhD students as well as to investigate the ways in which CES PhD students may be supported in order to minimize their distress.

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# Dedication

In loving memory of my grandmother, Fatmeh Siham Moubayed, who passed away the day before my final defense. She will forever be in our hearts.

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# Chapter 1: Introduction to the Study

## Introduction

According to the American Counseling Association (ACA; n.d.), the counseling profession can be extremely stressful at times and it is essential that counselors learn and implement self-care strategies. The ACA suggests several resources for self-care information on their website for all counselors. The Council for Accreditation of Counseling and Related Educational Programs (CACREP; 2016) requires all counseling programs to include self-care in the curriculum in order to achieve and maintain accreditation. Despite the existence of this requirement, there are limited studies on the wellness and general health of counselor education and supervision (CES) doctoral students. The wellness of CES students affects the wellness of their future counseling students and their students' future clients (Perepiczka & Balkin, 2010).

Based on existing studies, researchers have suggested that doctoral students in general struggle with a decrease in general health (Cornwall et al., 2019; Sverdlik et al., 2018) and experience high levels of anxiety and depression (Nagy et al., 2019) during their doctoral journey. There are limited studies that focus on CES PhD students and the majority of the existing studies that do are qualitative in nature, resulting in generalizability concerns (Pierce & Herlihy, 2013; Protivnak & Foss, 2009; Zeligman et al. 2015). In a qualitative study by Zeligman et al. (2015), CES PhD students reported struggling with social support, reduced engagement with friends and family, and difficulties with spouses. In an earlier qualitative study Pierce and Herlihy (2013) CES

PhD students reported experiencing decreased physical and mental health since beginning their doctoral program.

Therefore, I conducted a quantitative study to analyze the relationship between perceived student social support, phase of program, and general health in CACREP CES PhD students. Given the concerning results from previous studies and the gap in research specific to CES PhD students, further research was warranted. The goal of this study was to contribute to a greater understanding of the general health of CES PhD students. Conducting this quantitative study involving a larger sample of CES PhD students may contribute to the development of a foundation for future research to support CES PhD students in their doctoral journey. In this chapter, I discuss the problem and purpose of the study, theoretical framework guiding the study, as well as significance and limitations.

## Background

Over the past few decades, researchers have reported a connection between social support, physical health, and mental health among various populations (Barth et al., 2010; Cohen &Wills, 1985; Holt-Lunstad et al., 2010; Reblin & Uchino, 2008; Uchino, 2006). Among students in higher education, researchers reported that social isolation is common with about 20% of graduate students reporting feeling isolated and unable to discuss feelings with peers (Ray et. al, 2019). The researchers also stated that this sense of loneliness had a negative impact on the general health of the students and called for further research to better understand social isolation in graduate students (Ray et. al, 2019). In a study by Beaumont et al. (2016), researchers found that graduate students

who reported low levels of well-being also reported high levels of compassion fatigue and burnout. In a study investigating protective factors that predict suicide risk among graduate students Bruns and Letcher (2018) reported that 27.8% of graduate students had experienced suicidal ideation within the past year and 21.2% met the criteria for the suicide risk group. Based on their study, Bruns and Letcher (2018) concluded that social support and psychological strength were associated with lower levels of suicide risk.

Although there is less literature available focused on doctoral students, researchers who have studied this population have reported similarly concerning findings. Sverdlik et al. (2018) conducted a review of 163 articles where the researchers studied experiences of students in doctoral programs. They concluded that doctoral students' wellbeing decreases throughout their doctoral journey and that these students experience difficulties in their social life and struggle to maintain friendships and fulfill family responsibilities. They experience a decrease in social interaction and may neglect physical health and partner relationships.

Cornwall et al. (2019) examined the experiences of doctoral students during the beginning stages of their doctoral program and identified nine areas of concern related to the students' stress. The areas of concern included: time pressure, uncertainty of doctoral processes, sense of belonging in scholarly community, social isolation, financial impact of study, anticipation of future workload associated with PhD, doubt regarding abilities or strengths, work/life balance, and engagement and effectiveness of supervision. The authors stated that stress during the pursuit of a doctoral degree has a detrimental effect on the wellbeing of the students. They suggested that future research is necessary to

investigate strategies to better support doctoral students in the beginning stages of their doctoral program to support their wellbeing and performance.

In another study by Nagy et al. (2019), researchers found high levels of anxiety and depression among the students and that their burnout level was related to thoughts about dropping out of the doctoral program, functional impairment related to a mental health problem, and having at least one current mental health disorder all at statistically significant levels. They also found that 60.9% of the doctoral students who participated in their study had experienced thoughts about dropping out. Posselt (2018) explored the professors' role supporting doctoral students in high diversity science, technology, engineering, and mathematics (STEM) doctoral programs at two research universities. She found that support from faculty was beneficial to students' confidence in their ability to succeed. The support from faculty normalized the struggle that the students were experiencing, validated their competence, promoted a growth-mind set, and helped to create a safe space for discussing multicultural issues within academia. This is in agreement with another study where researchers reported that attrition is 10-20% higher in doctoral programs compared with traditional programs and highlighted the importance of social support among doctoral students (Fiore et al., 2019).

When searching for research on CES doctoral students, the existing literature becomes even more limited. Zeligman et al. (2015), explored the experiences of CES doctoral students but only included female students in the beginning of the program. The qualitative study included a total of five participants and based on the analysis of the interviews researchers identified six common themes. The identified themes included:

diversity (racial/ethnic) within the program, racial/cultural awareness, setting an example, sacrifices/challenges of PhD, and the journey to a PhD program. Within the sacrifices/challenges of a PhD theme, participants reported experiencing situations where relationships with individuals who had previously been part of their support systems were lost due to being in a PhD program. They also discussed their reduced engagement with friends and family and the difficulties of having friends and family not understanding the program and its requirements. Marital sacrifices and challenges were mentioned by participants with participants reporting experiencing difficulties with spouses due to their schedules as doctoral students. Pierce and Herlihy (2013) explored the overall wellness of CES doctoral students but only included mothers of children under the age of 18 years. Participants reported that their perceived level of wellness had decreased significantly since beginning their counselor education doctoral program. Symptoms of the decreased wellness reported included severe panic attacks, decrease in healthy eating habits, abandoning exercise routines, substantial weight gain, and a perceived decrease in mental health.

Although there are some studies exploring the experiences of CES doctoral students, I have not found any studies that analyze the predictive relationship between perceived social support, phase of program, and general health of PhD CES students. This quantitative study included a larger sample of CES PhD students than most previous studies and was available to potential participants from the entire country making results more generalizable. The study also contributed to the existing literature, helping to create a greater understanding of the experiences of CES PhD students, and shed light on the

relationship between perceived social support, phase of program, and general health among CES PhD students.

## Problem Statement

The Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2016) requires all counseling programs, including doctoral programs, to include self-care in the curriculum in order to achieve and maintain accreditation. Researchers have shown that doctoral students' general health may decrease throughout their time spent in a doctoral program and that they may neglect their physical health and struggle with social support during this time (Nagy et al., 2019; Sverdlik et al., 2018). This decline in wellbeing and poor general health in doctoral students can be associated with thoughts about dropping out from the program and functional impairment (Nagy et al., 2019). In addition, poor general health has been associated with compassion fatigue and burnout among graduate students (Beaumont et al., 2016). Emotional instability and lack of social support have been associated with an increased risk for suicidality among graduate students (Bruns & Letcher, 2018). Researchers have analyzed various demographic factors in relation to general health and social support among graduate students including living situation (Ray et al., 2019), ethnicity (Zeligman et al., 2015), and being a mother of a minor (Pierce & Herlihy, 2013). Cornwall et al. (2019) specifically focused on the experiences of doctoral students during the beginning stages of their doctoral program. However none of the studies have specifically analyzed the relationship between perceived social support, phase of program, and general health in PhD CACREP CES program students. Therefore, the problem that I addressed in this

study was the negative effect of the potential decline in overall general health and lack of perceived social support (e.g. functional impairment, compassion fatigue, burnout, and increased suicide risk) in PhD CES students. I addressed this by first studying how perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict general health as measured by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

Despite the existence of the CACREP requirement to include self-care, which implies promotion of maintaining one's general health, in all counseling curriculums there are few researchers who have studied the relationship between perceived social support (Protivnak & Foss, 2009; Zeligman et al., 2015) and general health (Hughes & Kleist, 2005; Perepiczka & Balkin, 2010) of CES doctoral students. Researchers have focused primarily on master's level counseling students (Harris et al., 2013) and have included relatively small sample sizes (Pierce & Herlihy, 2013). While the aforementioned research regarding perceived social support (Bruns and Letcher, 2018; Posselt, 2018; Ray et al., 2019) and graduate student general health (Nagy et al., 2019; Sverdlik et al., 2018) illuminates important findings, I have not found any researchers who have studied the predictive relationship between perceived social support, phase of program, and general health of PhD CES students. Therefore, further research was warranted that could examine this lack of literature to address the potential negative outcomes experienced by students in PhD CES programs related to declines of these factors.

## Purpose of the Study

The purpose of this quantitative correlational study was to determine if there is a predictive relationship between perceived student social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item),* phase of program, and general health as measured by *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students. The primary goal of this study was to contribute to a greater understanding of the general health of CES PhD students. This quantitative study included a larger sample of CES PhD students than previous studies and may contribute to the development of a foundation for future research to support CES PhD students in their doctoral journey. In addition, the results may inform future interventions of specific factors related to a decline of general health in doctoral students. For example, if results indicate that perceived social support and phase of program predict a decrease in a specific subscale of the General Health Questionnaire (GHQ-28) this may inform future researchers that an intervention that targets that subscale would be beneficial during that particular phase of the program. The four subscales of the GHQ-28 are somatic symptoms, anxiety/insomnia, social dysfunction, and severe depression (Goldberg & Williams, 1989). By having a better understanding of how these variables are related, it may be possible to educate students about the importance of maintaining social support structures throughout different phases of the doctoral program in order to maintain their general health and avoid experiencing the associated negative outcomes.

## Research Questions and Hypotheses

Research Question 1: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict general health as measured by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$1: There is no statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and general health as measured by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$1: There is a statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and general health as measured by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): General health as measured by *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 2: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$2: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$2: There is a statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 3: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$3: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$3: There is a statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 4: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$4: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$4: There is a statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 5: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$5: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$5: There is a statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

## Theoretical Framework

Self-determination theory (SDT) was the theoretical framework for this study. This theory indicates that socio-psychological conditions determine an individual's performance in any given setting (Ryan & Deci, 2000). The extent to which an individual's psychological needs are met determines their performance and whether they perform at optimal levels (Ryan & Deci, 2000). Within the SDT is the basic psychological need theory (BPNT), which posits that individuals have a need to satisfy three specific psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2000). A failure to satisfy any of those needs leads to less than optimal performance and negative impact on personal wellbeing (Erturan-Ilker et al., 2018). The need for relatedness is fulfilled by a satisfactory perception of social support (Lombas & Esteban, 2018). The connection between satisfactions of the three psychological needs has been documented in variety of settings including education settings (Lombas & Esteban, 2018). In my study, I analyzed the predictive relationship between perceived social support, phase of program, and general health of doctoral CES students. According to SDT the ability to satisfy one's psychological needs, including perceived social support, would determine students' performance, whether or not they function at optimal levels, and impact their general health.

## Nature of the Study

I used a quantitative, correlational research design to study the predictive relationship between the independent variables (IV) of perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and

phase of program (core courses, internship, or dissertation) and dependent variables (DV) general health as measured by *General Health Questionnaire (GHQ-28)*, somatic symptoms, anxiety/insomnia, social dysfunction, and severe depression as measured by subscales of the *GHQ-28.* I used a cross-sectional data collection method and collected data at one point in time through surveys. Data analyses methods included correlations, an ANOVA, and multiple linear regressions. An ANOVA was used to make between group comparisons within phase of program (core courses, internship, and dissertation phase) to see if there were any differences between these groups. An ANOVA was also used to make between group comparisons within program formats (online, face-to-face, and hybrid) to see if there were any differences between these groups. While not a research question in the study, it was important to include information about differences between groups within phases of program and program format to better understand the sample, and determine if similar or different than what other researchers have encountered in order to help determine generalizability of results. The results of this correlational study could have indicated a predictive relationship between variables however could not indicate any causal relationship due to its correlational design (Campbell & Stanley, 1963).

## Definitions

*General health:* Goldberg and Williams (1969) used the term general health to refer to an individual's overall ability to perform daily functions and their subjective experience of distress. General health includes both mental and physical symptoms and does not suggest any specific diagnosis. To assess general health, I used the GHQ-28

which measures four specific dimensions of general health and analyzes them in subscales including: Somatic Symptoms, Anxiety and Insomnia, Social Dysfunction, and Severe Depression.

*Perceived social support:* Perceived social support was used to measure the participants' perception of their current social support. Cohen et al. (1985b) defined social support as "resources that are provided by other persons " (p.73). This study measured participants' perceptions of their social support through the use of the ISEL-12 that includes three subscales: appraisal, belonging, and tangible (Cohen et al., 1985b).

*Phase of program:* The term phase of program was used to indicate the student's current status in their doctoral journey. Participants were categorized into three groups: core courses, field experience, and dissertation. Phase of program was assessed through a specific question within the demographic questionnaire.

## Assumptions

Several assumptions were made for the purposes of this research study. One of the assumptions was that CES PhD students are likely struggling with perceived social support, similarly to other graduate and doctoral students (Cornwall et al., 2019; Zeligman et al., 2015). The other assumption was that CES PhD students are also likely struggling with general health, similarly to other doctoral students (Nagy et al., 2019; Pierce & Herlihy, 2013; Sverdlik et al., 2018). The third assumption was that the participants in this study met the eligibility criteria and did not fill out a survey if they did not meet criteria. I assumed that participants included in the study understood the survey questions, answered honestly, and refrained from social desirability behaviors.

## Scope and Delimitations

I limited this research study to CES students in CACREP accredited Ph.D. programs in order to control for differences among programs that may have influenced the results. Although there may still have been some minor differences in the programs among various universities, limiting the study to CACREP programs ensured that the curriculums and minimum requirement in all of the included programs were the same. Due to COVID-19, many face-to-face programs and hybrid programs have switched to temporarily being fully online. Previous researchers have shown higher attrition rates and greater feelings of isolation among online PhD students (Fiore et al., 2019). This special circumstance may have influenced the results of this study.

The scope of this research study encompassed participants from the United States who were recruited through listservs, university participant pool, and Facebook groups. The findings of this study may contribute to the generalizability of CES PhD students' experiences regarding general health and perceived social support. Another delimitation of the study is that results may not be generalizable to Ed.D. students in CES programs since they will not be included in the sample.

## Limitations

Given that my research design was quantitative and correlational I did not have a control group or random assignment thus limiting internal validity. In addition, I used convenience sampling method to recruit participants and the sample may not accurately represent the population of interest limiting generalizability (Burkholder & Crawford, 2016). Additional challenges included participants not providing all the necessary data or

exiting the survey prior to completion. Results may not be generalizable to EdD students as only PhD. CES students enrolled in a CACREP program were eligible to participate. Lastly, participant responses to survey questions may have been affected by their experiences living thorough the COVID-19 pandemic.

## Significance

This dissertation study contributes to the limited research on the relationship between perceived social support, phase of program, and general health of CES students. The results of this study point to further research that needs to be done in this area in order to support students in PhD CES programs. The results of this study could also lead to the development of interventions to help students avoid experiencing a potential decline in general health. It is important for those training and supervising PhD CES students to understand the relationship between these factors in order to potentially identify issues that these students may be susceptible to as well as provide support specific to individuals based on their phase of program. Students could also potentially benefit from having information that is specific to them in regard to their general health. With a better understanding of the issues that they are susceptible to and may be experiencing, they may be able to take steps to protect themselves against some of the possible negative outcomes. Students would also benefit in having information that is specific to them in that it may normalize their experience during their doctoral journey, which can have a positive effect on wellbeing (Posselt, 2018). Lastly, perceived social support is negatively correlated with attrition rates in doctoral programs (Fiore et al., 2019). The results from this study may inform administration and faculty of CES doctoral

programs in regards to issues that their students may be susceptible to with specific demographic data that they can use in the development of interventions to decrease attrition rates within their programs.

