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Process Group Psychotherapy**

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**An Examination of Self-Compassion in Relation to  
Process Group Psychotherapy**

**by**

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**Dissertation**

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## **Dedication**

To my soon-to-be wife, Katy.  
The most beautiful part of my life.

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# **An Examination of Self-Compassion in Relation to Process Group Psychotherapy**

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Eric Stephen Jannazzo, Ph.D.

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Recent reviewers of the group psychotherapy literature have called for the introduction of new constructs that may contribute to a deeper understanding of what it is about process groups that make them effective in eliciting change. To this end, this study investigates the potential of a newly defined and operationalized construct known as self-compassion.

Drawing on the writings of various scholars of Buddhism, Neff has theorized that self-compassion consists of three main, mutually influential components: self-kindness (the act of being gentle with oneself in instance of pain or failure); mindfulness (holding painful thoughts and feelings in balanced awareness, without over-identifying with them); and common humanity (the perception of one's experiences as part of the larger human experience). This paper argues that there are strong parallels between each of these three components and existing theory on the mechanisms of change in group psychotherapy. The study was motivated by the belief that preliminary quantitative

support for the role of self-compassion in change through groups may highlight the importance of the construct and help orient both group practitioners and group researchers towards a new theoretical lens through which the power of groups may be better understood.

92 subjects were enrolled in the study: 57 in a non-treatment Control condition, and 35 in a Treatment condition. The Control group was comprised of undergraduates from the Educational Psychology Department subject pool at the University of Texas at Austin; the Treatment group was formed by UT undergraduate and graduate students who were enrolled in a process psychotherapy group at the UT Counseling and Mental Health Center. A pre-test/post-test design was employed, with subjects taking identical surveys at baseline (beginning of Fall 2007 semester) and follow-up (end of the same semester).

A variety of inferential statistical techniques were utilized, and results indicated that there was a significant relationship between participation in process group psychotherapy and positive mental health outcomes as measured by self-report levels of depression, perceived stress, and happiness; that participation in a therapy group was associated with increased levels of self-compassion; and that as a predictor of mental health outcome in relation to therapy groups, self-compassion was on the whole equivalent to one construct (hope) often cited in the group literature as a powerful therapeutic mechanism, and a more powerful predictor than another (altruism).

The overall results offer exciting implications for future research and clinical practice, as they suggest that self-compassion may well serve as an important component of a robust theoretical, organizing lens through which the power of group psychotherapy may be more clearly understood.



## Table of Contents

|   |    |
|---|----|
| <b>CHAPTER 1: Introduction</b> .....  | 1  |
| <b>CHAPTER 2: Review and Integration of the Literature</b> .....            | 5  |
| Conceptualization of Group Psychotherapy .....                              | 5  |
| Existing Research on Group Psychotherapy .....                              | 9  |
| Self-Compassion .....   | 14 |
| The Role of Self-Compassion in Classic Process Group<br>Psychotherapy ..... | 24 |
| Rationale for the Study .....   | 33 |
| <b>CHAPTER 3: Methods</b> .....   | 37 |
| Research Questions and Hypotheses .....                                     | 37 |
| Participants .....  | 40 |
| Procedure .....   | 41 |
| Instruments .....   | 46 |
| <b>CHAPTER 4: Results</b> .....   | 51 |
| Sample Description.....   | 51 |
| Preliminary Analyses.....   | 52 |
| Investigation of Possible Sample Bias.....                                  | 53 |
| Means of Initial Measures.....  | 55 |
| Participation by Specific Therapy Group.....                                | 58 |
| Baseline Correlations of Study Measures.....                                | 60 |
| Baseline Correlations of SCS Subscales.....                                 | 61 |
| Hypothesis 1.....   | 63 |
| Depression.....   | 64 |
| Perceived Stress.....   | 65 |
| Subjective Happiness.....   | 66 |
| Hypothesis 2.....   | 68 |
| Overall Self-Compassion.....  | 68 |
| Self-Compassion Subscales.....  | 72 |
| Self-Kindness Subscale.....   | 72 |
| Self-Judgment Subscale.....   | 74 |
| Common Humanity Subscale.....   | 75 |
| Isolation Subscale.....   | 77 |

|   |            |
|---|------------|
| Mindfulness Subscale.....   | 78         |
| Over-identification Subscale.....                                   | 80         |
| Three Components of Self-Compassion.....                            | 81         |
| Overall Self-Kindness.....  | 82         |
| Overall Common-Humanity.....  | 84         |
| Overall Mindfulness.....  | 86         |
| Hypothesis 3.....   | 87         |
| Hypothesis 4.....   | 90         |
| Depression.....   | 92         |
| Perceived Stress.....   | 95         |
| Subjective Happiness.....   | 96         |
| Hypothesis 5.....   | 97         |
| <br>  |            |
| <b>CHAPTER FIVE: Discussion.....</b>                                | <b>99</b>  |
| Main Hypotheses.....  | 99         |
| Clinical Implications.....  | 110        |
| Strengths of the Study.....   | 112        |
| Limitations.....  | 114        |
| Implications for Future Research.....                               | 117        |
| <br>  |            |
| <b>APPENDICES.....</b>  | <b>120</b> |
| Appendix A: Study Survey Packet.....                                | 121        |
| Beck Depression Inventory – Short Form.....                         | 122        |
| Perceived Stress Scale.....   | 124        |
| Subjective Happiness Scale.....                                     | 126        |
| State Hope Scale.....   | 128        |
| Attitudes Toward Helping Others Scale.....                          | 129        |
| Self-Compassion Scale.....  | 131        |
| Demographic Information.....  | 133        |
| Appendix B: Group Leader Demographic Request Form.....              | 134        |
| Appendix C: Group Leader Information Sheet.....                     | 135        |
| Appendix D: Recommended Group Leader Recruitment Script.....        | 137        |
| Appendix E: Group Leader Summary.....                               | 138        |
| Appendix F: Information Sheet for Treatment Group Participants..... | 139        |
| Appendix G: Information Sheet for Subject Pool Participants.....    | 141        |
| Appendix H: Initial Correspondence to Subject Pool.....             | 144        |
| Appendix I: Second Correspondence to Subject Pool.....              | 146        |
| Appendix J: Third Correspondence to Subject Pool.....               | 147        |
| Appendix K: Follow-up Webpage (Subject Pool).....                   | 148        |

|   |            |
|---|------------|
| Appendix L: Webpage Announcing Raffle Winners.....          | 149        |
| Appendix M: Study Debriefing Webpage (Treatment Group)..... | 150        |
| Appendix N: Study Debriefing Webpage (Control Group).....   | 151        |
| Appendix O: Study Proposal to CMHC.....                     | 152        |
| <br>  |            |
| <b>References</b> .....                                     | <b>157</b> |
| <br>  |            |
| <b>Vita</b> .....   | <b>166</b> |

## List of Tables

|            |  |    |
|------------|--|----|
| Table 4.1  | Academic Year by Condition.....  | 52 |
| Table 4.2  | Ethnicity by Condition.....  | 52 |
| Table 4.3  | Group Leader Demographics.....   | 53 |
| Table 4.4  | Means of measures at mid-November data point: final sample vs. non-responders.....   | 55 |
| Table 4.5  | Means of initial measures: Treatment vs. Control.....                                | 56 |
| Table 4.6  | Means of initial measures: Male vs. Female.....                                      | 57 |
| Table 4.7  | Participation by group.....  | 59 |
| Table 4.8  | Baseline and follow-up scores by group.....  | 59 |
| Table 4.9  | Pearson correlations for baseline measures – Treatment.....                          | 61 |
| Table 4.10 | Pearson correlations for baseline measures – Control.....                            | 61 |
| Table 4.11 | Pearson correlations for SCS subscales at baseline.....                              | 62 |
| Table 4.12 | ANOVA for BDI-SF scores for depression.....  | 64 |
| Table 4.13 | Pairwise comparison for change in depression scores over time....                    | 65 |
| Table 4.14 | ANOVA for PSS scores for perceived stress.....                                       | 65 |
| Table 4.15 | Pairwise comparison for change in perceived stress scores over time.....             | 66 |
| Table 4.16 | ANOVA for SHS scores for subjective happiness.....                                   | 67 |
| Table 4.17 | Pairwise comparison for change in happiness scores over time.....                    | 68 |
| Table 4.18 | ANOVA for SCS scores for overall self-compassion.....                                | 69 |
| Table 4.19 | Pairwise comparison for change in self-compassion scores over time.....              | 71 |
| Table 4.20 | ANOVA for the self-kindness subscale of the SCS.....                                 | 72 |
| Table 4.21 | Pairwise comparison for change in self-kindness subscale scores over time.....       | 73 |
| Table 4.22 | ANOVA for the self-judgment subscale of the SCS.....                                 | 74 |
| Table 4.23 | Pairwise comparison for change in self-judgment subscale scores over time.....       | 75 |
| Table 4.24 | ANOVA for the common humanity subscale of the SCS.....                               | 75 |
| Table 4.25 | Pairwise comparison for change in common humanity subscale scores over time.....     | 76 |
| Table 4.26 | ANOVA for the isolation subscale of the SCS.....                                     | 77 |
| Table 4.27 | Pairwise comparison for change in isolation subscale scores over time.....           | 78 |
| Table 4.28 | ANOVA for the mindfulness subscale of the SCS.....                                   | 78 |
| Table 4.29 | Pairwise comparison for change in mindfulness subscale scores over time.....         | 79 |
| Table 4.30 | ANOVA for over-identification subscale of the SCS.....                               | 80 |
| Table 4.31 | Pairwise comparison for change in over-identification subscale scores over time..... | 81 |
| Table 4.32 | ANOVA for Overall Self-Kindness.....   | 82 |
| Table 4.33 | Pairwise comparison for change in Overall Self-Kindness over time.....               | 83 |
| Table 4.34 | ANOVA for Overall Common Humanity.....   | 84 |

|   |    |
|---|----|
| Table 4.35 Pairwise comparison for change in Overall Common Humanity over time.....   | 85 |
| Table 4.36 ANOVA for Overall Mindfulness.....   | 86 |
| Table 4.37 Pairwise comparison for change in Overall Mindfulness over time.....   | 87 |
| Table 4.38 Zero-order correlations between changes in self-compassion & changes in mental health outcomes.....              | 90 |
| Table 4.39 Overall fit of the linear regression model for change in BDI-SF scores for depression .....                      | 92 |
| Table 4.40 Unique contributions of each variable to the prediction of change in depression score.....                       | 93 |
| Table 4.41 Fit of the linear regression model for change in depression when change in hope is removed from the model.....   | 94 |
| Table 4.42 Unique contributions of each variable to change in depression when change in hope is removed from the model..... | 94 |
| Table 4.43 Overall fit of the linear regression model for change in PSS scores for perceived stress.....                    | 95 |
| Table 4.44 Unique contributions of each variable to the prediction of change in perceived stress score.....                 | 95 |
| Table 4.45 Overall fit of the linear regression model for change in SHS scores for happiness.....                           | 96 |
| Table 4.46 Unique contributions of each variable to the prediction of change in subjective happiness score.....             | 96 |
| Table 4.47 Correlation between an individual's change in SCS and the change in SCS for the rest of his/her group.....       | 97 |

## List of Figures

|             |   |    |
|-------------|---|----|
| Figure 4.1  | Change in Depression by Condition.....  | 64 |
| Figure 4.2  | Change in Perceived Stress by Condition.....                                      | 66 |
| Figure 4.3  | Change in Happiness by Condition.....   | 67 |
| Figure 4.4  | Change in Self-Compassion by Condition.....                                       | 70 |
| Figure 4.5  | Change in Self-Kindness Subscale by Condition.....                                | 73 |
| Figure 4.6  | Change in Self-Judgment Subscale by Condition.....                                | 74 |
| Figure 4.7  | Change in Common Humanity Subscale by Condition.....                              | 76 |
| Figure 4.8  | Change in Isolation Subscale by Condition.....                                    | 77 |
| Figure 4.9  | Change in Mindfulness Subscale by Condition.....                                  | 79 |
| Figure 4.10 | Change in Over-Identification Subscale by Condition.....                          | 80 |
| Figure 4.11 | Change in Overall Self-Kindness by Condition.....                                 | 83 |
| Figure 4.12 | Change in Overall Common Humanity by Condition.....                               | 85 |
| Figure 4.13 | Change in Overall Mindfulness by Condition.....                                   | 86 |
| Figure 4.14 | Change in SC mediating impact of Condition on Change in Outcome.....              | 87 |
| Figure 4.15 | Change in SC mediating impact of Condition on Change in Depression.....           | 88 |
| Figure 4.16 | Change in SC mediating impact of Condition on Change in Perceived Stress.....     | 89 |
| Figure 4.17 | Change in SC mediating impact of Condition on Change in Subjective Happiness..... | 89 |

# Chapter 1

## Introduction

Group psychotherapy is a form of treatment widely utilized by patients and widely employed by counseling psychologists (Kivlighan, Coleman et al., 2000). It is estimated that 47% of counseling psychologists perform group counseling in the course of their practice (Fitzgerald & Osipow, 1986), while five percent of the articles published in the *Journal of Counseling Psychology* address the theory and practice of group counseling (Kivlighan, Coleman et al., 2000). Clearly, group psychotherapy is an important area of inquiry in the field of counseling psychology.

A large literature has investigated various aspects of group psychotherapy, from meta-analyses of efficacy studies comparing group treatments to other modalities such as individual psychotherapy (Tillitski, 1990), to studies investigating group therapy outcomes within specific patient populations (Gorey & Cryns 1991; Fettes & Peters, 1992).

The consensus formed by the abundance of research on the efficacy of group psychotherapy is that it works (Barlow, Burlingame et al., 2005). Generally it is found to be as efficacious as individual forms of psychotherapy, and superior to control conditions (McRoberts, Burlingame et al., 1998).

Yet despite a great many studies that have addressed the question, far less of a consensus has been reached in identifying the underlying mechanisms of change mobilized by the group therapy format. In the first edition of his widely-acclaimed book, “The Theory and Practice of Group Psychotherapy,” Irvin Yalom, generally considered

to be “the single most influential theorists in the group counseling arena” (Kivlighan et al., 2000, p. 770), first posed a question that has inspired decades of research:

How does group therapy help clients? A naïve question, perhaps. But if we can answer it with some measure of precision and certainty, we will have at our disposal a central organizing principle with which to approach the most vexing and controversial problems of psychotherapy. Once identified, the crucial aspects of the process of change will constitute a rational basis for the therapist’s selection of tactics and strategies to shape the group experience and maximize its potency with different clients and in different settings (Yalom, 1970, p. 1).

Recent reviewers of the group therapy literature have reached a consensus: dozens of studies in the past fifty years designed to investigate the mechanisms of change – or ‘therapeutic factors’ - of group psychotherapy have failed to adequately answer Yalom’s question (Bednar & Kaul, 1994; Burlingame, Fuhriman et al., 2004; Magen & Mangiardi, 2005). In fact, “in spite of an ever-growing clinical and research literature... the specific mechanisms by which groups help people to change remain elusive” (Magen & Mangiardi, 2005, p. 352).

One construct that may shed light on such a ‘mechanism of change’ in group psychotherapy is self-compassion. Self-compassion is related to the more general concept of ‘compassion’ (Neff, in press). Compassion is the antithesis of cruelty (Gilbert, 2005); if cruelty is the deliberate act of causing pain and suffering, then compassion is also derived from a ‘knowing’ position: compassion is the knowledge of another’s suffering, coupled with an attitude of acceptance (if not approval), openness, and connection. Implicit in the compassionate position is a nonjudgmental appraisal of others as belonging to an inherently flawed human condition (Neff, in press(a)) and a desire to alleviate suffering (Gilbert, 2005).



Drawing on the writings of various scholars of Buddhism, Neff has theorized that self-compassion consists of three main components (Neff, 2003a; Neff, 2003b): self-kindness (the act of being gentle with oneself in instance of pain or failure); mindfulness (holding painful thoughts and feelings in balanced awareness, without over-identifying with them); and common humanity (the perception of one's experiences as part of the larger human experience).

While there are numerous parallels between each of these three components and existing theory on the mechanisms of change in group psychotherapy, parallels that will be explored throughout this study, perhaps the most immediate centers around the idea of common humanity. A sense of universality, described as a “‘welcome to the human race’ experience” (Yalom & Leszcz, 2005, p. 6) is widely cited as a powerful ingredient in the group therapeutic process (Mennen & Meadow, 1993; Constantino, 2001).

The purpose of the study is to advance our understanding of the factors underlying the effectiveness of group psychotherapy. The theoretical framework guiding this research is that involvement in process group psychotherapy can lead to fundamental changes within the patient as evidenced by increased levels of self-compassion, and that these increased levels may be correlated with evidence of increased life-satisfaction and decreased psychopathology.

This investigation holds potentially important implications. First, as Yalom articulated in his famous question nearly forty years ago, a deeper understanding of how group psychotherapy helps patients will provide us with a more developed ‘organizing principle’ that, once clarified, will assist the group therapist in shaping and sharpening the group intervention, and thus maximize its efficacy. Further, this study will add a new

dimension to the growing body of research investigating the usefulness and applicability of Buddhist concepts – and particularly self-compassion – in the development of Western psychological theory and practice. One recent study (Neff, Kirkpatrick, & Rude, 2007) investigated the role of self-compassion in a Gestalt two-chair intervention, and found a significant link between an increase in self-compassion and an uplifting of psychological well-being across a variety of domains; these exciting findings have suggested that self-compassion can be buttressed to great benefit through effective clinical intervention. This dissertation will build on that precedent to examine the implicit role of self-compassion in the changes brought about in the course of another widely-accepted Western psychological intervention: the process group.

## Chapter 2

### Review and Integration of the Literature

The first section of Chapter 2 will provide a framework for the conceptualization of process group psychotherapy, with particular emphasis given to aspects of psychoanalytic theory useful to the study. The second section will present the state of existing literature on group psychotherapy efficacy and therapeutic factors (i.e. mechanisms of change). The third section will introduce the self-compassion construct, while the fourth will make explicit connections between this construct and existing theory on the underlying mechanisms of process group psychotherapy, again leaning on psychoanalytic theory when appropriate. The fifth section will provide the rationale for a study to analyze if and how self-compassion is significantly related to the effectiveness of participation in process group psychotherapy.

#### *Conceptualization of Group Psychotherapy*

Classic group psychotherapy, as it is often practiced in a wide-range of settings and with a diverse sampling of patients, relies heavily on what has been termed ‘process-illumination.’ Process-illumination, or focus on the ‘here-and-now experience,’ has been proposed as the major difference between a psychotherapy group that endeavors to effect enduring characterological and behavioral change and other groups that would not be considered classic psychotherapy groups: groups such as Alcoholics Anonymous, cognitive-behavioral groups, psychoeducational groups, and illness-support groups (Yalom & Leszcz, 2005). While these latter groups may address elements of the ‘here-and-now,’ such investigation is not nearly as central as it is in classic psychotherapy

groups, which are often termed ‘process groups.’ Such process groups will serve as the focus of the study.

According to Yalom, the here-and-now focus of process-illumination is the “power-source” of the group’s work (Yalom & Leszcz, 2005). To work in the here-and-now is to experience - and openly communicate - the immediate phenomenon of the group: how one thinks and feels about the leader, the other individual group members, the group as a whole, and oneself in the group. At the heart of process-illumination is an in-depth investigation of the interactions between group members; of particular interest is an honest appraisal of emotional states during interactions, as well as what the interaction conveys about each member and the relationship between them.

The here-and-now is shaped by the prior experiences of each member, but it also exists in an ahistorical context; that is, the here-and-now stands (and can be experienced) as a distinct moment in time. The relationship between each member’s life experience and his/her here-and-now experience is an important, implicit element of group therapeutic work. In psychoanalytic terms, this relationship is the *transference*: the unconscious redirection of feelings and attitudes from one person, situation, or phenomenon to another (Freud, 1905).

*Psychoanalytic theory and group psychotherapy.* Psychoanalytic perspectives on group therapeutic process are particularly useful to this study. The basis for all psychoanalytic conceptions of psychotherapy, including group forms, is that a primary goal of the intervention is the illumination of unconscious processes (Hunt & McCollom, 1994). In group work, the psychoanalytic perspective asserts that beneath the seemingly rational order of individual presentations and interpersonal interactions is an intricate web

of unconscious forces (Freud, 1960). These forces are contained within each member and manifest in the experiences of, and interaction within, the here-and-now of the group.

In psychoanalytic theory (as well as many other developmental theories), early relationships play an enormously influential role in how the adult individual conceptualizes his or her own self-worth. Attitudes about oneself are in great measure derived from cues internalized in the course of experiencing relationships during the earliest phases of development (Kohut, 1971). Psychoanalytic perspectives on group process see the individual's relationship with other members, the leader, and the group as a whole as a manifestation and eventual reworking of these early relationships (Geller, 2005). Bion (1974) states that the group is 'undifferentiated mother'; that is, with time, the group psychically represents the primary caretaker at a very early stage of development, before the caretaker was experienced as a person distinct from oneself. In this view, the effectiveness of group interventions arises from the remaking of one's internalized self-attitudes through the satisfying, safe experience of the member's relationship with the group as a whole. Though not a psychoanalytic theorist, Yalom offers quite similar insight when he writes of the importance of an aspect of group dynamics that he terms the 'effective recapitulation of the early family group' (Yalom & Leszcz, 2005). In his view, the therapy group resembles a family in many respects, including the presence of authority/parental figures, peer/sibling figures, and deep intimacy mixed with competitive, even hostile impulses. Yalom concludes that the successful (i.e. ultimately enriching) re-experiencing of these dynamics within the group context is fundamental to the intervention's ability to effect change.

