

GENDER DIFFERENCES, SOCIAL ROLES, AND TREATMENT
RESPONSES: ARE FEMALE ADOLESCENTS BETTER RESPONDERS IN THE
CONTEXT OF SCHOOL MENTAL HEALTH?

A Thesis
by
HOLLY M. HAUSER

Submitted to the Graduate School
at Appalachian State University
in partial fulfillment of the requirements for the degree of
MASTER OF ARTS in CLINICAL PSYCHOLOGY

December 2018
Department of Psychology

GENDER DIFFERENCES, SOCIAL ROLES, AND TREATMENT
RESPONSES: ARE FEMALE ADOLESCENTS BETTER RESPONDERS IN THE
CONTEXT OF SCHOOL MENTAL HEALTH?

A Thesis
by
HOLLY M. HAUSER
December 2018

APPROVED BY:

Kurt D. Michael, Ph.D.
Chairperson, Thesis Committee

Twila A. Wingrove, JD, Ph.D.
Member, Thesis Committee

Jacqueline R. Hersh, Ph.D.
Member, Thesis Committee

Lisa A. Curtin, Ph.D.
Member, Thesis Committee

Rose Mary Webb, Ph.D.
Chairperson, Department of Psychology

Michael McKenzie, Ph.D.
Dean, Cratis D. Williams School of Graduate Studies

Copyright by Holly M. Hauser 2018
All Rights Reserved

Abstract

GENDER DIFFERENCES, SOCIAL ROLES, AND TREATMENT RESPONSES: ARE FEMALE ADOLESCENTS BETTER RESPONDERS IN THE CONTEXT OF SCHOOL MENTAL HEALTH?

Holly M. Hauser
B.S. University of North Carolina at Charlotte
M.A. Appalachian State University

Chairperson: Dr. Kurt D. Michael, Ph.D.

Though some studies with youth suggested that females might respond more favorably to psychotherapy than their male counterparts, other literature suggests there are no differences in improvement based on gender. The question of whether female adolescents showed differential response rates to psychotherapy compared to male adolescents was examined in a school mental health (SMH) sample. Approximately 267 high school students (151 female adolescents, 116 male adolescents) between the ages of 13-19 years old were referred to the Assessment, Support, and Counseling (ASC) Center at Watauga High School, Ashe County High School, and Alleghany High School for psychotherapy services over approximately 5 years (2012-2017). Each participant completed the Youth Outcome Questionnaire (YOQ-30) at baseline and at least every other therapy session over the course of treatment. Upon completion of treatment, participants completed a final YOQ. Based on the literature, it was hypothesized that there would not be a difference between male and female adolescents in the trajectory of recovery after receiving services in a SMH program. Multilevel Modeling was used to analyze possible gender interactions regarding psychotherapy outcomes over time in a SMH setting. As predicted, though both males and females showed improvements by the

end of treatment, there were no significant gender differences in psychotherapy response over time after completing services in a SMH program.

Keywords: psychotherapy, outcomes, school mental health, gender

Acknowledgments

I would like to thank Dr. Kurt Michael, my thesis chair and graduate mentor, for his assistance in developing this research question and for his support and guidance throughout this process. In addition, I would like to thank Dr. Twila Wingrove for her patience, expertise, and assistance with the analysis and interpretation of the data. I would also like to thank Dr. Jacqueline Hersh for her suggestions regarding the data collection process, her willingness to meet with me to discuss challenges and concerns, and her encouragement over the past two years as I completed this thesis project. I would also like to extend my appreciation to Dr. Lisa Curtin for her unending support and reassurance over the course of this endeavor. Lastly, I would like to thank the clinicians and research assistants of the Assessment, Support, and Counseling (ASC) Center for their hard work and assistance in collecting the data utilized for this thesis.

Table of Contents

Abstract.....	iv
Acknowledgments.....	vi
List of Tables	viii
List of Figures.....	ix
Foreword.....	x
Introduction.....	3
Methods.....	14
Results.....	19
Discussion.....	21
References.....	27
Appendix A.....	37
Appendix B.....	40
Appendix C.....	42
Vita.....	44

List of Tables

Table 1. Highest BASC-2 Composite Elevation.....	32
Table 2. Descriptive Statistics of Age and Session Number	33
Table 3. Parameter Estimates for Model 4.....	34
Table 4. Parameter Estimates for Model 5.....	35

List of Figures

Figure 1. Mean YOQ-30 Scores Over the Course of Treatment	36
---	----

Foreword

This thesis is written in accordance with the style guidelines presented in the *Publication Manual of the American Psychological Association (6th Edition)* in line with the requirements of the Department of Psychology at Appalachian State University.

Gender differences, social roles, and treatment responses: Are female adolescents better responders in the context of school mental health?

Holly M. Hauser, B.S.

Appalachian State University

Abstract

Though some studies with youth suggested that females might respond more favorably to psychotherapy than their male counterparts, other literature suggests there are no differences in improvement based on gender. The question of whether female adolescents showed differential response rates to psychotherapy compared to male adolescents was examined in a school mental health (SMH) sample. Approximately 267 high school students (151 female adolescents, 116 male adolescents) between the ages of 13-19 years old were referred to the Assessment, Support, and Counseling (ASC) Center at Watauga High School, Ashe County High School, and Alleghany High School for psychotherapy services over approximately 5 years (2012-2017). Each participant completed the Youth Outcome Questionnaire (YOQ-30) at baseline and at least every other therapy session over the course of treatment. Upon completion of treatment, participants completed a final YOQ. Based on the literature, it was hypothesized that there would not be a difference between male and female adolescents in the trajectory of recovery after receiving services in a SMH program. Multilevel Modeling was used to analyze possible gender interactions regarding psychotherapy outcomes over time in a SMH setting. Though both males and females showed improvements by the end of treatment, there were no significant gender differences in psychotherapy response over time after completing services in a SMH program.

Keywords: psychotherapy, outcomes, school mental health, gender

Gender Differences, Social Roles, and Treatment Responses: Are Female Adolescents Better Responders in the Context of School Mental Health?

In Western society, men are stereotypically viewed as strong, in control of their feelings, and less likely to share emotional challenges with others (Vogel, Wester, Hammer, & Downing-Matibag, 2014). Women, on the other hand, are typically viewed as more social, seeking out ways to converse about internal concerns and emotions with friends, family members, and/or their partner (Cook, 1990). When examining therapeutic treatment seeking and responses, feminine characteristics such as “emotionality, sensitivity, nurturance, and interdependence” may give women the upper hand when compared to their male counterparts who are often described as “assertive, independent, dominant, and goal-directed” (Cook, 1990, p. 371).

The *gender mainstreaming perspective* suggests that gender differences are “relevant variables in life and society” (United Nations, 1997). As a result, gender and sex differences may impact psychopathology and diagnosis, willingness to seek treatment, referral to treatment, and response to treatment. Although various factors, such as the therapeutic alliance and the client’s willingness to seek treatment, appear to influence psychotherapy outcomes, no known studies to-date have examined the effects of gender as a primary research question at the individual level (Bohart & Wade, 2013; Staczan et al., 2017). Among the studies that have examined psychotherapy outcomes and gender, there are mixed findings. For example, some studies on this subject hold that gender roles and societal norms along with various cultural and therapeutic biases seemed to greatly affect psychotherapy outcomes (Weisz, Weiss, Han, Granger, & Morton, 1995; Michael & Crowley, 2002), while others indicate that, overall, gender effects alone do not significantly impact psychotherapy outcomes (Hyde, 2005; Ogrodniczuk, 2006). Nevertheless, it is imperative that clinicians be cognizant of gender differences in treatment in order to effectively serve each client.

Gender differences in the current diagnostic system are striking in some cases and should be carefully considered in case conceptualization. Hartung and Widiger (1998) posited that the *Diagnostic and Statistical Model (DSM)* contains biases in sampling and in diagnostic criteria. For example, in the case of conduct disorder, male children are more frequently diagnosed than female children. However, research concerning conduct disorder primarily utilizes samples of male children versus female children, which limits the conclusions regarding its prevalence among females (Hartung & Widiger, 1998). Costello, Mustillo, Erkanli, Keeler, and Angold (2003) went further and suggested that for child samples, the DSM is much more suited for males than females. That is, the prevalence and base rates for disorders such as attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder (ASD), conduct disorder (CD), and oppositional defiant disorder (ODD) are much higher in male than in female samples (Costello et al., 2003). Overall, the authors reported that boys outnumber girls in terms of psychological diagnoses by 3:1.