## Summary

In this chapter I provided an overview of the existing literature indicating the presence of a major gap in regards to general health and social support of CES doctoral students through various phases of their doctoral program. The purpose of this quantitative correlational study was to determine if there is a predictive relationship between perceived social support, phase of program, and general health in PhD CACREP CES program students. I measured perceived social support through the use of the *Interpersonal Support Evaluation List Shortened Version (12 item)* and general health through the *General Health Questionnaire (GHQ-28)*. The results of this study points to further research that needs to be done in this area in order to support students in PhD CES programs. In the next chapter, I discuss the theoretical foundation that I will utilize for this study in further detail. I also provide an in-depth and thorough review of the relevant existing literature.

# Chapter 2: Literature Review

## Introduction

Over the past decades, researchers have taken an interest in studying graduate students. Depending on their area of interest, they have examined different aspects in relation to graduate students. Some researchers focused on the students' perspective of how graduate school was impacting their self-worth, physical activities, and social activities (Longfield et al., 2006) while others studied the relationships between self-compassion, compassion fatigue, psychological well-being, and burnout (Beaumont et al., 2016). Others examined the prevalence of social isolation in graduate school (Ray et al., 2019) and researched factors that predict suicide risk among graduate students in the United States (Bruns & Letcher, 2018).

Significantly, fewer studies have been conducted that are focused on doctoral students. According to Schmidt and Hansson (2018), the wellbeing of doctoral students is crucial for the academic wellbeing and productivity throughout their career; however, this population is not sufficiently researched. In a thorough literature search, Schmidt and Hansson (2018) set out to locate research on the well-being of doctoral students and reported that they were only able to locate a total of 17 articles in English that included an empirical investigation and were peer-reviewed and published in a scientific journal. Schmidt and Hansson (2018) reported that only six of the 17 articles collected data in the United States and/or Canada, thereby highlighting a significant gap in the literature on this topic. This gap in the literature is greater when searching for information specific to counseling graduate students, and greater again if limiting to studies focused on PhD CES

students. The existing literature on doctoral students is similar to that available on graduate students in general. Results indicate problems with decreased wellbeing (Sverdlik et al., 2018), social isolation (Cornwell et al., 2019), and attrition associated with loneliness (Fiore, et al., 2019).

In Chapter 1, I presented a rationale for analyzing the predictive relationship between perceived social support, phase of program, and general health among CES PhD students. In this chapter I provide an in-depth review of the theories that make up the framework of this study, self-determination theory (SDT) and basic psychological need theory (BPNT) in relationship to the current study. This chapter also includes a review of current relevant existing literature key studies on perceived social support, phase of program, and general health among graduate students, doctoral students, and studies specific to PhD CES students. Additionally, I discuss the promotion of wellness among CES students.

## Literature Search Strategy

I conducted multiple searches using the Walden University Thoreau search system to gather literature. The databases searched included: Academic Search Complete, Dissertations and Theses at Walden University, Education Source, ERIC, ProQuest Central, PsychArticles, PsycINFO, SAGE Journals, Science Direct, and SocINDEX with Full Text. The key words used for the literature review included counsel*, counsel* educat*, higher education, well-being, wellbeing, wellness, graduate students, doctora* students, phd students, social support, CACREP, mental health, suicide, suicidality, burnout, impairment, physical health, and general health. I also used Google Scholar to

locate articles that were not available through Walden databases. I used citation chaining to find additional relevant research studies that authors of the research articles I had located had referenced. I researched self-determination theory and basic psychological needs theory. I focused primarily on recent studies that were published within the last five years. However, due to a large gap in the literature I did include some earlier studies that were closely aligned with my research study. I included studies with key findings regarding my population of interest – PhD CACREP CES students and key variables that I was interested in analyzing. For information specific to counselor education, I consulted the Council for Accreditation of Counseling and Related Educational Programs' (CACREP) website (https://www.cacrep.org/) and standards for counseling programs (CACREP, 2016).

## Theoretical Foundation

I used the self-determination theory (SDT) for this study. SDT is a theory of motivation suggesting that socio-psychological conditions determine an individual's performance in any given setting (Ryan & Deci, 2000b). According to SDT there are two types of motivation, which are intrinsic and extrinsic (Ryan, & Deci, 2000a). Behaviors induced by intrinsic motivation are associated with pleasant feelings, interest, and satisfaction of the individual carrying out the behavior (Daniels & Kennedy, 2019). When individuals engage in behaviors that are induced by intrinsic motivation, they do not need any external reward or constraint to maintain the behavior (Link, 2019). These behaviors are initiated by the individual and self-regulated (Link, 2019). Researchers have

suggested that intrinsic motivation is positively related to greater levels of general well-being (Baker, 2004).

The second type of motivation is extrinsic motivation (Ryan, & Deci, 2000a). Behavior induced by extrinsic motivation depends on the individual's belief that the behaviors will be beneficial in some manner (Link, 2019). This may be by helping the individual to avoid an undesirable outcome or lead to a desired outcome (Ryan, & Deci, 2000a). SDT also posits that behaviors induced by extrinsic motivation can become more intrinsic through internalization (Niemiec & Ryan, 2009). Researchers have suggested that students are motivated both intrinsically and extrinsically to attend college and pursue higher education (Fan-child et al., 2005) and that intrinsic motivation is associated with lower levels of burnout (Schaufeli et al., 2002). Research suggests that doctoral students motivation may be internal, external, or both. Typical internal sources of motivation include a desire to make a life change (Wellington & Sikes, 2007), a desire to conduct research (Stubb et al., 2012), and genuine interest in the field of study (Brailsford, 2010). External factors may include employment opportunities, prestige, and hope for greater income (Stubb et al., 2012).

Within the SDT is the basic psychological need theory (BPNT), suggesting that individuals are motivated to satisfy three specific psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2000a). Autonomy is the psychological need to feel a sense of control and individuals experience autonomy frustration if they feel controlled by an external force (Gilal et al., 2019). Competence is the psychological need to succeed and master and is fulfilled when an individual is able to achieve desired

outcomes. Relatedness is the psychological need to have caring relationships with others and relatedness frustration occurs when an individual experiences feelings of being alone or distant from others.

Low satisfaction in any of the three needs can be harmful to an individual's growth and development (Vansteenkiste & Ryan, 2013). When needs are not met, need frustration occurs, and can be pathogenic in individuals (Bartholomew et al., 2011). Need frustration is believed to lead to less than optimal performance and have a negative impact on personal wellbeing (Erturan-Ilker et al., 2018).

Vansteenkiste and Ryan (2013) explained the difference between low satisfaction and need frustration through a clear example where an individual struggles with the need of relatedness in the workplace. If the individual does not feel connected to others in the workplace he or she can experience low satisfaction of relatedness and may feel less excitement about going to work. However, if the individual feels rejected by others at work he or she can experience need frustration in terms of relatedness at and may experience severe stress and depression.

The basic needs of autonomy, competence, and relatedness are considered to be universal needs (Erturan-İlker et al., 2018). Researchers have suggested that satisfaction of all three needs is positively correlated with well-being in terms of family, friends, work, school, and activities (Milyavska & Koestner, 2011). According to Deci and Ryan (2002), the satisfaction of the three basic needs has a direct effect on well-being. Researchers have shown that the satisfaction of the three needs plays a role not only in

psychological health but physical health and activity as well (Gunnell et al., 2013; Mack et al., 2013; Wilson et al., 2008).

Based on BPNT, it is possible that doctoral students may experience low satisfaction or frustration in their basic needs leading to low motivation and declining general health during their academic journey. In the beginning stages of doctoral programs, students receive feedback from professors and supervisors as well as course grades (Sverdlik & Hall, 2019). However, in the later stages doctoral students receive much less feedback and experience a greater sense of isolation within the academic setting as they work on their dissertation (Sverdlik & Hall, 2019). In addition, doctoral students in general report experiencing problems with social support often reporting losing previous sources of support throughout their doctoral journal and having less time for social activities (Cornwell et al., 2019; Zeligman et al., 2015). The increased sense of isolation later on during the program may negatively influence the students' sense of relatedness, one of the basic needs. According to Longfield et al. (2016) doctoral students feel that their self-worth is compromised when they are faced with obstacles in their academic journey (Longfield et al., 2016). The students also reported that their self-worth fluctuates dramatically throughout their academic journey, as does their sense of competence, another basic need. Therefore, the stage of program in which doctoral students are currently in may be related to the students' sense of relatedness and competence, which may then negatively influence their general health. In this study, I contributed to the existing body of knowledge by analyzing the predictive relationship

between perceived social support, phase of program, and general health among CES PhD students.

## Literature Review

There is a substantial gap in the literature on the relationship between perceived social support, phase of program, and general health of PhD CACREP CES students. Therefore for the purposes of conducting a thorough literature review, I included research on all graduate level students and did not limit myself to only PhD CACREP CES students. In many previous studies, researchers did not distinguish between master's level and doctoral level students. For this reason, I included studies about graduate level students since doctoral level students were often included in the samples. I begin the literature review with an overview of perceived social support and present research on perceived social support in graduate students followed by research specific to doctoral students. Then I present research on general health among all graduate students followed by research on doctoral students. In the section on general health of doctoral students, I provide a more thorough review of several studies related to physical and mental health of doctoral students. Additionally, I include some key findings regarding burnout, functional impairment, and suicidality in relation to general health among doctoral students. Then, I review significant existing studies that specifically examine social support, phase of program, and/or general health. Lastly, I provide information on promoting wellness among CES PhD students.

**Perceived Social Support**

The American Psychological Association's Dictionary of Psychology (n.d.) defines social support as:

> The provision of assistance or comfort to others, typically to help them cope with biological, psychological, and social stressors. Support may arise from any interpersonal relationship in an individual's social network, involving family members, friends, neighbors, religious institutions, colleagues, caregivers, or support groups. It may take the form of practical help (e.g., doing chores, offering advice), tangible support that involves giving money or other direct material assistance, and emotional support that allows the individual to feel valued, accepted, and understood.

Perceived social support is more difficult to define and there is no single agreed upon definition (Nazari et al., 2020). Generally, perceived social support refers to individuals' perception of the amount and types of social support that they are experiencing and their satisfaction with the assistance (Nazari et al., 2020). Cobb (1976) identified social support as being made up of information that one is loved/cared for, esteemed/valued, and belongs to a group. Researchers have found that individuals may be experiencing the same amount and types of social support but have different perceptions based on social context (Afshar et al., 2017), cultural expectations, and age (Hosseinian, 2013). Other researchers have explored perceived social support among specific groups and analyzed relationships between perceived social support and other variables. For example, Guo et al. (2015) found a positive correlation between perceived social support and general

health in the elderly. Malkoc and Yalçın (2015) reported similar results in their study on perceived social support among university students.

***Perceived Social Support in Graduate Students***

Previous researchers have examined the experiences of graduate students during their academic journey with specific focus on perceived social support. Two specific recent studies are of particular interest. Ray et al. (2019) studied the prevalence of social isolation and associated factors in graduate and professional health science students. For their study, they analyzed students' demographics, weekly activity hours, support systems, financial concerns, and scores from the UCLA Loneliness Scale. The authors found that about one fifth of the students reported being social isolated. Authors also noted that being able to discuss feelings with other students within the graduate program was negatively associated with social isolation. The researchers identified student involvement in organizations and groups as protective factors against social isolation. They highlighted the prevalence of social isolation within graduate school programs, and called for further research to better understand social isolation in order to reduce it and enhance the general health of future professionals.

***Perceived Social Support in Doctoral Students***

Protivnak and Foss (2009) explored the experience of counselor education doctoral students and found five themes when analyzing the data including: departmental culture, mentoring, academics, support systems, and personal issues. In terms of support systems, many participants discussed loss of support systems, loss of friendships, loss of relationships, and missed time with loved ones. Participants also reported experiencing

personal problems including problems with energy, motivation, time management, health, finances, self-care, and values. The results of this study indicate that doctoral students in counselor education programs struggle with loss of support systems.

Although the research on perceived social support among PhD CES students is limited, there is some research on social support among doctoral students in general. Sverdlik et al. (2018) conducted a review of 163 articles where the researchers studied experiences of students in doctoral programs. Based on their extensive review, they concluded that doctoral students' wellbeing decreases throughout their doctoral journey and that these students experience difficulties in their social life and struggle to maintain friendships and fulfill family responsibilities. They experience a decrease in social interaction and may neglect physical health and partner relationships.

Cornwell et al. (2019) identified nine areas of concern for doctoral students in the beginning stages of their doctoral program including time pressure, uncertainty, sense of belonging in the scholarly community, social isolation, financial impact of study, anticipation of future workload associated with PhD, doubt regarding abilities or strengths, work/life balance, and engagement and effectiveness of supervision. Fiore et al. (2019) investigated attrition rates in online doctoral programs and found that the major themes associated with attrition were loneliness, peer advising, and a notion that persistence is an internal process.

Posselt (2018) explored the professors' role in supporting doctoral students in high diversity science, technology, engineering, and mathematics (STEM) doctoral programs at two research universities. The researcher found that support from faculty was

beneficial to students' confidence in their ability to succeed. The support from faculty normalized the struggle that the students were experiencing, validated their competence, promoted a growth-mind set, and helped to create a safe space for discussing multicultural issues within academia.

## General Health

Goldberg and Williams (1969) used the term general health to refer to an individual's overall ability to perform daily functions and their subjective experience of distress. The researchers believed that although mental health problems have different symptoms, they all affect an individual's daily function and subjective experience of distress. An individual with "good" general health is one who experiences minimal or no disruptions in their daily functioning and minimal or no subjective distress. General health includes both mental and physical symptoms and does not suggest any specific diagnosis. Researchers have found that a large percentage of university students struggle with general health (Mortier et al., 2018). According to Hussain et al. (2013), on average university students reported experiencing at least two health conditions within the past 6 months including frequent headaches (26%) and anxiety (25%). A growing number of literature indicate increasing rates of health problems and among students in higher education (Beiter et al., 2015; Eisenberg et al., 2007; Gallegher, 2010; Lindsey 2009; Mortier et al., 2018)

### *General Health of Graduate Students*

Longfield et al. (2006) explored the perspectives of graduate students on how graduate school has impacted their self-worth, physical activities, and social activities.

They found the primary social challenges experienced by graduate students were financial and decrease in quality of social interactions. In terms of self-worth, the main challenges included a cycle of elation that was followed by depression. As for physical activity, students reported the main challenge was availability of activities. They stated that a negative change in any area of wellness could negatively impact overall wellness and the participants of the study reported negative impacts in all three areas. This indicates that graduate students are struggling in terms of social support and general health.

Lambie et al. (2009) conducted a correlational study to explore graduate counseling students' levels of ego development, wellness, and psychological disturbance. The study included 111 graduate counseling students. Researchers defined wellness as the interaction between psychical, psychological, spiritual, occupational, and intellectual health. Researchers stated that counseling students are at a higher than average risk of distress due to their work with clients experiencing significant distress as well as the difficulties in mastering the counseling process. Researchers defined psychological disturbance as the severity of emotional conflict within the self, manifested as problems such as problems with interpersonal relationships, family roles, employment, leisure activity, etc. Based on the results, the researchers concluded that a higher level of ego maturity was related to a higher wellness score. Limitations of this study include the use of convenience sampling, small sample, and generalizability.

Beaumont et al. (2016) conducted a study to analyze the relationships between self-compassion, compassion fatigue, psychological well-being, and burnout in student

counselors and student cognitive behavioral psychotherapists. All participants were graduate students in their final year of their program. The researchers found that students who scored high on self-compassion and psychological well-being also reported lower levels of compassion fatigue and burnout. This highlights the importance of graduate students' psychological well-being as it is associated with compassion fatigue and burnout.

International studies have revealed similar results. For example Pallos et al. (2005) reported that 53% of graduate level students in Tokyo, Japan were experiencing emotional disturbances including anxiety, insomnia, social dysfunction, depression, and feelings of incompetence. Levecque et al. (2017) reported that 51% of doctoral students in Belgium experience psychological distress and 32% are at an increased risk for developing a psychiatric disorder.