Central to psychoanalytic theory is the so-called ‘structural theory,’ which sees the psyche as comprised of the id, the ego, and the superego (Freud, 1923). Briefly, the id contains primitive desires, such as hunger, rage, sexual impulses; the superego houses internalized norms and expectations; and the ego mediates the interactions between the two, and ideally gives rise to a cohesive sense of self.

Of particular interest to the study is the superego, the largely unconscious psychic entity that acts as the arbiter of our own thoughts, behaviors, desires, etc. The superego is formed at a very early stage of development primarily through the identification with and internalization of parental attitudes and cultural norms. Kramer (1958) states that the superego is itself a complex structure that can be subdivided into the ego ideal (the internalized notion of perfection), the benign superego (the more gentle side of one’s self-perception, derived from the image of the loving parent), and the harsh, critical superego (the more damning side, derived from the image of the parent-as-punisher and gatekeeper to need gratification). Ideal development leads to an adaptive balance of these substructures. If the harsh, critical superego becomes overactive and disrupts the adaptive balance, self-condemnation and pathology will likely result. Fieldsteel (1984) argues that such an imbalance in favor of the harsh superego is readily visible in the group setting, since superego functioning is quite apparent in group situations, where members are encouraged to react to their own and others’ behaviors.

Schafer (1960) states that the loving aspect of the superego (the benign superego) represents the loving parent. When this is considered together with Bion’s view that the therapy group comes to psychically represent the primary caretaker, the psychoanalytic view of the mechanism by which group therapy effects change becomes clear: the

primary aim of group therapy from this perspective is to modify the harsh superego and strengthen the benign one through the internalization of the group experience.

### *Existing Research on Group Psychotherapy*

Two types of studies predominate in the group psychotherapy literature: outcome studies and therapeutic factors research.

*Outcome studies.* In the 1990's, reviewers of group counseling research began to use meta-analysis to quantitatively review group counseling outcome studies (Kivlighan, Coleman et al., 2000). Kivlighan et al., note that, together, these meta-analyses have addressed three main outcome questions: (1) Is group counseling effective? (2) What are the relative effects of group and individual counseling? And (3) is group counseling effective with specific client populations?

Kivlighan et al., present several recent meta-analyses that have been conducted with methodological sophistication, and together form a clear picture of the state of group therapy outcome research. Tillitski (1990), in a meta-analysis of nine studies that compared group therapy, individual therapy, and control conditions in a diverse sample of children, adolescents, and adults, found that group and individual conditions were equally efficacious and superior to control. A similar, though later, meta-analysis by McRoberts, Burlingame et al. (1998) examined 23 studies investigating the comparative efficacy of group and individual treatments, and reported findings consistent with Tillitski's: group and individual modalities were equally efficacious and both superior to no-treatment controls. Gorey and Cryns (1991) meta-analyzed 19 studies and found that group therapy had a statistically significant effect on the symptomology of depressed

clients aged 65 and over. Fettes and Peters (1992) looked at forty studies investigating group therapy for patients with bulimic symptoms, and found that treated groups improved significantly more than untreated controls, and that treatment gains were sustained over the year following termination of group therapy. Hoag and Burlingame (1997) meta-analyzed forty-six studies investigating the efficacy of child and adolescent therapy groups and found that those treated in a group format improved significantly more than those in untreated controls.

Together, these findings form a clear consensus: group psychotherapy is an efficacious treatment modality across a wide range of patient populations.

*Therapeutic factors research.* Bloch and Crouch (1985, p. 4) defined a group therapeutic factor as “an element of group therapy that contributes to improvement in a patient’s condition and is a function of the actions of the group therapist, the other group members, and the patient himself.” The dominant perspective within the group psychotherapy literature is that there are universal therapeutic factors that underlie the effectiveness of groups independent of specific group characteristics such as length of treatment, type of group, or the issues for which treatment is sought (Marmarosh, Holtz et al., 2005). A large portion of the research in the domain of group psychotherapy has undertaken the task of uncovering such universal therapeutic factors.

In the first edition of his book “The Theory and Practice of Group Psychotherapy” (1970), Yalom introduced his highly influential 11-factor theory of therapeutic mechanisms. His eleven factors are: instillation of hope; altruism; universality; imparting of information; the corrective recapitulation of the primary family group; development of socializing techniques; imitative behavior; interpersonal learning; group cohesiveness;



catharsis; and existential factors. Yalom's factors are the product of his clinical observations, and are theoretically-based. To take two quite often-cited therapeutic factors as an example, Yalom has written at length on his observations of the power of hope and altruism in the group setting – hope that is fueled by a shared faith in the treatment, and altruism as the experience of giving freely and warmly to other members. I will not devote a great deal of space to each of these factors, as Yalom himself states they are mere starting points for a more productive discussion (Yalom & Leszcz, 2005). These 'factors' are not statistically arrived upon, nor are they to be considered independent. Yalom writes that "the distinctions between the factors are arbitrary" (Yalom & Leszcz, 2005), and are the result of his own experience with and theorizing about group work. Butler and Fuhriman (1983), in an examination of the many quantitative studies based on Yalom's therapeutic factor theorizing, found that Yalom's factors are highly intercorrelated.

Still, his outline has been enormously influential in the field, and has served as an important starting point for the investigation of mechanisms of change in groups (Kivlighan & Holmes, 2004). Research in the area of furthering an understanding of these mechanisms of change have traditionally centered on two related techniques: (1) retrospective studies with questionnaires administered to terminating group members, asking them to rate items describing their experience; and (2) investigations with active members in on-going groups, asking them to report so-called 'critical incidents' (or moments thought to be important by the group member), which are then sorted by independent judges into predetermined categories (MacKenzie, 1987). Of these two types, the first has predominated in the literature.

Yalom, in introducing his 12-factor theory (which was later trimmed to 11 factors), conducted an oft-cited study of this type, utilizing the Therapeutic Factor Questionnaire (Yalom, 1970). The TFQ is a 60-item instrument, with five items devoted to each of Yalom's 12 therapeutic factors, and is administered in either a Likert-type or Q-sort fashion. Yalom administered the TFQ to 20 successful long-term therapy clients and used the Q-sort technique, whereby the members were asked to rank the 60 items in order of importance. The item rated as most important to the psychological health gains experienced by these patients was 'discovering and accepting previously unknown or unacceptable parts of myself.' In writing about his findings, Yalom (2005, p. 92) wrote that these patients had, in the course of their therapy, found within themselves the "ability to care for another, to relate closely to others, to experience compassion."

The decades since Yalom first published his findings have seen a proliferation of studies that apply some variation of his TFQ to various populations; this forms the basis of group therapeutic factor research. Findings have *not* contributed to an underlying theoretical understanding of universal mechanisms of change (Kivlighan & Holmes, 2004). In a recent paper, Kivlighan and Holmes sum up the state of research on therapeutic factors with the following:

[The literature is] composed of contradictory and atheoretical findings that have added little to the practice and theory of group counseling... Despite a large body of literature examining the relative importance of therapeutic factors, we are not much closer to answering Yalom's question: How does group therapy help patients? (Kivlighan & Holmes, 2004, p. 26)

The authors conclude that a deeper, more comprehensive understanding of group therapeutic factors is "hampered by the lack of an articulated organizing theoretical structure."

*Group level effects.* There is little doubt that when individuals are operating within a group format, a complex pattern of mutual influence arises; this certainly applies to group psychotherapy (Corey & Corey, 2002). And yet the vast majority of group research has failed to examine group level effects on the individual (Murphy & Johnson, 2006).

Each therapy group may be conceived as having its own particular “tone” or shared experience unique to that group; this group-level tone may be considered a therapeutic factor acting on each individual group member (Yalom, 2005). The group-level tone may be thought to exist along a variety of dimensions related to a virtually endless array of constructs (e.g. overall level of depression within the whole group, degree of expressiveness within the whole group, changes over time in group cohesion, etc.). The relationships between individual-level outcome variables and a full sampling of possible group-level variables have been insufficiently explored, largely due to the methodological demands required by such an investigation: to implement the kind of sophisticated hierarchical modeling recommended for a full exploration of the interplay between group- and individual-level variables, large samples sizes, with subjects randomized to at least 20 different groups, are needed (Murphy & Johnson, 2006). This simply exceeds the resources available to the vast majority of group therapy researchers (Yalom, 2005).

A large portion of the research that has sought to investigate group-level effects has utilized the Group Climate Questionnaire (MacKenzie, 1983), which asks each member to subjectively rate on a Likert-type scale the level of engagement with the group as a whole (i.e. “The members were distant and withdrawn from each other today”).

Research using this scale has consistently found that increased engagement at the group level is associated with positive outcome for members (MacKenzie, et al., 1987; Tschuschke & Greene, 2002).

Again, however, the majority of group psychotherapy research is conducted on a smaller number of groups than are necessary for the kind of multilevel modeling recent reviewers call for (Kivlighan & Coleman, 2000). Most group researchers, limited to a smaller number of working groups, have ignored the effects of group-level variables entirely (Bonito, 2002). As a result, the number of group-level variables that have been investigated falls far short of the total number of constructs that may be potentially fruitful targets of inquiry.

Still, there may be ways to investigate, in an exploratory fashion, group-level dynamics using statistical techniques appropriate to smaller sample sizes. See p. 37 for an overview of such a technique employed in the current study.

### *Self-Compassion*

The construct known as self-compassion may well provide a contribution to the kind of “articulated organizing theoretical structure” that has been lacking in the group psychotherapy literature.

The self-compassion construct is rooted in Buddhist thinking, and has recently come under increased focus within Western psychology. While Buddhism and Western psychology in many ways offer different perspectives on human nature and suffering, the construct of self-compassion is accessible to both. In part, this is due to the relationship between self-compassion and insight. Insight – insight into one’s emotional state and

one's relationship to others - has long been a central value in Western conceptions of psychological well-being and is often, in various forms, a prime goal of therapeutic intervention (Freud, 1933). Likewise, the state of self-compassion is built upon a foundation of insight, of knowing, of understanding (Gilbert, 2005). True self-compassion is not possible without a deep understanding of oneself and one's relationship to others and the world at-large.

Self-compassion is functionally related to the more general concept of compassion (Neff, in press). Gilbert, one of the leading Western proponents of the compassion construct as an area of scientific inquiry, states that compassion is the antithesis of cruelty (Gilbert, 2005). Cruelty is acting with the intention of causing pain and suffering; it is the intentional aspect of cruelty that gives it its meaning. Similarly, the meaning of compassion is derived from its 'knowing' position: compassion is the full knowledge of another's suffering, weakness, or failure, coupled with an attitude of acceptance (if not approval), openness, and connection. Implicit in the compassionate position is a nonjudgmental appraisal of others as belonging to an inherently flawed human condition (Neff, in press) and a desire to alleviate suffering (Gilbert, 2005).

Neff (2003a; 2003b) has proposed that self-compassion consists of three main components: self-kindness; common humanity; and mindfulness.

*Self-kindness.* This first component of self-compassion speaks to an ability to treat oneself with non-judgment in times of pain, failure, or suffering. To be self-kind does not mean that 'anything goes,' that one's behavior does not matter since all will be forgiven, or that one should not attempt to improve oneself. It is, rather, borne of the recognition that failure and disappointment are inevitable and unavoidable aspects of the human

experience: everyone will fail, everyone will suffer. A self-kind position will allow for an individual to react to these inevitabilities with sympathy for oneself; self-recrimination and excessive self-focus will be limited or avoided altogether; one will ‘swim with the current’ and be prepared to face the next set of challenges with courage and equanimity.

*Common humanity.* While self-kindness allows individuals to tolerate the inevitability of failure, pain, and suffering, a sense of common humanity permits us to experience in these inevitabilities a kinship with all of humankind. Among the most difficult aspects of various forms of psychopathology, such as depression or social phobias, is the deep sense of personal isolation that accompanies the experience. To maintain a sense of common humanity is to recognize that even the occasional feeling of deep isolation is a fundamental component of the human experience. In this way, even pain and failure are experienced as a bridge to the greater community of humankind.

*Mindfulness.* Kabat-Zinn (2003) proposes that mindful attention carries with it a position of open-hearted interest toward the experience of the present moment, regardless of how pleasant or unpleasant the experience may be. This component of self-compassion speaks to the ability to approach any affective state with equanimity, armed with the realization that all humans will at one time or another experience virtually every emotion, and each will in time pass. Mindfulness buffers against what has been termed *over-identification*. Over-identification is a process whereby individuals are so involved in their current emotional reactions that other aspects of the self (such as the ability to explore alternative affect states) are inaccessible (Neff, 2003). Neff writes, “Because one’s awareness is totally consumed by subjective reactions, one cannot step back from the situation and adopt a more objective perspective” (p.88). The mindful individual does

not suppress or deny negative emotions; nor does he or she ruminate on them or allow a sense of self to be overly impacted by what are ultimately transitory emotional experiences. Instead, the present moment, including the present affect state, is observed with nonjudgment and acceptance, and put into a larger context of emotions that inevitably will come and go.

Central to the concept of self-compassion is a sense of the interconnected self (Neff, in press). The interconnected self is less prone to competitive comparisons between self and others or between true self and ideal self. Instead, a sense of the interconnected self is likely to buttress an individual against increased perceived isolation. Neff notes what may be considered the central paradox of the self-compassion position: healthy, adaptive, functional, and stable self-attitudes arise not from the solidifying of one's unique 'specialness,' but instead, in part, from a de-emphasis of the very idea of the entirely separate self. It is this element of self-compassion, derived from a deep sense of the common human experience, that distinguishes it from other, similar constructs, such as self-acceptance, which do not emphasize to the same degree the interconnectedness of humankind.

*The capacity for self-compassion and its relation to well-being.* Gilbert has utilized his social mentality theory to propose an evolutionary perspective on the development of the human capacity for compassion (Gilbert, 2000). Social mentalities can be thought of as sets of motives, emotions, thoughts, and behaviors that enable the organism to navigate an enormously complex, interdependent reality. That is, living organisms have developed complex sets of routines that allow it to maximize odds of survival in various relational situations. The organism may avail itself of any number of

these sets in any given situation, depending on the particular challenges to be met, the kinds of relationships involved, and the cues the organism receives from others in its environment.

Gilbert draws on attachment theory (Bowlby, 1969) to note that the capacity for affiliative attachment plays an important role in the nurturance and protection of offspring, and is thus an integral component of the survival of the human species. The compassion that a caretaker offers his or her offspring in times of stress and threat is one type of social mentality. Humans have the capacity to employ other types of social mentalities, as well; for example, in times of perceived threat, an individual may engage in a more competitive, aggressive strategy, or perhaps a submissive one. Gilbert argues that the non-compassionate strategies employed by modern humans are evolutionarily-based, and are not nearly as adaptive in a modern context as they may have been when the capacity for these mentalities were naturally selected. It is Gilbert's position that, when faced with the activation of the fight/flight threat system, the human mind can learn to activate compassion/self-compassion strategies in lieu of less adaptive aggressive/submissive ones. In essence, this type of training may be seen as being at the heart of a great many psychotherapeutic interventions, from those that explicitly attempt to help patients acquire this ability, to others that impart this ability as a by-product of relating authentically in a challenging but safe environment.

Gilbert (2005) notes that a mentality marked by excessive self-criticism, the antithesis of self-compassion, is seen as a root of many forms of psychopathology. One theory as to why certain people are prone to depression states that such individuals have an underdeveloped care-compassion mentality (Gilbert & Irons, 2005). When a threat to



the self is perceived by such individuals, instead of utilizing care-compassion mentalities, depressive, self-critical mentalities are employed that serve to protect the organism by causing a disengagement from the threatening world of relationships and entanglements, a ruminative ‘holing-up’ that may have served great purpose in the world of constant physical threats to survival, but is often self-defeating in a modern context. The employment of such strategies leads to a difficult to break cycle, marked by the suppression of disconfirming positive emotional states and increased attention to social threats. It is posited that the enhancement of the depressed person’s capacity for compassion can shut down the risk-focused processing systems that contribute to the perpetuation of this defensive cycle, as more adaptive mentalities replace less adaptive ones (Allen & Knight, 2005).

Mikulincer and Shaver (2005) have demonstrated how the attachment and caregiving systems act in concert. They propose that the optimal functioning of the compassionate caregiving system – and by extension the experience of self-compassion – is contingent upon the organism being uninhibited by attachment insecurity; in this way, the state of the attachment system impacts the expression and utilization of the caregiving system. Their research has suggested that those who experience secure attachments are far more likely to perceive and respond to the suffering of others than those who are insecurely or anxiously attached. Bowlby (1969) provides insight into this phenomenon by asserting that securely attached individuals are freed from concerns and behaviors related to their own (physical or psychic) survival, and thus have the tools and psychic space required to turn their attention to their environment and relational field. The secure

position is related to self-efficacious and hopeful beliefs, both of which are conducive to compassionate (and likely self-compassionate) attitudes and behaviors.

*Empirical data related to self-compassion.* In recent years, empirical research on self-compassion has sought to explore its relationship to well-being in a variety of domains. Most of this research has employed the Self-Compassion Scale (Neff, 2003a), which taps the three components of self-compassion by measuring the extent to which subjects employ self-kindness versus self-judgment, common humanity vs. isolation, and mindfulness versus over-identification. The Self-Compassion Scale was developed in a series of three studies that, in addition to establishing the sound psychometric properties of the scale, found that individuals scoring high in self-compassion reported significantly less depression, anxiety, rumination, and neurotic perfectionism, in addition to greater social connectedness, emotional intelligence, and life satisfaction (Neff, 2003a). These studies also found that there was a moderate correlation between self-compassion and self-esteem, a finding that fits what would be expected, since both tap the realm of generally positive self-attitude; however, self-esteem was significantly correlated with narcissism, while self-compassion was not, “indicating that self-compassion is not related to self-aggrandizement in the way that self-esteem is” (Neff, 2004, p. 33). When controlling for self-esteem, self-compassion was still found to be a robust predictor of anxiety and depression, further indicating that self-compassion and self-esteem are theoretically distinct.

Two further studies with a total of 332 undergraduates investigated the relationship between academic achievement goals, coping with perceived academic failure, and self-compassion (Neff, Hseih, et al., 2005). Motivation theorists make a

distinction between mastery and performance orientation. Mastery orientation, whereby an individual is motivated to strive towards proficiency independent of external performance indicators, is often associated with deeper engagement and greater perseverance in response to obstacles. Performance orientation, on the other hand, is when a person's main focus is on social evaluations, and is associated with a fear of "looking bad," elevated states of anxiety, and rote-learning rather than deep understanding (Ames, 1992). The first study found a positive association between self-compassion and mastery goals, and a negative association between self-compassion and performance goals, suggesting that self-compassion is related to what may be considered more adaptive, intrinsic motivational patterns and the ability to see failure as an opportunity for growth, rather than as something to avoid and rigidly defend against.

The second study echoed these findings regarding the relationship between self-compassion and motivation; the study uncovered a positive association between self-compassion and adaptive emotion-focused coping strategies of positive reinterpretation and acceptance, and a negative association between self-compassion and maladaptive emotion-focused coping and avoidance-oriented strategies.

Two studies by Neff, Kirkpatrick, and Rude (2007) further investigated the relationship between self-compassion and mental health. The first study utilized a laboratory setting to investigate whether self-compassion protects against the anxiety that stems from engaging in self-evaluation. Given that self-esteem is thought to rest largely on positive self-evaluation, while self-compassion is theorized as being based on non-judgmental understanding, it was hypothesized that subjects high in self-compassion would report less anxiety after writing about "their greatest weakness," whereas self-

esteem would not be a significant predictor of anxiety after considering personal weakness. Findings supported these hypotheses. As part of this first study, the researchers also assessed subjects' language when writing about these weaknesses. Because self-compassion entails a connected sense of self and a self-acceptance, the authors hypothesized that self-compassion would be negatively associated with the use of first person singular pronouns and positively associated with the use of first person plural pronouns and social references. Findings supported this hypothesis, as well.