Additionally, Hartung and Widiger (1998) examined gender differences in diagnosis in adult samples. In the case of pathological gambling disorder, two thirds of males are diagnosed when compared to females. On average, females are underrepresented due to “the greater stigma regarding females who gamble” (Hartung & Widiger, 1998, p. 263). Furthermore, women are often over-represented in the diagnosis of certain disorders, such as histrionic personality disorder. The criteria for this disorder appear feminine in nature with symptoms including emotional lability, concern with physical attractiveness, and sexual seductiveness. However, clinicians must be careful to consider cultural differences and stereotypes for men and women. There may, in fact, be an “equal amount of men diagnosed with histrionic personality disorder” if the diagnostic criteria would focus less on “female-oriented symptoms” and more on equalizing symptomology based on male and female characteristics (Hartung & Widiger, 1998, p. 273). The current diagnostic system fails to appropriately control for sample bias and bias

in diagnostic criteria in male clients versus female clients. As such, Hartung and Widiger (1998) hold that “if gender neutral criteria cannot be accomplished, then separate criteria should be created for males and females” (p. 273).

In addition to potential biases in diagnosis, research suggests that women comprise the majority of randomly controlled trials for depression. Weissman (2014) noted that “studies of depressed patients often yield smaller numbers of men than women” due to differences in “help-seeking patterns and prevalence rates” (p. 384). In fact, Alonso et al. (2004) found that in a twelve-month study, use of mental health services overall was twice as high for women than it was for men. In a large study examining depression by the National Institute for Mental Health, 83% of patients were female (Bauer et al., 2012). In addition, a study by de Roten et al. (2017) examined Inpatient Brief Psychodynamic Psychotherapy versus treatment as usual, utilizing 72.5% of women in their sample. In addition to depression, a process-outcome study examining the roles of sex and gender of clients and therapists across presenting problems called the *Practice-Oriented Outpatient Psychotherapy Study (PAP-S)* in Switzerland had 67.9% female participants and 32.1% male participants (Staczan et al., 2017). In accordance with these statistics, a Mental Health Service Use study in Canada discovered that female sex may be one of the greatest predictors for help-seeking (Sareen, Cox, Afifi, Yu, & Stein, 2005). Results also suggested that young males with a low education level were least likely to seek treatment (Sareen et al., 2005). Similar findings by Mackenzie, Reynolds, Cairney, Streiner, and Sareen (2012) hold that certain demographic groups, specifically men and older adults (i.e., > 65 years old), are least likely to seek psychotherapy services when compared to other individuals in the population. Although older adults in general are less likely to pursue treatment, results found that older women were still more likely to seek services than older men (Mackenzie et al., 2012).

On the other hand, research suggests that men are less often referred to psychotherapy, reinforcing the stereotypical gender role that, on average, men

underutilize psychotherapy services (Vogel et al., 2014). This stance could be greatly affecting the way gender roles are perceived in therapy, giving women a possible advantage in the context of psychotherapy services. As a result, failure to refer men to therapy by friends, family members, and significant others may perpetuate men's reduced likelihood in seeking help (Vogel et al., 2014). A study by Vogel, Wade, Wester, Larson, and Hackler (2007) highlighted this disparity by assessing treatment referrals by a friend, sibling, mother, father, other family member, co-worker, general medical doctor, or other in relation to gender. Results suggested that 47% of mothers and only 5% of fathers encouraged participants of the study to seek mental health services (Vogel et al., 2007). In addition, Vogel et al. (2014) described an ongoing cycle, where the more a man adheres to the traditional male gender role, the greater psychological distress and withdrawal from social connections he experiences (Vogel et al., 2014). As a result, men, on average, end up working harder to meet the "traditional male role" instead of asking for help in times of distress (Vogel et al., 2014, p. 60). In addition, they discovered two factors that may decrease men's willingness to refer other men and women to psychotherapy called restrictive emotionality (RE) and restrictive affectionate behavior between men (RABBM) (Vogel et al., 2014). RE is defined as "men's tendency to avoid the verbal expression of tender emotions in general," while RABBM is defined as "men's socialized avoidance to limit their expression of warmth and care to other men in their lives" (Vogel et al., 2014, p. 61). Both of these factors contributed to a decreased willingness in men to refer friends and family members to treatment (Vogel et al., 2014).

Despite differences in referral rates, a portion of the literature suggests that women typically benefit more from therapy than men based on gender roles and social norms; benefits may include overall symptom reduction in areas such as depression, anxiety, somatization, and hyperactivity (Michael & Crowley, 2002; Ogrodniczuk, 2006). In addition, benefits may be emphasized through the client's self-reported progress from receiving treatment interventions. In a meta-analysis of treatment outcomes studies with

children and adolescents, Weisz, Weiss, Alicke, and Klotz (1987) reported a mean effect size (ES) of 1.11 for female majority groups and .80 for male majority groups. Additionally, in a different meta-analysis of treatment outcomes with children and adolescents, Weisz et al. (1995) found that the mean ES for female majority samples was .71, while the mean ES for male majority samples was .43. Findings suggest that psychotherapy had more beneficial effects in female-majority samples than in male-majority samples. Additionally, when comparing an adolescent population to a child population, Weisz et al. (1995) found that gender effects were only significant in the female adolescent population, not with male adolescents or children. In a meta-analysis examining the effectiveness of treatment for depression in children and adolescents, Michael and Crowley (2002) found that when the percentage of female subjects in controlled studies was 60% or greater, the mean ES was 0.90 ($n = 9$; 95% CI [0.42, 1.38]), as compared to an ES of 0.63 ($n = 6$; 95% CI [0.32, 0.92]) when the percentage of female subjects was below 60%. Likewise, in pre/post studies, when the percentage of female subjects was 60% or greater, the average ES was 1.20 ($n = 5$; 95% CI [0.55, 1.84]), whereas the mean ES was 1.04 ($n = 4$; 95% CI [0.56, 1.51]) when the percentage of female subjects dropped below 60% (Michael & Crowley, 2002). Ultimately, the authors concluded that more information is needed to better understand the relationship between gender and treatment outcomes, especially since the prevalence for young females to be diagnosed with depression was higher in comparison to their male counterparts. Since the aforementioned gender-related findings were not analyzed at the individual level, conclusions cannot be made regarding the potential interaction of gender and psychotherapy outcome.

Societal norms, including gender roles, may affect how an individual perceives the therapeutic experience, resulting in various outcomes in men compared to women. For example, Bohart and Wade (2013) found that masculine norms may influence how clients interpret the therapeutic experience. They also discovered that men appear less

likely to enter therapy, although it is unclear if they have worse outcomes. Mintz and O'Neil (1990) found when men seek therapy, which is not often, they are frequently "fearful of disclosing or quite unaware of their feelings" (p. 382). If so, this may impede their overall progress and outcomes in therapy. Additionally, Cook (1990) explained that feminine characteristics and socialization may lead to better psychotherapy outcomes in women than in men. Feminine characteristics include "emotionality, sensitivity, nurturance, and interdependence, where masculinity denotes assertion, independence, dominance, and goal-directedness" (Cook, 1990, p. 371). Also, women are more likely to converse about internal concerns, such as relationships and personal feelings, while men's conversations tend to revolve around work, sports, and other external issues (Cook, 1990). Research suggests that men appear more likely to minimize, camouflage, or deny their feelings due to gender socialization which may hinder them in a therapeutic setting (Cook, 1990). A study by Kirshner, Genack, and Hauser (1978) found that women appeared more "responsive and effective in psychotherapy" (p. 158) than men. Based on societal and gender roles, these characteristics suggest a more positive outcome in psychotherapy for women than for men.

In a meta-analysis examining psychological and pharmacological treatment for depression, Cuijpers et al. (2014) found that men and women may attribute their depression to different factors. For example, men seem to attribute depression to "failure in finances, occupation, and achievements," whereas women attribute depression to "neuroticism, divorce, absence of parental warmth, social supports, and marital satisfaction" (Cuijpers et al., 2014, p. 942; Kendler, Myers, & Prescott, 2005). As such, Cuijpers et al. (2014) concluded that women may respond better to psychotherapy than men. Despite these findings, the results of this meta-analysis found that gender did *not* predict or moderate outcome when using cognitive behavioral therapy (CBT) and pharmacotherapy treatment modalities ($g = -0.05$; 95% CI $[-0.22, 0.12]$), as all differences between men and women were small and non-significant (Cuijpers et al.,

2014). A notable limitation of this study is that CBT was the only therapy modality utilized. This leaves the possibility that other modalities might be associated with a previously undetected interaction.

Furthermore, research suggests that societal norms and gender roles are molded during childhood and adolescence. Lewis et al. (2015) found that prevalence for depression increases in adolescence (i.e., around age 12), with more pronounced effects in female adolescents than in male adolescents. This may be attributed to vulnerability factors and various psychosocial and biological changes prominently found in female adolescents, such as the development of interpersonal skills and relationships for self-discovery and change (Lamb, 1986; Lewis et al., 2015). In addition, Lewis et al. (2015) found a significant gender by emotional closeness interaction, where females who reported low emotional closeness to their parents were 2.3 times more likely to develop depressive symptoms than females who reported having a high emotional closeness with their parents. Overall, findings suggested that female adolescents may be more susceptible to certain kinds of stressors, particular the quality of parent-child relationship (Lewis et al., 2015). Michael and Crowley (2002) reported that being emotionally expressive is more likely to be normative among female adolescents whereas “display rules” are more discouraging of emotional expression (e.g., “big boys don’t cry”) among their male counterparts, which may lead to an advantage for young women in the context of psychotherapy. In addition, a study by Ponton (1993) found that adolescent females are more sensitive to “superficiality or the use of artificial devices on the part of the therapist” (p. 361). This highlights the importance of the therapeutic relationship in working with female adolescents, which may, in turn, positively impact the client’s self-esteem and body image concerns. Additionally, Lamb (1986) and Ponton (1993) agreed that adolescent females are sophisticated in their utilization of interpersonal skills and relationships for self-discovery and change, which may promote more success in psychotherapy outcomes than male adolescents.