### *General Health of Doctoral Students*

Protivnak and Foss (2009), reported participants experiencing problems with decreased general health including a decrease in energy, motivation, and self-care. Other researchers have reported similar results in terms of a general decrease in health among doctoral students. Schmidt and Hansson (2018) stated that the well-being of doctoral students is crucial for their academic well-being and productivity throughout their career. In their thorough literature search, they were only able to locate 17 relevant articles and from those articles only six of them collected data in the United States and/or Canada, highlighting the gap in the literature on this topic.

In an earlier and contradictory study, Myers et al. (2003) examined the wellness of graduate counseling students. Through their study they aimed to understand how the wellness of graduate counseling students compared to the wellness of people in general. They were also interested in analyzing how the wellness of counseling students differed based on gender, graduate status (entry-level versus doctoral), and ethnicity. Based on the results, the researchers concluded that counseling students experience greater wellness than the general population. The authors also indicated that doctoral students experienced overall higher levels of wellness than the entry level-students in several areas of wellness. They stated that wellness among graduate counseling students varied and although there is no immediate cause for concern, there is room for improvement.

**Physical Health of Doctoral Students.** Sverdlik et al. (2018) conducted a review of 163 articles where the researchers studied experiences of students in doctoral programs. They concluded that doctoral students' wellbeing decreases throughout their doctoral journey and that these students experience difficulties in their social life and struggle to maintain friendships and fulfill family responsibilities. They experience a decrease in social interaction and may neglect physical health and partner relationships.

Pierce and Herlihy (2013) explored the overall wellness of counselor education doctoral students who are mothers of children under the age of 18. Participants reported that their perceived level of wellness had decreased significantly since beginning their counselor education doctoral program. Symptoms of the decreased wellness reported included severe panic attacks, decrease in healthy eating habits, abandoning exercise routines, substantial weight gain, and a perceived decrease in mental health. This

supports the need for further understanding of general health in PhD CES students as these authors did not include perceived social support or phase of program. The researchers of this study solely analyzed data from participants who met demographic criteria specific to location, gender, children, and age of children. My study will include perceived social support as measured by Interpersonal Support Evaluation List Shortened Version (12 item) and phase of program.

Perepiczka and Balkin (2010) examined the relationship between wellness and age, matriculation, and relationship status of counselor education doctoral students. They concluded that physical health is an area of concern for counselor education doctoral students. They also found that participants appeared to struggle with unrealistic goals and definitions of success and identified a desire among the doctoral students to be perfect. The researchers concluded that the students' overall mental health might also be an area of concern. The results indicate that there is a problem with the general health of doctoral students in counselor education programs that should be explored further.

**Mental Health of Doctoral Students.** According to a report from the University of California at Berkley (2014) 47% of all PhD students experience depression and the percentage of prevalence varies slightly depending on field of study. Nagy et al. (2019) studied burnout, mental health, and academic outcomes in biomedical doctoral students. They found high levels of anxiety and depression among the students and that their burnout level was related to thoughts about dropping out of the doctoral program, functional impairment related to a mental health problem, and having at least one current mental health disorder all at statistically significant levels. They also found that 60.9% of

the doctoral students who participated in their study had experienced thoughts about dropping out. This is related to my study as one of the main problems identified is that students were thinking about dropping out of the doctoral programs that they were enrolled in which would result in negative academic outcomes related to their general health.

Harris et al. (2013) examined the psychological wellbeing and perception of wellbeing of counseling students enrolled in a CACREP accredited program. Results showed a significant relationship between the two variables indicating that counseling students' perception of their psychological wellness is related to their psychological wellness. The researchers presented a strong argument for the importance of counselors and counseling students having an accurate perception of wellness. Given that these individuals will be providing counseling services to clients it is important that they are able to identify and resolve psychological issues that if unresolved could impact their professional lives. Some ways that their wellness may impact their professional lives include effectiveness, burnout, and job stress.

Researchers in Belgium used the GHQ-12, a shortened version of the questionnaire proposed for this study, to assess mental health problems in PhD students (Levecque et al., 2017). They found that 51% of PhD students reported two or more symptoms on the GHQ-12, 40% reported three or more symptoms, and 32% reported at least four symptoms. The researchers concluded that these alarming results suggest that a significant percentage of PhD students are experiencing psychological distress and are at risk for developing psychiatric disorders. Based on further analysis the researchers also

stated that work-family conflict was the most important predictor of psychological distress and risk of psychiatric disorder.

***Burnout.*** In a study by Galdino et al. (2016) researchers investigated the prevalence of burnout in graduate level students. They included 129 masters and doctoral students from three different public universities in their study where they used a semi-structured questionnaire to collect data. Based on analysis of the results, the researchers stated that 11.6% of students had signs of burnout. The main predictors for burnout were: dissatisfaction with the topic they were studying, low perceived social support, and fewer leisure opportunities.

Lee et al., (2018) examined the relationship between attributional style and burnout in 201 counseling graduate students. They aimed to understand whether any dimension of attributional style explained counseling graduate students' vulnerability to burnout. The researchers found that stability and globality of attribution explained a significant amount of the variance in counseling graduate students' burnout. Researchers stated that counseling graduate students who saw negative causes as unchangeable and applied them across multiple situations tended to report more burnout. They recommend that all counseling programs include wellness training into their programs that assess and address attributional styles of students.

***Functional Impairment.*** In a study by El-Ghoroury et al. (2012), researchers analyzed stressors, coping strategies, barriers to engaging in wellness activities in psychology graduate students. The majority of the students, over 70%, reported that a stressor was interfering with their functioning. The most common stressors reported

included academic responsibilities, anxiety, finances, and work/school/life balance. Students also reported experiencing barriers to engaging in wellness activities including time constraints and finances. Based on the study that researchers concludes that a large majority of the graduate students were experiencing significant levels of stress that interfered with optimal functioning and although students were aware of coping strategies they were experiencing barriers to engaging in the identified strategies.

In a different study by Kernan et al. (2011), researchers studied health-related barriers to learning among graduate levels students. Based on analysis of the results, researchers found that 78.9% of graduate students reported experiencing upper respiratory infections, 63.5% were experiencing interpersonal concerns, and 51.7% reported sleep difficulties. However, according to the responses of the participants graduate students perceived psychological and psychosocial problems such as depression, stress, and troubled relationships to have the most negative academic impact and hold the highest threat to their functioning.

***Suicidality.*** According to American College Health Association (2015; as cited in Tsong et al., 2019, p. 131) 35% of all college students reported feeling depressed and experiencing significant anxiety that interfered with their academic performance. Mental health problems that are left untreated among college students are a risk factor for suicide attempts (Cerel et al., 2013). Mental health problems and suicidal thoughts and behaviors are becoming more prevalent among college students (Tsong et al., 2019). According to Mortier et al. (2018) 10.6% of all college students experience suicidal ideation each year. Unfortunately, many of these students do not seek professional treatment (Eisenberg et

al., 2007) and only 14% of college students who died via suicide sought help at their college's counseling center (Gallagher, 2014). Suicidal ideation and behavior are a serious concern within the graduate student population and many students at this level of education also do not seek out mental health services (Moffitt, 2014). According to results from a study by Waight and Giordano (2018), many doctoral students do not seek institutional support for mental health issues with 40.6% of students reporting that they have never even considered reaching out to their university's student services center.

Bruns and Letcher (2018) conducted a study on protective factors that may predict levels of suicide risk in graduate students in the United States. Internal factors were defined as psychological strengths (emotional stability) and external factors were defined as resources outside the individual (social support). The researchers found that high levels of protective factors may be associated with lower levels of suicide risk. Students who scored higher on the emotional stability subscale were more likely to be placed in the no suicide risk group. The authors also found that 21.2% of participants met the criteria for the suicide risk group. They reported that 27.8% of participants reported experiencing suicidal ideation within the past year, 21.2% shared their suicidal thoughts with someone, and 1.3% reported it was likely that they would attempt suicide in the future. This study highlights the prevalence of suicide risk among graduate students and the importance of both psychological health and perceived social support in terms of protection against suicide risk.

**Research Specific to PhD CES Students**

A few of the previously mentioned studies were specific to PhD CES students (Hughes & Kleist, 2005; Perepiczka & Balkin, 2010; Pierce & Herlihy, 2013; Protivnak & Foss, 2009). In the following I discuss some additional research studies specific to PhD CES students' general health and perceived social support. The most recent and relevant study is by Zeligman et al. (2015) in which researchers explored the experiences of women of color who were in the beginning of a counselor education doctoral program. The researchers conducted five interviews and analyzed the data to identify six common themes among the interviews. The identified themes included: diversity (racial/ethnic) within the program, racial/cultural awareness, setting an example, sacrifices/challenges of PhD, and the journey to a PhD program. Within the sacrifices/challenges of a PhD theme, participants reported experiencing situations where relationships with individuals who had previously been part of their support systems being lost due to being in a PhD program. They also discussed their reduced engagement with friends and family and the difficulties of having friends and family not understanding the program and its requirements. Marital sacrifices and challenges were mentioned by participants with participants reporting experiencing difficulties with spouses due to their schedules as doctoral students.

Willis and Carmichael (2011) explored the experiences of doctoral non-completers from counselor education programs. The participants reported having a desire to complete the program and feeling helpless against the combination of barriers that they were experiencing. These barriers included problems in their relationship with their chair

and viewing their career as refuge from the increasing frustrations that they were experiencing in their doctoral study. One participant reported leaving the program due to internal changes that lead her to reassess her goals and decide that she no longer wanted to continue.

**Promoting Wellness in CES Students**

Yager and Tovar-Blank (2007) identified ten ways to promote wellness as part of counselor education. They stated that due to the nature of the counseling profession certain challenges arise that may be detrimental a counselor's wellness such as stress, fatigue, and possible burnout. Their suggestions included introducing wellness directly, modeling wellness for counseling students, communicating that perfection is not the goal of wellness, presenting wellness as a lifestyle choice, encouraging personal counseling as a source of support, and promoting a wellness philosophy in all courses.

Marshall (2018) conducted a quantitative study to analyze the relationship between wellness levels of counselor educators and their wellness promotion behaviors. Based on the results of the study, the researcher concluded that wellness is associated with wellness promotion. Counselor educators who scored higher in terms of wellness levels also scored higher in wellness promotion behaviors. The researcher suggested that further researcher should be conducted to focus on the variables that contribute to counselor educator wellness. Marshall also suggested that counselor educators should work towards maintaining their wellness and analyze their methods of incorporating wellness into their classrooms.

## Summary and Conclusions

The current literature specific to PhD CES students is limited in regards to their general health and perceived social support. The results from the existing studies suggest that this specific population may be experiencing problems in terms of support systems (Protivnak & Foss, 2009; Zeligman et al., 2015), wellness (Myers et al., 2003; Pierce & Herlihy, 2013), anxiety, depression, and burnout (Nagy et al., 2019). Pierce and Herlihy (2013) called for further research on the wellness of PhD CES students after their participants reported symptoms of decreased wellness including severe panic attacks, decrease in healthy eating habits, abandoning exercise routines, substantial weight gain, and a perceived decreased in mental health. Researchers have reported other related issues such as unrealistic goals and definitions of success, a desire to be perfect (Perepiczka & Baskin 2010), and experiencing thoughts about dropping out in 60.9% of participants (Nagy et al., 2019). Research also shows that a significant percentage of PhD students in general experience psychological distress and are at risk for psychiatric disorders (Levecque et al., 2017). Several of the key studies conducted on PhD CES students took into consideration the phase of program that the students were currently in (Cornwell et al., 2019; Myers et al., 2003; Zeligman et al., 2015) or asked participants to reflect on changes since beginning their doctoral journey (Pierce & Herlihy, 2013; Protivnak &Foss, 2009). Although the results from these studies illuminate important findings, I have not found researchers who have studied the predictive relationship between perceived social support, phase of program, and general health of PhD CES students. By having a better understanding of how these variables are related, it may be

possible to educate students about the importance of maintaining social support structures throughout different phases of the doctoral program in order to maintain their general health and avoid experiencing any of the associated negative outcomes. In Chapter 3, I present how I utilized the Interpersonal Support Evaluation List Shortened Version (12 item) and General Health Questionnaire (GHQ-28) to examine the predictive relationship between social support, phase of program, and general health of PhD CES students.

# Chapter 3: Research Method

## Introduction

In this chapter, I describe the research design of the current study and approach that I used to analyze the predictive relationship between perceived student social support, phase of program, and general health in PhD CACREP CES program students. I also analyzed the predictive relationship between perceived student social support, phase of program, and the four subscales of general health. The strength of the predictive relationship between the variables and analysis of the subscales could lead to the development of interventions to help PhD CES students avoid experiencing a potential decline in general health. I discuss the research design, rationale, methodology, setting and sampling criteria, data analysis plan, and research questions and hypotheses. In addition, I present possible threats to validity and steps taken to address them as well as steps taken to ensure that all participant information is anonymous, secure, and protected.

## Research Design and Rationale

The purpose of this quantitative correlational study was to determine if there is a predictive relationship between perceived student social support, phase of program, and general health in PhD CACREP CES program students. I used a cross-sectional, correlational research design to collect data at one point in time to study the predictive relationship between the independent variables (IV) perceived social support and phase of program (core courses, internship, or dissertation) and dependent variables (DV) general health, somatic symptoms, anxiety/insomnia, social dysfunction, and severe depression as measured by subscales of the *GHQ-28.* Data analyses methods included

correlations, an ANOVA, and multiple linear regressions. I used an ANOVA to make between group comparisons within phase of program (core courses, internship, and dissertation phase) to see if there were any differences between these groups. I also used an ANOVA to make between group comparisons within program formats (online, face-to-face, and hybrid) to see if there were any differences between these groups. While not a research question in the study, it was important to include information about differences between groups within phases of program and within program formats to better understand the sample and determine if similar or different than what other researchers have encountered in order to help determine generalizability of results. The results of this correlational study may indicate a predictive relationship between variables however will not indicate any causal relationship (Campbell & Stanley, 1963).

## Methodology

### Population

I drew a sample from the population of CES students who are currently enrolled in a CACREP accredited PhD program. I recruited participants through counseling listservs and a university research participant pool. I also posted announcements in Facebook groups for counseling and counselor education.

## Sampling and Sampling Criteria

### Sampling Method

I used convenience sampling and snowball sampling to obtain participants. I chose these nonprobability sampling methods because they allowed me to obtain participants who are readily and conveniently available and who also met the criteria of

the study (Burkholder, 2016). Given that I was interested in gathering data from a very specific population within a relatively short amount of time these sampling methods were the most appropriate choice.

Individuals were eligible to participate in this study if they were students currently enrolled in a CACREP accredited CES PhD program. Students enrolled in a CES PhD program that is not accredited by CACREP were not eligible to participate. All programs accredited by CACREP have met specific guidelines outlined by CACREP that include standards for the institution, academic unit, program faculty and staff, curriculum, practicum, internship, supervisor qualifications, evaluation, and specialty areas (CACREP, 2016). Including only CES PhD students enrolled in a CACREP program ensured that all of the participants were enrolled in programs that are relatively similar.

**Sample Size**

I conducted a priori analysis using *A-priori Sample Size Calculator for Multiple Regression* (Soper, 2020) to determine the appropriate sample size for this study using an alpha level of 0.05 and power of 0.80, and medium effect size (0.15), and number of predictors (2). I chose an alpha level of 0.05 as it is the standard alpha level recommended for statistical significance (Soper, 2020). Calculations indicated that the minimum recommended sample size is 67 (Soper, 2020). Similar quantitative studies focused on CES PhD students have included various sample sizes with some studies including as few as 59 participants (Farmer et al., 2017) and others including as many as 261 participants (Petko et al., 2020). Another study by Deemer et al. (2017) aiming to analyze the relationship between research self-efficacy, motivation, and productivity

among counselor education students included a sample of 190 students. In Neale-McFall and Ward's (2015) analysis of the factors that contribute to counselor education doctoral student's satisfaction with their dissertation chairperson, the sample included 133 CES doctoral students. Perepiczka and Balkin's (2010) analysis of the relationship between wellness and age, matriculation, and relationship status of CES doctoral students included 173 participants. Therefore, a minimum sample size of 67 participants appeared to be appropriate as researchers studying the same population included a similar sample size. Obtaining participants through Facebook groups, a university research participant pool, and counseling listservs allowed me to reach potential participants without being limited by geography and allowed me to include a greater number of participants than the recommended minimum. I increased the minimum sample size by 10% to minimize the impact of participants dropping out or withdrawing from the study. This made the total intended sample size for this study, 74 participants.