Neff, Kirkpatrick, and Rude assert that "it could be argued that the construct of self-compassion is most useful when viewed as a skill that people can develop to facilitate mental health, rather than as a static personality trait" (2007, p.146). To test this position, the researchers conducted a second study investigating the relationship over time between changes in self-compassion and changes in psychological well-being. Self-report measures for self-compassion, self-criticism, social connectedness, depression, anxiety, rumination, and thought suppression were administered roughly one week before and three weeks after subjects participated in a Gestalt two-chair intervention. The authors found that subjects who experienced an increase in self-compassion also experienced an increase in social connectedness and a decrease in anxiety, depression, rumination, thought suppression, and self-criticism. These findings highlight the strong link between self-compassion and adaptive psychological functioning, and suggest that self-compassion can be buttressed to great benefit through effective clinical intervention. Neff, Rude, and Kirkpatrick (in press) have also looked at the relation between self-compassion, adaptive psychological functioning, and the five factor model of personality among undergraduates, finding that self-compassion had a significant positive correlation

with self-reported measures of conscientiousness, extroversion, agreeableness, curiosity and exploration, personal initiative, wisdom, positive affect, optimism and happiness; and a significant negative correlation with neuroticism and negative affect. The authors also suggested that self-compassion “taps into certain aspects of positive well-being not fully captured by the five-factor model of personality” (p. 11).

In another study of 104 heterosexual couples in committed relationships, Neff (2006) found preliminary support for a significant correlation between self-compassion and attachment security. The author argues that this is consistent with expected findings, given that those higher in self-compassion would be expected to have a greater ability to self-care and self-soothe in times of relational distress.

*Clinical interventions.* While the construct of self-compassion has long been implicitly utilized in the treatment of depression (Allen & Knight, 2005), it is a relatively recent area of explicit application in Western psychotherapy. Recent clinical focus has sought to tap into the innate human capacity for compassion in order to bring about desired therapeutic effects (Gillath, Shaver et al., 2005; Rinpoche & Mullen, 2005). These interventions, such as Paul Gilbert’s ‘Compassionate Mind Training’ (CMT), focus on teaching patients to develop and utilize the ability to extend compassion to themselves through the use of guided compassionate imagery (Gilbert & Irons, 2005). CMT builds from the more classical CBT approach of psychoeducation and affect monitoring, and posits that many patients have not developed their self-soothing systems and as a result are highly threat sensitive; often, these threat sensitive people respond to perceived danger with chronic self-attacking, which contributes to a self-defeating cycle of depression and rumination. CMT endeavors to train people to generate feelings of compassion and warmth when feeling threatened or self-critical through a series of task-focused steps that include the identification and discussion of self-attacking thoughts/feelings, followed by the use of guided self-compassionate imagery intended to

shift the subject to a more self-kind stance. A recent pilot study investigated the use of CMT in a group format, with results showing significant reductions in depression, anxiety, self-criticism, shame, inferiority and submissive behavior (Gilbert & Procter, in press).

Currently, however, the state of research on self-compassion lags behind the state of research on the related concept of mindfulness. A host of interventions have been developed in recent years that attempt to develop the patient's capacity for mindfulness – the nonjudgmental awareness of present moment experience. These interventions include Mindfulness-Based Stress Reduction (Kabat-Zinn, 1990), Mindfulness-Based Cognitive Therapy (Segal, Williams et al., 2002), Dialectical Behavior Therapy (Linehan, 1993), and Acceptance and Commitment Therapy (Hayes, Strosahl et al., 1999). Early stages of empirical efficacy research on each of these treatments has yielded promising findings (Baer & Krietemeyer, 2006).

Though these therapies tend to take place in a group setting, the explicit focus of the intervention is the alteration of patients' individual cognitive processes; there may be some interaction between group members, but these are not classic psychotherapy groups in that process-illumination is not a target component of treatment. Further, the mindfulness-based groups are far more psychoeducationally oriented than the classic psychotherapy process groups that are the focus of this study.

### *The Role of Self-Compassion in Classic Process Group Psychotherapy*

Early stages of participation in a psychotherapy process group are often quite challenging. Members are encouraged to invest hope and trust in others with whom one has developed no sense of safety. The threat posed by such a situation often elicits the

employment of core safety strategies designed to protect the self and insulate against potentially hurtful comments or attitudes on the part of others in the group (Bates, 2005).

Gilbert's mentality theory may illuminate the psychic processes that are activated in this environment. The perceived threat inherent in the initial phases, at least, of the group setting will activate a patient's threat response system. Mikulincer and Shaver (2005) tell us that those who are more insecurely attached will be more likely to judge ambiguous behaviors as threatening, and thus are more likely to engage their own threat-response system of attitudes and behaviors. Many of these threat-responsive mentalities will be maladaptive (critical, defensive, withdrawing, etc.). It time, however, as threats are managed with the support of the group leader and, often, the other group members, these defensive mechanisms may be replaced by more affiliative ones.

The expression and experience of compassion plays an important role in this shift from defensive, maladaptive processes to affiliative, adaptive ones. A nearly universal phenomenon in the group setting is the experience of feeling deep awareness of and sympathy for another's suffering (Yalom & Leszcz, 2005). Compassion for others and compassion for the self are intrinsically linked, perhaps at the neurological level (Allen & Knight, 2005); so experiencing compassion for others in the group setting may be seen as simultaneously developing the capacity for compassion for the self. The skilled group leader recognizes the deep connection between one's external relational position (i.e. how one relates to other members) and one's internal relational position (i.e. one's self-concept), and attempts through various techniques to utilize the former to affect the latter.

Bates writes:

Since compassion is a learned skill developed through observing and being treated with compassion in the context of relating with others, and

through experiencing its power when we ourselves extend this to others, the process of group therapy is an ideal setting to observe its role in change (Bates, 2005, p. 370).

In this formulation, the primary role of the group leader is to model the compassionate position by bestowing compassion on all members of the group. Members are encouraged by the leader to self-disclose, take risks, offer weaknesses, and respond with openness and compassion to others doing the same. The leader utilizes the unique relationships inherent in the group setting to facilitate a connection between a member and the struggles of each other member, with the hope of imparting the understanding that each member has the capacity to “use their own experience of suffering to extend care to another” (Bates, 2005).

Bates’ claim that the process of group therapy is an ideal setting to observe self-compassion’s role in change underlies this study, which will investigate the role of self-compassion in group therapy. There is a strong theoretical basis for positing that the function of self-compassion in the process of change is significant within the group setting; that is, to use the language of past and current group researchers, that self-compassion is an important ‘therapeutic mechanism’ of mental health change in groups. Perhaps the best way to demonstrate this theoretical basis is to examine each of the three components of self-compassion (self-kindness, common humanity, and mindfulness) in light of existing theory on group psychotherapy.

*Self-kindness and group psychotherapy.* In Yalom’s well-known and highly influential study on group therapeutic factors, in which he presented former group therapy patients with 60 statements theorized to be important in promoting positive change in psychological well-being, he found that the item rated by patients as most



influential to their change was a statement that read ‘discovering and accepting previously undiscovered parts of myself’ (Yalom & Leszcz, 2005). The 60 items in Yalom’s study were drawn from the twelve factors that comprised his initial formulation of therapeutic factors, with five statements drawn from each factor. The ‘discover and accept’ statement was drawn from a factor Yalom termed ‘self-understanding’ (analogous to ‘insight into the self’).

In discussing the importance of this item above all others, Yalom expressed some bewilderment over the poor correlation between the ‘discover and accept’ item and the other items in the ‘self-understanding’ factor (Yalom & Leszcz, 2005). The other items in this factor were:

- Learning that I have likes or dislikes for a person for reasons which may have little to do with the person and more to do with my hangups or experiences with other people in my past
- Learning why I think and feel the way I do (that is, learning some of the causes and sources of my problems)
- Learning that I react to some people or situations unrealistically (with feelings that somehow belong to earlier periods of my life)
- Learning that how I feel and behave today is related to my childhood and development (there are reasons in my early life why I am as I am)

Each of these items was rated as significantly less influential than the ‘accept and discover’ item.

Not addressed by Yalom (or, to this author's knowledge, any of the other many dozens of authors who have built on his study) is the fact that his 'discover and accept' item is actually comprised of two distinct actions: (1) *discovering* previously undiscovered parts of myself (i.e. insight into the self); and (2) *accepting* previously undiscovered parts of myself. From a logical analysis of the other items in the 'self-understanding' factor, it can be theorized that the 'discovering' action, on its own, may be likely to have a high correlation with the other items in the 'self-understanding' factor, while the 'accepting' action represents something not captured by the other items, and would be likely to have a lower correlation; that is, it is the 'accepting' action that distinguishes the 'discover and accept' item from the others. One may conclude that there is a basis to theorize that self-acceptance plays an important role in change in the group setting, a role distinct from insight into the self (which may be necessary for, but is not sufficient to, self-acceptance).

Psychoanalytic theorizing on the relationship between group participation and the development of the benign superego may be useful here. Fieldsteel (1984) posits that identification with the loving objects in the form of the group leader, the other group members, and the 'group as a whole' (Bion's concept of 'group-as-mother') allows for the "enhancement and development of the benign and protective aspects of the superego." The benign superego protects the individual from the harsh, critical superego that forces the psyche into a punitive, condemning relationship with itself. The goal of group therapy, from this perspective, is to help shift the superego from the critical to the benign position. In the parlance of non-psychoanalytic theory, this process might be termed 'self-acceptance'; self-compassion theorists would know this as 'self-kindness.'

Whatever the terminology, the significant power of this process to effect change in the group setting is likely what Yalom captured in the ‘discover and accept’ item of his classic study.

*Common humanity and group psychotherapy.* There is a preponderance of research on group mechanisms of change that supports the importance of what Yalom and other researchers have termed ‘universality’ (Gold-Steinberg & Buttenheim, 1993; Mennen & Meadow, 1993; Yalom & Leszcz, 2005). Many, if not most, patients enter group psychotherapy with strong feelings that they are alone in their particular emotional world; that others are unlikely to understand them, let alone accept or value them; that there is little to gain from the experiences and struggles of others. While a sense of personal uniqueness is a common feature of human experience, perhaps particularly in the West, this sense is particularly pronounced in the population comprised of those who seek therapy for mental health (Yalom & Leszcz, 2005). Quite often, a sense of mental health problems carries with it a perceived or actual social isolation that contributes mightily to the impact of psychic struggles on quality of life.

Early stages of process group psychotherapy demonstrate to the patient that he or she is far from alone in the experience of pain or inner conflict, no matter how extreme or taboo the experience may be. This discovery is an extremely powerful experience and offers an enormous source of relief, as patients report feeling ‘more in touch with the world’ (Yalom & Leszcz, 2005) as a result.

Of course, the experience of ‘universality’ maps quite seamlessly onto the ‘common humanity’ component of self-compassion. Neff (in press) asserts that the experience of common humanity allows for an adaptive de-emphasis of the self; it is

through a deeper sense of connection to the outer world that an individual may hope to disrupt the oppressive cycle of rumination, isolation, and poor mental health.

Psychoanalytic theory, particularly object relations, is useful here, as well, as it posits the fostering of shared humanity as a process naturally woven into the fabric of an unfolding therapy group. Shields (1999) has commented on the development of “potential space” within the context of the working therapy group as among the prime forces of group work. Briefly, Winnicott's (1953; 1971) concept of potential space explores an intermediate arena of experience that lies between the internal (“me”) and external (“not-me”) psychic worlds; it is within this space that, among other things, intimate relationships and creativity exist and find expression. In the group context, potential space may be seen as the arena of engagement between (and even within) group members; in time, the experiences of other group members begin to be experienced by group participants not exactly as one would experience their own private lives, and not exactly as one would experience something of which they were not in some deep way a part. If this concept is difficult to grasp, it is because, as Winnicott so eloquently expressed, the process rests upon a paradox, and the acceptance of that paradox: the group experience belongs exclusively to neither the “me” nor the “not me” worlds, but simultaneously both. In that it is the creation over time of a complex psychic and largely unconscious reality, this process is analogous to the development of Bion's concept of group-as-mother.

Ogden (1990) asserts that it is only in the arena of potential space that true empathy (or compassion) can develop and find expression. “Empathy is a psychological process that occurs within the context of a dialectic of being and not-being the other.

Within this context (Winnicott would say, ‘within potential space’), one plays with the idea of being the other while knowing that one is not” (p. 107). Since the engagement of potential space is a natural outgrowth of the group process, and since this engagement allows and fosters the experience of empathy and interpersonal connection, one may theorize that the development of a sense of common humanity plays a central role in the formation of the successful therapy group.

*Mindfulness and group psychotherapy.* While there are several mindfulness-based therapies that take place in a group setting, these tend to be individually-targeted interventions that focus on individual cognitive processes (Kabat-Zinn, 1990; Linehan, 1993; Hayes, Strosahl et al., 1999; Segal, Williams et al., 2002). Far more relevant to this study are theoretical links between the mindfulness construct and classic process group psychotherapy, which historically does not make explicit use or mention of mindfulness.

In formulating the defining features of the process group, Yalom emphatically asserts the centrality of here-and-now experience and expression. He writes that “the immediate events of the meeting take precedence over events both in the current outside life and in the distant past of the members” (Yalom & Leszcz, 2005). While these ‘outside’ events are instructive and are an element of focus in the process group, it is the ‘immediate’ event that drives the therapeutic process and warrants extremely close attention.

According to Yalom, there are two facets to the here-and-now therapeutic engine: (1) *experiencing* the here-and-now (that is, being fully aware of what one is feeling, thinking, doing in that very moment); and (2) *illuminating* the here-and-now process (understanding and expressing the present moment inter- and intra-personal reality). So

successful group process requires allowing oneself to fully experience the present moment, followed by an active, open engagement of the group in an attempt to understand the present experience and ultimately integrate it into the larger framework of one's self-knowledge. Ideally, the emotional/cognitive phenomenon experienced in the here-and-now is neither suppressed nor exaggerated; it is to be observed openly and honestly. The result is an equilibrated stance that allows for an assimilation of the present moment into the greater self-concept. Winnicott (1965) termed this a process of 'integration.'

The connection between this aspect of group therapy and the construct of mindfulness should be apparent. Kabat-Zinn (2003) proposes that mindful attention carries with it a position of open-hearted interest toward the experience of the present moment, regardless of how pleasant or unpleasant the experience may be. This is precisely the stance that the group therapy leader encourages in group members in order to apprehend the reality of the here-and-now and integrate it into a more robust self-concept. In opposition to this stance is an overly reactive or ruminative style, where patients may find themselves overidentifying with certain emotional states or stuck in a cycle of self-perpetuating negative thoughts, judgments, and condemnations, rendering impossible the adaptive integration of the present moment into a larger, more effective, more benign self-concept.

### *Rationale for the study*

Yalom's direct question, "How does group therapy help clients?" was first posed over 35 years ago, and has generated many dozens of studies that have not yielded

anything resembling a consensus. Several recent reviewers have lamented the current disorganized state of research in the field (Bednar & Kaul, 1994; Burlingame, Fuhriman et al., 2004; Magen & Mangiardi, 2005), and another has called for the emergence of a revamped theoretical structure of group therapeutic mechanisms (Kivlighan & Holmes, 2004).

This study will investigate the potential for the construct of self-compassion to serve as a contribution to a theoretical, organizing lens through which the power of group psychotherapy may be more clearly understood. Though there has to date been no empirical investigation of the relationship between self compassion and psychological change as a function of participation in process therapy groups, there is a theoretical basis for the belief that such a relationship exists, and is significant.

Moscovitch, Hofmann, et al., (2005) assert that “an essential step in understanding the active ingredients or mechanisms of therapeutic interventions is the identification of variables that mediate treatment outcomes.” Taken together, the literature on mechanisms of change in group psychotherapy suggests, though falls short of explicitly stating and investigating, that self-compassion may be an important variable that mediates treatment outcomes. The study will attempt to provide a foundational step toward an empirical basis to this theory.

The current study compares the role of self-compassion as a therapeutic mechanism to that of *hope* and *altruism*, two therapeutic factors Yalom (2005) considers enormously influential in group functioning. Providing empirical support for self-compassion as a therapeutic factor comparable in influence to hope and altruism would mark an initial step in the introduction of a new mechanism of change in group theory.

Hope and altruism were chosen as points of comparison for three main reasons. First, they have been firmly established as theoretically relevant to group process, and are thus entrenched in the 'canon' of group theory. Second, they can be measured reliably using established measures independent of the lengthy questionnaires (such as Yalom's TFQ and similar surveys) that are quite predominantly used in therapeutic factor research; the ability to measure hope and altruism independent of these widely-used questionnaires, which all presuppose a list of therapeutic factors and ask terminating group members to rate the importance of each, allows for a comparison of these established constructs to new ones - such as self-compassion - that of course are not included in the existing questionnaires. And third, the measurement of hope and altruism can be done relatively quickly, an important factor given that on-going groups taking place in a professional agency form the clinical sample in this study.

Empirical support for the importance of hope and altruism in group functioning has been well established. In a review of 23 therapeutic factors research studies in which group members were asked at termination to rate the degree to which various constructs were felt to have had an impact on their therapy, Mackenzie (1987) found that hope and altruism were both consistently endorsed by group members as important and significantly related to the overall group experience. More recent studies have continued to add support to the role of both hope (Cameron, 1999; Ogrodniczuk & Piper, 2003; Lara, et al, 2004; Marmarosh, et al., 2005) and altruism (Kapur, et al., 1988; Helms, 2003; Spek, et al., 2008) in a range of group therapy formats.

The current study investigates self-compassion, hope, and altruism as therapeutic factors in group therapy, and attempts to link *changes* in these factors over the course of



therapy to mental health outcome. The focus on variables' change over time represents a contrast to the majority of studies that form the group literature. Recent reviewers lament the fact that group researchers have traditionally made use of static, rather than dynamic, data measurements (Kivlighan, Coleman et al., 2000); that is, data is typically collected at termination, or at some single, arbitrary point during the therapy. This method leads researchers to “miss the time dependent nature of group process” and limits the meaning of their findings (Kivlighan, Coleman et al., 2000). Kivlighan, Coleman, et al. conclude that there is a need in the literature for “longitudinal, repeated measures-type data.”

This study endeavors to examine the dynamic, rather than the static, relationship between the therapeutic factors under investigation and mental health outcome. This is accomplished through the implementation of a repeated measures design and the use of two collection points: the beginning and the end of a semester long process group. Using statistical analysis techniques appropriate to the sample size, the study also aims to investigate the relationship between group-level and individual-level changes in self-compassion, an examination that is absent in the great majority of group research (Bonito, 2002).

Why is it important to determine mechanisms of change in the group setting? The group leader (indeed, any psychotherapist) is constantly confronted with the challenge of making therapeutic decisions, and has a nearly infinite number of options at every turn. How to be in the consulting room, how to respond to predictable patient behavior, how to respond to unpredictable patient behavior, what to encourage, what to discourage, what to illuminate, what to flesh out: these are but a small fraction of the general concerns intrinsic to the practice of psychotherapy. Central to the psychotherapists' ascension of

the steep and at times daunting learning curve of therapeutic practice is an increased understanding of and comfort with what it is about the intervention being offered that works. McWilliams (2004) has termed this 'faith,' by which she means faith that the process means something good for your patient, and faith in what it is about the process that makes this so.

By contributing to a theoretical understanding of what it is about group therapy that works, it is the hope of the author that the study will offer some guidance to the group therapist who must choose among the myriad options in any given moment in the therapeutic process. Ultimately, such a central orientating principal may contribute to the creation of more 'faithful' group therapists and more effective group therapy.

## Chapter 3

### Methods

#### *Overview*

Group psychotherapy is a widely-utilized form of psychotherapy, and it is employed by a significant percentage of counseling psychologists in the course of psychotherapeutic practice. Decades of empirical research on group psychotherapy have contributed to a firm consensus that group therapy works in promoting positive change in various measures of mental health. However, despite many dozens of studies investigating the issue, a central organizing theoretical principle as to ‘how’ group therapy helps participants has remained underdeveloped. The study will investigate the potential for the construct of self-compassion to contribute to such a principle.

#### *Research Questions and Hypotheses*

On the basis of the vast literature exploring the subject, it is hypothesized that involvement in a psychotherapy process group will significantly predict psychological well-being as measured by levels of depression, perceived stress, and happiness at baseline and follow-up.

For the reasons detailed in Chapter 2, it is also hypothesized that involvement in a psychotherapy process group will significantly predict an increase in self-compassion over time. This study will test the hypothesis that the change in mental health outcome as a result of participation in group psychotherapy is influenced by these changes in levels of self-compassion. It is further hypothesized that the influencing power of self-compassion will be at least equivalent to that of two other explanatory variables (hope

and altruism) initially proposed by Yalom (1970) and often cited in the literature as predictive of outcome in group therapy.

The current study will address the following research questions:

1) Compared to those who are not participating in group therapy, do people who participate in a psychotherapy process group demonstrate increased levels of psychological well-being over time?

- *Hypothesis 1:* Participants of process group psychotherapy will demonstrate increased levels of psychological well-being over time, as measured by baseline and follow-up levels of depression, perceived stress, and happiness. This change in psychological well-being over time will be significantly greater than any change found in the non-treatment control group.

2) Compared to those who are not participating in group therapy, do people who participate in a psychotherapy process group demonstrate increased levels of self-compassion over time?

- *Hypothesis 2:* Participants of process group psychotherapy will demonstrate increased levels of self-compassion when comparing baseline and follow-up measures of self-compassion. This change in self-compassion will be significantly greater than any change found in the non-treatment control group. Further, this increase in self-compassion will be observed to an approximately equivalent degree in each of the six subscales of the SCS, as well as within each of the three

overall components of self-compassion: self-kindness, mindfulness, and the experience of common humanity.