Client presentation also seems to have an effect on psychotherapy outcomes. Research suggests that women may present themselves as more open, emotionally exposed, and eager in therapy sessions when compared to men (Cook, 1990). A study by Heatherington, Stets, and Mazzarella (1986) found that women are typically more comfortable, vulnerable, and willing to seek help in therapy. This may create a bias in some therapeutic relationships, suggesting that the majority of female clients may have an “edge” in therapy when compared to male clients. As such, psychotherapists may subconsciously favor women as clients because of their tendency to seek help and demonstrate vulnerability, which may lead to greater psychotherapy outcomes in women than in men (Heatherington et al., 1986).

In addition, Phillips and Segal (1969) found that women are more likely to admit to psychological problems than men and have higher expectations for a positive experience with therapy. They also found that women are more likely than men to collaborate effectively with the therapist (Phillips & Segal, 1969). Although these characteristics are ideal in clients, some authors hold that women may be the preferred clients because of their submissive, compliant nature and their ability to “know their place” in therapy (Heatherington et al., 1986, p. 255).

Ultimately, the aforementioned findings suggest that, while women may present themselves as more vulnerable and willing to seek treatment when compared to men, therapists may also maintain certain biases toward women in therapy, resulting in greater psychotherapy outcomes. A quote by Sheridan (1982) states that “it would be premature to conclude that, in a sexist society, therapists have somehow escaped untainted” (p. 81). Most therapists maintain ideas regarding the “ideal” client presentation. Consequently, the majority of female clients seem to fulfill this role more effectively in the therapist’s eyes than male clients (Heatherington et al., 1986). Although research is inconclusive about the effect of gender biases in client presentation, it is important to consider that therapists are not exempt from biases.

While some research suggests that factors such as societal and gender norms, client presentation, and types of therapy may affect female clients differently than male clients, other research supports the *gender similarities hypothesis*, suggesting that there are no considerable psychological differences among men and women, including in type of therapy received and response to treatment (Hyde, 2005). Hyde (2005) examined this phenomenon in a meta-analysis and found that 78% of gender differences (e.g., verbal/non-verbal abilities, cognitive abilities, social abilities) were small or close to zero. As a result, Hyde (2005) found that boys and girls are alike on most, but not all, psychological variables (exceptions include motor abilities and sexuality).

Although in some cases women seem to have greater psychotherapy outcomes than men, multiple studies suggest that both men and women benefit equally from therapy (Mintz & O'Neil, 1990; Ogrodniczuk, Piper, Joyce, & McCallum, 2001; Ogrodniczuk, 2006). In fact, men seem to value different aspects of the therapeutic relationship compared to women. For example, Bohart and Wade (2013) found that men use therapy mainly to discuss important issues, while women typically use the session for education and validation from the therapist. In addition, men may prefer a more neutral relationship with a therapist who encourages introspection and interventions when uncomfortable emotions arise (Ogrodniczuk, et al., 2001). Women, on the other hand, may desire a more personal and collaborative relationship with a therapist, seeking a problem-solving approach in therapy (Ogrodniczuk et al., 2001). Some of the literature on gender effects suggests that men and women prefer to work with a same-gender therapist. Although some individuals may prefer a same-gender therapist, there are mixed findings regarding the significance of same-gender client and therapist relationships. In fact, Zlotnic, Elkin, and Shea (1998) found that no specific groupings of the client and therapist relationship led to more improvement in presenting problems even when controlling for type of treatment and depressive symptomology at baseline.

As briefly mentioned above, Ogrodniczuk (2006) found that men have greater outcomes from interpretive therapy, while women benefit more from supportive therapy. Interpretive therapy promotes self-examination with a focus on introspective interventions, while supportive therapy encourages external interventions and a collaborative, problem-solving approach with the therapist (Ogrodniczuk, 2006). It is important to recognize that, in a sample of 89 men and women split into two groups (interpretive vs. supportive therapy), both men and women showed improvements in each type of therapy. However, clinically significant and reliable change occurred for men who were in interpretive therapy as opposed to supportive therapy. Women, on the other hand, demonstrated clinically significant and reliable change while in supportive therapy but not while in interpretive therapy (Ogrodniczuk, 2006). This study suggests that men and women may not benefit in the same ways from psychotherapy. Instead, different forms of psychotherapy may be more effective depending on one's gender.

Despite the aforementioned studies, it is difficult to locate literature that solely examines gender effects in psychotherapy (Kirshner et al., 1978). In fact, Zlotnick, Elkin, and Shea (1998) suggested that "gender be considered in a variety of interactions rather than as a central determinant of therapeutic outcome" (p. 655). Numerous studies include gender as a factor among other variables for analysis, which makes it challenging to understand the effect of gender alone in psychotherapy outcomes. For example, Weisz et al. (2017) conducted a meta-analysis of youth therapies over the past fifty years. Findings suggest that the probability that youths in the treatment condition would obtain better outcomes than youths in the control conditions (i.e., no treatment/waitlist, therapy placebo, pill placebo, and usual clinical care) was 63%. However, gender was not a significant moderator in this study (Weisz et al., 2017).

Ultimately, there is a lack of empirical evidence investigating gender differences and/or interactions in psychotherapy (Kirshner et al., 1978). Additionally, most of the literature to-date examines psychotherapy outcomes in adults with even fewer studies

concerning the adolescent population, especially within school mental health (SMH) settings. Given that approximately 20% of youth experience social and emotional difficulties and only 6-7.5% access mental health services, SMH treatment aims to reduce barriers (e.g., financial concerns, transportation difficulties), decrease stigmatization, promote prevention, and facilitate targeted empirically-based interventions in a conveniently located setting (Michael et al., 2016). In examining the limited literature on SMH outcomes, findings suggest efficacy in SMH treatment settings with effect sizes ranging from .29 to .97 over the past 30 years (Michael et al., 2016).

The current study assessed gender differences in psychotherapy outcomes by specifically examining a SMH setting known as the Assessment, Support, and Counseling (ASC) Center. The ASC Center, established in 2006, is staffed with supervised clinicians from the Clinical Psychology, Marriage and Family Therapy, and Social Work graduate programs at Appalachian State University in Boone, North Carolina. The clinicians-in-training provided psychotherapy services to students referred to the center by themselves, parents, guardians, teachers, and/or school counselors. The ASC Centers are located in three western North Carolina school districts and serve approximately 5-10% of the student body annually.

No known research studies exist where the relationship between gender on psychotherapy outcomes was examined as a primary research question. The purpose of the current study is to answer a question that has never been directly assessed in the extant literature. The goal of the current study is to directly investigate the relationship between gender and psychotherapy outcomes by examining psychotherapy outcomes over time at the individual level, an analysis that cannot be performed with data from meta-analyses.

Archival data was analyzed from the 2012-2017 school years in order to examine possible differences in YOQ-30 scores between male and female adolescents in the ASC Center. In addition to gender effects, this study examined the possibility of a gender by

time interaction between male and female adolescents and their differences, if any, in the trajectory (i.e., slopes) of recovery/improvement over time. If a gender effect and/or interaction is present, this study aims to identify whether female or male adolescents have greater psychotherapy outcomes as a result of services received in the ASC Center. This research study attempts to utilize knowledge regarding gender effects and treatment responses to guide interventions and overall effectiveness of clinicians in SMH programs.

Based on previous findings in the adolescent and adult literatures, female majority samples appeared to experience somewhat better outcomes when compared to male majority samples. However, psychotherapy outcomes and the potential relationship with gender has not been examined specifically in SMH settings. Among the more current adolescent psychotherapy outcome studies, the findings are mixed and inconclusive. Therefore, it is hypothesized that there will be no significant differences between male and female adolescents in the trajectory of recovery/improvement in the ASC Center when accounting for number of individual psychotherapy sessions.

Methods

Participants

Approximately 267 high school students (151 female adolescents, 116 male adolescents; age range 13-19 years old, $M = 15.9$, $SD = 1.3$; 1 male and 1 female with min. session number of 1) were referred to the ASC Centers at Watauga, Ashe, and Alleghany County High Schools. Students were referred to the ASC Center by parents/guardians, teachers, school counselors, or themselves in order to receive psychotherapy services from supervised clinicians. Each adolescent who participated in the current study evidenced elevated psychological distress and/or impairments in daily life activities, academic endeavors, dating relationships, relationships with friends, and/or family dynamics. In order to receive services, the student and his/her parent(s) or guardian(s) were required to sign a consent form before treatment (Appendix A). In addition, students who chose to continue services at the ASC Center for more than one

school year were not duplicated as participants in subsequent school years. Data from “carry-over” clients were only used from their initial treatment trial in the current study. Individuals who identified as “transgender” ($N = 2$) were excluded from the current study. The data were truncated to include and analyze only those clients through session 16.