## Procedures for Recruitment, Participation, and Data Collection

After receiving approval from Walden's Institutional Review Board, I began recruiting participants through the counseling listservs, a university participant pool, and Facebook groups. I posted an announcement in Facebook groups (Appendix A) and provided the link to the survey so that any group members who were eligible and chose to participate were able to do so while remaining anonymous. I also e-mailed the survey link (Appendix B) to potential participants through the counseling listservs and posted it to a university participant pool (Appendix C).

I uploaded the demographic questions, *Interpersonal Support Evaluation List – Shortened Version (12-item)*, and *General Health Questionnaire (GHQ 28)* to SurveyMonkey and created a survey. Prior to beginning the survey, the participants were presented with an electronic informed consent (Appendix D) that appeared on the first page of the survey. The informed consent page notified participants of the risks and benefits of participating in the study. To proceed with the survey, the participants were asked to provide their consent and acknowledge that their participation is voluntary. Participants were able to withdraw from the study at any time without penalty.

Using SurveyMonkey ensured that participant information remained anonymous throughout the study while collecting data. SurveyMonkey allows researchers to use an anonymous responses collector option so that identifiable respondent information is not tracked or stored. In addition to using the anonymous responses collector, I did not include any questions that collect personal identifying information. I was able to retrieve all of the collected data and download it to SPSS for analysis after the target sample size was reached. I did not follow up with participants, as their identity remained anonymous throughout the study.

## Instrumentation and Operationalization of Constructs

### Demographic Questionnaire

In the survey, I included a demographic questionnaire (Appendix E) that was administered to all participants. The questionnaire collected information regarding the participants' age, gender, race, marital status, employment status, financial aid status, and number of children living in home. The questionnaire also included two questions

regarding the program format that the participant is enrolled in. Due to COVID-19 many face-to-face programs and hybrid programs have temporarily moved online. The questionnaire collected information about the original program format and the current program format. Lastly, the questionnaire included a question regarding the phase of program in which the participant is currently enrolled (core courses, internship, or dissertation).

**Interpersonal Support Evaluation List Shortened Version (12 item)**

Social support has been previously measured in both qualitative and quantitative terms (Pearson, 1986). Although social support is defined somewhat differently by various researchers, it generally refers to individuals' perception of the amount and types of social support that they are experiencing as well as their satisfaction with the assistance (Nazari et al., 2020). Cohen et al. (1985b) defined social support as "resources that are provided by other persons " (p.73). The Interpersonal Support Evaluation List Shortened Version - 12 (ISEL -12) was developed by Cohen et al. in 1985 to assess an individual's perception of the social support that is available to them in any given moment. The ISEL-12 is a shortened version of the original 40-item questionnaire developed two years prior (Cohen & Hoberman, 1983). The ISEL-12 includes the following three subscales: Appraisal, Belonging, and Tangible (Cohen et al., 1985). There are four questions in each subscale for the total of 12 questions. Each question is rated on a 4-point scale that ranges between 0 and 3 with 0 signifying definitely false and 3 signifying definitely true. Scoring process also allows for a total score, which ranges between zero and 36 with a higher score indicating higher perception of social support.

The ISEL-12 takes less than 2 minutes to complete. The ISEL-12 has been validated by previous research and is widely used to measure perceived social support. According to Payne et al. (2012) the shortened version of the ISEL is a "psychometrically valid instrument" (p. 1). Wong et al. (2011), reports that the ISEL-12 has good internal consistency (Cronbach's $\alpha = .88$). The ISEL-12 has been used among various populations including women experiencing intimate partner violence in China (Wong et al., 2011), English- and Spanish-speaking Hispanics and Latinos (Merz et al., 2014), and adults experiencing homelessness (Hernandez, 2020). Special permission to use the ISEL-12 is not required for non-commercial research and educational purposes (See Appendix F).

**General Health Questionnaire (GHQ-28)**

In the survey, I also included The General Health Questionnaire (GHQ-28) for administration to all participants. The creators of the GHQ-28, Goldberg and Williams (1969), used the term general health to refer to an individual's overall ability to perform daily functions and their subjective experience of distress. The researchers believed that although mental health problems have different symptoms, they all affect an individual's daily function and subjective experience of distress. An individual with "good" general health is one who experiences minimal or no disruptions in their daily functioning and minimal or no subjective distress. General health includes both mental and physical symptoms and does not suggest any specific diagnosis. The version of the questionnaire that I used, GHQ-28, is a scaled version of the original questionnaire and was developed in 1978 (Goldberg & Williams, 1989). The GHQ-28 assesses four specific dimensions of general health and analyzes them in subscales including: Somatic Symptoms (items 1-7),

anxiety/insomnia (items 8-14); social dysfunction (items 15-21), and severe depression (items 22- 28). The GHQ-28 takes less than 5 minutes to complete. The minimum score is 0 and the maximum is 84, with higher scores indicating a higher level of distress. The GHQ-28 is commonly used in screening for mental health symptoms as well as in assessing overall psychosocial wellbeing of an individual (Hjelle et al., 2019).

The validity and reliability of GHQ-28 has been established in prior research and it is currently one of the most commonly used screening tools for psychiatric disorders (Kokkinis et al., 2017). The questionnaire has been translated in 38 languages and has been utilized by researchers, psychiatrists, and other health professionals all around the world including in Japan (Iwata & Saito, 1992), El Salvador (Gibbons et al., 2004), Greece (Kokkinis et al., 2017) and Turkey (Kihç et al., 1997). Researchers have used the GHQ-28 to screen for various conditions including post-stroke depression and found it to be valid when compared with a standardize psychiatric interview (Lincoln et al., 2003; Thomas & Lincoln, 2006). Shayan et al. (2015) utilized the GHQ-28 to assess the general health of infertile women facing physical, mental, and social stressors related to infertility. The GHQ-28 has been validated for use with pregnant women (Aderibigbe et al., 1996) rape victims (Darves-Bornoz et al., 1998) and general psychiatric patients (Pariente et al., 1992). Special permission to use the GHQ-28 is not required for non-commercial research and educational purposes (See Appendix G).

## Data Analysis Plan

After data collection, I analyzed the data using descriptive statistics, an ANOVA, correlations, and multiple linear regressions. I performed the entire statistical analysis

procedure using SPSS (Version 27). I used descriptive statistics to analyze the reported demographic survey information and included the mean, standard deviation, and frequencies among the collected characteristics. I used an ANOVA to make between group comparisons within phase of program (core courses, internship, and dissertation phase) to see if there were any differences between these groups. I used an ANOVA to make between group comparisons within program formats (online, face-to-face, and hybrid) to see if there were any differences between these groups. I tested the research hypotheses using multiple linear regression analysis. Multiple regressions allowed me to analyze the predictive relationship between the multiple independent variables and the linear dependent variables. The results of this correlational study could have indicated a predictive relationship between variables however could not indicate any causal relationship due to its correlational design (Campbell & Stanley, 1963).

## Research Questions and Hypotheses

Research Question 1: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict general health as measured by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

> $H_0$1: There is no statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and general health as measured by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A1$: There is a statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and general health as measured by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): General health as measured by *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 2: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_02$: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A2$: There is a statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 3: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$3: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A3$: There is a statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 4: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$4: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A4$: There is a statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 5: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$5: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A5$: There is a statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

## Threats to Validity

Threats to internal validity include researcher bias, selection bias, and mortality. The researcher's understanding of the topic and major concepts such as perceived social support and general health influence the design of the study (Burkholder & Crawford, 2016). In this study, I used convenience sampling to select participants based on the specific set of characteristics needed for the study who were also available and willing to participate. However, using convenience sampling presented as a threat to validity and may have lead to selection bias (Burkholder & Crawford, 2016). Due to the fact that convenience sampling includes only participants who are available and willing to participate, there is no way to know if the sample accurately represents the population of

interest. Mortality was also a threat and occurs when participants drop out of the study and do not complete the survey creating the possibility that the participants who dropped out differed from those who completed the survey in a meaningful way (Burkholder & Crawford, 2016). The obtained sample may not be an accurate representation of the population of interest and limits generalizability of results presenting a threat to external validity (Burkholder & Crawford, 2016). Due to the correlational nature of the study one cannot conclude causation (Lappe, 2000). The instruments that I used in the study are validated by previous research.

## Ethical Procedures

In order to complete this study, Walden University guidelines require students to obtain IRB approval prior to beginning the data collection process. The researcher may not contact any participants until IRB approval is obtained. Once I received IRB approval, I e-mailed and posted information regarding the opportunity to participate in the study in afore mentioned locations. I provided participants with basic information on the purpose of the current study – to analyze the predictive relationship between perceived social support, phase of program, and general health. I also presented participants with the informed consent including the risks and benefits of participating in the study. I informed participants that they could withdraw from the study at any time without penalty. All participant information remained secure and confidential throughout the study. I did not collect participant names or major demographic information that could have lead to the identification of any participants. At the end of the survey, I included a message thanking all participants for their participation and advising them to

seek help if they are experiencing any mental or physical health problems. I provided a national resource for mental health on the final page as part of the conclusion message.

## Summary

In this chapter, I provided a description of the methodology that I used to complete this quantitative correlation study in order to analyze the predictive relationship between perceived social support, phase of program, and general health in CACREP CES PhD students. In order to complete the study, I utilized the ISEL-12, GHQ-28, and a short demographic questionnaire. In the next chapter, I will discuss the data collection process and data analysis. Additionally, I will provide answers to my research questions based on the analysis of the data.

# Chapter 4: Results

## Introduction

The purpose of this quantitative correlational study was to determine if there is a predictive relationship between perceived student social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item),* phase of program, and general health as measured by *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students. The primary goal of this study was to contribute to a greater understanding of the general health of CES PhD students as well as contribute to the development of a foundation for future research to support CES PhD students.

The five research questions investigated in this study were:

Research Question 1: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict general health as measured by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$1: There is no statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and general health as measured by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$1: There is a statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and general health as measured

by the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): General health as measured by *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 2: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$2: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$2: There is a statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and somatic symptoms as

measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 3: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$3: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$3: There is a statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and anxiety/insomnia as measured by

subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Anxiety/insomnia as measured by subscale B of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 4: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$4: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$4: There is a statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and social dysfunction as measured by

subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Social dysfunction as measured by subscale C of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

Research Question 5: How do perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)* and phase of program predict severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students?

$H_0$5: There is no statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

$H_A$5: There is a statistically significant predictive relationship perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and severe depression as measured by

subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students.

- Independent Variables (IVs): Perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*; Phase of program (core courses, internship, or dissertation)
- Dependent Variables (DVs): Severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)*
- Statistical Analysis: Multiple linear regression

## Data Collection

Walden University Institutional Review Board approval was granted October 25, 2020 (approval # 10-25-20-0673892). On October 26, 2020, I opened up the survey that I had created in SurveyMonkey to allow anyone with the survey link to access and complete the survey. The survey included my demographics questionnaire, the Interpersonal Evaluation List Shortened Version (ISEL -12), and General Health Questionnaire (GHQ-28). I emailed an announcement for the survey through three counseling listservs and included the survey link. I also posted the announcement in various counseling and counselor education Facebook groups. An announcement for the study was also posted in a research participant pool portal of a CACREP accredited university.

I sent out the first round of announcements on October 26, 2020. During the first week of data collection, October 26 – November 1, 2020 I received 26 responses. I sent

out the second round of announcements on November 2, 2020. In the second week, November 2 – November 8, 2020 I received 25 responses. I sent out the third round of announcements on November 9, 2020. During the third week, November 9 – November 15, 2020 I received 25 responses. At the end of the third week of data collection I met and exceeded my sample size requirement. Per the a priori analysis discussed in Chapter 3, I needed a minimum of 67 participants. I increased the minimum sample size by 10% to minimize the impact of participants dropping out or withdrawing from the study, resulting in an intended 74 participants. By the end of week 3, I had 76 responses with 73 of those responses being eligible for data analysis. Ninety-six percent of participants who opened the survey completed and submitted it. The median amount of time that participants spent completing the survey was 6 minutes and 13 seconds. I closed the survey on SurveyMonkey on November 16, 2020. There were no notable discrepancies in data collection from the initial plan discussed in Chapter 3. I examined the data for missing values and found one missing value in the ISEL-12 data and two missing values within the GHQ-28 data. The missing values appeared to be missing at random and were addressed through mode imputation. Mean/mode imputation is completed by replacing a missing value with the mean or mode of observed values for a variable (Silva-Ramírez et al., 2011). Mean/mode imputation can be used in cases, such as this, where less than 5% of the data are missing (Aljuaid, & Sasi, 2016). The GHQ-28 and ISEL-12 responses were transformed into numerical data and scored on a Likert scale (0-3). ISEL-12 items 1,2,7,8,11, and 12 were reverse scored. I created variables for the GHQ-28 total scores,

GHQ-28 subscale A, GHQ-28 subscale B, GHQ-28 subscale C, GHQ-28 subscale D, and ISEL-12 total scores.

According to the CACREP Vital Statistics report (2018) in 2017, there were 2,561 students enrolled in a CACREP accredited CES program. Due to recruiting through listservs, Facebook groups, and a university research participant pool there is no way to know the exact number of individuals that received the announcement for the study. The listservs have thousands of members and Facebook announcements may have reached hundreds of potential participants. The sample included 63 females (87.50%), 8 males (11.11%), and 1 non-binary/third gender (1.39%). The majority of participants identified themselves as White (72.22%) while the remaining identified as Black or African American (13.89%), Hispanic or Latino or Spanish Origin of any race (5.56%), American Indian or Alaskan Native (2.78%), Native Hawaiian or Other Pacific Islander (1.39%), Asian (1.39%), Mixed (1.39%), and Other (1.39%). The basic demographic characteristics of the sample are somewhat similar to those reported in the CACREP Vital Statistics Report (2018) where CACREP reported that 55% of students in CACREP accredited doctoral programs identify as Caucasian/White, 25% Black/African American, 5.7% Hispanic or Latino, 0.75% American Indian/Native Alaskan, 3.02% Asian American, 0.19% Native Hawaiian/Pacific Islander, 1.75% Multiracial, 3.16% Non-resident alien, and 5% Other/Undisclosed. In the current sample as well as in the CACREP (2018) report, Caucasian/White students were the majority followed by Black or African American and Hispanic. CACREP (2018) reported that 76.89% of students enrolled in a CACREP doctoral program identify as female and 23.11% identify as male.

In the current sample, 87.67% of the participants identified as female. Although there are some differences between the current sample and the CACREP (2018) data, both samples show the majority of students as female and white. Also the CACREP (2018) data includes all doctoral students enrolled in a CACREP accredited program and is not specific to PhD CES students.

## Results

### Demographics and Other Variables

In the survey, I collected the following demographic information: age, gender, race, marital status, employment status, number of children living in the home, parents' highest level of education, current phase of CES program, original program format (prior to COVID), and current program format. The mean age of the participants was 38.07 years old ($SD$ = 10.61). The participants ($N$ = 73) were primarily female (87.67%), White (72.6%), married (58.90%), employed full-time (58.90%), and had no children under the age of 18 living in the home (58.90%). The participants' parents' highest level of education was primarily Bachelor's Degree (28.77%) followed by Master's degree (21.92%). Table 2 includes a detailed breakdown of the demographics of the participants who completed the survey. Analysis of the descriptive statistics indicated that the majority of participants were further along in the program with 64.38% reporting being in the dissertation phase of the CES program.

The mean for ISEL-12 was 27.05 ($SD$ = 6.82), a relatively high score indicating high levels of perceived social support among participants. Analysis also indicated the

mean for the GHQ-28 was 27.97 (*SD* = 13.40), indicating the presence of distress in terms of the participants' general health.