3) Does self-compassion mediate group therapy participants' increased well-being?

- *Hypothesis 3:* Self-compassion will mediate group psychotherapy participants' increased well-being as measured by surveys of depression, perceived stress, and subjective happiness at baseline and follow-up.

4) How does the relationship between outcome and self-compassion compare to the relationship between outcome and two other variables (hope and altruism) often presented in the literature as predictive of change in process group therapy?

- *Hypothesis 4:* Change in self-compassion will have a significant relationship with change in the depression, perceived stress, and subjective happiness. The significance of these relationships involving self-compassion will be at least comparable to those involving hope and altruism.

In addition, a supplemental research question will explore the effects of a group level variable on individual participants; this level of analysis is largely absent in the group literature. Each therapy group will have its own particular "tone" or shared experience particular to that group. Such a tone may be conceived along a variety of dimensions; the current study suggests that one of these dimensions is self-compassion. Due to any number of possible factors (self-compassion level of the leaders, vagaries of random sampling, members mutually influencing each other, etc.), some groups will be

more self-compassionate than others. The following question will provide potentially useful data on the impact changes in “group-level tone” can have on group members. Because there is insufficient sample size for the kind of multilevel modeling recommended for such an investigation of the relationship between group-level and member-level variables (Murphy & Johnson, 2006), the study will use inferential techniques appropriate to the available sample size to explore preliminary findings in this area. It is hoped that such an analysis will provide a first step towards an understanding of how each member is affected by the changes in self-compassion at the group-level.

5) What is the relationship between change in self-compassion at the group level (i.e. how much the group as a whole gains in self-compassion) and change in self-compassion at the individual level (i.e. for individual group participants)?

- *Hypothesis 5:* There will be at least a moderate correlation between individual group members’ change in self-compassion and the aggregate change in self-compassion of the rest of his/her group.

### *Participants*

**Treatment Group.** The study tracked 35 process group psychotherapy participants over the course of the Fall 2007 semester. In the spring of 2007, the researcher approached the University of Texas at Austin Counseling and Mental Health Center (CMHC) with the study proposal (Appendix O) and CMHC agreed to cooperate. Participants were then drawn from the seven process groups that took place during the Fall 2007 semester. The seven process groups were titled: “Observation Group for All

Ages”; “Older Psychotherapy Group for Ages 25 and Above[1]”; “Older Psychotherapy Group for Ages 25 and Above[2]”; “Younger Psychotherapy for Ages 18-23”; “Coed Psychotherapy for All Ages”; “Mid-Range/Older Psychotherapy for Ages 23 and Above”; and “Women’s Psychotherapy.” Each of these groups contained anywhere from 5-9 UT students.

**Control Group.** The control group was comprised of 57 undergraduate students drawn from the Educational Psychology undergraduate subject pool.

### *Procedure*

**Treatment Group.** Immediately prior to the beginning of the Fall 2007 semester, the researcher met collectively with the thirteen group leaders from the above seven process groups (each group has two co-leaders; one therapist co-led two different groups). During this meeting, each group leader was provided with binders containing relevant study material (Appendix C through F), trained in the protocol, and encouraged to voice any comments and questions. In an effort to avoid biasing the group leaders and possibly contaminating the data, the study was explained in very general terms as an investigation of process group therapy. Leaders were told that they would be fully debriefed on the purpose and findings of the study towards the end of the Spring 2008 semester.

Students enter process groups at CMHC on a referral basis after at least one individual meeting with a staff therapist. Students referred to groups then meet with one of the group co-leaders for a Pre-Group Interview (PGI). During this PGI, group leaders and the prospective group member together determine if joining the group is a good

option. While there is no set exclusion criteria for these groups, reasons for exclusion would include the presence of psychosis or the strong presentation of an Axis II disorder. The majority of students seen during a PGI eventually enter the group.

Group leaders were instructed to briefly introduce the study at the end of the PGI to all students who had been deemed appropriate for entrance into the group. The introduction consisted of mentioning that a study on group therapy was being conducted and all prospective group members were being asked if they would like to participate. Group leaders were then asked to provide students with a consent form/information sheet for students (Appendix F). As an incentive to participate, students were informed that there would be a raffle for two \$50 gift cards to a local movie theater. Leaders were asked to emphasize that participation was entirely voluntary, that the decision to participate or not would in no way effect their treatment, and participants' identities would remain completely anonymous to the researcher. (Steps were taken to ensure study data could not be linked to specific participants; for this reason the study was granted "Exempt" status by the IRB).

During the PGI, potential participants were informed by group leaders that study participation would consist of filling out an identical, 10 minute survey during the first and last meetings of the semester.

At the beginning of the first group meeting of the semester, group leaders distributed surveys to those students who agreed to participate. 48 participants at that point completed the survey packet at baseline. Perhaps because the group leaders were enthusiastic about the study, or due to some other reason or combination of reasons, every student in all 7 participating groups agreed to participate in the study at baseline.



4 students left their respective groups during the course of the semester; these 4 participants dropped out before completing the follow-up measures, and were excluded from analysis.

In an effort to capture data on as many participants as possible, group leaders brought the follow-up survey to the penultimate group meeting of the semester and asked if any members thought they were likely to miss the final session; those who said they were likely to be absent the following week were asked to complete the follow-up survey then. 4 participants completed the follow-up survey at that time.

9 participants were absent the final group meeting of the semester and did not fill out the follow-up survey the week before. These 9 participants were sent a link to the anonymous survey via UT's secure email system within three days of their final group meeting. To ensure anonymity, the researcher did not have access to their email addresses or their actual names; the secure email was written by the researcher and then securely forwarded to these participants by CMHC staff. The survey was housed on SurveyMonkey.com. 1 participant completed the follow-up survey via this method.

Thus a total of 8 students remained in their respective groups until the end of the semester but did not attend the final meeting and did not respond to efforts to have them complete the survey at Time 2 by alternative means.

Altogether, 36 participants completed the survey packet at both baseline and follow-up. 1 participant completed the survey at the appropriate collection points, but skipped the Self-Compassion questionnaire at baseline; this participant's data was excluded from analysis, leaving 35 participants in the Control condition.

Other than the consent form and a brief demographic form filled out only at baseline, the baseline and follow-up assessment packet was identical and was comprised of six questionnaires:

the Beck Depression Inventory – Short Form; the Perceived Stress Scale; the Subjective Happiness Scale; the State Hope Scale; the Attitudes Toward Helping Others Scale; and the Self-Compassion Scale.

Since the study was anonymous, surveys were linked at baseline and follow-up by having participants enter the first four letters of their mother's maiden name, as well as the first four letters of the high school from which they graduated. This was sufficient to uniquely identify each completed survey.

Attached to the follow-up survey was a ticket for the movie theater gift card raffle. The ticket directed students to a webpage that, on a specified date, posted the winning raffle numbers (Appendix L). This webpage also contained a link to another page (Appendix M) that offered a debriefing as to the full purpose of the study and listed contact information for the researcher in the event that participants had concerns or questions. Winning numbers were drawn anonymously. Students with the winning raffle tickets were directed to contact the researcher via phone, and a meeting was arranged to present the gift cards. The names of these students remained anonymous, and there was no way to connect the winning raffle number with any of the completed surveys.

**Control group.** 250 students from the Educational Psychology Subject Pool were initially assigned to the study. These students were directed via email (Appendix H) to an online survey set up through Survey Monkey. The survey was anonymous; again participants entered the first four letters of their mother's maiden name and the high school from which they graduated in order to uniquely link surveys at different collection points.

Of these 250 initial participants, 211 completed the survey within the specified Time 1 participation window (early to mid-October, during the first week after subject pool participants were assigned to studies). These 211 were directed via email to complete an identical online survey at Time 2 within a second specified window. This Time 2 window was during the last week subject pool participants were allowed to participate for class credit in their assigned studies (mid-November). 186 students completed the survey during this Time 2 window.

The time period between the Time 1 and Time 2 collection points was dictated by limitations on subject pool participation established by the Educational Psychology Department. This interval, roughly 5-6 weeks, did not mirror the interval between the baseline and follow-up collection points in the treatment group, which was roughly 9-10 weeks. In order to match as closely as possible the two month interval between the treatment group collection points, the 194 control group participants who completed the Time 2 survey were then asked to complete the survey again at Time 3, in mid-December. Since this collection point was outside the required subject pool participation window, it was made clear to participants that completing the survey at Time 3 was not required to receive credit for study participation. As an incentive, another \$50 movie

theater gift card was raffled off to those who agreed to take the online survey at Time 3 in mid-December, 2007. 57 students voluntarily completed the survey at Time 3 and served as the final control group for the study. The Control group raffle winner was notified via email. To ensure anonymity, mail addresses were collected in such a way that they could not be linked to any survey responses.

It was felt that it was crucial for the time interval between data points in the Control group mirror that of the Treatment group, particularly with the student population, when the rhythms of the semester (mid-terms, finals, etc.) may be assumed to play at least some role in mental health. For this reason, for all hypothesis testing in this study, it was decided that it was justified to examine the Control group data that was collected at the same points as the Treatment data (in early to mid-October and again in mid-December), even though this meant excluding a large quantity of data at the mid-November collection point (a time point when no Treatment data was collected).

### *Instruments*

*(Note: all instruments are included in the appendix section of this dissertation)*

*Self-Compassion Scale (SCS).* The 26-item Self-Compassion Scale, developed by Neff (2003a), measures items on six factors: a 5-item self-kindness subscale (e.g. “I try to be understanding and patient toward aspects of my personality I don’t like”), a 5-item self-judgment subscale, reverse scored (“I’m disapproving and judgmental about my own flaws and inadequacies”), a 4-item common humanity subscale (“I try to see my failings as part of the human condition”), a 4-item isolation subscale, reverse scored (“When I think about my inadequacies, it tends to make me feel more separate and cut off from the

rest of the world”), a 4-item mindfulness subscale (“When something painful happens I try to take a balanced view of the situation”), and a 4-item over-identification subscale, reverse scored (“When I’m feeling down I tend to obsess and fixate on everything that’s wrong”). Validation studies (Neff, 2003a) have found internal reliability of .92 (Subscale reliabilities: self-kindness: .78; self-judgment: .77; common humanity: .80; isolation: .79; mindfulness: .75; and overidentification: .81) and test-retest reliability of .93 (self-kindness: .88; self-judgment: .88; common humanity: .80; isolation: .85; mindfulness: .85; and overidentification: .88). The scale has shown statistically significant positive correlations with self-esteem: .55 (Neff, 2003b) and .59 (Neff, 2003a), social connectedness (.41), and life satisfaction (.45), and significant negative correlations with depression (-.51), anxiety (-.65), self-criticism (-.65) and neurotic perfectionism (-.57) (Neff, 2003a). The Self-Compassion scale has been tested with several U.S. undergraduate samples (Neff, 2003a, 2003b); Thai and Taiwanese samples cross-culturally, and with a practicing Buddhist sample (Neff, 2003a). Confirmatory factor analysis was used to cross-validate the six factor structure underlying responses to the final version of the scale. CFA was also employed to confirm the model of a single higher-order self-compassion factor explaining the inter-correlations between the six subscale factors.

*Beck Depression Inventory-Short Form (BDI-SF)*. The BDI-SF (Beck & Beck, 1972; Beck et al., 1974) is a short version of the 21-item Beck Depression Inventory, one of the most widely used measures of depression. The BDI Short-Form is a 13 item self-report measure designed to assess a subject’s depressive symptoms for the week prior to survey completion. The BDI-SF presents the subject with groups of four statements,

scored 0 to 3, and asks for the selection of the statement that best fits for the previous week. The 21 items on the scale are scored from 0 to 3; summing these items gives the total score, which ranges from 0 to 36. Higher scores suggest increased severity of depressive symptoms. Beck, Steer et al., estimate internal reliability (coefficient alpha) of the scale's scores at .87. Concurrent validity of the scale has been well established: it was found to be correlated with the Depression Adjective Check Lists and the MMPI D Scale with correlation results of .66 and .75, respectively, and Williams, Barlow, & Agras (1972) report a .82 correlation between the BDI and the Hamilton Rating Scale for Depression (Hamilton, 1960).

*Perceived Stress Scale-10 (PSS)*. The subjective perception of a life situation as stressful may be seen as more relevant to psychological well-being than the objective event itself (Lazarus, 1999). The PSS-10 (Cohen et al., 1983) is a 10-item scale designed to measure the extent to which a subject's life situation is globally appraised as "unpredictable, uncontrollable, and overloading" (Cohen & Williamson, 1987). Each item is rated on a 5-points scale ranging from 0 ("never") to 4 ("very often"). PSS-10 scores are obtained by reversing the scores on the four positive items and then summing across all 10 items (items 4, 5, 7, and 8 are positively stated). Cohen et al. (1983) reported coefficient alpha of .84 to .86. The authors also reported good external validity and correlated as expected with other established measures of life stress.

*Subjective Happiness Scale*. The SHS (Lyubomirsky & Lepper, 1999) is a 4-item self-report measure of global subjective happiness. Items are rated on a scale from 1 (not very happy) to 7 (very happy); higher scores indicate higher levels of happiness (one item is reverse scored). The authors developed and validated the scale over 14 studies with a

total of 2,732 participants, with data collected from: students on two college campuses; students from one high school campus; and community adults in two California cities. Internal consistency for the SHS was found to be .89, and test-retest reliability was .90 for four weeks, and .71 for three months. The authors demonstrated good convergent and discriminant validity, as the scale correlated moderately highly with such scales as the Satisfaction with Life Scale, Affect Balance Scale, and Delighted-Terrible Scale, and showed low correlations with college GPA, SAT scores, and the Social Readjustment Rating Scale.

*State Hope Scale.* The SHS (Synder et al., 1996a) is a self-report measure of both efficacy and outcome expectancies, with the sum capturing overall state level of hope. The SHS is comprised of six questions and utilizes a Likert-type eight-point format. The total score for the SHS will range from 6 to 48, and is arrived at by summing the three efficacy and the three outcome items. Snyder, et al. (1996b) has demonstrated in four studies with a total sample of 444 University of Kansas undergraduates that the scale possesses reliability in the range of .79-.95. The authors have also shown the scale to possess good concurrent validity, as the SHS correlates with the Dispositional Hope Scale at .79.

*Attitudes Toward Helping Others Scale.* The AHO (Webb, Green et al., 2000) is a measure of willingness to engage in altruistic behavior. The scale is comprised of four items rated on a five-point Likert scale. Two separate validation studies were undertaken by the authors, one a sample of over 300 undergraduate and graduate students, the other a sample of over 300 nonstudents from five counties surrounding a large, culturally-diverse southeastern city. For the combined sample, the authors demonstrate an internal

consistency by Cronbach's alpha of .79, as well as good discriminant and external validity. A recent study (Carlton, 2006) making use of the measure found an internal consistency of .85. Construct validity of the scale was assessed as adequate by a team of independent raters (Webb, Green, et al., 2000); the authors also report that correlations between the AHO and related variables such as giving behavior and a sense of universalism indicate good concurrent validity.

The demographic variables age, grade level, sex, and ethnicity will also be recorded.



## Chapter Four

### Results

#### *Sample Description*

The study sample was comprised of 92 participants, 35 in the Treatment group and 57 in the Control group. Of the 35 in the Treatment group, 25 (71%) were female and 10 (29%) were male; of the 57 in the Control group, 34 (60%) were female and 23 (40%) were male.

The age range in the Treatment group was 19-36, with an average age of 24 years, 10 months. In the Control group, the age range was 17-24, with an average age of 20 years, 5 months. In the Treatment group, 16 (46%) were graduate students, 6 (17%) were seniors, 11 (31%) were juniors, 2 (6%) were sophomores, and there were no freshmen in the sample. In the Control group, 1 (2%) was a graduate student, 26 (46%) were seniors, 12 (21%) were juniors, 9 (16%) were sophomores, and 8 (14%) were freshmen.

By ethnicity, in the Treatment group, 26 (74%) identified as European American/White, 4 (11%) as Asian/Southeast Asian, 3 (9%) as Latino(a)/Hispanic/Mexican-American, and 2 (6%) as Mixed ethnicity. In the Control group, 35 (61%) identified as European American/White, 9 (16%) as Asian/Southeast Asian, 6 (11%) as Latino(a)/Hispanic/Mexican-American, 3 (5%) as Mixed ethnicity, 2 (4%) as African-American/Black, and 2 (4%) as Native American.

*Preliminary Analyses*  
*Demographics - Treatment vs. Control groups*

*Sex.* A t-test demonstrated that there was no significant difference between the two groups on the basis of sex:  $t(90) = 1.14, p = .26$ . 60% of the Control group was female, compared to 71% of the Treatment group.

*Age.* A t-test demonstrated that the difference in mean age between the Treatment (M = 24.9 years; SD = 4.7 years) and the Control groups (M = 20.5 years; SD = 1.5 years) was quite significant:  $t(90) = 6.61, p < .001$ . Already we clearly see that the Treatment and Control samples were drawn from distinct populations: the Treatment group was nearly half composed of graduate students; the average age of these graduate students was 28 years, 6 months. The Control condition contained only 1 graduate student.

| Academic Year    | Percentages by Condition |         |
|------------------|--------------------------|---------|
|                  | Treatment                | Control |
| Graduate Student | 46                       | 2       |
| Senior           | 17                       | 46      |
| Junior           | 31                       | 21      |
| Sophomore        | 6                        | 16      |
| Freshman         | 0                        | 14      |

Table 4.1 Academic Year by Condition

*Ethnicity.* As Table XX demonstrates, both samples were comprised of roughly equivalent percentages of each of the six ethnic groups represented.

| Ethnicity                           | Percentages by Condition |         |
|-------------------------------------|--------------------------|---------|
|                                     | Treatment                | Control |
| African American/Black              | 0                        | 4       |
| Asian/Southeast Asian               | 11                       | 16      |
| European American/White             | 74                       | 61      |
| Latino(a)/Hispanic/Mexican American | 9                        | 11      |
| Native American                     | 0                        | 4       |
| Mixed Ethnicity                     | 6                        | 5       |

Table 4.2 Ethnicity by Condition

T-tests demonstrated that there was no significant difference between the two samples on the basis of ethnicity.

*Group Leader Demographics*

Of the 7 therapy groups examined by this study, 4 groups were co-led, 3 were led by a single leader, and one leader co-led two different groups, for a total of 11 leaders involved in the study. Demographic data on the leaders is presented below:

| Age | Sex | Degree | Years leading groups | # of therapy groups led |
|-----|-----|--------|----------------------|-------------------------|
| 26  | F   | MA     | 4                    | 10                      |
| 27  | F   | MSW    | 1                    | 2                       |
| 32  | F   | M.Ed   | 4                    | 30                      |
| 37  | M   | M.Ed   | 0                    | 0                       |
| 39  | M   | Ph.D   | 10                   | 22                      |
| 41  | F   | MSW    | 5                    | 10                      |
| 42  | F   | Ph.D   | 16                   | 20                      |
| 52  | F   | MSW    | 1                    | 1                       |
| 54  | F   | Ph.D   | 22                   | 50                      |
| 57  | F   | Ph.D   | 13                   | 20                      |

Table 4.3 Group Leader Demographics

Of the 10 leaders involved in the study, 2 were male. The average age of group leaders was 41 years, 8 months (SD = 10 years, 10 months). Leaders had an average of 7.6 years of therapy group leadership experience (SD = 7.4 years), with a total mean of 16.5 therapy groups led (SD = 15.5 groups). The high standard deviation in experience reflects the fact that 3 groups at CMHC were co-led by doctoral practicum students or interns; in each of these groups, the doctoral student or intern co-led with a the senior staff member, and was also supervised by that staff member.

*Investigation of Possible Sample Bias*

To maximize the validity of Treatment/Control comparisons, the study endeavored to have the time between baseline and follow-up measurements for the

Control group match that of the Treatment group. Given the likely relationship between affect and time-of-semester for students, it was also important to have the measurements take place at the same time in the semester. For this reason, Control group participants were asked to complete the study survey at a time point that matched the last group meeting for the Treatment group; for the Control group, this time point fell outside the window for mandatory EDP study pool participation. As an incentive for potential Control participants to participate, movie theater tickets were raffled.

For the Control group, data was collected at the opening of the subject pool window (early to mid-October) and at the end of the subject pool window (mid-November). 57 students then completed the study measures at the final, optional collection point (early to mid-December), while 129 students who had taken the survey at the mid-November collection point did not. The 57 students who completed the study measures at the same interval as the Treatment group comprise the Control group of this study.

The Control group, then, is not comprised of a random sample, but instead is comprised of those students who volunteered to take the survey again when they did not have to. Since the final sample might represent a different population than the initial sample, this is a potential source of selection bias.

To investigate the possibility of this bias, mid-November data from the final sample of 57 students was compared to the mid-November data from the 129 students who did not voluntarily take the measures in mid-December. Any differences found between these two groups might indicate a selection bias.