Measures

Demographics. Demographic information was extracted from each participants’ record and included age and biological sex.

Descriptive Information. The total number of psychotherapy sessions were extracted from each participants’ record. In addition, the Behavioral Assessment System for Children, Second Edition (BASC-2), an assessment tool measuring behavioral functioning in youth, was administered (Albright et al., 2013). The BASC-2 assists in the identification of at-risk behaviors and emotional problems of clinical concern (e.g., anxiety, depression, hyperactivity, school maladjustment) for children through the use of clinical, adaptive, broadband, and narrowband subscales (Albright et al., 2013). Participants answered a variety of questions (true/false and ratings on a 4-point Likert scale) regarding their current emotional and behavioral functioning. For the purpose of this study, each participants’ highest elevation (e.g., score above 60) on the BASC-2 was extracted from their record and categorized into one of four broadband scales (School Problems, Internalizing Problems, Externalizing Problems, and Personal Adjustment) to examine elevation frequencies for the total sample and by gender (Table 1).

Youth Outcome Questionnaire-30. In order to assess responses to treatment and psychotherapy outcomes, participants were asked to complete the Youth Outcome Questionnaire-30 (YOQ-30) at baseline (i.e., the initial session) and during at least every other therapy session (Burlingame et al., 2004). The YOQ-30 is a 30-item psychometric assessment that was developed from the original 64-item YOQ measure (Burlingame et al., 2004). The 30-item version was used “based on [the items’] individual sensitivity to

change as estimated from a large scale study of patients undergoing treatment in a variety of settings” (Burlingame et al., 2004, p. 2). This measure was normed using a representative sample of 530 youths and maintains a high internal consistency for community normative samples ($\alpha = .92$) and outpatient normative samples ($\alpha = .93$).

The YOQ-30 is not intended to be used as a diagnostic tool, but as a screening measure for various internalizing (e.g. somatization, depression, anxiety) and externalizing (e.g. aggression, conduct or hyperactivity/distractibility) symptomology. This assessment contains six subscales that assess somatization, social stress, aggression, conduct problems, hyperactivity/distractibility, and depression/anxiety in adolescents by using a 5-point Likert scale. Items include statements such as “My stomach hurts or I feel sick more than others my same age,” “I feel like I don’t have any friends or that no one likes me,” “I physically fight with adults,” “I argue or speak rudely to others,” “I have a hard time sitting still or I have too much energy,” and “I think about suicide or feel I would be better off dead.” Participants rate each statement with a response of “Never or Almost Never (0),” “Rarely (1),” “Sometimes (2),” “Frequently (3),” and “Almost Always or Always (4)” based on “how true” it is to them within the past seven days. This questionnaire typically takes the average respondent approximately four minutes to complete (Burlingame et al., 2004).

The measure is scored by summing the responses from each of the 30 items to calculate the total score in addition to summing the specific items that compose each of the six subscales (e.g., items 18 and 30 compose the social stress subscale). The total scores of the YOQ-30 range from 0 to 120. Scoring is divided into two parts: clinical and non-clinical. A total score of 29 or greater indicates overall distress at the clinical level. As the total score increases, greater overall distress and impairment is indicated. Any score less than 29 is considered as non-clinical. According to Burlingame et al. (2004), “the total score of the YOQ-30 tends to be the best index to track global change and has the highest reliability and validity” (p. 4). The subscales are supplementary in that they

may be utilized to identify presenting problems and to track changes as well.

Additionally, the YOQ-30 has been utilized to determine whether meaningful change has occurred following treatment through the Reliable Change Index (RCI) (Jacobson & Truax, 1991). In establishing RCI estimates for SMH samples, the difference between the student's pre- and post- YOQ-30 scores is calculated and adjusted for the standard error of the difference between scores (Albright et al., 2013; Michael et al., 2016). At post-treatment, in order to determine if the student has recovered, the student must have begun treatment with clinically significant levels of distress (YOQ-30 score > 29), had a decrease in symptomology of 10 points or more, and ended treatment with YOQ-30 scores in the sub-clinical range (score < 29) (Albright et al., 2013; Burlingame et al., 2004).

Procedure

Procedures in this study were reviewed and approved by Appalachian State University's Institutional Review Board (IRB: 18-0069) prior to the beginning of data collection (Appendix B). Upon referral, students and parents/guardians underwent a full informed consent (Appendix A) procedure, which described ASC Center services, the voluntary nature of treatment, and a separate research consent (Appendix C). Treatment began once the written consent was obtained from the referred student and from his/her parents and/or guardians. Over the course of treatment, which varied in duration and frequency depending on the severity of the presenting concerns, students met with their respective clinician for individual psychotherapy on a weekly basis. Clinician backgrounds were diverse and included supervised graduate clinicians from Marriage and Family Therapy, Clinical Psychology, and Social Work programs at Appalachian State University (ASU). Specific treatments were implemented depending on the client's presenting symptoms with the goal of providing effective, empirically-based interventions. The vast majority of students received cognitive behavioral therapy (CBT) by graduate students or master's level practitioners under the supervision of Licensed

Psychologists or Licensed Psychological Associates. Termination of treatment resulted when the client exhibited significant recovery or improvement in their symptoms or was no longer interested in receiving services.

Each participant was administered an initial YOQ-30 at baseline and at the beginning of every other session, and in some cases every session. The measure was given at the beginning of each session in order to obtain the most valid responses from each participant as responses are typically highly influenced by meeting with the clinician for psychotherapy.

Archival data was examined from the 2012-2017 school years to determine if there was a significant difference in the trajectory of recovery for male adolescents versus female adolescents when controlling for symptoms at pre-treatment and total number of therapy sessions. Data was retrieved from Excel spreadsheets on three laptops with one laptop located at each school in the ASC Center. Each laptop was password protected and de-identified for purposes of confidentiality and privacy.

Analyses

Multilevel modeling with fixed and random effects was used to examine psychotherapy outcomes as measured by YOQ-30 scores for individuals over the course of treatment. Only data from the first 16 treatment sessions of all cases were used in the model to prevent the model from being predominantly represented by a few cases with more data. In addition, missing data (i.e., missing YOQ-30 scores) were included in the data set in order to maintain ecological validity.

The data contains two levels: 1) time (within-subjects) and 2) gender (between-subjects). For the multilevel modeling analyses, we evaluated five increasingly complex models, with the purpose of systematically testing for fixed and random effects of time

(number of sessions) and gender. Models 4 and 5 most directly tested the research question of whether there were gender differences on YOQ-30 scores over time.

Results

The average baseline YOQ-30 score for the 267 students in the sample was 36.44 ($SD = 19.09$, 95% CI [33.67, 39.21]). The average final YOQ-30 score for all students in the sample was 17.13 ($SD = 19.08$, 95% CI [8.88, 25.38]). For male students, the baseline YOQ-30 score ($N = 116$) was 33.93 ($SD = 19.32$, 95% CI [29.63, 38.22]) and the final YOQ-30 score was 14.55 ($SD = 16.22$, 95% CI [3.65, 25.44]). The baseline YOQ-30 score for female students ($N = 151$) was 38.35 ($SD = 18.78$, 95% CI [34.72, 41.99]). The final YOQ-30 score for female students was 19.50 ($SD = 21.82$, 95% CI [5.64, 33.36]). Students met for an average of 9.69 sessions ($SD = 4.88$; range: 1-20 sessions) over the course of approximately ten weeks (Table 2). The most frequent elevation for both males and females on the BASC-2 was Internalizing Problems (Table 2).

Multilevel modeling with fixed and random effects was used to examine change in YOQ-30 scores over the course of treatment (i.e., time; level 1) and between genders (level 2). All estimates were conducted using maximum likelihood estimation, which allowed for the use of all data available in estimating parameters. A total of five models were conducted to estimate the change over time in YOQ-30 scores and then to examine the interaction between gender and time and potential varying trajectories for male versus female adolescents in psychotherapy. First, we estimated a baseline model of YOQ-30 scores without any predictors, $F(1, 255.92) = 755.64$, $p < .001$, $-2LL = 13392.96$. The parameter estimate for YOQ-30 scores was 28.51 ($p < .001$, 95% CI [26.46, 30.55]), which reflects the sample mean. This is a score slightly below the clinical range. The random effect around the intercept was 255.60 ($p < .001$, 95% CI [211.47, 308.94]) and

the Intraclass Correlation Coefficient (ICC) indicated that 30% of the variance in YOQ-30 scores was unaccounted for. Both of these statistics suggest there was significant within-person variability.