**Table 1**

*Participant Demographic Characteristics as a Percentage of the Sample*

| Characteristic | *n* | Percentage |
|---|---|---|
| Age | | |
| 23-33 | 26 | 35.62% |
| 34-44 | 33 | 45.21% |
| 45-55 | 11 | 15.07% |
| Over 55 | *3* | 4.11% |
| Gender | | |
| Female | 64 | 87.67% |
| Male | 8 | 10.96% |
| Non-binary/Third Gender | 1 | 1.37% |
| Race | | |
| White | 53 | 72.60% |
| Black or African American | 10 | 13.70% |
| Hispanic/ Latino/Spanish | 4 | 5.48% |
| American Indian or Alaskan Native | 2 | 2.74% |
| Native Hawaiian or Other Pacific Islander | 1 | 1.37% |
| Asian | 1 | 1.37% |
| Mixed | 1 | 1.37% |
| Other | 1 | 1.37% |
| Marital Status | | |
| Single | 19 | 26.03% |
| Married | 43 | 58.90% |
| Widowed | 1 | 1.37% |
| Separated | 1 | 1.37% |
| Divorced | 5 | 6.85% |
| Partnered | 4 | 5.48% |
| Employment Status | | |
| Employed, working full-time | 43 | 58.90% |
| Employed, working part-time | 28 | 38.36% |
| Unemployed, looking for work | 1 | 1.37% |
| Unemployed, not looking for work | 1 | 1.37% |
| Retired | 0 | 0.00% |
| Number of Children Living in Home | | |
| 0 Children | 43 | 58.90% |

| Characteristic | *n* | Percentage |
|---|---|---|
| 1 Child | 11 | 15.07% |
| 2 Children | 10 | 13.70% |
| 3 Children | 7 | 9.59% |
| 4 Children | 2 | 2.74% |
| Parents' Highest Level of Education | | |
| Less than high school | 4 | 5.48% |
| High school or equivalent | 13 | 17.81% |
| Some College | 8 | 10.96% |
| Associate Degree | 8 | 10.96% |
| Bachelor's Degree | 21 | 28.77% |
| Master's Degree | 16 | 21.92% |
| Doctorate | 3 | 4.11% |
| Current Phase of CES Program | | |
| Core Courses | 14 | 19.18% |
| Internship | 12 | 16.44% |
| Dissertation | 47 | 64.38% |
| Original Program Format (Prior to COVID-19) | | |
| Face-to-face | 31 | 42.47% |
| Online | 37 | 50.68% |
| Hybrid (face-to-face and online) | 5 | 6.85% |
| Current Program Format | | |
| Face-to-face | 1 | 1.37% |
| Online | 61 | 83.56% |
| Hybrid (face-to-face and online) | 11 | 15.07% |

**Null Hypothesis 1**

Null hypothesis 1 stated that there will be no statistically significant predictive relationship between perceived social support as measured by the Interpersonal Support Evaluation List Shortened Version (12 item), phase of program, and general health as measured by the General Health Questionnaire (GHQ-28) in PhD CACREP CES program students. Prior to conducting the analysis I tested the assumptions of multiple linear regression including: normality, homoscedasticity, and absence of multicollinearity. I tested the assumption of normality by examining the P-P plot and ensuring that data points did not strongly deviate from the normal line (see Figure 1). I

assessed for homoscedasticity by visually inspecting a scatter plot of standardized residuals versus unstandardized predicted values (See Figure 2). I assessed multicollinearity using tolerance values and variance inflation factors (VIFs). All tolerance values were greater than 0.1 and all variance inflation factors (VIFs) were less than 10. All assumptions were met.

**Figure 1**

*Normal P-P plot for Null Hypothesis 1*

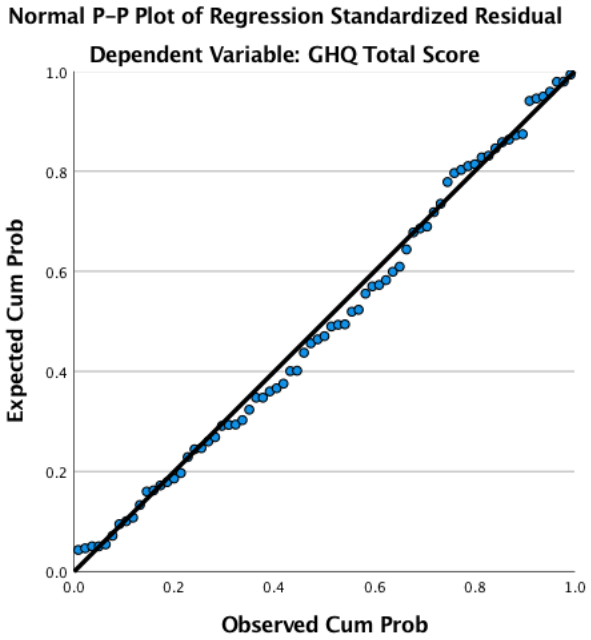
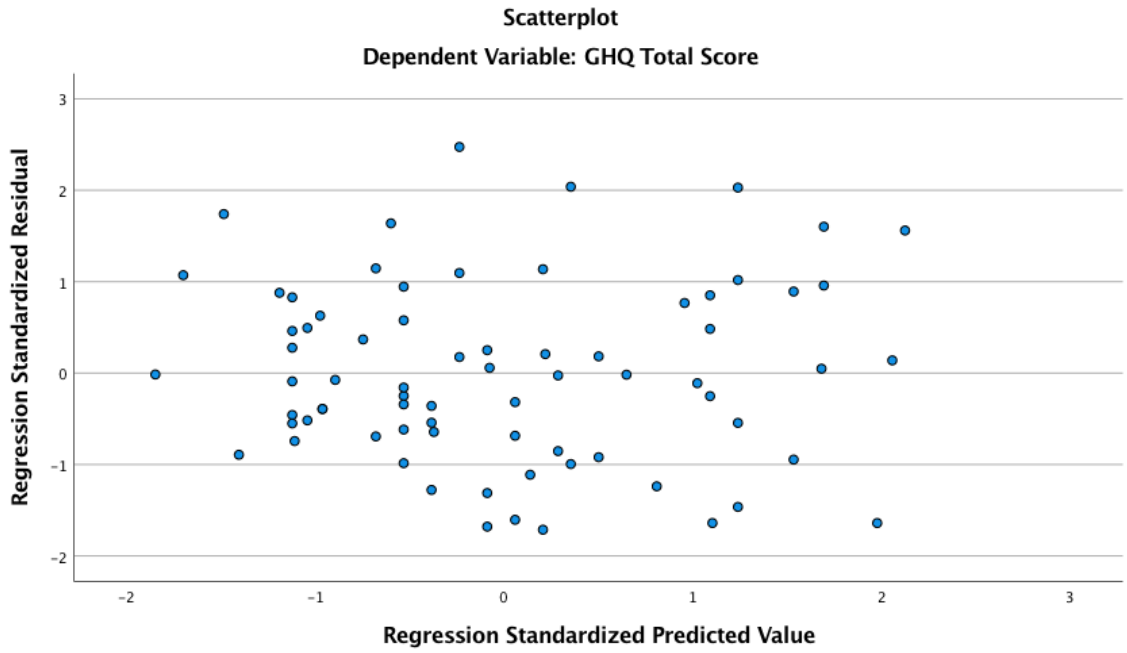


**Figure 2**

*Scatterplot of residuals vs. predicted values for Null Hypothesis 1*




To test null hypothesis 1, a multiple linear regression analysis was conducted to evaluate if perceived social support and phase of program predicted general health. As shown in Table 2, the overall regression model was statistically significant, $F(2,70)=19.585$, $p<.001$, $R^2=.36$, indicating perceived social support and phase of program successfully predicted students' general health. The regression explained 36% variance in the general health scores. Therefore, Null Hypothesis 1 was rejected. Table 3 shows the coefficients table to assess if each independent variable was a predictor of general health on its own. Participants' general health was predicted by perceived social support (ß = -.603, $t$ = -6.211, $p$ < .001). Controlling for phases of program, the

regression suggests that with each additional increase in perceived social support score, the general health score decreases by approximately 60. Note that a high general health score indicates higher level of distress. Participants' general health, however, was not predicted by phase of program (ß = .174, $t$ = 1.790, $p$ = .078).

**Table 2**

*ANOVA: Independent Variables and General Health*

ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 4635.580 | 2 | 2317.790 | 19.585 | .000[b] |
| | Residual | 8284.365 | 70 | 118.348 | | |
| | Total | 12919.945 | 72 | | | |

a. Dependent Variable: GHQ Total Score
b. Predictors: (Constant), Current Phase CES Program, ISEL Total

**Table 3**

*Multiple Linear Regression Predicting General Health*

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 52.866 | 6.105 | | 8.659 | .000 |
| | ISEL Total | -1.184 | .191 | -.603 | -6.211 | .000 |
| | Current Phase CES Program | 2.910 | 1.625 | .174 | 1.790 | .078 |

a. Dependent Variable: GHQ Total Score

**Null Hypothesis 2**

Null hypothesis 2 stated that there will be no statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support*

*Evaluation List Shortened Version (12 item)*, phase of program, and somatic symptoms as measured by subscale A of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students. Prior to conducting the analysis I tested the assumptions of multiple linear regression in the same way as the previous analysis. The normal P-P plot (See Figure 3) showed that the assumption of normality was met as none of the data strongly deviated from the normal line. A visual inspection of the scatterplot of standardized residuals versus unstandardized predicted values (See Figure 4) showed that the data were equally distributed around 0 and the assumption of homoscedasticity was met. All tolerance values were greater than 0.1 and VIFs were less than 10, so multicollinearity was not present. All assumptions were met.

**Figure 3**

*Normal P-P plot for Null Hypothesis 2*

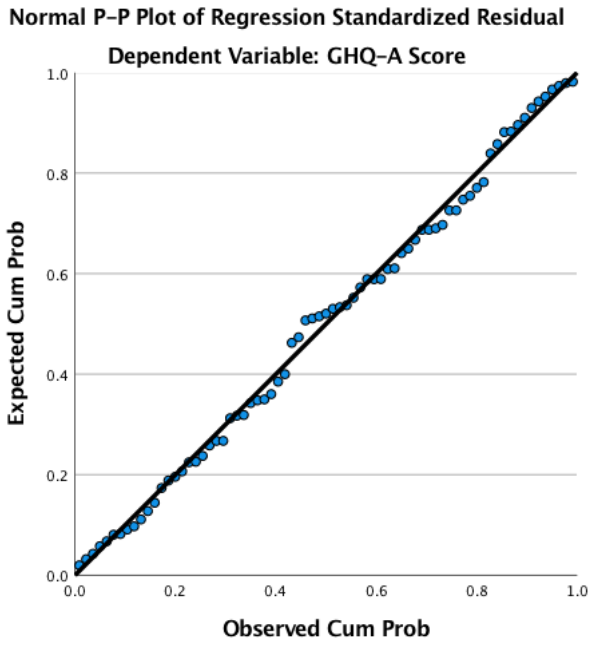
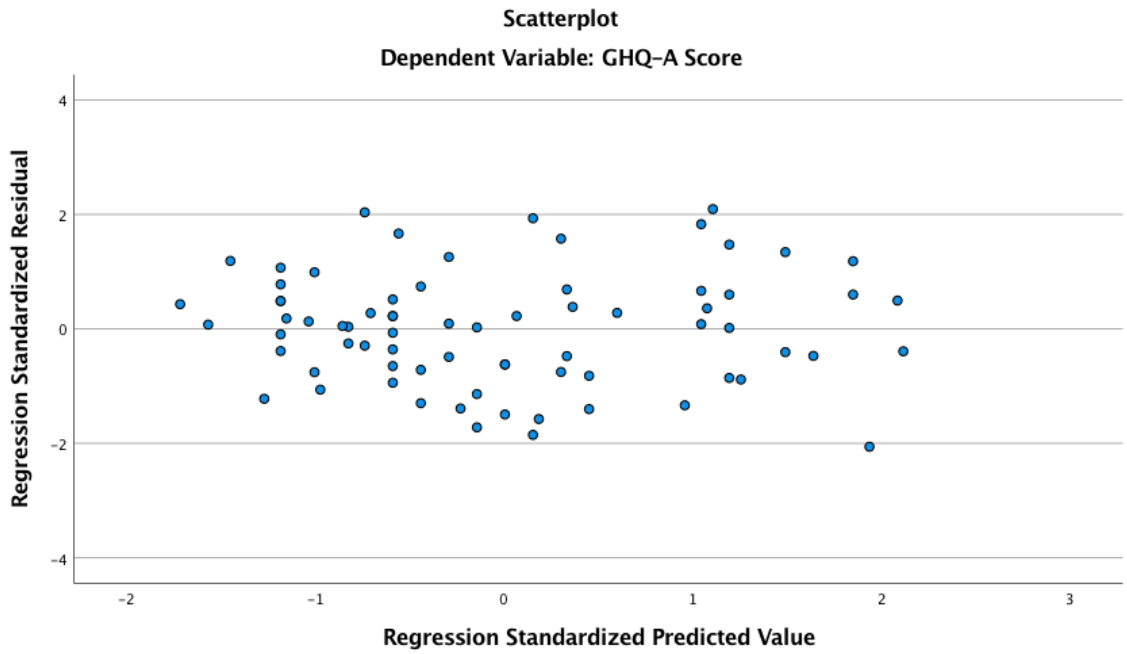


**Figure 4**

*Scatterplot of residuals vs. predicted values for Null Hypothesis 2*




To test null hypothesis 2, a multiple linear regression analysis was conducted to evaluate if perceived social support and phase of program predicted somatic symptoms (subscale A). As shown in Table 4, the results of the regression analysis were statistically significant, $F(2,70)=7.068$, $p<.002$, $R^2=.17$, indicating perceived social support and phase of program successfully predicted students' somatic symptoms. The regression explained 17% variance in the somatic symptoms scores. Therefore, Null Hypothesis 2 was rejected. Table 5 shows the coefficients table to assess if each independent variable was a predictor of somatic symptoms on its own. Participants' somatic symptoms score was predicted by perceived social support (ß = -.415, $t$ =-3.756, $p < .001$). Controlling for phases of program, the regression suggests that with each additional increase in perceived

social support score, the somatic symptom score decreases by approximately 42. Participants' somatic symptom score, however, was not predicted by phase of program ($\beta$ = .087, $t$ = 0.790, $p$ = .432).

**Table 4**

*ANOVA: Independent Variables and Somatic Symptoms*

ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 166.649 | 2 | 83.325 | 7.068 | .002[b] |
| | Residual | 825.241 | 70 | 11.789 | | |
| | Total | 991.890 | 72 | | | |

a. Dependent Variable: GHQ-A Score
b. Predictors: (Constant), Current Phase CES Program, ISEL Total

**Table 5**

*Multiple Linear Regression Predicting Somatic Symptoms*

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 12.243 | 1.927 | | 6.354 | .000 |
| | ISEL Total | -.226 | .060 | -.415 | -3.756 | .000 |
| | Current Phase CES Program | .405 | .513 | .087 | .790 | .432 |

a. Dependent Variable: GHQ-A Score

**Null Hypothesis 3**

Null hypothesis stated that there will be no statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and anxiety/insomnia as

measured by subscale B of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students. Prior to conducting the analysis I tested the assumptions of multiple linear regression in the same way as the previous analysis. The normal P-P plot (See Figure 5) showed that the assumption of normality was met as none of the data strongly deviated from the normal line. A visual inspection of the scatterplot of standardized residuals versus unstandardized predicted values (See Figure 6) showed that the data were equally distributed around 0 and the assumption of homoscedasticity was met. All tolerance values were greater than 0.1 and VIFs were less than 10, so multicollinearity was not present. All assumptions were met.