The following table presents data on the six study measures for these two groups. The “probability of difference” row presents the results of an independent samples t-test for each measure.

|  | <b>Depress.</b> | <b>P. Stress</b> | <b>Happ.</b>   | <b>Hope</b>    | <b>Altruism</b> | <b>SC</b>     |
|--|-----------------|------------------|----------------|----------------|-----------------|---------------|
| <b>Final Sample</b>                                  | 5.38<br>(5.60)  | 2.04<br>(.58)    | 4.99<br>(1.28) | 5.95<br>(1.57) | 4.14<br>(.82)   | 3.00<br>(.75) |
| <b>Non-responders<br/>at voluntary<br/>follow-up</b> | 5.35<br>(5.79)  | 1.97<br>(.55)    | 4.92<br>(1.40) | 5.79<br>(1.62) | 3.94<br>(1.03)  | 3.03<br>(.68) |
| <b>Probability of<br/>difference</b>                 | .97             | .51              | .76            | .53            | .22             | .82           |

Table 4.4 Means of measures at mid-November data point: final sample vs. non-responders  
(Variables in parentheses represent standard deviations)

The data suggests that there was no selection bias related to the use of a voluntary follow-up collection point.

#### *Means of Initial Measures*

*Treatment vs. Control.* For the two groups, means and standard deviations for the baseline measures are as follows:

| <b>Construct and Scale</b>    | <b>Intervention</b> |       | <b>Control</b> |      |
|-------------------------------|---------------------|-------|----------------|------|
| Depression<br>0-36            | M                   | 10.60 | M              | 5.09 |
|                               | SD                  | 5.77  | SD             | 4.79 |
| Perceived Stress<br>0-4       | M                   | 2.39  | M              | 1.65 |
|                               | SD                  | .73   | SD             | .77  |
| Happiness<br>1-7              | M                   | 3.72  | M              | 5.09 |
|                               | SD                  | 1.23  | SD             | 1.30 |
| Hope<br>1-8                   | M                   | 4.89  | M              | 6.27 |
|                               | SD                  | 1.37  | SD             | 1.15 |
| Altruism<br>1-5               | M                   | 4.22  | M              | 2.50 |
|                               | SD                  | .56   | SD             | 1.02 |
| Self Compassion<br>1-5        | M                   | 2.38  | M              | 3.01 |
|                               | SD                  | .54   | SD             | .73  |
| (Self Kindness)<br>1-5        | M                   | 2.39  | M              | 3.04 |
|                               | SD                  | .77   | SD             | .87  |
| (Self Judgment)*<br>1-5       | M                   | 2.10  | M              | 2.79 |
|                               | SD                  | .76   | SD             | .86  |
| (Common Humanity)<br>1-5      | M                   | 2.56  | M              | 3.07 |
|                               | SD                  | .74   | SD             | .93  |
| (Isolation)*<br>1-5           | M                   | 2.12  | M              | 2.91 |
|                               | SD                  | .73   | SD             | 1.05 |
| (Mindfulness)<br>1-5          | M                   | 2.96  | M              | 3.35 |
|                               | SD                  | .56   | SD             | .85  |
| (Over-Identification)*<br>1-5 | M                   | 2.17  | M              | 2.91 |
|                               | SD                  | .77   | SD             | .97  |

Table 4.5 Means of initial measures: Treatment vs. Control  
(Constructs in parentheses represent subscales of the Self-Compassion Scale)

\* These three subscales have been reverse scored; higher scores indicate lower degrees of the construct.

Independent sample t-tests revealed significant differences between the two groups on all of these baseline measures. Interestingly, there was a significant difference between the two groups on initial measures of altruism, with the Treatment group quite scoring much higher on the Attitudes Towards Helping Others scale:  $t(90) = 9.19, p < .001$ . Differences on baseline measures of depression, perceived stress, happiness, hope, self compassion, self kindness, self judgment, isolation, and over-identification were also significant at the .001 level. Differences on baseline measures of mindfulness and common humanity were significant at the .01 level. These differences are not surprising, given the fact that the

Treatment group is comprised of a clinical sample, while the Control condition was drawn from the subject pool.

*Sex.* For the two groups, means and standard deviations for the baseline measures are as follows:

|                     | <b>Depress.</b> | <b>P. Stress</b> | <b>Happ.</b> | <b>Hope</b> | <b>Altruism</b> | <b>SC</b> |
|---------------------|-----------------|------------------|--------------|-------------|-----------------|-----------|
| <b>Treatment M</b>  |                 |                  |              |             |                 |           |
| <i>males</i>        | 12.50           | 2.52             | 3.03         | 4.83        | 4.25            | 2.33      |
| <i>females</i>      | 9.84            | 2.34             | 4.00         | 4.91        | 4.22            | 2.40      |
| <b>Treatment SD</b> |                 |                  |              |             |                 |           |
| <i>(males)</i>      | (4.17)          | (.46)            | (.92)        | (1.11)      | (.50)           | (.35)     |
| <i>(females)</i>    | (6.23)          | (.81)            | (1.24)       | (1.48)      | (.60)           | (.60)     |
| <b>Control M</b>    |                 |                  |              |             |                 |           |
| <i>males</i>        | 5.56            | 1.57             | 5.00         | 6.13        | 2.52            | 2.97      |
| <i>females</i>      | 4.71            | 1.71             | 5.15         | 6.36        | 2.48            | 3.04      |
| <b>Control SD</b>   |                 |                  |              |             |                 |           |
| <i>(males)</i>      | (5.72)          | (.87)            | (1.42)       | (1.45)      | (.95)           | (.70)     |
| <i>(females)</i>    | (4.10)          | (.70)            | (1.24)       | (.91)       | (1.08)          | (.76)     |
| <b>Combined M</b>   |                 |                  |              |             |                 |           |
| <i>males</i>        | 7.73            | 1.86             | 4.40         | 5.74        | 3.05            | 2.78      |
| <i>females</i>      | 6.88            | 1.97             | 4.66         | 5.75        | 3.22            | 2.77      |
| <b>Combined SD</b>  |                 |                  |              |             |                 |           |
| <i>(males)</i>      | (6.12)          | (.88)            | (1.57)       | (1.47)      | (1.16)          | (.68)     |
| <i>(females)</i>    | (5.67)          | (.81)            | (1.36)       | (1.38)      | (1.25)          | (.76)     |

|                     | <b>(SK)</b> | <b>(SJ)</b> | <b>(CH)</b> | <b>(Iso)</b> | <b>(MF)</b> | <b>(OverID)</b> |
|---------------------|-------------|-------------|-------------|--------------|-------------|-----------------|
| <b>Treatment M</b>  |             |             |             |              |             |                 |
| <i>males</i>        | 2.12        | 2.18        | 2.53        | 2.08         | 2.83        | 2.28            |
| <b>females</b>      | 2.50        | 2.06        | 2.57        | 2.14         | 3.01        | 2.13            |
| <b>Treatment SD</b> |             |             |             |              |             |                 |
| <i>(males)</i>      | (.58)       | (.66)       | (.53)       | (.37)        | (.58)       | (.58)           |
| <b>(females)</b>    | (.82)       | (.80)       | (.81)       | (.83)        | (.55)       | (.85)           |
| <b>Control M</b>    |             |             |             |              |             |                 |
| <i>males</i>        | 2.87        | 2.77        | 2.87        | 2.95         | 3.38        | 2.98            |
| <b>females</b>      | 2.17        | 2.80        | 3.21        | 2.90         | 3.33        | 2.86            |
| <b>Control SD</b>   |             |             |             |              |             |                 |
| <i>(males)</i>      | (.73)       | (.86)       | (.91)       | (1.09)       | (.91)       | (1.07)          |
| <b>(females)</b>    | (.94)       | (.88)       | (.93)       | (1.03)       | (.83)       | (.91)           |
| <b>Combined M</b>   |             |             |             |              |             |                 |
| <i>males</i>        | 2.64        | 2.59        | 2.77        | 2.68         | 3.21        | 2.77            |
| <b>females</b>      | 2.88        | 2.49        | 2.94        | 2.58         | 3.19        | 2.55            |
| <b>Combined SD</b>  |             |             |             |              |             |                 |
| <i>(males)</i>      | (.76)       | (.84)       | (.82)       | (1.01)       | (.86)       | (.99)           |
| <b>(females)</b>    | (.94)       | (.92)       | (.93)       | (1.02)       | (.73)       | (.95)           |

Table 4.6 Means of initial measures: Male vs. Female  
(Variables in parentheses represent subscales of the Self-Compassion Scale)

Differences on each measure between males and females within each condition and within the entire study sample were tested for significance using independent sample t-tests. No significant differences were found between males and females on any of the baseline measures.

#### *Participation by Specific Therapy Group*

The 35 participants that comprised the final Treatment condition were from the following groups:



| <b>Group Name</b>                     | <b>Number of Participants in Final Sample</b> |
|---------------------------------------|---|
| Coed Psychotherapy – All Ages         | 4   |
| Group for Ages 22+                    | 7   |
| Observation Group                     | 5   |
| Group for Ages 25+ (Thursdays @ 2:30) | 3   |
| Group for Ages 25+ (Thursdays @ 5:00) | 5   |
| Women’s Group                         | 7   |
| Age 22 and Under                      | 4   |

Table 4.7 Participation by Group

The “Observation Group” is used in the training of practicum students. It is lead by senior staffers at CMHC, and is conducted in a room with a one-way mirror. Graduate doctoral students observe each session from behind this mirror.

The following table presents the mean baseline and follow-up scores for each of the 7 groups investigated:

| <b>Group Name</b> | <b>Dep. T<sub>1</sub></b> | <b>Dep. T<sub>2</sub></b> | <b>Perc. Stress T<sub>1</sub></b> | <b>Perc. Stress T<sub>2</sub></b> | <b>Happ. T<sub>1</sub></b> | <b>Happ. T<sub>2</sub></b> |
|-------------------|---------------------------|---------------------------|-----------------------------------|-----------------------------------|----------------------------|----------------------------|
| Coed              | 4.75                      | 5.25                      | 1.85                              | 1.93                              | 4.25                       | 4.19                       |
| Ages 22+          | 11.86                     | 9.57                      | 2.67                              | 2.54                              | 3.29                       | 3.64                       |
| Observation       | 9.6                       | 9                         | 2.18                              | 2.22                              | 3.15                       | 3.6                        |
| Ages 25+ (2:30)   | 11                        | 4.33                      | 2.3                               | 1.87                              | 3.25                       | 3.25                       |
| Ages 25+ (5:00)   | 10.6                      | 8.2                       | 2.16                              | 2.14                              | 3.25                       | 3.15                       |
| Women’s           | 9.71                      | 5                         | 2.36                              | 1.71                              | 4.61                       | 4.53                       |
| Age 22 and Under  | 16.75                     | 3.25                      | 3.13                              | 1.4                               | 4.06                       | 4.69                       |

| <b>Group Name</b> | <b>SC T<sub>1</sub></b> | <b>SC T<sub>2</sub></b> | <b>Hope T<sub>1</sub></b> | <b>Hope T<sub>2</sub></b> | <b>Alt. T<sub>1</sub></b> | <b>Alt. T<sub>2</sub></b> |
|-------------------|-------------------------|-------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Coed              | 2.38                    | 2.69                    | 6.29                      | 5.54                      | 4.06                      | 3.75                      |
| Ages 22+          | 2.14                    | 2.27                    | 4.83                      | 4.98                      | 4.39                      | 4.25                      |
| Observation       | 2.36                    | 2.45                    | 4.63                      | 5.40                      | 3.95                      | 4.25                      |
| Ages 25+ (2:30)   | 2.3                     | 2.41                    | 5.22                      | 5.89                      | 4.08                      | 4.33                      |
| Ages 25+ (5:00)   | 2.46                    | 2.39                    | 5.47                      | 5.60                      | 4.45                      | 4.4                       |
| Women’s           | 2.80                    | 3.25                    | 4.48                      | 5.81                      | 4.36                      | 4.36                      |
| Age 22 and Under  | 2.08                    | 3.16                    | 3.67                      | 6.04                      | 4.06                      | 4.00                      |

Table 4.8 Baseline (T<sub>1</sub>) and Follow-up (T<sub>2</sub>) scores by Group

Particularly noteworthy here is the change over time for the 4 participants from the “Age 22 and Under” group. On average, these 4 participants decreased dramatically in depression and perceived stress, and increased dramatically in self-compassion and hope. At baseline, of the 7 groups in the study, this group scored the highest in depression and perceived stress and the lowest in self-compassion and hope, and at follow-up they scored the lowest on both depression and perceived stress, highest on hope, and second highest on self-compassion.

### *Baseline Correlations*

*Self-compassion and other baseline measures.* Correlations between participants’ baseline measures of self-compassion and other constructs measured in the study were consistent with previous research on self compassion (Neff, 2003a; Kirkpatrick, 2006). At baseline, self-compassion correlated positively with happiness (Treatment  $r = .475$ ,  $p = .004$ ; Control  $r = .663$ ,  $p < .001$ ) and hope (Treatment  $r = .376$ ,  $p = .026$ ; Control  $r = .666$ ,  $p < .001$ ), and negatively with depression (Treatment  $r = -.473$ ,  $p = .004$ ; Control  $r = -.707$ ,  $p < .001$ ) and perceived stress (Treatment  $r = -.501$ ,  $p = .002$ ; Control  $r = -.749$ ,  $p < .001$ ). There was no significant correlation between self-compassion and altruism in either condition (Treatment  $r = -.031$ ,  $p = .858$ ; Control  $r = -.141$ ,  $p = .303$ ).

|                          | <b>Self<br/>Compassion</b> | <b>Depression</b>        | <b>Perceived<br/>Stress</b> | <b>Happiness</b>     | <b>Hope</b>              | <b>Altruism</b>      |
|--------------------------|----------------------------|--------------------------|-----------------------------|----------------------|--------------------------|----------------------|
| <i>No. of Obs</i>        | 35                         | 35                       | 35                          | 35                   | 35                       | 35                   |
| Self-Comp.<br><i>p</i>   | 1                          | -.473<br><b>.004</b>     | -.501<br><b>.002</b>        | .475<br><b>.004</b>  | .376<br><b>.026</b>      | -.031<br><b>.858</b> |
| Depression<br><i>p</i>   | -.473<br><b>.004</b>       | 1                        | .661<br><b>&lt;.001</b>     | -.369<br><b>.029</b> | -.722<br><b>&lt;.001</b> | -.030<br><b>.865</b> |
| Perc. Stress<br><i>p</i> | -.501<br><b>.002</b>       | .661<br><b>&lt;.001</b>  | 1                           | -.271<br><b>.116</b> | -.781<br><b>&lt;.001</b> | .005<br><b>.978</b>  |
| Happiness<br><i>p</i>    | .475<br><b>.004</b>        | -.369<br><b>.029</b>     | -.271<br><b>.116</b>        | 1                    | .344<br><b>.043</b>      | .020<br><b>.908</b>  |
| Hope<br><i>p</i>         | .376<br><b>.026</b>        | -.722<br><b>&lt;.001</b> | -.781<br><b>&lt;.001</b>    | .344<br><b>.043</b>  | 1                        | .113<br><b>.519</b>  |
| Altruism<br><i>p</i>     | -.031<br><b>.858</b>       | -.030<br><b>.865</b>     | .005<br><b>.978</b>         | .020<br><b>.908</b>  | .113<br><b>.519</b>      | 1                    |

Table 4.9 Pearson correlations for baseline measures – Treatment Condition

|                          | <b>Self<br/>Compassion</b> | <b>Depression</b>        | <b>Perceived<br/>Stress</b> | <b>Happiness</b>         | <b>Hope</b>              | <b>Altruism</b>      |
|--------------------------|----------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|----------------------|
| <i>No. of Obs</i>        | 57                         | 57                       | 57                          | 57                       | 57                       | 57                   |
| Self-Comp.<br><i>p</i>   | 1                          | -.707<br><b>&lt;.001</b> | -.749<br><b>&lt;.001</b>    | .663<br><b>&lt;.001</b>  | .666<br><b>&lt;.001</b>  | -.141<br><b>.303</b> |
| Depression<br><i>p</i>   | -.707<br><b>&lt;.001</b>   | 1                        | .814<br><b>&lt;.001</b>     | -.769<br><b>&lt;.001</b> | -.777<br><b>&lt;.001</b> | .152<br><b>.258</b>  |
| Perc. Stress<br><i>p</i> | -.749<br><b>&lt;.001</b>   | .814<br><b>&lt;.001</b>  | 1                           | -.765<br><b>&lt;.001</b> | -.779<br><b>&lt;.001</b> | .076<br><b>.576</b>  |
| Happiness<br><i>p</i>    | .663<br><b>&lt;.001</b>    | -.769<br><b>&lt;.001</b> | -.765<br><b>&lt;.001</b>    | 1                        | .751<br><b>&lt;.001</b>  | -.175<br><b>.194</b> |
| Hope<br><i>p</i>         | .666<br><b>&lt;.001</b>    | -.777<br><b>&lt;.001</b> | -.779<br><b>&lt;.001</b>    | .751<br><b>&lt;.001</b>  | 1                        | -.146<br><b>.279</b> |
| Altruism<br><i>p</i>     | -.141<br><b>.303</b>       | .152<br><b>.258</b>      | .076<br><b>.576</b>         | -.175<br><b>.194</b>     | -.146<br><b>.279</b>     | 1                    |

Table. 4.10 Pearson correlations for baseline measures – Control condition.

One would expect that altruism would correlate with some other study variable, given the theoretical relationship between this construct and the other constructs under investigation. The fact that it does not indicates that there may be some validity issue with the AHO scale. This will be discussed in the Chapter 5 of this dissertation.

*Baseline Correlations of Self-Compassion Scale Subscales.* The following table presents the baseline correlations between the SCS subscales for the overall study sample.

| <i>No. of Obs</i>           | <b>Overall SC</b>      | <b>Self-Kindness</b>   | <b>Self-Judgm't</b>    | <b>Common Human.</b>   | <b>Isolation</b>       | <b>Mindfulness</b>     | <b>Over-Id</b>         |
|-----------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                             | 92                     | 92                     | 92                     | 92                     | 92                     | 92                     | 92                     |
| Overall SC<br><i>p</i>      | 1                      | .83<br><b>&lt;.001</b> | .80<br><b>&lt;.001</b> | .73<br><b>&lt;.001</b> | .87<br><b>&lt;.001</b> | .78<br><b>&lt;.001</b> | .82<br><b>&lt;.001</b> |
| Self-Kindness<br><i>p</i>   | .83<br><b>&lt;.001</b> | 1                      | .71<br><b>&lt;.001</b> | .61<br><b>&lt;.001</b> | .62<br><b>&lt;.001</b> | .58<br><b>&lt;.001</b> | .50<br><b>&lt;.001</b> |
| Self-Judgment<br><i>p</i>   | .80<br><b>&lt;.001</b> | .71<br><b>&lt;.001</b> | 1                      | .44<br><b>&lt;.001</b> | .68<br><b>&lt;.001</b> | .42<br><b>&lt;.001</b> | .62<br><b>&lt;.001</b> |
| Common Humanity<br><i>p</i> | .73<br><b>&lt;.001</b> | .61<br><b>&lt;.001</b> | .44<br><b>&lt;.001</b> | 1                      | .50<br><b>&lt;.001</b> | .51<br><b>&lt;.001</b> | .48<br><b>&lt;.001</b> |
| Isolation<br><i>p</i>       | .87<br><b>&lt;.001</b> | .62<br><b>&lt;.001</b> | .68<br><b>&lt;.001</b> | .50<br><b>&lt;.001</b> | 1                      | .67<br><b>&lt;.001</b> | .70<br><b>&lt;.001</b> |
| Mindfulness<br><i>p</i>     | .78<br><b>&lt;.001</b> | .58<br><b>&lt;.001</b> | .42<br><b>&lt;.001</b> | .51<br><b>&lt;.001</b> | .67<br><b>&lt;.001</b> | 1                      | .65<br><b>&lt;.001</b> |
| Over-ID<br><i>p</i>         | .82<br><b>&lt;.001</b> | .50<br><b>&lt;.001</b> | .62<br><b>&lt;.001</b> | .48<br><b>&lt;.001</b> | .70<br><b>&lt;.001</b> | .65<br><b>&lt;.001</b> | 1                      |

Table. 4.11 Pearson correlations for SCS subscales at baseline – overall sample.

This strong intercorrelation between factors of the SCS is consistent with previous findings (Neff, 2003a).

### *Hypotheses Testing*

*Outlying data.* With all hypothesis testing undertaken in this study, the first step was the identification of any possible outliers. Due to the relatively limited sample size, it was thought that the presence of any outliers would influence the hypothesis testing to a misleading degree. On this basis, it was concluded that the dropping of any outlying data would be justified and called for (Judd and McClelland, 1989).

Hawkins describes an outlier as an observation that “deviates from other observations as to arouse suspicions that it was generated by a different mechanism” (Hawkins, 1980, p.1). For each statistical test performed in this study, standardized

residuals were first created for the variables being analyzed. Standardized residuals represent distance from the variable mean, and thus are a useful method of identifying the presence of potentially unduly influential data.