A random intercepts model was then estimated for YOQ-30 scores with a fixed effect for session number (i.e., time; level 1), $F(1, 1480.77) = 537.49, p < .001, -2LL = 12936.44$. Session number as a fixed effect was significant, $b = -1.44, p < .001, 95\% \text{ CI } [-1.56, -1.32]$, indicating that session number was associated with significant change in YOQ-30 scores. On average, collapsing across participants, there was a YOQ-30 decrease across sessions (see Figure 1). In addition, the random effect for participant was also significant, $b = 262.59, p < .001, 95\% \text{ CI } [218.38, 315.75]$, indicating a large amount of variance attributable to individual differences in YOQ-30 scores.

For the next step, we added in a random effect for session number, $F(1, 141.43) = 167.23, p < .001, -2LL = 12645.14$, to determine whether the slopes of the intercept (YOQ-30 scores) and the session number changed at different rates by different participants. Results found that the random effect for session number was significant, $b = 2.52, p < .001, 95\% \text{ CI } [1.81, 3.49]$, indicating significant variance in the slopes. In addition, results indicated that the fixed effect for session number was still significant, $b = -1.70, p < .001, 95\% \text{ CI } [-1.96, -1.44]$. The random effect for participant also remained significant, $b = 292.82, p < .001, 95\% \text{ CI } [240.00, 357.26]$.

Next, a fourth model was used to examine if there was a fixed effect for gender, $F(1, 320.05) = 3.75, p = .054, -2LL = 12641.44$. Results indicated that a fixed effect for gender was not significant, $b = 3.70, p = .054, 95\% \text{ CI } [-.06, 7.46]$, while the intercept

and fixed effect for session number remained significant ($p < .001$; Table 3). The random effects for participant and session number also remained significant.

A final model was estimated examining if there was a change in YOQ-30 scores over time by gender, $F(1, 145.03) = .40, p = .53, -2LL = 12641.05$. Results indicated that the interaction of session number and gender was not significant, $b = -.17, p = .53, 95\%$ CI $[-.69, .36]$. The other parameters remained significant (Table 4).

Discussion

The descriptive findings indicate that when examining average YOQ-30 scores at baseline, female adolescents had consistently higher scores by approximately five points than male adolescents. Said another way, on average, female adolescents were more symptomatic than their male counterparts at baseline. At least from a descriptive standpoint, these baseline findings are consistent with several studies which conjectured that women might be more likely to acknowledge psychological problems more readily than men who might underreport distress (Cook, 1990; Heatherington et al., 1986. Michael & Crowley, 2002). The descriptive findings were roughly similar at post-treatment, wherein the average YOQ-30 for females, though in the non-clinical range, remained approximately 5 points higher than the males who underwent psychotherapy at the conclusion of treatment in a school mental health setting. The research questions pertaining to what happened over time were addressed by a series of multilevel modeling analyses.

Five increasingly complex multilevel models were evaluated to systematically test for fixed and random effects of time (number of sessions) and gender. The models may be conceptualized as a “building block” approach, meaning that as the models progressed, more information was provided to answer the research questions in a logical

sequence. Models 4 and 5 directly tested the primary research question of whether there were gender differences on YOQ-30 scores over time in the ASC Center.

The findings of the baseline model indicated that there was a significant amount of within-person variability on YOQ-30 scores, which is to be expected with a wide range of students, each with their own individual needs and presenting concerns. Overall, the average YOQ-30 score was clearly suggestive of elevated symptoms of distress.

The random intercepts model for YOQ-30 scores indicated that there appeared to be an associated significant decrease in symptoms over time. Because this study was not experimental and utilized a within-subjects design, definitive conclusions about the reasons for the observed decreases in symptomology over time cannot be made.

However, it is certainly plausible to assert that some of the improvements were associated with the treatment, given that the difference between pre- and post-treatment mean scores on the YOQ-30 greatly exceeded the criteria for reliable change as first described by Jacobsen and Truax (1991). That is, even after accounting for change attributable to factors such as regression to the mean and maturation, the results are congruent with previously published school mental health outcome studies (e.g., Albright et al., 2013, Michael et al., 2016).

Finally, we directly addressed the primary research question of whether there is a gender effect and/or interaction present and, if so, which gender has better psychotherapy outcomes. Results were consistent with the hypothesis in that there were no significant gender differences in the trajectory of recovery/improvement when accounting for number of individual psychotherapy sessions. Results from Model 4 indicated that a fixed effect for gender was not significant, indicating no significant difference on YOQ-30 scores for male and female adolescents in the ASC Center. When examining the interaction of session number and gender, results from Model 5 indicated that, as predicted, there were no differences in the trajectory of improvement/recovery over time based on gender.

These findings are consistent with the *gender similarities hypothesis* (Hyde, 2005) and the notion that men and women benefit equally from therapy (Ogrodniczuk, Piper, Joyce, & McCallum, 2001; Ogrodniczuk, 2006). Although some studies indicated that psychotherapy seems to have more benefits for female-majority samples (Michael & Crowley, 2002; Weisz et al., 1987, Weisz et al., 1995), this is not the case with the present study. Unlike previous studies (e.g., Kirshner, Genack, & Hauser, 1978), males and females achieved approximately commensurate outcomes.

As it pertains to adolescents in school mental health programs, gender did not seem to make a difference in terms of differential response to treatment even though female adolescents were slightly more symptomatic at baseline and post-treatment. These data mirror the recent findings of a large meta-analysis that analyzed the results of child and adolescent psychotherapy trials over the past fifty years. Weisz et al. (2017) reported that gender was not a significant moderator of treatment outcomes when examining studies published in the empirical literature since 1960. These data are also consistent with Cuijpers et al.'s (2014) conclusion that gender did not predict or moderate treatment outcomes when utilizing CBT and pharmacotherapy treatment modalities among adults. In summary, data from the present study suggest that there is not a significant interaction between gender and psychotherapy outcomes for adolescents as it pertains to SMH settings.

Limitations

There are several limitations to this study. Although specific ethnic and racial demographic information was not collected for this particular data set, the basic demographics from the schools suggest that the vast majority of participants in this study were predominantly white. Thus, firm conclusions about how these findings might be relevant to more diverse samples cannot be made.

Though racial diversity was a limitation, the types of symptoms the youth exhibited, on average, were quite diverse. This might be construed as a limitation since

we were not testing the effects of SMH treatment for specific problems (e.g., elevated anxiety symptoms). Consequently, answers to questions about how males and females might respond differently to the treatment of specific symptoms were not addressed. Perhaps if a more focused study of outcomes with a specific psychopathology (e.g., depression) was conducted, there may indeed be differential outcomes based on gender. In fact, several studies explored gender differences in outcomes by examining depression or anxiety only (Bauer et al., 2012; Cuijpers et al., 2014; Michael & Crowley, 2002; Weissman, 2014).

Another limitation of this study is that precise information regarding the treatment modality is limited. The vast majority of clinicians in the ASC Center (80% plus) utilize modular CBT, a tailored treatment approach that included treatment elements such as psychoeducation, identification of cognitive distortions, cognitive restructuring, and mood monitoring (Chorpita, Daleiden, & Weisz et al., 2005), under the supervision of Licensed Psychologists or Licensed Psychological Associates; however, fidelity checks were not implemented to determine adherence to this treatment model. As such, it could be that gender differences were not discovered in the present study given the potential variability in theoretical orientation and treatment approach amongst clinicians. Also, it is possible that some clinicians exhibited subconscious biases during treatment and tailored their treatment approach based on their client's gender. As such, there was no way to measure potential individualization of gender or bias in the current study. Further, we did not account for those students who may have received psychotherapeutic interventions or other mental health treatment prior to their involvement with school mental health.

It is also important to note that the YOQ-30 measure has its own limitations, which may have impacted the results of this study. For example, the YOQ-30 is designed as a binary measure with norms determined only for males and females. As such, it was not feasible to include individuals who identified as transgender in the current study. An additional limitation is that weekly YOQ-30 administrations was often challenging and,

at times, was inconsistently administered by clinicians in the ASC Center (e.g., every other session instead of every session). Furthermore, this study was limited by the effects of attrition (e.g., students participated in limited sessions, dropped out) as well as by missing data (e.g., YOQ-30 not administered during a session).

Implications and Future Directions

Overall, findings indicate that, when it comes to SMH programs, there is no need to alter treatment approaches or modalities based on gender. Future studies might address whether a particular treatment modality (e.g., CBT) alone has a particular effect on psychotherapy outcomes for male and female adolescents by utilizing a manualized treatment protocol to ensure fidelity to the model. Additionally, future studies might aim for a more consistent administration of the YOQ-30 measure in order to allow more precise and consistent symptom tracking over time. Future studies may also wish to investigate other individual factors, including the effects of clinical training (e.g., Marriage and Family Therapy, Clinical Psychology, Social Work), level of experience (e.g., graduate-level clinicians versus licensed professionals), theoretical orientation and approach (e.g., CBT, Dialectical Behavior Therapy, Acceptance and Commitment Therapy), and student psychopathology on psychotherapy outcomes.