**Figure 5**

*Normal P-P plot for Null Hypothesis 3*

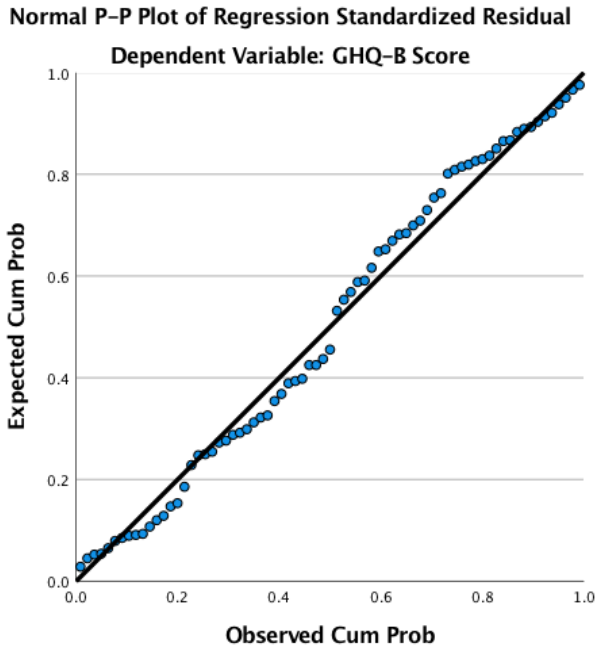
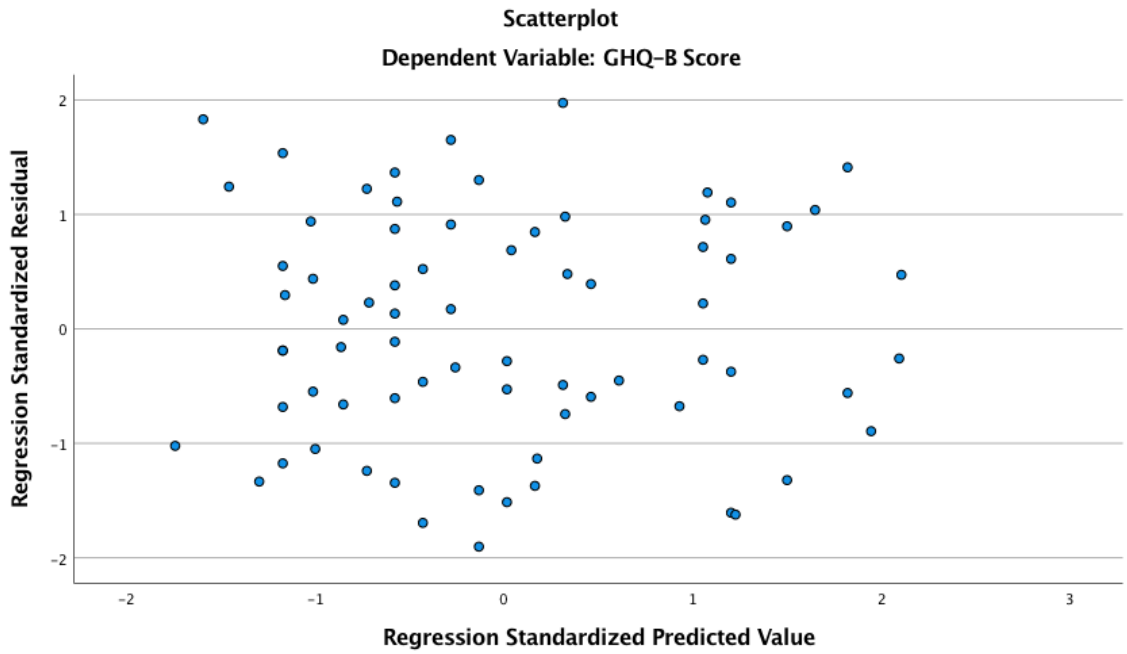


**Figure 6**

*Scatterplot of residuals vs. predicted values for Null Hypothesis 3*




To test null hypothesis 3, a multiple linear regression analysis was conducted to evaluate if perceived social support and phase of program predicted anxiety/insomnia (subscale B). As shown in Table 6, the results of the regression analysis were statistically significant, $F(2,70)=17.672$, $p<.001$, $R^2=.34$, indicating perceived social support and phase of program successfully predicted students' anxiety/insomnia score. The regression explained 34% variance in the anxiety/insomnia scores. Therefore, Null Hypothesis 3 was rejected. Table 7 shows the coefficients table to assess if each independent variable was a predictor of anxiety/insomnia on its own. Participants' anxiety/insomnia score was predicted by perceived social support (ß = -.586, $t$ = -5.934, $p$ < .001). Controlling for phases of program, the regression suggests that with each additional increase in perceived

social support score, the anxiety/insomnia score decreases by approximately 59. Participants' anxiety/insomnia score, however, was not predicted by phase of program (ß = .132, $t = 1.337$, $p = .186$).

**Table 6**

*ANOVA: Independent Variables and Anxiety/Insomnia*

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 581.888 | 2 | 290.944 | 17.672 | .000[b] |
| | Residual | 1152.440 | 70 | 16.463 | | |
| | Total | 1734.329 | 72 | | | |

a. Dependent Variable: GHQ-B Score

b. Predictors: (Constant), Current Phase CES Program, ISEL Total

**Table 7**

*Multiple Linear Regression Predicting Anxiety/Insomnia*

| Coefficients[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 18.523 | 2.277 | | 8.135 | .000 |
| | ISEL Total | -.422 | .071 | -.586 | -5.934 | .000 |
| | Current Phase CES Program | .810 | .606 | .132 | 1.337 | .186 |

a. Dependent Variable: GHQ-B Score

**Null Hypothesis 4**

Null Hypothesis 4 stated that there will be no statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and social dysfunction as

measured by subscale C of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students. Prior to conducting the analysis I tested the assumptions of multiple linear regression in the same way as the previous analysis. The normal P-P plot (See Figure 7) showed that the assumption of normality was met as none of the data strongly deviated from the normal line. A visual inspection of the scatterplot of standardized residuals versus unstandardized predicted values (See Figure 8) showed that the data were equally distributed around 0 and the assumption of homoscedasticity was met. All tolerance values were greater than 0.1 and VIFs were less than 10, so multicollinearity was not present. All assumptions were met.

**Figure 7**

*Normal P-P plot for Null Hypothesis 4*

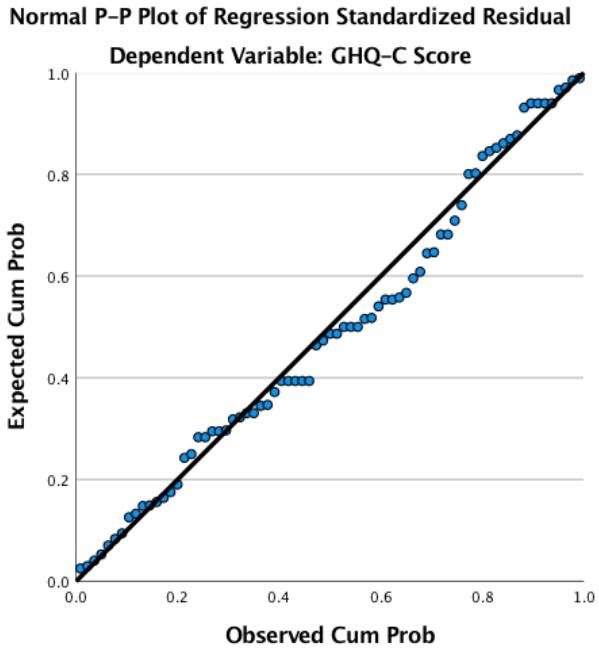
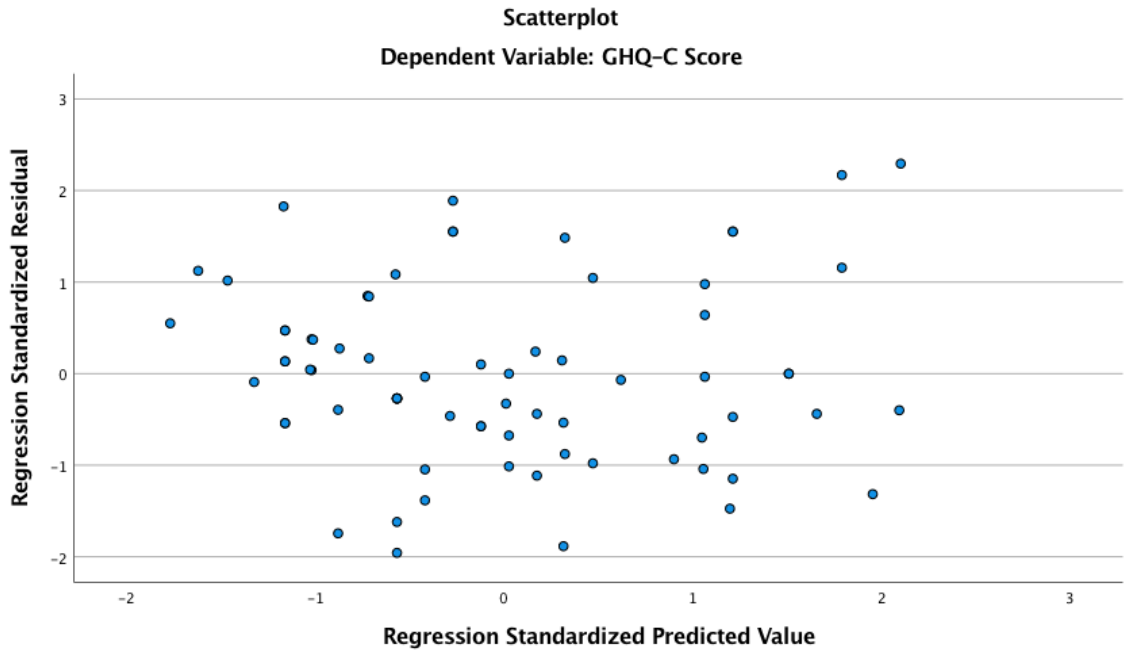


**Figure 8**

*Scatterplot of residuals vs. predicted values for Null Hypothesis 4*




To test null hypothesis 4, a multiple linear regression analysis was also conducted to evaluate if perceived social support and phase of program predicted social dysfunction (subscale C). As shown in Table, the results of the regression analysis were statistically significant, $F(2,70)=16.782$, $p<.001$, $R^2=.32$, indicating perceived social support and phase of program successfully predicted students' social dysfunction score. The regression explained 32% variance in the social dysfunction scores. Therefore Null Hypothesis 4 was rejected. Table shows the coefficients table to assess if each independent variable was a predictor of social dysfunction on its own. Participants' social dysfunction score was predicted by perceived social support (ß = -.576, $t$ =-5.777, $p$ <

.001). Controlling for phases of program, the regression suggests that with each additional increase in perceived social support score, the social dysfunction score decreases by approximately 58. Participants' social dysfunction score, however, was not predicted by phase of program (ß = .139, $t$ = 1.390, $p$ = .169).

**Table 8**

*ANOVA: Independent Variables and Social Dysfunction*

ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 294.849 | 2 | 147.424 | 16.782 | .000[b] |
| | Residual | 614.932 | 70 | 8.785 | | |
| | Total | 909.781 | 72 | | | |

a. Dependent Variable: GHQ-C Score
b. Predictors: (Constant), Current Phase CES Program, ISEL Total

**Table 9**

*Multiple Linear Regression Predicting Social Dysfunction*

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 15.552 | 1.663 | | 9.350 | .000 |
| | ISEL Total | -.300 | .052 | -.576 | -5.777 | .000 |
| | Current Phase CES Program | .616 | .443 | .139 | 1.390 | .169 |

a. Dependent Variable: GHQ-C Score

**Null Hypothesis 5**

Null Hypothesis 5 stated that there is no statistically significant predictive relationship between perceived social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item)*, phase of program, and severe depression as measured by subscale D of the *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students. Prior to conducting the analysis I tested the assumptions of multiple linear regression in the same way as the previous analysis. The normal P-P plot (See Figure 9) showed that the assumption of normality may not have been met as some of the data deviated from the normal line. A visual inspection of the scatterplot of standardized residuals versus unstandardized predicted values (See Figure 10) showed that the data were somewhat unequally distributed around 0 and the assumption of homoscedasticity may not have been met. All tolerance values were greater than 0.1 and VIFs were less than 10, so multicollinearity was not present. Due to the results of the P-P plot and the scatterplot, further assumption testing was conducted. Residual statistics showed that the standard residual minimum was -1.423 and maximum was 3.307. The Durbin-Watson statistic was 2.005 indicating that residuals were uncorrelated. Cook's Distance was below 1 indicating no significant outliers. Although the assumptions may not have been fully met, results were analyzed.

**Figure 9**

*Normal P-P plot for Null Hypothesis 5*

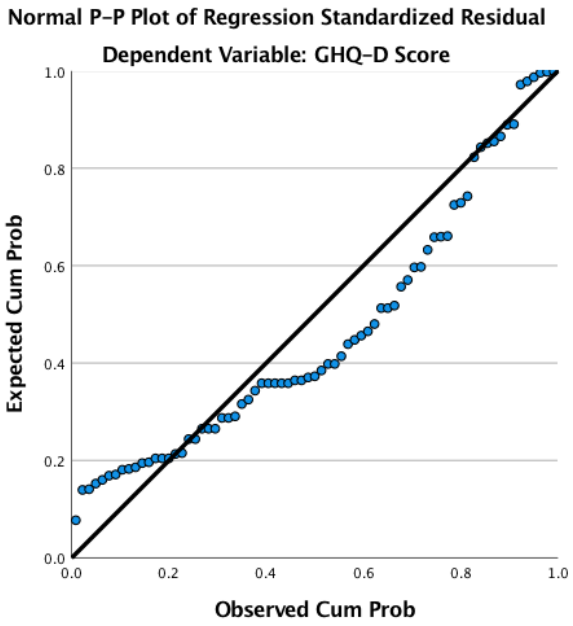
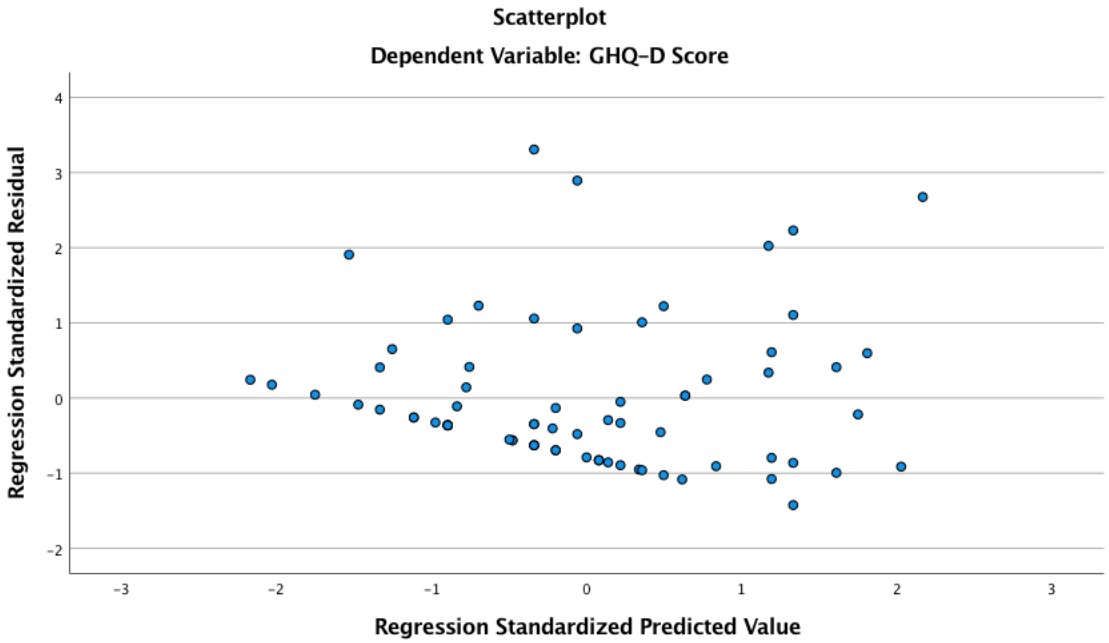



**Figure 10**

*Scatterplot of residuals vs. predicted values for Null Hypothesis 5*



To test null hypothesis 5, a multiple linear regression analysis was also conducted to evaluate if perceived social support and phase of program predicted severe depression (subscale D). As shown in Table 10, the results of the regression analysis were statistically significant, $F(2,70)=8.175$, $p < .001$, $R^2=.19$, indicating perceived social support and phase of program successfully predicted students' severe depression score. The regression explained 19% variance in the severe depression scores. Table 11 shows the coefficients table to assess if each independent variable was a predictor of severe depression on its own. Participants' severe depression score was predicted by perceived social support (ß = -.413, $t$ =-3.786, $p < .001$). Controlling for phases of program, the regression suggests that with each additional increase in perceived social support score, the severe depression score decreases by approximately 41. Participants' severe depression score was also predicted by phase of program (ß = .221, $t$ = 2.030, $p$ = .046). Controlling for perceived social support, the regression suggests that with each additional increase in phase of program, the severe depression score increases by approximately 22. However, due to an inability to meet all of the assumptions of multiple linear regression it was determined that no conclusive decision can be made in regards to Null Hypothesis 5.