In the following hypothesis tests, unless explicitly mentioned, the creation of standardized residuals for the variables under investigation did not reveal any outlying data, and all data was entered into the analysis.

***Hypothesis 1: Participants of process group psychotherapy will demonstrate increased levels of psychological well-being over time, as measured by baseline and follow-up levels of depression, perceived stress, and happiness. This change in psychological well-being over time will be significantly greater than any change found in the non-treatment control group.***

Changes in psychological well-being were examined using 2-way, repeated measures analyses of variance for each of the three outcome measures: BDI scores at T<sub>1</sub> and T<sub>2</sub> (for depression); PSS scores at T<sub>1</sub> and T<sub>2</sub> (for perceived stress); and SHS scores at T<sub>1</sub> and T<sub>2</sub> (for subjective happiness). The mixed design contains one within group factor (Time), one between group factor (Condition), and one interaction (Time x Condition).

For all analyses undertaken in the investigation of Hypothesis 1, sex was entered as a covariate. Although there were no sex differences between the Control and Treatment conditions, sex has traditionally been associated with the constructs under investigation. Using sex as a covariate removes the effect of sex from the other effects under investigation; it is hoped that this increases the clarity and interpretability of findings. Unless otherwise noted, the effect of sex itself did not reach significance.

*Depression.* Results of the 2-way ANOVA for BDI-SF scores for depression are as follows:

| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | 128.57          | 128.57      | 7.28        | .008***   |
| Condition           | 1  | 539.29          | 539.29      | 14.05       | <.001**** |
| Time*Condition      | 1  | 196.02          | 196.02      | 11.10       | .001***   |
| Error               | 89 | 1572.43         | 17.67       |             |           |

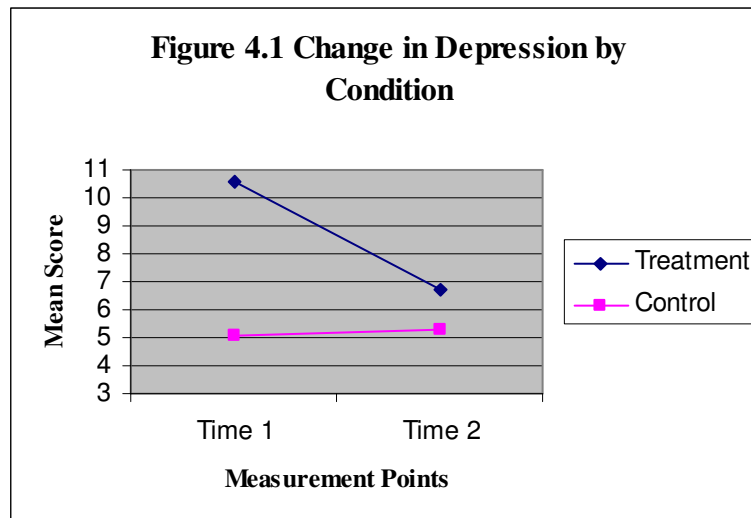
Table 4.12 ANOVA for BDI-SF scores for depression.

\*\*\*\* Significant at the  $p < .001$  level

\*\*\* Significant at the  $p < .01$  level

The Time\*Condition effect is the important statistic in this analysis. Here, the interaction effect is found to be significant at the  $p < .01$  level, suggesting that the degree of change in outcome is dependent on condition (i.e. those in Treatment vs. Control conditions can expect different outcomes).

The following graph illustrates the changes in BDI-SF scores over time by condition:



Pairwise comparisons were performed in order to hone in on the source of the effect. The pairwise comparison relevant to this study is one that compares the  $T_1$  and  $T_2$

mean outcome scores within both the Treatment and Control conditions. A significant finding means that the T<sub>2</sub> mean score differs significantly from the T<sub>1</sub> mean score for a given condition. This is analogous to two t-tests that compare pre-test/post test scores within each condition, but the pairwise comparison performed as part of the two-way ANOVA takes into account what is happening in the other condition. In this respect, it is a more sophisticated (and more discerning) test of significant change over time within a condition.

The following table presents the relevant results of the Fisher's Least Square Difference (LSD) pairwise comparison:

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 10.71               | 6.71                | 4.00                                      | 1.01           | <.001****    |
| Control   | 5.02                | 5.30                | .21                                       | .79            | .722         |

Table 4.13 Pairwise comparison for change in depression scores over time  
\*\*\*\* Significant at the  $p < .001$  level

The pairwise comparison demonstrates that the source of the interaction effect is the highly significant change in depression scores over time found in the Treatment group, a change that is not mirrored in the Control group.

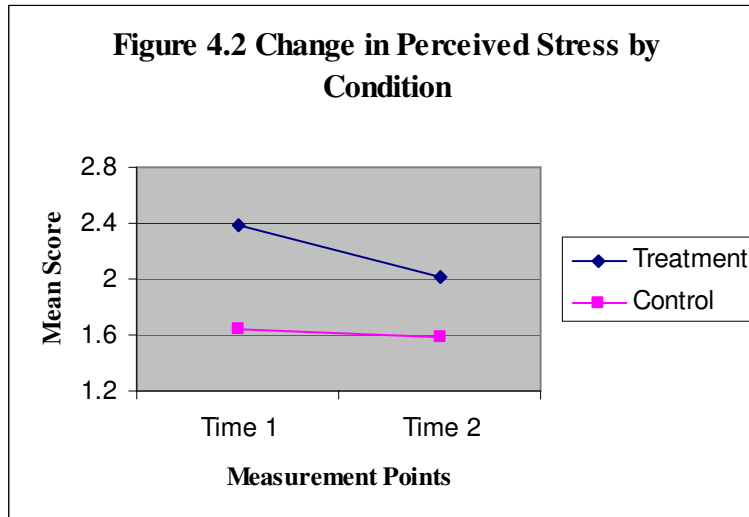
*Perceived stress.* Results of the two-way ANOVA examining changes in PSS scores over time by condition are as follows:

| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | .405            | .405        | 1.061       | .30       |
| Condition           | 1  | 14.86           | 14.86       | 19.53       | <.001**** |
| Time*Condition      | 1  | .935            | .935        | 2.45        | .121      |
| Error               | 89 | 33.96           | 89          |             |           |

Table 4.14. ANOVA for PSS scores for perceived stress  
\*\*\*\* Significant at the  $p < .001$  level

Again, the key statistic is the Time\*Condition interaction effect. This test does not meet significance at the  $p < .05$  level.

The following graph illustrates the changes in PSS scores over time by condition:



Pairwise comparisons were performed in order to hone in on the source of any relevant differences between the Treatment and Control conditions. The following table presents the relevant results of the Least Square Difference (LSD) pairwise comparison:

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.39                | 2.01                | -.38                                      | .147           | .014**       |
| Control   | 1.65                | 1.58                | -.07                                      | .115           | .523         |

Table 4.15 Pairwise comparison for change in perceived stress scores over time.

\*\* Significant at the  $p < .05$  level

The pairwise comparison demonstrates that the source of the interaction effect is the significant change in perceived stress scores over time found in the Treatment group, a change that is not mirrored in the Control group.

*Subjective happiness.* Results of the two-way ANOVA examining changes in SHS scores over time by condition are as follows:



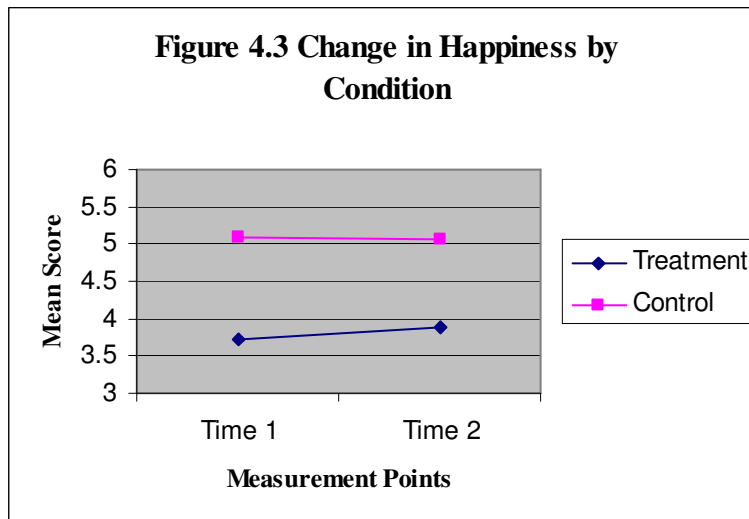
| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | 1.26            | 1.26        | 1.13        | .29       |
| Condition           | 1  | 71.36           | 71.36       | 32.38       | <.001**** |
| Time*Condition      | 1  | .669            | .669        | .601        | .44       |
| Error               | 89 | 98.94           | 1.11        |             |           |

Table 4.16 ANOVA for SHS scores for subjective happiness.

\*\*\*\* Significant at the  $p < .01$  level

Again, the key statistic is the Time\*Condition interaction effect. This test does not meet significance at the  $p < .05$  level. The main effect of Condition is significant; this suggests that there is a statistically significant difference between the Treatment and Control groups in overall level of happiness, collapsed across time.

The following graph illustrates the changes in SHS scores over time by condition:



Because a primary hypothesis is that the Treatment group will change in mental health over time, a pairwise comparison was performed with SHS scores.

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 3.72                | 3.89                | .17                                       | .134           | .211         |
| Control   | 5.09                | 5.01                | -.08                                      | .237           | .736         |

Table 4.17 Pairwise comparison for change in happiness scores over time.

The pairwise comparison did not reveal any significant differences between baseline and follow-up happiness scores for either the Treatment or Control conditions.

***Hypothesis 2: Participants of process group psychotherapy will demonstrate increased levels of self-compassion when comparing baseline and follow-up measures of self-compassion. This change in self-compassion will be significantly greater than any change found in the non-treatment control group. Further, this increase in self-compassion will be observed to an approximately equivalent degree in each of the six subscales of the SCS, as well as within each of the three overall components of self-compassion: self-kindness, mindfulness, and the experience of common humanity.***

Testing of Hypothesis 2 consisted of three sets of analyses: 1) an analysis of Overall Self-Compassion; that is, data on the entire SCS at baseline and follow-up; 2) an analysis of baseline and follow-up data on each of the six subscales of the SCS; and 3) an analysis of baseline and follow-up data on the three components of self-compassion, formed by grouping the subscales data along theoretical lines.

*Overall self-compassion.* Standardized z-scores were created from pre-test/post-test change scores (SCS score at  $T_2$  – SCS score at  $T_1$ ). Change scores were used to determine the presence of outliers because in a single variable it captures the key concept under investigation: change in psychological state over time. Additionally, it was felt that the examination of change scores for outliers would be likely to capture data entry errors, outliers from motivated mis-reporting, and/or outliers from sampling error at either Time

1 or Time 2 (Osborne & Overbay, 2004). The resulting z-score values represented standard deviations from the mean self compassion change score. Using this method, one data point stood out as a clear outlier. In the Control group, one participant jumped from a score of 66 on the SCS at Time 1 to a score of 125 at Time 2. This jump of 59 points was 2.45 standard deviations from the overall sample mean, and 2.17 standard deviations from the Control condition mean. This was the only data point in the  $p < .01$  portion of the normal two-tailed distribution for both the overall sample and condition distributions. Because it was felt that this score might overly influence the analysis, especially given the relatively modest sample size, SCS data for this control group participant was removed from the analysis of Hypothesis 2.

Again, for all analyses related to Hypothesis 2, sex was used as a covariate in order to remove the effect of sex from the effects under investigation. Unless otherwise noted, the effect of sex itself did not meet significance.

Changes in self compassion over time were examined using 2-way, repeated measures analyses of variance. The following table presents the results of this analysis:

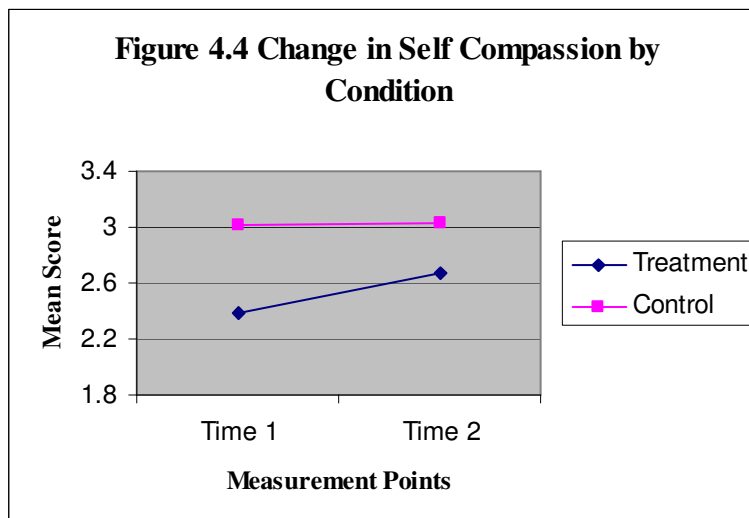
| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | .860            | .860        | 2.46        | .120      |
| Condition           | 1  | 11.78           | 11.78       | 19.71       | <.001**** |
| Time*Condition      | 1  | .637            | .637        | 1.82        | .181      |
| Error               | 88 | 30.76           | .35         |             |           |

Table 4,18 ANOVA for SCS scores for overall self-compassion  
 \*\*\*\* Significant at the  $p < .01$  level

Again, the key statistic is the Time\*Condition interaction effect. This test does not meet significance at the  $p < .05$  level, suggesting that, compared to the Control group, the relative increase in SCS scores experienced by Treatment group participants was not

sufficient to conclude statistically that the intervention increased self-compassion over time. The main effect of Condition is significant; this suggests that there is a statistically significant difference between the Treatment and Control groups in overall level of self-compassion. The Time main effect is nearly significant at the .05 level, and is significant and the less conservative .10 level, suggesting that there may be a difference between baseline and follow-up levels of self-compassion for the overall sample.

The following graph shows the means over time for scores on the Self Compassion Scale:



Due to the nature of the hypothesis, it was felt that a pairwise decomposition of the effects would be justified.

Again, the pairwise comparison relevant to this study is one that compares the  $T_1$  and  $T_2$  mean scores on a given scale or subscale within both the Treatment and Control conditions. A significant finding means that the  $T_2$  mean score differs significantly from the  $T_1$  mean score for a given condition. Understanding the purpose and power of the pairwise comparison is essential to interpreting the results of this study; it thus bears repeating that the pairwise comparison is analogous to two t-tests that compares pre-

test/post test scores within each condition, but the pairwise comparison performed as part of the two-way ANOVA takes into account what is happening in the other condition. In this respect, compared to the simple t-test, often used in this type of study, it is a more sophisticated and discerning test of significant change over time within a condition.

The following table presents the relevant results of the Least Square Difference (LSD) pairwise comparison for change in self-compassion scores over time:

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.38                | 2.67                | ..29                                      | .14            | .040**       |
| Control   | 3.03                | 3.08                | .06                                       | .11            | .647         |

Table 4.19 Pairwise comparison for change in self-compassion scores over time

\*\* Significant at the  $p < .05$  level

The pairwise comparison demonstrates that there is a change, significant at the .05 level, in self-compassion scores over time found in the Treatment group; that is, mean self-compassion scores at T<sub>2</sub> are significantly different than mean self-compassion scores at T<sub>1</sub>, even when changes in these scores within the Control group are taken into account. This significant change is not mirrored in the Control group. This suggests that the Treatment group’s self-compassion scores changed over time to a statistically significant degree at the .05 level, while the Control group did not come close to experiencing a significant change in self-compassion over time.

*Self compassion subscales.* Changes in the 6 self-compassion subscales (self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification) over time were examined using 2-way, repeated measures analyses of variance. Self-judgment, isolation, and over-identification are reversed scored, so that

higher scores on these subscales indicate a lower degree of these states; thus for all six subscales, higher scores indicate more desirable functioning. The following presents the results of the ANOVA analyses and pairwise comparisons performed for each subscale. To assist interpretation, all charts used in this section retain the same scale.

*Self-kindness subscale.*

| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value |
|---------------------|----|-----------------|-------------|-------------|---------|
| Time                | 1  | 1.90            | 1.90        | 3.22        | .076*   |
| Condition           | 1  | 11.13           | 11.13       | 10.92       | .001*** |
| Time*Condition      | 1  | 1.60            | 1.60        | 2.71        | .103    |
| Error               | 88 | 51.93           | .59         |             |         |

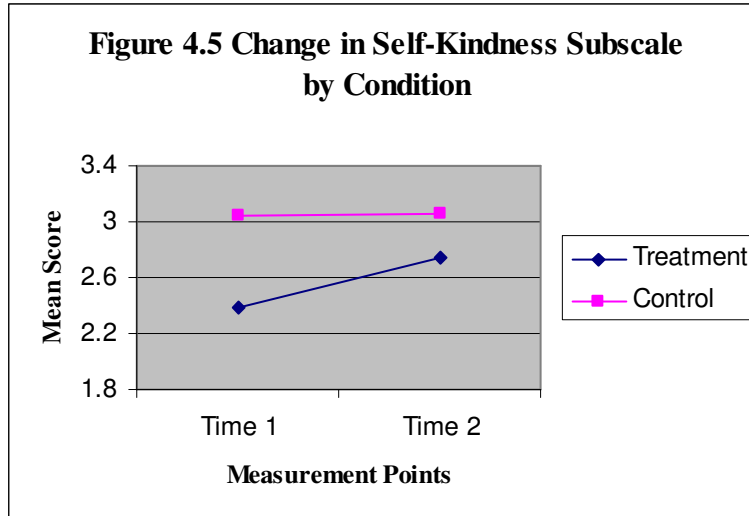
Table 4.20 ANOVA for the self-kindness subscale of the SCS.

\*\*\* Significant at the  $p < .01$  level

\* Significant at the  $p < .10$  level

Here, the significant main effect of Condition demonstrates there is a significant difference between the Control and Treatment group self-kindness subscale scores, collapsed over time. The crucial statistic in the present analysis is the Time\*Condition interaction effect, which looks at the Treatment and Control groups and examines differential changes in self-kindness subscale scores over time. This statistic approaches significance but does not reach it.

The following graph shows the means over time for scores on the self-kindness subscale:



A pairwise comparison of effects at Times 1 and 2 could be fruitful. The following table presents results from this Least Significant Difference comparison:

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.36                | 2.74                | .38                                       | .19            | .043**       |
| Control   | 3.07                | 3.06                | .009                                      | .15            | .950         |

Table 4.21 Pairwise comparison for change in self-kindness subscale scores over time

\*\* Significant at the  $p < .05$  level

The significant finding suggests that the difference over time in self-kindness subscale scores found within the Treatment group is significant at .05, and significantly greater than changes over time found in the non-treatment Control group.

*Self-judgment subscale.*

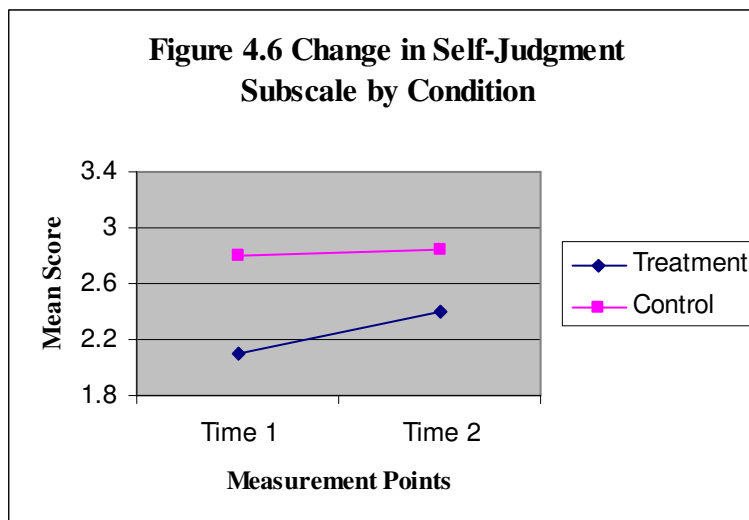
| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | .640            | .640        | 1.32        | .254      |
| Condition           | 1  | 13.89           | 13.89       | 13.13       | <.001**** |
| Time*Condition      | 1  | .72             | .72         | 1.48        | .226      |
| Error               | 88 | 42.68           | .48         |             |           |

Table 4.22 ANOVA for the self-judgment subscale of the SCS.

\*\*\*\* Significant at the  $p < .001$  level

Here, the significant main effect of Condition demonstrates there is a significant difference between the Control and Treatment group self-judgment subscale scores, collapsed over time. The crucial statistic in the present analysis is the Time\*Condition interaction effect, which looks at the Treatment and Control groups and examines differential changes in self-judgment subscale scores over time. This statistic does not reach significance.

The following graph shows the means over time for scores on the self-kindness subscale:





Again, a pairwise comparison of effects at Times 1 and 2 was performed. The following table presents the results from this LSD comparison:

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.09                | 2.40                | .30                                       | .166           | .075*        |
| Control   | 2.80                | 2.84                | .04                                       | .131           | .760         |

Table 4.23 Pairwise comparison for change in self-judgment subscale scores over time.