Finally, future studies regarding psychotherapy outcomes in SMH programs for individuals who identify as transgender are of particular importance. A recent study of individuals who identify as transgender in the rural state of Montana highlights their associated mental health disparities, which include marginalization, discrimination, and stigmatization (Smith et al., 2018). Due to unmet mental health needs, transgender individuals in the sample were substantially more likely to experience suicidal ideation, a history of suicide attempts, decreased well-being, and additional risks including bullying and marginalization (Smith et al., 2018). These findings indicate the necessity to include adolescents who identify as transgender in future outcome studies in order to ensure their needs are being met and to monitor treatment effectiveness. Ultimately, the question of

whether male or female adolescents have differential treatment responses in the context of a SMH setting, or a treatment setting in general, could soon be obsolete due to the societal and cultural recognition of gender fluidity and transgenderism as a legitimate means of gender identity. Knowing this, it is pertinent that clinicians stay abreast of the necessary changes in assessment and treatment practices to effectively assist diverse clients.

References

- Albright, A., Michael, K.D., Massey, C., Sale, R., Kirk, A., & Egan, T. (2013). An evaluation of an interdisciplinary rural school mental health programme in Appalachia. *Advances in School Mental Health Promotion*, 180–202. doi: 10.1080/1754730X.2013.808890.
- Alonso, J., Angermeyer, M. C., Bernert, S., Bruffaerts, R., Brugha, T. S., Bryson, H., & ... Vollebergh, W. M. (2004). Use of mental health services in Europe: Results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project. *Acta Psychiatrica Scandinavica*, 109, 47-54. doi:10.1111/j.1600-0047.2004.00330.x
- Bauer, A. M., Azzone, V., Alexander, L., Goldman, H. H., Unützer, J., & Frank, R. G. (2012). Are patient characteristics associated with quality of depression care and outcomes in collaborative care programs for depression? *General Hospital Psychiatry*, 34, 1–8. <http://doi.org/10.1016/j.genhosppsych.2011.08.019>
- Bohart, A. C. & Wade, A. G. (2013). The client in psychotherapy. In M. J. Lambert (Ed.), *Handbook of Psychotherapy and Behavior Change* (pp. 219-257). Hoboken, NJ: John Wiley & Sons.
- Burlingame G. M., Dunn T., Hill M., Cox J., Wells M. G., Lambert M. J. & Brown G. S. (2004). *Administration and scoring manual for the Y-OQ-30.2*. Youth Wilmington, DE: American Professional Credentialing Services.
- Chorpita, B.F., Daleiden, E.L., & Weisz, J.R. (2005). Identifying and selecting the common elements of evidence based interventions: A distillation and matching model. *Mental Health Services Research*, 7, 5-20. doi:10.1007/s11020-005-1962-6
- Cook, E. P. (1990). Gender and psychological distress. *Journal of Counseling & Development*, 68, 371-375. doi:10.1002/j.1556-6676.1990.tb02513.x

- Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and Development of Psychiatric Disorders in Childhood and Adolescence. *Archives Of General Psychiatry*, *60*, 837-844. doi:10.1001/archpsyc.60.8.837
- Cuijpers, P., Weitz, E., Twisk, J., Kuehner, C., Cristea, I., David, D., & ... Hollon, S. D. (2014). Gender as predictor and moderator of outcome in cognitive behavior therapy and pharmacotherapy for adult depression: An 'individual patient data' meta-analysis. *Depression and Anxiety*, *31*, 941-951. doi:10.1002/da.22328
- de Roten, Y., Ambresin, G., Herrera, F., Fassassi, S., Fournier, N., Preisig, M., & Despland, J. (2017). Efficacy of an adjunctive brief psychodynamic psychotherapy to usual inpatient treatment of depression: Results of a randomized controlled trial. *Journal of Affective Disorders*, *209*, 105-113. doi:10.1016/j.jad.2016.11.013
- Hartung, C. M., & Widiger, T. A. (1998). Gender differences in the diagnosis of mental disorders: Conclusions and controversies of the DSM-IV. *Psychological Bulletin*, *123*, 260-278. doi:10.1037/0033-2909.123.3.260
- Heatherington, L., Stets, J., & Mazzarella, S. (1986). Whither the bias: The female client's 'edge' in psychotherapy? *Psychotherapy: Theory, Research, Practice, Training*, *23*, 252-256. doi:10.1037/h0085606
- Hyde, J. S. (2005). The gender similarities hypothesis. *American Psychologist*, *60*, 581-592. doi: 10.1037/0003-066X.60.6.581
- Jacobson, N.S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, *59*, 12-19. doi: 10.1037/0022-006X.59.1.12
- Kendler, K. S., Myers, J., & Prescott, C. A. (2005). Sex Differences in the Relationship Between Social Support and Risk for Major Depression: A Longitudinal Study of Opposite-Sex Twin Pairs. *The American Journal Of Psychiatry*, *162*, 250-256. doi:10.1176/appi.ajp.162.2.250

- Kirshner, L. A., Genack, A., & Hauser, S. T. (1978). Effects of gender on short-term psychotherapy. *Psychotherapy: Theory, Research & Practice, 15*, 158-167. doi:10.1037/h0085856
- Lamb, D. (1986). *Psychotherapy with adolescent girls*. New York, NY: Plenum Press.
- Lewis, A. J., Kremer, P., Douglas, K., Toumborou, J. W., Hameed, M. A., Patton, G. C., & Williams, J. (2015). Gender differences in adolescent depression: Differential female susceptibility to stressors affecting family functioning. *Australian Journal Of Psychology, 67*, 131-139. doi:10.1111/ajpy.12086
- Mackenzie, C. S., Reynolds, K., Cairney, J., Streiner, D. L., & Sareen, J. (2012). Disorder-specific mental health service use for mood and anxiety disorders: Associations with age, sex, and psychiatric comorbidity. *Depression And Anxiety, 29*, 234-242. doi:10.1002/da.20911
- Michael, K. D., & Crowley, S. L. (2002). How effective are treatments for child and adolescent depression? A meta-analytic review. *Clinical Psychology Review, 22*, 247-269. doi:10.1016/S0272-7358(01)00089-7
- Michael, K. D., George, M. W., Splett, J. W., Jameson, J. P., Sale, R., Bode, A. A., & ... Weist, M. D. (2016). Preliminary outcomes of a multi-site, school-based modular intervention for adolescents experiencing mood difficulties. *Journal Of Child And Family Studies, 25*, 1903-1915. doi:10.1007/s10826-016-0373-1
- Mintz, L. B., & O'Neil, J. M. (1990). Gender roles, sex, and the process of psychotherapy: Many questions and few answers. *Journal of Counseling & Development, 68*, 381-387. doi:10.1002/j.1556-6676.1990.tb02515.x
- Ogrodniczuk, J. S., Piper, W. E., Joyce, A. S., & McCallum, M. (2001). Effect of patient gender on outcome in two forms of short-term individual psychotherapy. *Journal of Psychotherapy Practice & Research, 10*, 69-78.
- Ogrodniczuk, J. S. (2006). Men, women, and their outcome in psychotherapy. *Psychotherapy Research, 16*, 453-462. doi:10.1080/10503300600590702

- Phillips, D. & Segal, B. (1969). Sexual status and psychiatric symptoms. *American Sociological Review*, *34*, 58-72. doi: 10.2307/2092787
- Ponton, L. E. (1993). Issues unique to psychotherapy with adolescent girls. *American Journal of Psychotherapy*, *47*, 353-372. doi: 10.1176/appi.psychotherapy.1993.47.3.353
- Sareen, J., Cox, B. J., Afifi, T. O., Yu, B. N., & Stein, M. B. (2005). Mental health service use in a nationally representative Canadian survey. *The Canadian Journal Of Psychiatry / La Revue Canadienne De Psychiatrie*, *50*, 753-761. doi: 10.1177/070674370505001204
- Sheridan, K. (1982). Sex bias in therapy: Are counselors immune? *The Personnel and Guidance Journal*, *61*, 81-83. doi: 10.1002/j.2164-4918.1982.tb00732.x
- Smith, A. J., Hallum-Montes, R., Nevin, K., Zenker, R., Sutherland, B., Reagor, S., ... Brennan, J. M. (2018). Determinants of transgender individuals' well-being, mental health, and suicidality in a rural state. *Journal of Rural Mental Health*, *42*(2), 116-132. doi: 10.1037/rmh0000089
- Staczan, P., Schmuecker, R., Koehler, M., Berglar, J., Cramer, A., von Wyl, A., & ... Tschuschke, V. (2017). Effects of sex and gender in ten types of psychotherapy. *Psychotherapy Research*, *27*, 74-88. doi:10.1080/10503307.2015.1072285
- United Nations Economic and Social Council (1997). *Report of the economic and social council for 1997*. New York, NY: United Nations General Assembly.
- Vogel, D. L., Wade, N. G., Wester, S. R., Larson, L., & Hackler, A. H. (2007). Seeking help from a mental health professional: The influence of one's social network. *Journal Of Clinical Psychology*, *63*, 233-245. doi:10.1002/jclp.20345
- Vogel, D. L., Wester, S. R., Hammer, J. H., & Downing-Matibag, T. M. (2014). Referring men to seek help: The influence of gender role conflict and stigma. *Psychology Of Men & Masculinity*, *15*, 60-67. doi:10.1037/a0031761
- Weissman M. M. (2014). Treatment of depression: men and women are different?