**Table 10**

*ANOVA: Independent Variables and Severe Depression*

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 207.013 | 2 | 103.506 | 8.175 | .001[b] |
| | Residual | 886.302 | 70 | 12.661 | | |
| | Total | 1093.315 | 72 | | | |

a. Dependent Variable: GHQ-D Score
b. Predictors: (Constant), Current Phase CES Program, ISEL Total

**Table 11**

*Multiple Linear Regression Predicting Severe Depression*

| Coefficients[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 6.548 | 1.997 | | 3.279 | .002 |
| | ISEL Total | -.236 | .062 | -.413 | -3.786 | .000 |
| | Current Phase CES Program | 1.079 | .532 | .221 | 2.030 | .046 |

a. Dependent Variable: GHQ-D Score

**Between Group Analyses**

I conducted an analysis to determine if there is a difference in the general health total score and perceived social support total score between students in different phases of the CES program (core courses, internship, dissertation). The analysis indicated that there is no statistically significant difference between groups as determined by the One-way ANOVA in terms of general health ($p$ = .81) or perceived social support ($p$ = .28). See Table 3 for breakdown of descriptives.

**Table 12**

*Descriptive statistics of ISEL-12 and GHQ-28 scores between phase of program groups*

| | | N | Mean | Std. Deviation |
|---|---|---|---|---|
| ISEL Total | Core Courses | 14 | 24.4286 | 8.36397 |
| | Internship | 12 | 27.7500 | 7.11113 |
| | Dissertation | 47 | 27.6596 | 6.19353 |
| | Total | 73 | 27.0548 | 6.82090 |
| GHQ Total Score | Core Courses | 14 | 25.8571 | 15.74243 |
| | Internship | 12 | 28.1667 | 9.71253 |
| | Dissertation | 47 | 28.5532 | 13.65858 |
| | Total | 73 | 27.9726 | 13.39566 |

I also conducted an analysis to determine if there is a difference in the general health total score and perceived social support total score between students' original program format prior to COVID-19 (Face-to-face, online, hybrid). The analysis indicated that there is no statistically significant difference between groups as determined by the One-way ANOVA in terms of general health ($p$ = .73) or perceived social support ($p$ = .59). See Table 4 for breakdown of descriptives.

**Table 13**

*Descriptive statistics of ISEL-12 and GHQ-28 scores between phase of program groups*

| | | *N* | Mean | Std. Deviation |
|---|---|---|---|---|
| ISEL Total | Face-to-face | 31 | 27.0645 | 6.98539 |
| | Online | 37 | 26.6486 | 7.01275 |
| | Hybrid | 5 | 30.0000 | 4.06202 |
| | Total | 73 | 27.0548 | 6.82090 |
| GHQ Total Score | Face-to-face | 31 | 28.7419 | 14.05932 |
| | Online | 37 | 26.8919 | 12.52727 |
| | Hybrid | 5 | 31.2000 | 17.51285 |
| | Total | 73 | 27.9726 | 13.39566 |

## Summary

In this chapter, I analyzed the data collected from participants who completed the survey in this research study. I aimed to uncover whether statistically significant predictive relationships existed between perceived social support, phase of program and general health; social support, phase of program and somatic symptoms; social support, phase of program and anxiety/insomnia; social support, phase of program and social dysfunction; social support, phase of program and severe depression. For the first four null hypotheses, all of the assumptions were met and data analysis results indicated significant predictive relationships allowing for the null hypotheses to be rejected. Results indicated that there is a statistically significant predictive relationship between perceived social support and general health, perceived social support and somatic symptoms, perceived social support and anxiety/insomnia, and perceived social support and social dysfunction. However, no statistically significant predictive relationship was found between phases of program and general health, phases of program and somatic

symptoms, phases of program and anxiety/insomnia, or phase of program and social dysfunction. The assumptions for a multiple linear regression in null hypothesis 5 were not all fully met however results were analyzed. Analysis of data for the fifth research question indicated that there is a statistically significant predictive relationship between social support and severe depression however there is no statistically significant relationship between phases of program and severe depression. In the next chapter I will interpret these findings, explore possible explanations and rationales for the results, and discuss limitations, implications for social change, and recommendations for future research.

# Chapter 5: Discussion, Conclusions, and Recommendations

## Introduction

The purpose of this quantitative correlational study was to determine if there is a predictive relationship between perceived student social support as measured by the *Interpersonal Support Evaluation List Shortened Version (12 item),* phase of program, and general health as measured by *General Health Questionnaire (GHQ-28)* in PhD CACREP CES program students. The primary goal of this study was to contribute to a greater understanding of the general health of CES PhD students. I used a cross-sectional data collection method and collected data at one point in time through surveys. Data analyses methods included correlations, ANOVAs, and multiple linear regressions. Results showed that there is a statistically significant predictive relationship between perceived social support, phase of program, and general health. However, phase of program was not a significant or important predictor of general health in PhD CACREP CES program students when examined independently. Four of the five null hypotheses were rejected and it was determined that a decision could not be made in regards to the fifth null hypothesis. The goal of contributing to a greater understanding of the general health of PhD CACREP CES students was met. In this chapter, I discuss interpretations of the findings and provide a comparison of the current study findings with findings of previous similar studies. Interpretations of findings are presented in order of null hypotheses followed by discussion of overall analyses including analyses of group

comparisons. Lastly, I discuss limitations of the study, recommendations, and implications.

## Interpretation of the Findings

Several assumptions were made in this study based on results of previous research, and not all were supported by the results. The majority of participants reported being further along in the program (internship/dissertation) with 64.38% reporting currently being in the dissertation phase of the CES program. Cornwall et al. (2019) and Zeligman et al. (2015) reported that doctoral students experience problems with social support and lose previous sources of support throughout their doctoral journey. Sverdlik and Hall (2019) reported that in later stages of a doctoral program, students receive considerably less feedback from professors and supervisors and experience a greater sense of isolation within the academic setting as they work on dissertation. However, participants in this study scored relatively high on the ISEL-12. In this study the mean for the ISEL-12 was 27.05 (scores range 0-36), which indicates high levels of perceived social support among the participants. Although this study did not investigate social support specifically within the academic setting, it did analyze perceived social support among CES PhD students in general. Not only did PhD CES students score relatively high in terms of perceived social support, but there also was no significant relationship found between phase of program and perceived social support. This suggests that perception of social support does not significantly change as PhD CES students progress through their doctoral program. It also contradicts previous studies that reported CES

PhD students were struggling with social support (Cornwall et al., 2019; Zeligman et al., 2015).

Previous researchers have reported that doctoral students struggle with general health (Nagy et al., 2019, Sverdlik et al., 2018). Researchers in Belgium used the GHQ-12, a shortened version of the questionnaire used in this study, to assess general health problems in PhD students and found that a significant percentage of the students were experiencing distress (Levecque et al., 2017). The results of the current study support previous findings on general health. The mean score on the GHQ-28 was 27.97 (scores range 0-84), indicating the presence of distress among participants and supporting the assumption that CES PhD students struggle with general health. According to Goldberg (1978) a total score >24 on the GHQ-28 indicates the presence of distress. Therefore, a mean score of 27.97 on the GHQ-28 indicates that the participants are struggling with mental and physical health.

In the following section, I provide a summary of results for each research question and interpretations. I begin with the first research question that investigated the predictive relationship between perceived social support, phase of program and general health, as measured by scores on the GHQ-28, and then discuss the predictive relationship between perceived social support, phase of program, and each subscale of the GHQ-28.

**Research Question 1**

Self-determination theory (SDT) posits that an individual's ability to satisfy basic psychological needs determines students' performance, whether or not they function at

optimal levels, and impacts their general health (Ryan & Deci, 2000). Within the SDT is the BPNT, which posits that individuals have a need to satisfy three specific psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2000). Researchers have found that the satisfaction of the three basic needs plays a role not only in psychological health but physical health and activity as well (Erturan-Ilker et al., 2018; Gunnell et al., 2013; Mack et al., 2013; Wilson et al., 2008). Based on this information, the first null hypothesis stated that there is no statistically significant predictive relationship between perceived social support, phase of program, and general health in PhD CACREP CES program students. After analyzing the data, I was able to reject the null hypothesis. The results showed that there is a statistically significant predictive relationship between perceived social support, phase of program, and general health. Analysis of the results indicated that perceived social support was a significant predictor of general health. The statistically significant relationship between perceived social support and general health found in this study corroborates previous findings. For example, Guo et al. (2015) found a positive correlation between perceived social support and general health in the elderly and Malkoc and Yalçın (2015) reported similar results among university students.

Analysis of the results also indicated that phase of program was not a significant predictor of general health. Phase of program was expected to be a significant predictor of general health based on findings of previous researchers such as Sverdlik et al. (2018) who reported that doctoral students general health and wellbeing decreases throughout their doctoral journey. Pierce and Herlihy (2013) also found that counselor education

doctoral students reported symptoms of decreased wellness as they progressed through the doctoral program. Based on the results of this study, CES PhD students struggle with general health and do not experience any significant changes in general health throughout the program.

**Research Question 2**

Previous research indicated that physical health is an area of concern for CES PhD students (Perepiczka & Balkin, 2010). Protivnak and Foss (2009) reported that CES students experience several problems including problems with energy and health. In a study by Kernan et al. (2011), researchers studied health-related problems among graduate students and found that 78.9% of graduate students reported experiencing upper respiratory infections. Therefore, the second null hypothesis stated that there is no statistically significant predictive relationship between perceived social support, phase of program, and somatic symptoms (subscale A of the GHQ-28) in PhD CACREP CES program students. After analyzing the data, I was able to reject the null hypothesis. The results showed that there is a statistically significant predictive relationship between perceived social support, phase of program, and somatic symptoms. Analysis of the results indicated that perceived social support was a significant predictor of somatic symptoms. However, analysis of the results also indicated that phase of program was not a significant predictor of somatic symptoms. Although CES PhD students are not experiencing significant changes in terms of somatic symptoms throughout their doctoral program, the results indicated that they are experiencing distress

in terms of somatic symptoms and that perceived social support significantly predicts somatic symptoms.

**Research Question 3**

According to American College Health Association (2015; as cited in Tsong et al., 2019, p. 131) 35% of all college students reported experiencing significant anxiety that interfered with their academic performance. Previous studies indicated that graduate students struggle with anxiety that interferes with their functioning (El-Ghoroury et al., 2012) and over half of all graduate students report sleep difficulties (Kernan et al., 2011). International researchers such as Pallos et al. (2005) have reported similar findings. According to Pallos et al., 53% of graduate students in Tokyo, Japan experienced emotional disturbances including anxiety, insomnia, social dysfunction, depression, and feelings of incompetence. When focusing specifically on doctoral students Nagy et al. (2019) found high levels of anxiety among doctoral students. Pierce and Herlihy (2013) reported severe panic attacks as one of the main symptoms of decreased wellbeing experienced by CES doctoral students.

Based on this information, the third null hypothesis stated that there is no statistically significant predictive relationship perceived social support, phase of program, and anxiety/insomnia (subscale B of the *GHQ-28)* in PhD CACREP CES program students. The results of this study corroborate results of previous studies and indicate that CES PhD students struggle with anxiety/insomnia. After analyzing the data, I was able to reject the null hypothesis. The results showed that there is a statistically significant predictive relationship between perceived social support, phase of program,

and anxiety/insomnia. Analysis of the results indicated that perceived social support was a significant predictor of anxiety/insomnia. However, analysis of the results indicated that phase of program was not a significant predictor of anxiety/insomnia. This suggests that CES PhD students struggle with anxiety/insomnia throughout the program, their symptoms are significantly predicted by perceived social support, and they do not experience any significant change in anxiety/insomnia throughout the program.

**Research Question 4**

Previous studies suggest that doctoral students in general report experiencing problems with social support, often reporting losing previous sources of support throughout their doctoral journal and having less time for social activities (Cornwall et al., 2019; Sverdlik et al., 2018). CES doctoral students reported experiencing difficulties with spouses due to their schedules as doctoral students, facing marital sacrifices and challenges, and missing time with loved ones (Protivnak & Foss 2009; Zeligman et al., 2015). Therefore, the fourth null hypothesis stated that there is no statistically significant predictive relationship perceived social support, phase of program, and social dysfunction (subscale C of the *GHQ-28)* in PhD CACREP CES program students. The results of this study corroborate results of previous studies and indicate that CES PhD students struggle with social dysfunction.

After analyzing the data, I was able to reject the null hypothesis. The results showed that there is a statistically significant predictive relationship between perceived social support, phase of program, and social dysfunction. Analysis of the results indicated that perceived social support was a significant predictor of social dysfunction.

However, analysis of the results also indicated that phase of program was not a significant predictor of social dysfunction. This suggests that CES PhD students are struggling with social dysfunction, their symptoms are significantly predicted by perceived social support, and they do not experience any significant changes in social dysfunction throughout the program. Students experience relatively similar levels of social dysfunction at all phases of their doctoral program.

**Research Question 5**

According to a report from the University of California at Berkley (2014) 47% of all PhD students experience depression and the percentage of prevalence varies slightly depending on field of study. Other researchers have reported that doctoral students struggle with high levels of depression (Nagy et al., 2019) and feelings of low self-worth especially when facing obstacles in their academic journey (Longfield et al., 2016). However based on results of this study, PhD CES students did not report experiencing high levels of depression. In fact, the severe depression subscale had the lowest mean score out of the four GHQ-28 subscales. The relatively high scores of perceived social support in CES PhD students might explain the low depression scores in this study. In a study by Bruns and Letcher (2018) researchers found that social support was a protective factor for suicide risk among graduate students in the United States.

The fifth null hypothesis stated that there is no statistically significant predictive relationship perceived social support, phase of program, and severe depression (subscale D of *GHQ-28)* in PhD CACREP CES program students. The assumptions of a multiple regression were not met however results were analyzed.

Analysis of the results showed that there is a statistically significant predictive relationship between perceived social support, phase of program, and severe depression. Analysis of the results indicated that perceived social support and phase of program both significantly predicted severe depression in CES PhD students. Based on the results of the multiple linear regression in this study, as perceived social support increases severe depression decreases and as phase of program increases severe depression increases. However, due to an inability to meet all of the assumptions of multiple linear regression it was determined that no conclusive decision can be made in regards to Null Hypothesis 5.

**Overall Analyses**

Based on the results, I was able to reject the first four null hypotheses. Results indicated that there is statistically significant predictive relationship between perceived social support, phase of program, and general health; perceived social support, phase of program and somatic symptoms; perceived social support, phase of program, and anxiety/insomnia; and perceived social support, phase of program, and social dysfunction. However, when examined independently phase of program did not appear to contribute significantly to predicting the dependent variables in the first four null hypotheses. Results showed that CES PhD students struggled with general health, somatic symptoms, anxiety/insomnia and social dysfunction throughout all phases of the program without any significant differences between phases. This means that all CES PhD students are struggling relatively similarly regardless of phase of program. For the fifth hypothesis, a conclusive decision was not made because the assumptions of a multiple regression were not all met. However, if interpreted the results indicated that

there is a predictive relationship between perceived social support, phase of program, and severe depression and both perceived social support and phase of program contribute significantly in predicting severe depression. Interestingly, based on scores of subscale D of the GHQ-28, which measured severe depression it did not appear that CES PhD students were struggling with severe depression. Social desirability bias might explain why results did not indicate that CES PhD students are struggling with severe depression. CES PhD students may have responded with socially desirable answers. Social desirability might also explain why results from this study indicated that CES PhD students are struggling with symptoms of social dysfunction (subscale C of GHQ-28) despite scoring high on perceived social support.

Both of the ANOVAs conducted to analyze differences between groups did not show any significant differences. The first ANOVA used to make between group comparisons within phase of program showed no significant differences between groups. This means that CES PhD students do not experience any significant changes in perceived social support or general health throughout their doctoral journal. The second ANOVA was used to make between group comparisons within original program formats (online, face-to-face, and hybrid) and found no significant differences between these groups. This analysis was conducted to see if students who began their program in one format and had to temporarily switch to a different format during the pandemic experienced any differences in perceived social support or general health. Results showed that students did not experience any significant changes in perceived social support or general health related to the original program format.