\* Significant at the  $p < .10$  level

The significant finding suggests that the difference over time in self-judgment subscale scores found within the Treatment group is significant at .10, and significantly greater than changes over time found in the non-treatment Control group.

*Common humanity subscale.*

| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value |
|---------------------|----|-----------------|-------------|-------------|---------|
| Time                | 1  | 1.62            | 1.62        | 2.56        | .113    |
| Condition           | 1  | 7.43            | 7.43        | 9.18        | .003*** |
| Time*Condition      | 1  | .902            | .902        | 1.43        | .236    |
| Error               | 88 | 55.66           | .632        |             |         |

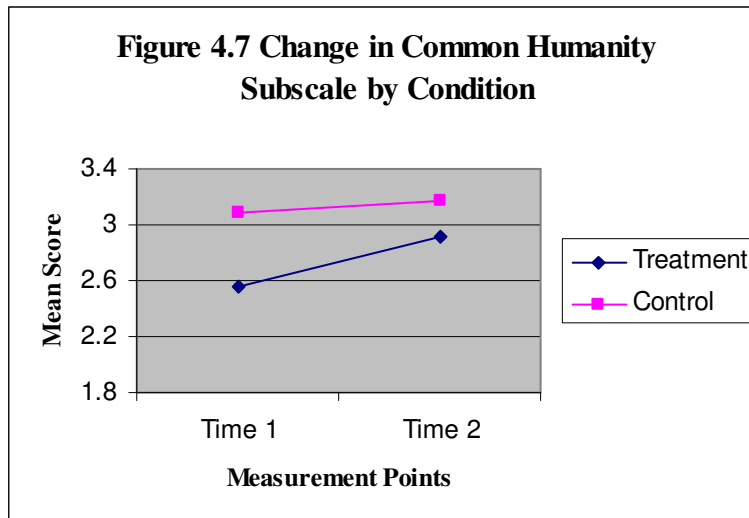
Table 4.24 ANOVA for the common humanity subscale of the SCS.

\*\*\* Significant at the  $p < .01$  level

Here, the significant main effect of Condition demonstrates there is a significant difference between the Control and Treatment group common humanity subscale scores, collapsed over time. The significant main effect of Time suggests that there is a significant difference between T<sub>1</sub> and T<sub>2</sub> common humanity subscale scores for the overall sample (i.e. condition is collapsed). The crucial statistic in the present analysis is the Time\*Condition interaction effect, which looks at the Treatment and Control groups

and examines differential changes in common humanity subscale scores over time. This statistic does not reach significance.

The following graph shows the means over time for scores on the common humanity subscale:



A pairwise comparison of effects at Times 1 and 2 was performed. The following table presents the results from this LSD comparison:

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.54                | 2.91                | .37                                       | .19            | .057*        |
| Control   | 3.10                | 3.18                | .08                                       | .15            | .609         |

Table 4.25 Pairwise comparison for change in common humanity subscale scores over time

\* Significant at the  $p < .10$  level

The significant finding suggests that the difference over time in common humanity subscale scores found within the Treatment group is significant at .10, and significantly greater than changes over time found in the non-treatment Control group.

*Isolation subscale.*

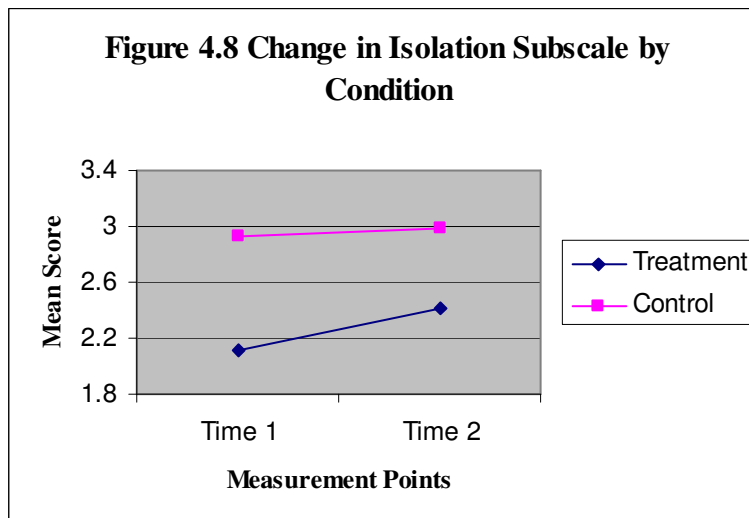
| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | 1.71            | 1.71        | 2.16        | .145      |
| Condition           | 1  | 19.47           | 19.47       | 19.08       | <.001**** |
| Time*Condition      | 1  | .716            | .716        | .91         | .345      |
| Error               | 88 | 69.72           | .79         |             |           |

Table 4.26 ANOVA for the isolation subscale of the SCS

\*\*\*\* Significant at the  $p < .001$  level

Here, the significant main effect of Condition demonstrates there is a significant difference between the Control and Treatment group isolation subscale scores, collapsed over time. The crucial statistic in the present analysis is the Time\*Condition interaction effect, which looks at the Treatment and Control groups and examines differential changes in isolation subscale scores over time. This statistic does not reach significance.

The following graph shows the means over time for scores on the isolation subscale:



Because a primary hypothesis is that the Treatment group will change in self-compassion over time, and theoretically it was believed that this change would extend to each of the SCS subscales, a pairwise comparison was performed with the isolation subscale scores.

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.12                | 2.41                | .29                                       | .137           | .039**       |
| Control   | 2.93                | 2.99                | .06                                       | .20            | .751         |

Table 4.27 Pairwise comparison for change in isolation subscale scores over time.

\*\* Significant at the  $p < .05$  level

The significant finding suggests that the difference over time in isolation subscale scores found within the Treatment group is significant at .05, and significantly greater than changes over time found in the non-treatment Control group.

*Mindfulness subscale.*

| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value |
|---------------------|----|-----------------|-------------|-------------|---------|
| Time                | 1  | .10             | .10         | .175        | .677    |
| Condition           | 1  | 4.74            | 4.74        | 6.58        | .012**  |
| Time*Condition      | 1  | .18             | .18         | .327        | .569    |
| Error               | 88 | 48.64           | .55         |             |         |

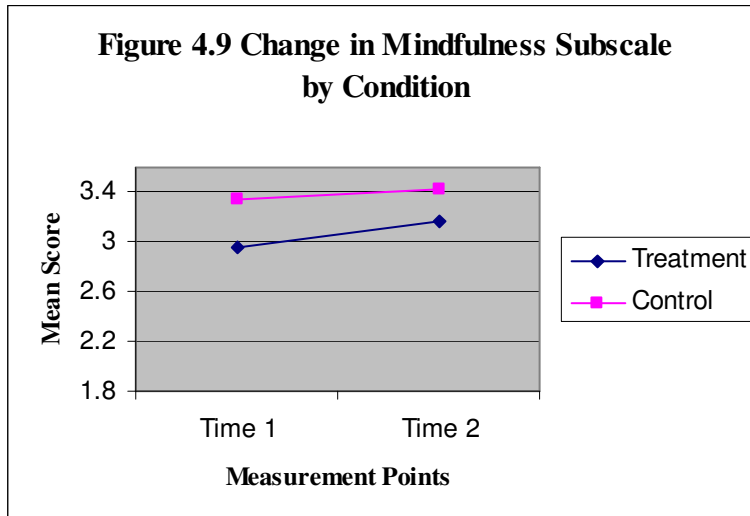
Table 4.28 ANOVA for the mindfulness subscale of the SCS.

\*\* Significant at the  $p < .05$  level

The significant main effect of Condition demonstrates there is a significant difference between the Control and Treatment mindfulness subscale scores, collapsed over time.

The crucial statistic in the present analysis is the Time\*Condition interaction effect, which looks at the Treatment and Control groups and examines differential changes in mindfulness subscale scores over time. This statistic does not reach significance.

The following graph shows the means over time for scores on the mindfulness subscale:



This graph shows that while there was a T<sub>1</sub>/T<sub>2</sub> increase in mindfulness subscale scores for the Treatment group, this gain was to a large degree mirrored in the Control group.

Because a primary hypothesis is that the Treatment group will change in self-compassion over time, and theoretically it was believed that this change would extend to each of the SCS subscales, a pairwise comparison was performed with the mindfulness subscale scores.

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.96                | 3.17                | .21                                       | .126           | .098*        |
| Control   | 3.35                | 3.42                | .16                                       | .160           | .657         |

Table 4.29 Pairwise comparison for change in mindfulness subscale scores over time.

\* Significant at the  $p < .10$  level

The significant finding suggests that the difference over time in mindfulness subscale scores found within the Treatment group is significant at .10, and significantly greater than changes over time found in the non-treatment Control group.

*Over-identification subscale.*

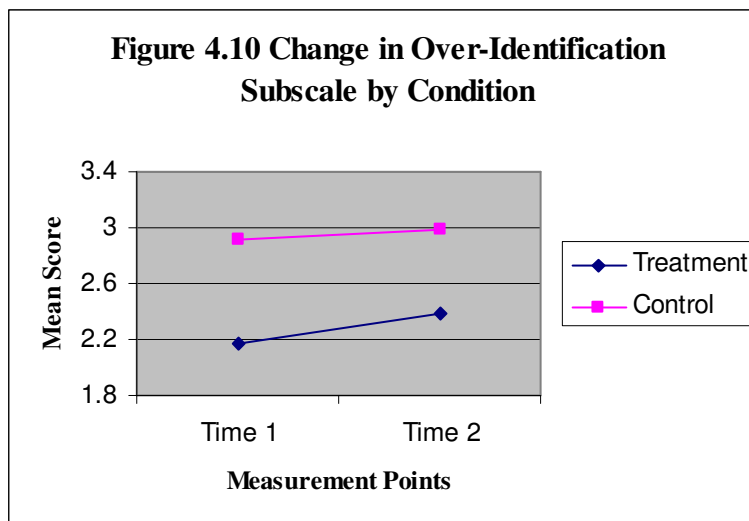
| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | .25             | .25         | .41         | .524      |
| Condition           | 1  | 17.84           | 17.84       | 15.59       | <.001**** |
| Time*Condition      | 1  | .21             | .21         | .34         | .560      |
| Error               | 88 | 53.11           | .60         |             |           |

Table 4.30 ANOVA for over-identification subscale of the SCS.

\*\*\*\* Significant at the  $p < .001$  level

The significant main effect of Condition demonstrates there is a significant difference between the Control and Treatment over-identification subscale scores, collapsed over time. The crucial statistic in the present analysis is the Time\*Condition interaction effect, which looks at the Treatment and Control groups and examines differential changes in over-identification subscale scores over time. This statistic does not reach significance.

The following graph shows the means over time for scores on the over-identification subscale:



This graph shows that while there was a T<sub>1</sub>/T<sub>2</sub> increase in over-identification subscale scores for the Treatment group, this gain was to a large degree mirrored in the Control group.

Because a primary hypothesis is that the Treatment group will change in self-compassion over time, and theoretically it was believed that this change would extend to each of the SCS subscales, a pairwise comparison was performed with the over-identification subscale scores.

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.17                | 2.39                | .21                                       | .111           | .063*        |
| Control   | 2.91                | 2.98                | .07                                       | .172           | .680         |

Table 4.31 Pairwise comparison for change in over-identification subscale scores over time.

\* Significant at the  $p < .10$  level

The significant finding suggests that the difference over time in over-identification subscale scores found within the Treatment group is significant at .10, and significantly greater than changes over time found in the non-treatment Control group.

*Three components of self-compassion.* Chapter 2 explored the basis for the hypothesis that process group therapy might well lead to significant change in each of the three components of self-compassion: self-kindness, common humanity, and mindfulness. To explore this idea, the six factors of the SCS were grouped according to these three components of the self-compassion construct: the self-kindness and self-judgment subscales were combined, averaged, and examined as Overall Self-Kindness; the common humanity and isolation subscales were combined, averaged, and examined as Overall Common Humanity; and the mindfulness and over-identification subscales were combined, averaged, and examined as Overall Mindfulness. Two-way analyses of variance and Fisher’s LSD pairwise comparisons were then conducted for each of these three groupings.

*Overall Self-Kindness.*

| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | 1.19            | 1.19        | 2.80        | .098*     |
| Condition           | 1  | 12.47           | 12.47       | 14.39       | <.001**** |
| Time*Condition      | 1  | 1.12            | 1.12        | 2.64        | .108      |
| Error               | 88 | 37.27           | .424        |             |           |

Table 4.32 ANOVA for Overall Self-Kindness.

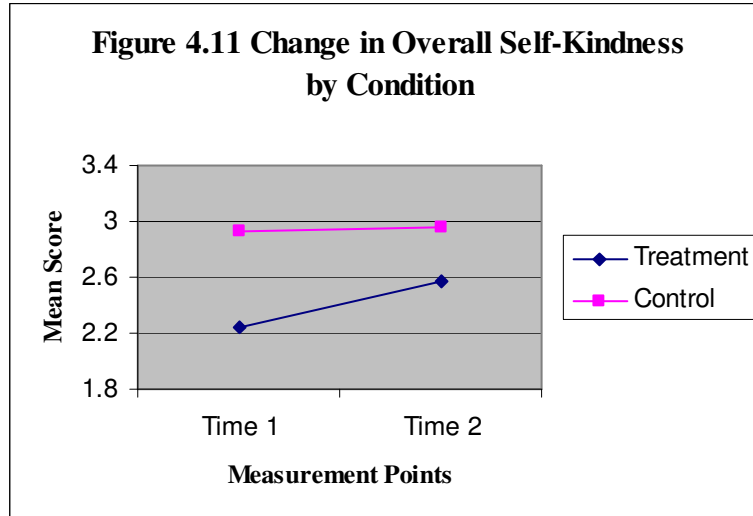
\*\*\*\* Significant at the  $p < .001$  level

\* Significant at the  $p < .10$  level

Here, the significant main effect of Condition demonstrates there is a significant difference between the Control and Treatment group Overall Self-Kindness scores, collapsed over time (i.e. T<sub>1</sub> and T<sub>2</sub> scores are combined and examined as a whole). The significant main effect of Time suggests that there is a significant difference between T<sub>1</sub> and T<sub>2</sub> Overall Self-Kindness scores for the overall sample (i.e. condition is collapsed). However, the crucial statistic in the present analysis is the Time\*Condition interaction effect, which looks at the Treatment and Control groups and examines differential changes in Overall Self-Kindness scores over time. This statistic does not reach significance, though it approaches it.

The following graph shows the means over time for scores on Overall Self-Kindness:





Due to the nature of the hypothesis, a pairwise comparison of effects at Times 1 and 2 was deemed appropriate. The following table presents results from this Fisher's LSD comparison:

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.23                | 2.57                | .34                                       | .16            | .032**       |
| Control   | 2.94                | 2.95                | .02                                       | .12            | .898         |

Table 4.33 Pairwise comparison for change in Overall Self-Kindness over time

\*\* Significant at the  $p < .05$  level

The pairwise comparison demonstrates that there is a change, significant at the .05 level, in Overall Self-Kindness scores over time found in the Treatment group; that is, mean Overall Self-Kindness scores at T<sub>2</sub> are significantly different than mean Overall Self-Kindness scores at T<sub>1</sub>, even when changes in these scores within the Control group are taken into account. This significant change is not mirrored in the Control group. This suggests that the Treatment group's Overall Self-Kindness scores changed over time to a statistically significant degree at the .05 level, while the Control group did not come close to experiencing a significant change in Overall Self-Kindness over time.

*Overall Common Humanity.*

| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | 1.66            | 1.66        | 3.47        | .066*     |
| Condition           | 1  | 12.74           | 12.74       | 18.71       | <.001**** |
| Time*Condition      | 1  | .81             | .81         | 1.68        | .198      |
| Error               | 88 | 42.24           | .48         |             |           |

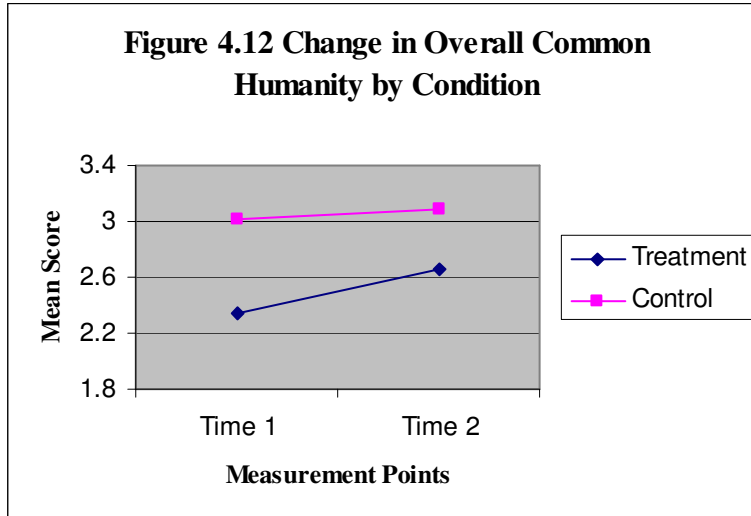
Table 4.34 ANOVA for Overall Common Humanity.

\*\*\*\* Significant at the  $p < .001$  level

\* Significant at the  $p < .10$  level

Here, the significant main effect of Condition demonstrates there is a significant difference between the Control and Treatment group Overall Common Humanity scores, collapsed over time (i.e.  $T_1$  and  $T_2$  scores are combined and examined as a whole). The significant main effect of Time suggests that there is a significant difference between  $T_1$  and  $T_2$  Overall Common Humanity scores for the overall sample (i.e. condition is collapsed). However, the crucial statistic in the present analysis is the Time\*Condition interaction effect, which looks at the Treatment and Control groups and examines differential changes in Overall Common Humanity scores over time. This statistic does not reach significance.

The following graph shows the means over time for scores on Overall Common Humanity:



A pairwise comparison of effects at Times 1 and 2 was then performed. The following table presents results from this Fisher’s LSD comparison:

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.33                | 2.67                | .34                                       | .17            | .044**       |
| Control   | 3.02                | 3.08                | .06                                       | .13            | .626         |

Table 4.35 Pairwise comparison for change in Overall Common Humanity over time.  
 \*\* Significant at the  $p < .05$  level

The pairwise comparison demonstrates that there is a change, significant at the .05 level, in Overall Common Humanity scores over time found in the Treatment group; that is, mean Overall Self-Kindness scores at T<sub>2</sub> are significantly different than mean Overall Self-Kindness scores at T<sub>1</sub>, even when changes in these scores within the Control group are taken into account. This significant change is not mirrored in the Control group.

*Overall Mindfulness.*

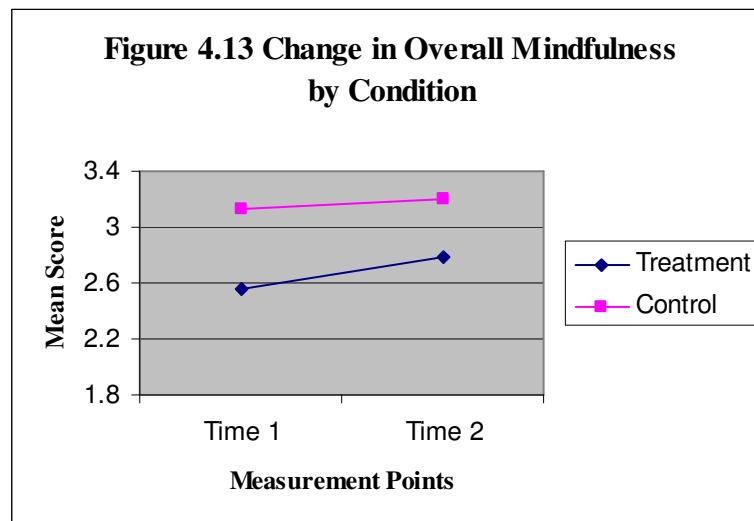
| Source of Variation | Df | Sums of Squares | Mean Square | F Statistic | p Value   |
|---------------------|----|-----------------|-------------|-------------|-----------|
| Time                | 1  | .16             | .16         | .37         | .544      |
| Condition           | 1  | 10.24           | 10.24       | 14.67       | <.001**** |
| Time*Condition      | 1  | .19             | .19         | .44         | .508      |
| Error               | 88 | 38.59           | .43         |             |           |

Table 4.36 ANOVA for Overall Mindfulness.

\*\*\*\* Significant at the  $p < .001$  level

The significant main effect of Condition demonstrates there is a significant difference between the Control and Treatment group Overall Mindfulness scores, collapsed over time (i.e. T<sub>1</sub> and T<sub>2</sub> scores are combined and examined as a whole). Again, of course, the key statistic in the present analysis is the Time\*Condition interaction effect, which looks at the Treatment and Control groups and examines differential changes in Overall Common Humanity scores over time. This statistic does not reach significance.