American Journal of Psychiatry, 171, 384-387. doi:
10.1176/appi.ajp.2013.13121668

Weisz, J. R., Kuppens, S., Ng, M. Y., Eckshtain, D., Ugueto, A. M., Vaughn-Coaxum, R., & ... Fordwood, S. R. (2017). What five decades of research tells us about the effects of youth psychological therapy: A multilevel meta-analysis and implications for science and practice. *American Psychologist*, 72, 79-117. doi:10.1037/a0040360

Weisz, J. R., Weiss, B., Alicke, M. D., & Klotz, M. L. (1987). Effectiveness of psychotherapy with children and adolescents: a meta-analysis for clinicians. *Journal of Consulting and Clinical Psychology*, 55, 542-549. doi: 10.1037/0022-006X.55.4.542

Weisz, J. R., Weiss, B., Han, S. S., Granger, D. A., & Morton, T. (1995). Effects of psychotherapy with children and adolescents revisited: A meta-analysis of treatment outcome studies. *Psychological Bulletin*, 117, 450-468. doi:10.1037/0033.2909.117.3.450

Zlotnick, C., Elkin, I., & Shea, M. T. (1998). Does the gender of a patient or the gender of a therapist affect the treatment of patients with major depression? *Journal Of Consulting And Clinical Psychology*, 66, 655-659. doi:10.1037/0022-006X.66.4.655

Table 1. Highest BASC-2 Composite Elevation

	School Problems	Internalizing Problems	Externalizing Problems	Personal Adjustment
Total Sample	17	147	31	18
Males	12	58	17	11
Females	5	89	14	7

Table 2. Descriptive Statistics of Age and Session Number

	<i>M</i>	<i>SD</i>
<i>Age</i>		
Total Sample	15.90	1.26
Males	15.89	1.23
Females	15.92	1.23
<i>Session Number</i>		
Total Sample	9.69	4.88
Males	9.47	4.79
Females	9.84	4.98

Table 3. Parameter Estimates for Model 4

Parameter	Parameter Estimate	SE	95% CI
<i>Fixed Effects</i>			
Intercept	31.12**	3.18	24.92, 37.44
Session Number	-1.70**	.13	-1.96, 1.44
Gender	3.70	1.91	-.06, 7.46
<i>Random Effects</i>			
Residual	51.71**	2.14	47.68, 56.08
Participant	286.37**	29.18	234.53, 349.68
Session Number	2.52**	.42	1.82, 3.49

Table 1. * $p < .05$; ** $p < .001$

Table 4. Parameter Estimates for Model 5

Parameter	Parameter Estimate	SE	95% CI
<i>Fixed Effects</i>			
Intercept	30.15**	3.57	23.13, 37.18
Session Number	-1.44**	.44	-2.3, -.57
Gender	4.35	2.17	.08, 8.62
Session Number * Gender	-.17	.26	-.69, .36
<i>Random Effects</i>			
Residual	51.72**	2.14	47.67, 56.09
Participant	286.22**	29.14	234.44, 349.43
Session Number	2.51**	.42	1.81, 3.48

Table 2. * $p < .05$; ** $p < .001$

Figure 1. Mean YOQ-30 Scores Over the Course of Treatment

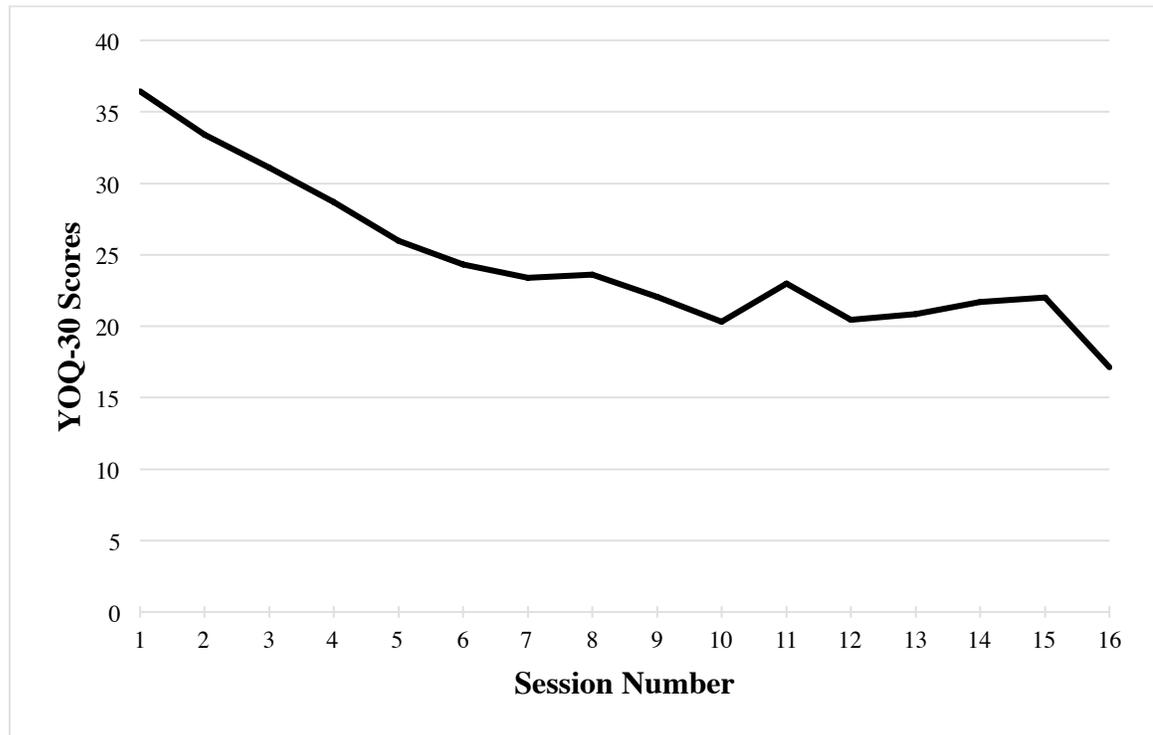


Figure 1. Average psychological symptom endorsement over treatment sessions for overall sample. Higher YOQ-30 scores reflect a higher level of psychological symptoms with decreases in YOQ-30 scores reflecting the remittance psychological symptoms. YOQ-30 scores of 29 or greater represent a clinical level of psychological symptoms, and scores lower than 29 reflect non-clinical psychological symptom experience.

Appendix A

Informed Consent for Clinical Services

We are pleased to have the opportunity to serve you and/or your child through the ASC (Assessment, Support, and Counseling) Center, a partnership between Ashe High School and Appalachian State University (ASU). ASC Center personnel are committed to providing the highest quality clinical services to students and their families, providing education and training for faculty and staff, and expanding the knowledge base for best practice standards through research. Clinical services are provided by qualified, licensed professional providers, faculty members, and/or students under supervision, as appropriate. As we proceed to work together, the following information may be helpful.

Depending on your situation, our first few sessions might be spent exploring and assessing your problems and the possible reasons for them. This might include written or oral testing and evaluation. Once we understand your issues to the best of our ability, you and we will agree on the goals you want to accomplish. Together, we may also agree to change the goals as we move along. We may set some time frames for action.

IHHS/ASC providers/faculty and students will work to ensure that the theoretical perspectives, interventions, and treatments used are considered the best practice methods, supported by research, and are appropriate for your needs. However, it is important for you to know that there are often many different approaches to similar problems. We will talk with you about the pros and cons of each approach before a decision is made to go ahead with any treatment plan. Successful treatment or problem resolution requires a commitment from you. There is always the possibility that our work will not result in the progress we hope to make. Please let us know immediately if you have any questions or concerns.

CONFIDENTIALITY

Ordinarily, anything and everything you share with us is strictly confidential—whether you say it in person, on the telephone, or write it. Some of the information you give us about yourself and matters we discuss will be recorded in your clinical record. If we mutually decide that, in your interests, ASU/ASC Center personnel should provide some part of your confidential information to another professional, your insurance company, your attorney, or even you, you will sign a specific and time-limited release of information. You will know what is to be released, to whom, and how the information will be used. You will be able to stipulate the time period in which the release is to be in effect.

There are some circumstances in which ASU/ASC Center providers, faculty, and/or students would be required by law to reveal confidential information about you without your consent. One situation would be if we learned that you were at imminent risk of harming yourself or another person. Another situation would be if there is reasonable suspicion of abuse or neglect of a child or elderly individual. A third situation would be in the event of a court order compelling us to release your clinical record to a court of

law. Other situations would be based on federal or state laws. Some of these situations are discussed in a separate document, the Notice of Privacy Practices, which we are providing as required by federal law.