## Limitations of the Study

As with all studies, there are several limitations in the current study. One of the limitations is that the ISEL-12 was administered to participants rather than the full ISEL-40, which includes 40 questions. Previous research has indicated that doctoral students struggle with perceived social support (Cornwall et al. 2019; Posselt, 2018), however the results of this study did not reflect that. There is no way to know whether participants would have scored differently on the full version of the ISEL. It is also possible that social desirability bias was a factor. The participants were all CES PhD students and, therefore, likely familiar with research, assessments, and socially desirable answers. Selection bias may also have been a factor as individuals who self-selected to participate in the study may have differed in some way from nonparticipants. For example, it is possible that individuals who were feeling extremely overwhelmed may have chosen to not participate.

Another limitation of the study is that it was conducted during a global pandemic and participant responses may have been affected. In the early months of 2020, COVID-19 rapidly spread across the world. Governments across the world responded by enacting safety measures that included social distancing, confining people to their homes, and mandating quarantines. Schools and universities transitioned to online formats and many individuals switched to working from home. Analysis of the demographic information showed that many of the participants experienced a change in doctoral program format due to COVID-19. Participants reported that prior to COVID-19, 50.7% were in a fully online program, 42.5% face-to-face program, and 6.8% in a hybrid program. Participants

reported that since COVID-19, 83.6% are now temporarily attending their CES program in a fully online format, 1.4% face-to-face program, and 15.5% hybrid program. However, results of an ANOVA analysis showed that there is no significant difference in perceived social support among groups of students enrolled in different program formats.

Since my research design was quantitative and correlational I did not have a control group or random assignment thus limiting internal validity. I also used convenience and snowball sampling to recruit participants who met the criteria of the study and were available (Burkholder, 2016). Therefore, it is impossible to know if the individuals who participated in the study accurately represented the population of interest, limiting generalizability (Burkholder & Crawford, 2016). I also limited eligibility to PhD CES students enrolled in a CACREP accredited program and therefore results may not be generalizable to PhD CES students in programs that are not accredited by CACREP, or to CES Ed.D. students.

## Recommendations

Recommendations for future research include the use of the full ISEL-40 or an alternative thorough method for assessing perceived social support. Although previous research has indicated that doctoral students struggle with perceived social support (Cornwall et al. 2019; Posselt, 2018), the results of this study did not indicate a problem with perceived social support among this population. Research on perceived social support among CES PhD students is limited however it does indicate that social support is an area of concern (Protivnak & Foss, 2009; Sverdlik et al., 2018; Zeligman et al., 2015). Further research is suggested in order to determine if perceived social support is

truly an area of concern for this population. It is possible that previous research results are not generalizable to the entire CES PhD student population as previous studies have primarily been qualitative in nature. Additional research is suggested to investigate other factors that predict general heath among CES PhD students. Although this study found significant predictive relationships between perceived social support and general health as well as perceived social support and the subscales of the GHQ-28, the variables included in this study alone do not fully predict general health. Results of this study also corroborated findings of previous studies indicating that CES PhD students are experiencing distress in terms of their general health. A greater understanding of CES PhD students' general health and related factors is necessary in order to better support this population.

A similar study should also be completed after the global pandemic has passed in order to ensure that results were not affected by current experiences related to the pandemic. Although analysis of the results indicated that there were no significant differences between groups depending on original program format, there is a possibility that results were influenced by participants' experiences during the pandemic. Due to the pandemic, many individuals have experienced numerous changes in their lives that may have influenced the results. For example, some people may have become more intentional about checking on friends and family through video and phone calls due to social distancing restrictions. Others may be spending more time with family members or roommates while their jobs and educational programs have temporarily switched to being fully online. General health results may also have been influenced by the pandemic as

research indicates that the COVID-19 pandemic is causing psychological and physical stress (Jungmann &Witthöft, 2020; Sohrabi et al., 2020; Tanne et al., 2020; Wang et al., 2020). There is no way to know if results would be similar after the pandemic without repeating the study or conducting another similar one after the pandemic has ended.

The study may also be repeated with a larger sample size to include more participants in each phase of program. Although I was able to exceed the minimum suggested sample size, the majority of the participants in this study were further along in the program. There is no way to know if results would have been different had the sample included more participants in the beginning phase of their doctoral journey. Lastly, the results of this study corroborate results from previous research indicating that CES PhD students are struggling with their general health (Hughes & Kleist, 2005; Perepiczka & Balkin, 2010; Pierce & Herlihy, 2013; Protivnak & Foss, 2009). This study was the first study within the counseling literature to investigate the predictive relationship between perceived social support, phase of program, and general health in CES PhD students in CACREP programs. This study is also the first to report a predictive relationship between perceived social support and general health, perceived social support and somatic symptoms, perceived social support and anxiety/insomnia, and perceived social support and social dysfunction among CES PhD students. Further research is needed to investigate the ways in which CES PhD students may be supported during their doctoral journey in order to minimize their distress in terms of general health.

## Implications

Results showed CES PhD students are struggling with general health. Results also indicated that there is statistically significant predictive relationship between perceived social support, phase of program, and general health; perceived social support, phase of program and somatic symptoms; perceived social support, phase of program, and anxiety/insomnia; and perceived social support, phase of program, and social dysfunction. However, when examined independently phase of program did not appear to contribute significantly to predicting the dependent variables in the first four null hypotheses. This means that all CES PhD students are struggling relatively similarly regardless of phase of program. These findings, while not surprising, highlight the need for further research and interventions to be developed and applied within CES programs. The findings of this study present an opportunity for the CES community to make efforts towards positive social change.

As previously mentioned in Chapter 2, mental health problems that are left untreated among college students are a risk factor for suicide attempts (Cerel et al., 2013). According to Waight and Giordano (2018), many doctoral students do not seek institutional support for mental health issues with 40.6% of students reporting that they have never even considered reaching out to their university's student services center. Given the results of the current study, efforts must be made by CES faculty and administrators to encourage students to seek support for mental health issues, especially students who are further along in the doctoral program. CES educators should be aware that their students might be increasingly susceptible to severe depression as they progress

further in the doctoral program. CES students should also be aware of this possibility as well as the possibility of experiencing a decline in general health. With a better understanding of the issues that they are susceptible to and may be experiencing, students may be able to take steps to protect themselves. This knowledge may also normalize their experience, which has been shown to have a positive effect on wellbeing (Posselt, 2008). Research efforts must be made to investigate other variables that predict general health in CES PhD students. Research efforts must also be made to investigate and develop appropriate interventions to address poor general health in CES PhD students in all phases of the CES program.

Through the suggested combined efforts of CES educators, faculty, administration, and researchers, positive social change is possible at every level – individual, organizational, and global, and it begins with sharing the results of this study. Perhaps if the general health of CES PhD students is addressed, they may graduate and act as role models for their future counseling students who may also then graduate and act as role models for their future clients.

## Conclusion

The ACA acknowledges that the counseling profession can be extremely stressful at times and emphasizes the importance of counselors engaging in self-care practices and maintaining their general health and wellness (ACA, n.d.). CACREP acknowledges the stressful nature of the stressful profession as well and requires all counseling programs to include self-care in the curriculum (CACREP, 2016). Researchers have found that doctoral students in general struggle with a decrease in general health (Cornwall et al.,

2019; Sverdlik et al., 2018) and experience high levels of anxiety and depression (Nagy et al., 2019). Research specific to counseling students shows that graduate counseling students struggle with perceived social support and general health (Beaumont et al., 2016; Lambie et al., 2009; Myers et al., 2003; Perepiczka & Balkin, 2010). The results of this study indicate that CES PhD students in CACREP programs struggle with general health and experience an increase in depression as they progress through the doctoral program. As with any population, distress should be addressed and interventions should be investigated to improve the experiences of CES PhD students. Additionally, it is necessary to note that after successful completion of the PhD program and matriculation, many CES students become counselor educators. Their general health affects their ability to perform and educate a new generation of counselors and counseling students. CES graduates serve as role models for counseling students and counselors alike. If an improvement in self-care is to be made within counselor education, it begins with Counselor Education and Supervision students.

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# Appendix A: Facebook Announcement

Hello Colleagues! I am a doctoral candidate at Walden University. To fulfill requirements for the doctoral dissertation I am conducting a research study on the relationship between perceived social support, phase of program, and general health of Counselor Education and Supervision (CES) PhD students.

You are eligible to participate if you are:

- Currently enrolled in a CACREP accredited CES PhD program
- Live in the United States

The anonymous survey takes 10-15 minutes to complete and has been approved by Walden University Institutional Review Board. Your participation in the study is voluntary and you may discontinue the survey at any time without penalty. A consent form is included at the beginning of the survey. If you would like to share this invitation with other CES PhD students you are welcome to do so and I would greatly appreciate it.

If you would like to participate please click here

(I will insert survey link here)

I can be reached via e-mail at sara.moubayed@waldenu.edu

## Appendix B: Listserv E-mail Announcement

Hello Colleagues,

My name is Sara Moubayed and I am a doctoral candidate at Walden University. To fulfill requirements for the doctoral dissertation I am conducting a survey on the relationship between perceived social support, phase of program, and general health of Counselor Education and Supervision (CES) PhD students.

You are eligible to participate if you are:

- Currently enrolled in a CACREP accredited CES PhD program
- Live in the United States

The anonymous survey takes 10-15 minutes to complete and has been approved by Walden University IRB. Your participation in the study is voluntary, anonymous, and greatly appreciated. You may discontinue the survey at any time without penalty. A consent form is included at the beginning of the survey. If you would like to share this invitation with other CES PhD students you are welcome to do so.

If you would like to participate please click here

(I will insert survey link here)

Thanks in Advance,

Sara Moubayed M.S., LMHC

PhD Candidate

sara.moubayed@waldenu.edu

Dissertation Chair: Dr. Chandra Johnson can be reached at

chandra.johnson@mail.waldenu.edu

Appendix C: Research Participant Pool Announcement

**Relationship Between Perceived Social Support, Phase of Program, And General Health In Counselor Education And Supervision (CES) PhD Students**

**Purpose:** To gain a greater understanding of the perceived social support and general health of CES PhD students as part of my dissertation research.

**Volunteer Requirements:** Currently enrolled in a CACREP accredited CES program and live in the United States

**Time Commitment: 15 minutes**

**To volunteer: (**I will insert survey link here)

## Appendix D: Demographic Questionnaire

Please respond to the following questions.

1. Age: ___
2. Gender:
    a. Male
    b. Female
    c. Non-binary/Third Gender
3. Race:
    a. White
    b. Hispanic or Latino or Spanish Origin of any race
    c. Black or African American
    d. Native Hawaiian or Other Pacific Islander
    e. Asian
    f. American Indian or Alaskan Native
    g. Mixed
    h. Other
4. Marital Status
    a. Single
    b. Married
    c. Widowed
    d. Separated
    e. Divorced

f. Partnered

5. Employment Status
    a. Employed, working full-time
    b. Employed, working part-time
    c. Unemployed, looking for work
    d. Unemployed, not looking for work
    e. Retired
6. Number of Children Living in Home: ____
7. Parents' Highest Level of Education
    a. Less than high school
    b. High school or equivalent
    c. Some college
    d. Associate Degree (such as A.A., A.S.)
    e. Bachelor's degree (such as B.A., B.S.)
    f. Master's Degree (such as M.A., M.S.)
    g. Doctorate (such as Ph.D., Ed.D., MD)
    h. Unknown
8. Current Phase of CES Program:
    a. Core Courses
    b. Internship
    c. Dissertation

*Due to COVID-19 many programs have temporarily moved online.

Please answer the following questions regarding the format of the CES program in which you are currently enrolled.

9. Original program format prior to COVID-19:
    a. Face-to-face
    b. Online
    c. Hybrid (face-to-face and online)
10. Current program format:
    a. Face-to-face
    b. Online
    c. Hybrid (face-to-face and online)

Appendix E: ISEL-12 Permission

**Interpersonal Support Evaluation List-12**

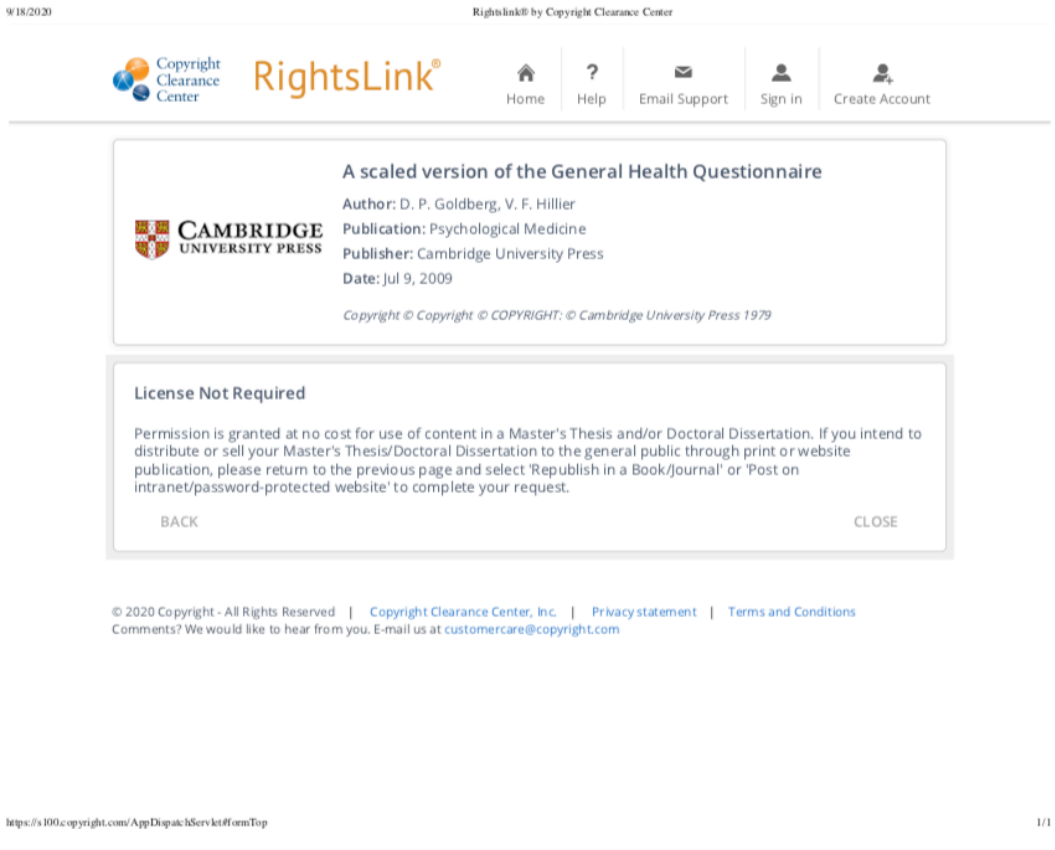
PsycTESTS Citation: Cohen, S., Mermelstein, R., Kamarck, T., & Hoberman, H. M. (1985). Interpersonal Support Evaluation List-12 [Database record]. Retrieved from PsycTESTS. doi: https://dx.doi.org/10.1037/t48933-000

Instrument Type: Inventory/Questionnaire

Test Format: Items are rated on a 4-point scale ranging from 0 (definitely false) to 3 (definitely true). All items are summed to yield a total score (scores range 0–36).

Source: Merz, Erin L., Roesch, Scott C., Malcarne, Vanessa L., Penedo, Frank J., Llabre, Maria M., Weitzman, Orit B., Navas-Nacher, Elena L., Perreira, Krista M., Gonzalez, Franklyn, Ponguta, Liliana A., Johnson, Timothy P., & Gallo, Linda C. (2014). Validation of Interpersonal Support Evaluation List-12 (ISEL-12) scores among English- and Spanish-speaking Hispanics/Latinos from the HCHS/SOL Sociocultural Ancillary Study. Psychological Assessment, Vol 26(2), 384-394. doi: https://dx.doi.org/10.1037/a0035248

# Appendix F: GHQ-28 Permission



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A scaled version of the General Health Questionnaire

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**Publication:** Psychological Medicine
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