Sound clinical practice and teaching includes consultation and discussion with other interdisciplinary providers, faculty members, and students, sometimes regarding specific cases. All those affiliated with ASU/ASC Center are also legally bound to keep the information confidential. If you do not object, we will not tell you about these consultations and discussion unless they are important to our work together.

RESEARCH PARTICIPATION

As indicated above, we endeavor to use best practices when providing treatment to students. In order to accomplish this, we regularly collect data on treatment progress, satisfaction, academic outcomes, attendance, and disciplinary referrals. Although we use these data to facilitate best practices, participation in this type of data collection in no way reduces our commitment to protecting students' confidentiality. We also conduct specific research projects above and beyond these normal methods of data collection. A separate consent form is included in the packet and additional information is provided for parent/guardian and student consideration. You and your child's participation is voluntary and refusal to participate in this research element or discontinuing participation will involve no penalty or loss of benefits to which you or your child are otherwise entitled, including services provided by the ASC Center.

HOW TO REACH ASC CENTER PROVIDERS, FACULTY, AND STUDENTS

If it is necessary to cancel or reschedule an appointment, please do so at least 24 hours in advance. Please cancel your appointment by calling 336-845-2400 (ext. 2135), between 8:30 a.m. and 3:30 p.m., Monday through Friday. If your call is urgent or an emergency, please tell the operator immediately. If you have an imminent emergency, you may also contact Daymark Mobile Crisis, at 336-846-HELP, call 911, or go to any hospital emergency room. We will discuss other ways of dealing with crisis situations relevant to your personal situation, as needed.

Feel free to contact Dr. Kurt Michael, Licensed Psychologist, Professor of Psychology (828-262-2272, ext. 432), or Whitney Van Sant, ASC Center Coordinator (336-846-2400, ext. 2135), if you have questions or comments regarding clinical services.

I have received and been given the opportunity to read a copy of this Informed Consent for Clinical Services sheet.

Signature of Student or Legally Responsible Person:

_____ Date:

Specify Relationship to Student and Print Name in

Full: _____

Signature of Student:

_____ Date: _____

Witness (optional):

_____ Date: _____

___ Copy given to Student ___ Student declined copy

Appendix B

To: Holly Hauser
Psychology
CAMPUS EMAIL

From: Dr. Andrew Shanely, IRB Chairperson
Date: January 3, 2018
RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)
Agrants #: 14-0248,15-0245,16-0148
Grant Title: Sponsors: Alleghany County Schools
Ashe County Board of Education
Watauga County Schools

STUDY #: 18-0069
STUDY TITLE: GENDER DIFFERENCES, SOCIAL ROLES, AND TREATMENT RESPONSES: ARE FEMALE ADOLESCENTS BETTER RESPONDERS TO SCHOOL MENTAL HEALTH (SMH) TREATMENT?
Submission Type: Initial
Expedited Category: (5) Research Involving Pre-existing Data, or Materials To Be Collected Solely for Nonresearch Purposes,(7) Research on Group Characteristics or Behavior, or Surveys, Interviews, etc.
Approval Date: 1/03/2018
Expiration Date of Approval: 1/02/2019

The Institutional Review Board (IRB) approved this study for the period indicated above. The IRB found that the research procedures meet the expedited category cited above. IRB approval is limited to the activities described in the IRB approved materials, and extends to the performance of the described activities in the sites identified in the IRB application. In accordance with this approval, IRB findings and approval conditions for the conduct of this research are listed below.

Study Regulatory and other findings:

The IRB determined that this study involves minimal risk to participants.

All approved documents for this study, including consent forms, can be accessed by logging into IRBIS. Use the following directions to access approved study documents.

1. Log into IRBIS
2. Click "Home" on the top toolbar
3. Click "My Studies" under the heading "All My Studies"
4. Click on the IRB number for the study you wish to access
5. Click on the reference ID for your submission
6. Click "Attachments" on the left-hand side toolbar
7. Click on the appropriate documents you wish to download

Approval Conditions:

Appalachian State University Policies: All individuals engaged in research with human

participants are responsible for compliance with the University policies and procedures, and IRB determinations.

Principal Investigator Responsibilities: The PI should review the IRB's list of PI responsibilities. The Principal Investigator (PI), or Faculty Advisor if the PI is a student, is ultimately responsible for ensuring the protection of research participants; conducting sound ethical research that complies with federal regulations, University policy and procedures; and maintaining study records.

Modifications and Addendums: IRB approval must be sought and obtained for any proposed modification or addendum (e.g., a change in procedure, personnel, study location, study instruments) to the IRB approved protocol, and informed consent form before changes may be implemented, unless changes are necessary to eliminate apparent immediate hazards to participants. Changes to eliminate apparent immediate hazards must be reported promptly to the IRB.

Approval Expiration and Continuing Review: The PI is responsible for requesting continuing review in a timely manner and receiving continuing approval for the duration of the research with human participants. Lapses in approval should be avoided to protect the welfare of enrolled participants. If approval expires, all research activities with human participants must cease.

Prompt Reporting of Events: Unanticipated Problems involving risks to participants or others; serious or continuing noncompliance with IRB requirements and determinations; and suspension or termination of IRB approval by an external entity, must be promptly reported to the IRB.

Closing a study: When research procedures with human subjects are completed, please log into our system at https://appstate.myresearchonline.org/irb/index_auth.cfm and complete the Request for Closure of IRB review form.

Websites:

1. PI responsibilities: <http://researchprotections.appstate.edu/sites/researchprotections.appstate.edu/files/PI%20Responsibilities.pdf>
2. IRB forms: <http://researchprotections.appstate.edu/human-subjects/irb-forms>

CC:
Kurt Michael, Psychology

Appendix C

Ashe County Schools/Appalachian State University

Informed Consent for Participation in Research

Title of Project: The Effectiveness of the Assessment, Support, and Counseling (ASC) Center

Investigator(s): Dr. Kurt Michael, Dr. John Paul Jameson

I. Purpose of Research:

As described on the Consent to Treatment form that was signed and on-file at the ASC Center, we are committed to providing your children with effective interventions to address their behavioral and academic concerns. As you are already aware, we regularly collect data on treatment progress, satisfaction, academic outcomes, attendance, and disciplinary referrals that help us serve your children better. We now request your permission to present anonymous data regarding the effects of ASC Center services in the form of presentations and publications to an audience of professionals outside of the ASC Center. Information about the effects of the ASC Center services will be presented anonymously so that your children's identities will not be disclosed.

II. Procedures:

In addition to the information collected regularly as part of ASC Center involvement, students and parents will be asked to complete a few brief assessments before, during, and after ASC Center services have been delivered. The assigned ASC Center clinician will review these documents in detail with the students and parents (before and after) and if there is evidence on the assessments of significant distress or discomfort, interventions will be delivered (or referrals made) immediately, up to and including the disclosure of this information to parents/guardians should it deemed consistent with the "limits of confidentiality" described on the original Consent to Treatment Form (that is, danger to self or others, reasonable suspicion of abuse).

III. Risks:

As described above, the risks of participation in this project do not exceed the normal risks associated with receiving mental health/behavioral treatment in other settings. We will abide by all standards of confidentiality and we are committed to the safe and effective treatment of your children's concerns.

IV. Benefits:

Your participation in this project will help other professionals and society at large learn more about providing effective mental health and behavioral treatment for high school students.

V. Extent of Anonymity and Confidentiality:

The answers you and your student provide on the assessments will be kept confidential and under lock and key. Only authorized ASC Center personnel will know the identity of your children. When the data is presented, it will not include your children's identity. The information will be presented anonymously.

VI. Compensation:

There will not compensation for your participation. ASC Center services are provided at no cost to you or your child.

VII. Freedom to Withdraw:

You or your child do not have to answer any questions if you do not want to and you can stop at any time.

VIII. Approval of Research:

This research project has been approved, as required, by the Institutional Review Board of Appalachian State University.

IRB Approval Date: 11/04/2016
11/03/2017

Approval Expiration Date:

IX. Participant's Responsibilities:

I voluntarily agree to participate in this study. I have the following responsibilities:

1. Review this consent form
2. Complete the assessments honestly if I consent to participation

X. Participant's Permission:

I have read and understand the Informed Consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent by completing and signing this form.

Signature of Student or Legally Responsible Person:

_____ Date: _____

Specify Relationship to Student and Print Name in Full: _____

Signature of Student:

_____ Date: _____

Should I have any questions about this research or its conduct, I may contact:

Kurt Michael, michaelkd@appstate.edu, (828) 262-2272, extension 432
IRB Administrator, Research and Sponsored Programs, Appalachian State University,
Boone, NC 28608, (828) 262-2692, irb@appstate.edu.

Vita

Holly Hauser was born in Winston Salem, North Carolina, to Robin and Darrell Hauser. She graduated from the University of North Carolina at Charlotte in May, 2016 with a Bachelor of Science degree in Psychology with a Minor in Music. She began a course of study toward a Master of Arts degree in Clinical Psychology at Appalachian State University in the Fall of 2016 and earned her degree in December, 2018. In January of 2019, Holly will pursue licensure as a Licensed Psychological Associate and begin working in private practice.