The following graph shows the means over time for scores on Overall Mindfulness:



A pairwise comparison of effects at baseline and follow-up was performed:

| Condition | T <sub>1</sub> Mean | T <sub>2</sub> Mean | T <sub>2</sub> Mean – T <sub>1</sub> Mean | Standard Error | Significance |
|-----------|---------------------|---------------------|---|----------------|--------------|
| Treatment | 2.56                | 2.78                | .21                                       | .094           | .030**       |
| Control   | 3.13                | 3.20                | .07                                       | .147           | .629         |

Table 4.37 Pairwise comparison for change in Overall Mindfulness over time.

\*\* Significant at the  $p < .05$  level

The significant finding suggests that the difference over time in Overall Mindfulness scores found within the Treatment group is significant at .05, and significantly greater than changes over time found in the non-treatment Control group.

***Hypothesis 3: Self-compassion will mediate group psychotherapy participants' increased well-being as measured by surveys of depression, perceived stress, and subjective happiness at baseline and follow-up.***

Investigation of this hypothesis calls for an examination of the relationship between the following constructs:

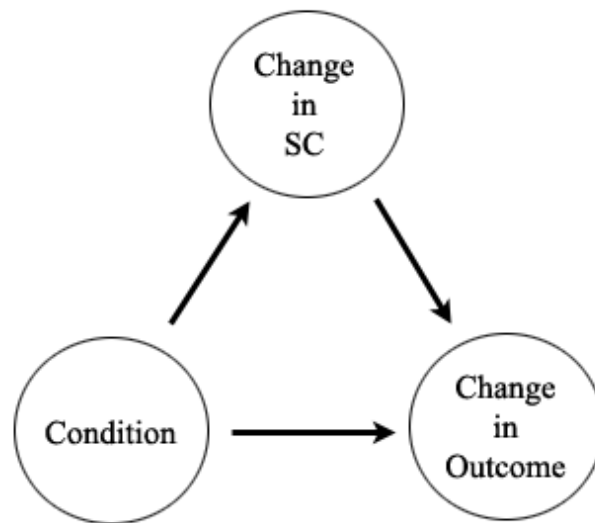


Figure 4.14 Change in SC mediating impact of Condition on Change in Outcome

The mediational model is a causal model. Figure 4.13 is exploring the following question: does change in self-compassion mediate the impact of condition (i.e. Group vs. Control) on change in outcome (depression, perceived stress, and/or happiness)? That is, is there an intervening process (change in self-compassion) that contributes to the impact group therapy participation has on outcome?

The first step in testing for mediation is to test that all three variables are significantly correlated (Baron & Kenny, 1986). Here are the bivariate correlations between condition, change in self-compassion, and change in outcome for each of the three outcome measures under investigation:

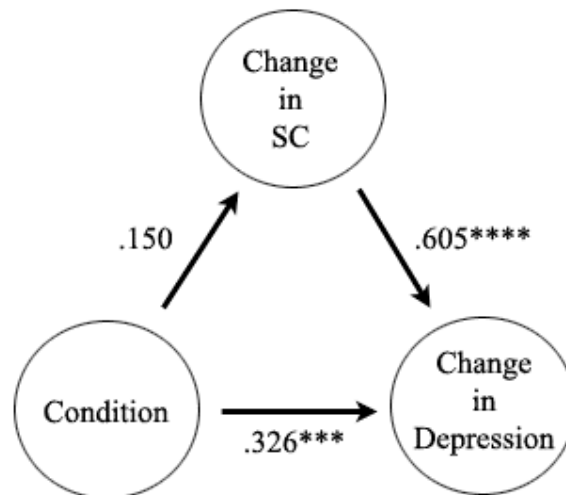


Figure 4.15 Change in SC mediating impact of Condition on Change in Depression  
\*\*\* Significant at  $p < .01$

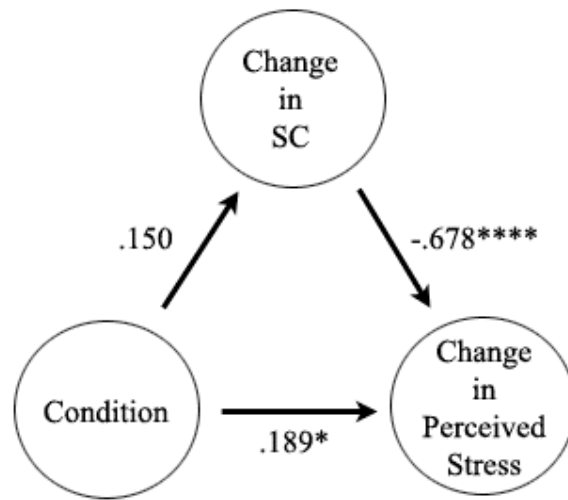


Figure 4.16 Change in SC mediating impact of Condition on Change in Perceived Stress  
 \*\*\*\* Significant at  $p < .001$   
 \* Significant at  $p < .10$

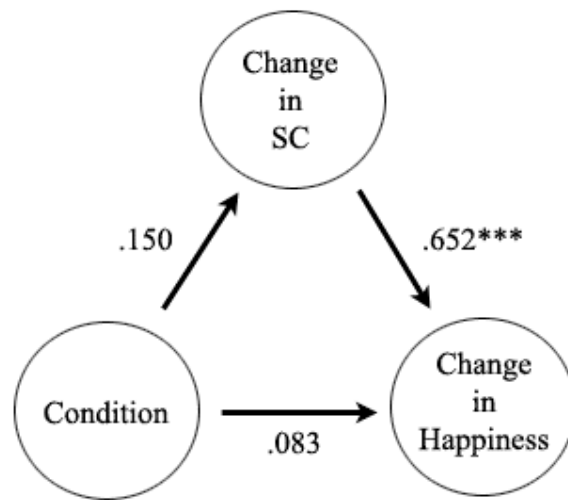


Figure 4.17 Change in SC mediating impact of Condition on Change in Subjective Happiness  
 \*\*\* Significant at  $p < .01$

Already we see that there was no mediation effect, simply because the correlation between condition and change in self-compassion did not reach significance ( $p = .143$ ).

The absence of statistical support for the presence of mediation leaves open the question of the relationship between change in self-compassion and change in the outcome variables. This question is addressed in an investigation of Hypothesis 4.

***Hypothesis 4: Change in self-compassion will have a significant relationship with change in the mental health outcome measures. This significance of this relationship will be comparable to two other variables (hope and altruism) often presented in the literature as predictive of change in process group therapy.***

To examine the significance of the relationship between change in self-compassion and change in the three outcome measures (depression, perceived stress, and subjective happiness), changes in SCS scores were correlated with changes in the outcome measures. For both the self-compassion measure and the outcome measures, T2 scores were regressed on T1 scores, and the residual values were saved for the correlation analysis. The following table presents the results of this analysis:

| Condition | Outcome Measure            | <i>R</i> | <i>p</i>  |
|-----------|----------------------------|----------|-----------|
| Treatment | BDI-SF (Depression)        | -.530    | <.001**** |
|           | PSS (Perceived Stress)     | -.629    | <.001**** |
|           | SHS (Subjective Happiness) | .676     | <.001**** |
| Control   | BDI-SF (Depression)        | -.634    | <.001**** |
|           | PSS (Perceived Stress)     | -.639    | <.001**** |
|           | SHS (Subjective Happiness) | .685     | <.001**** |

Table 4.38 Zero-order correlations between changes in self-compassion scores and changes in mental health outcomes

\*\*\*\* Significant at  $p < .001$

Results suggest that participants who experienced an increase in self-compassion also experienced an increase in subjective happiness, and a decrease in depression and



perceived stress. This was true to an equivalent degree in both the Treatment and Control conditions.

To address the question of the strength of these significant relationships to those associated with two other variables (hope and altruism) often presented in the literature as predictive of outcome, multiple linear regression was employed.

Instead of using change scores for the variables under investigation (i.e. T<sub>2</sub> score – T<sub>1</sub> score), standardized residuals were created by regressing the T<sub>2</sub> scores on the T<sub>1</sub> scores and saving the residuals. The regression model follows the following formula:

$$Y = a + b_1 * X_1 + b_2 * X_2 + b_3 * X_3 + b_4 * X_4$$

Here, X<sub>1</sub> is the self-compassion residual value variable (computed by regressing SCS score at T<sub>2</sub> on SCS score at T<sub>1</sub>); X<sub>2</sub> is the altruism variable (residuals from regressing AHO score at T<sub>2</sub> on AHO score at T<sub>1</sub>); X<sub>3</sub> is the hope variable (residuals from regressing SHS score at T<sub>2</sub> on SHS score at T<sub>1</sub>); and X<sub>4</sub> is the sex variable (with 0 = male and 1 = female); b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, and b<sub>4</sub> are the beta weights applied to variables X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub> and X<sub>4</sub>, respectively.

Three different equations were calculated for each of the three study outcome measures (three separate equations where Y is standardized residuals from T<sub>2</sub>/T<sub>1</sub> depression score, perceived stress score, or happiness score). For each of the three outcome measures, two models were generated: one for the Treatment condition and (for the sake of comparison) one for the Control condition. Since the hypothesis explicitly called for an investigation of four predictors, final models were created with the simultaneous entry method; that is, all predictive variables were entered at the same time. This allows for a focus on the unique contributions of each variable. In each model, the

relative size of the standardized regression coefficients (beta weights, or  $\beta$ ) will indicate the relative strength of the *unique* predictive power of each of the predictor variables. The beta weights do not indicate the variance that may be *shared* by more than one variable.

*The contribution of sex in the regression models.* Because sex has traditionally been associated with the variables under investigation, sex was initially entered into the regression model to determine the size of these effects and remove the effect of sex from the other constructs under examination. As expected, for each regression analysis, results showed that the sex variable made an insignificant contribution to the overall fit of the model. For the final models reported below, sex was dropped, and the regression was run with the three target predicting variables (self-compassion, hope, and altruism). This method was considered prudent due to the fact that the sample size was limited, and in order to maintain the integrity of findings, it was important to limit the number of predicting variables entered into the final regression model to a ratio of 10-15 subjects per predictor (Park & Dudycha, 1974). Because the Treatment condition contained 35 subjects, efforts were made to limit the final model to three predicting variables.

*Depression.* Results from the multiple linear regression analysis on change in depression scores is presented below:

| Condition | $R^2$ | Std. Error of Estimate |
|-----------|-------|------------------------|
| Treatment | .436  | .75                    |
| Control   | .583  | .68                    |

Table 4.39 Overall fit of the linear regression model for change in BDI-SF scores for depression

Here,  $R^2$ , or the coefficient of determination, tells us the percentage of the total outcome variability predicted by our model. In this case, for both conditions, roughly half the variability in BDI-SF change is explained by the three variables loaded into the model.

Using a Fisher  $r$  to  $Z$  testing procedure for comparing coefficients from different samples (Hays, 1988), it was determined that the difference in power between these models was not significant ( $p = .37$ ).

The following table presents the unique contribution of each of the three predictors loaded into the model, in order of unique predictive power:

| Condition | Variable | Standardized Beta ( $\beta$ ) | $P$       |
|-----------|----------|-------------------------------|-----------|
| Treatment | Hope     | -.473                         | .012**    |
|           | Altruism | .259                          | .074*     |
|           | SC       | -.252                         | .154      |
| Control   | Hope     | -.546                         | <.001**** |
|           | SC       | -.293                         | .016**    |
|           | Altruism | -.060                         | .509      |

Table 4.40 Unique contributions of each variable to the prediction of change in depression score

\*\*\*\* Significant at  $p < .001$

\*\* Significant at  $p < .05$

\* Significant at  $p < .10$

Again, the relative strength of each predictor to provide a unique contribution to the model is indicated by the size (distance from 0, whether positive or negative) of the standardized beta ( $\beta$ ). In both the Treatment and the Control condition, the hope variable offered the most substantial unique contribution. Also interestingly, in the Treatment group, change in Altruism score makes a unique contribution significant at the  $p < .10$  level. What is most interesting about this is the direction of the relationship: as altruism *decreased*, so did depression. This was not the case in the Control condition.

Relevant to this analysis is the fact that the self-compassion variable and the hope variable were quite highly correlated (for the Treatment group,  $r = .611$ ,  $p < .001$ ; for the Control group,  $r = .640$ ,  $p < .001$ ). It would be misleading to interpret the above table as demonstrating that, for the Treatment group, change in self-compassion score did not

predict change in depression score to a significant degree, even though its unique contribution did not reach significance (though it did approach it;  $p = .154$ ). Since self-compassion and hope shared so much variance, it can be said that both significantly predicted change in depression. However, within the Treatment group, hope was the more powerful predictor, because it made an additional unique contribution that was greater than that of self-compassion (the case is reversed in the Control group). The following table presents results from the regression analysis when change in hope score is dropped from the model:

| Condition | $R^2$ | Std. Error of Estimate |
|-----------|-------|------------------------|
| Treatment | .306  | .82                    |
| Control   | .407  | .81                    |

Table 4.41 Fit of the linear regression model for change in BDI-SF scores for depression when change in hope is removed from the model. The difference between the two models is not statistically significant ( $p = .60$ ).

| Condition | Variable | Standardized Beta ( $\beta$ ) | $P$       |
|-----------|----------|-------------------------------|-----------|
| Treatment | SC       | -.537                         | .001***   |
|           | Altruism | .157                          | .293      |
| Control   | SC       | -.644                         | <.001**** |
|           | Altruism | -.073                         | .496      |

Table 4.42 Unique contributions of each variable to the prediction of change in depression score when change in hope is removed from the model.

\*\*\*\* Significant at  $p < .001$

\*\*\* Significant at  $p < .01$

When hope is removed from the model, there is a large increase in the unique contribution of self-compassion to change in depression within the Treatment group. This will be discussed in the discussion chapter of this dissertation.

*Perceived stress.* Results from the multiple linear regression analysis on change in perceived stress scores is presented below:

| Condition | $R^2$ | Std. Error of Estimate |
|-----------|-------|------------------------|
| Treatment | .449  | .72                    |
| Control   | .481  | .73                    |

Table 4.43 Overall fit of the linear regression model for change in PSS scores for perceived stress. The difference between the two models is not statistically significant ( $p = .86$ ).

$R^2$  tells us the percentage of the total outcome variability predicted by our model. In this case, for both conditions, more than half the variability in PSS score change is explained by the three variables loaded into the model.

The following table presents the unique contribution of each of the three predictors loaded into the model, in order of unique predictive power:

| Condition | Variable | Standardized Beta ( $\beta$ ) | $P$     |
|-----------|----------|-------------------------------|---------|
| Treatment | Hope     | -.411                         | .020**  |
|           | SC       | -.383                         | .025**  |
|           | Altruism | .151                          | .262    |
| Control   | Hope     | -.397                         | .003*** |
|           | SC       | -.396                         | .003*** |
|           | Altruism | -.081                         | .413    |

Table 4.44 Unique contributions of each variable to the prediction of change in perceived stress score.

\*\*\* Significant at  $p < .001$

\*\* Significant at  $p < .05$

In both the Treatment and the Control condition, the hope and self-compassion variables contributed an approximately equal degree of unique variance, followed by change in altruism (with again a *decrease* in altruism score predicting a *decrease* in perceived stress in the Treatment group, but not in the Control). Again, of course, the shared contribution of self-compassion and hope is relevant.

*Subjective Happiness.* Results from the multiple linear regression analysis on change in happiness scores is presented below:

| Condition | $R^2$ | Std. Error of Estimate |
|-----------|-------|------------------------|
| Treatment | .541  | .53                    |
| Control   | .551  | .76                    |

Table 4.45 Overall fit of the linear regression model for change in SHS scores for happiness. The difference between the two models is not statistically significant ( $p = .95$ ).

$R^2$  tells us the percentage of the total outcome variability predicted by our model. In both cases, roughly half the outcome variance was explained.

The following table presents the unique contribution of each of the three predictors loaded into the model, in order of unique predictive power:

| Condition | Variable | Standardized Beta ( $\beta$ ) | $p$     |
|-----------|----------|-------------------------------|---------|
| Treatment | SC       | .499                          | .003*** |
|           | Hope     | .280                          | .089*   |
|           | Altruism | .138                          | .282    |
| Control   | SC       | .448                          | .001*** |
|           | Hope     | .348                          | .006**  |
|           | Altruism | -.105                         | .269    |

Table 4.46 Unique contributions of each variable to the prediction of change in subjective happiness score.

\*\*\* Significant at  $p < .01$

\*\* Significant at  $p < .05$

\* Significant at  $p < .10$

In the Treatment condition, self-compassion offered the most substantial unique contribution, followed by hope. This was also true in the Control group, though the difference between self-compassion and hope was not as pronounced.

**Hypothesis 5: There will be at least a moderate correlation between individual group members' change in self-compassion and the aggregate change in self-compassion of the rest of his/her group.**

This hypothesis considers the relationship between change in self-compassion at the group level (i.e. how much the group as a whole gains in self-compassion) and change in self-compassion at the individual level (i.e. for individual group participants).

A bivariate Pearson coefficient was produced to investigate the correlation between an individual's change in self-compassion and the change in self-compassion for the *rest* of his or her group. For example, in the "Coed" group, there were four participants; SCS change scores ( $T_2 - T_1$ ) for the four participants were .06, .16., .18, and .82. For the individual who gained .06 on the SCS at  $T_2$ , the average gain for the *rest* of his or her group was:

$$(.16 + .18 + .82) / 3 = .39$$

Every group member in the Treatment condition has a variable score that represents the average gain on SCS for the rest of his or her group. This score was computed for all Treatment group subjects.

To investigate Hypothesis 5, the bivariate correlation was computed for the following two sets of numbers: the gain on SCS over time for each individual, and the average gain on the SCS for the *rest* of his or her group.

Results are as follows:

| <i>r</i> | <i>r</i> <sup>2</sup> | <i>p value</i> |
|----------|-----------------------|----------------|
| .385     | .148                  | .022**         |

Table 4.47 Correlation between an individual's change in SCS and the change in SCS for the rest of his/her group.

\*\* Significant at  $p < .05$

The results of this analysis suggest a moderate degree of correlation between individual and “rest of group” SCS change scores.

This testing is quite exploratory in nature, in that it endeavors to look at an interaction between individual- and group-level effects utilizing a statistical technique that is appropriate to the sample size at hand. A much larger sample would allow for the kind of multilevel modeling that would of course investigate such effects in a more sophisticated and robust fashion.



## CHAPTER FIVE

### DISCUSSION

In their analysis of group therapy “therapeutic factors,” or mechanisms of change, recent reviewers have called for the investigation of new constructs and their relationship to group therapy outcome (Magen & Mangiardi, 2005). This study attempted to provide preliminary data on what was hypothesized to be significant relationships between process group therapy participation, mental health outcome, and self-compassion. To date, the vast literature on therapy groups has made scant mention of self-compassion and its role in change through general process group psychotherapy.

*Main Hypotheses.* The data suggested a significant relationship between participation in process group psychotherapy and positive mental health outcomes. This is hardly surprising given that numerous studies have established similar findings (Yalom, 2005). When compared to the Control group, group therapy participants experienced a significant decrease in depression (Beck Depression Inventory – Short Form) and perceived stress (Perceived Stress Scale) scores. At baseline, there was a quite significant difference between the two groups on both of these negative affect measures, with the clinical Treatment group higher in both depression and perceived stress than the non-clinical Control. However, these differences were eliminated by T<sub>2</sub>, roughly 8-9 weeks later.

These findings were not mirrored by the positive affect outcome measure used in the study, the Subjective Happiness Scale. The Control group scored significantly higher in subjective happiness than the Treatment group at baseline, and this difference was basically maintained (if slightly lessened) at T<sub>2</sub>.

The difference in change between the positive and negative affect measures is not surprising, given the established independence of the two domains (Warr, et al; Bradburn, 1969). From a clinical perspective, it is one thing to achieve a decrease in depression and anxiety, and another (perhaps more challenging) task to move towards happiness. The primary investigator of this study has had some experience in leading process groups, having led two groups at CMHC over the course of the Fall 2006 and Spring 2007 semesters. The experience suggested that the focus of inter-member discourse within process groups is much more likely to be related to negative affect than positive affect. That is, far more time in group is spent discussing shared experiences of depression and anxiety than on positive emotions such as happiness. Though happiness may be discussed as an ultimate goal of therapy (or life in general), it is not actively cultivated with the same energy that is invested in coping with negative affect. And since the action of group has much to do with connecting over shared experience, and since most members' experience (or at least recent experience) is characterized by negative affect, these emotions get far more "air time."

Though the statistical evidence for significant mental health change over time is strong for the Treatment group, findings must be interpreted with caution. Regression towards the mean (Bland, 1994) is perhaps playing a key role in the lowering of these depression and stress scores over time. The phrase refers to the statistically and logically established fact that a group with extreme scores in a measure is likely to have less extreme scores the next time they are tested. An impediment to easy interpretation is the fact that the study did not employ a true experimental design; the Treatment group was not a random sample, but a cohort drawn from a clinical population. At baseline,

Treatment participants had just entered group psychotherapy, presumably because they were experiencing some psychic distress (as suggested by the elevated negative affect scores); it is entirely possible that the same cohort would have experienced significant beneficial changes in negative affect over a 9-10 week period had they not received an intervention of any kind.

Another possible explanation for the movement of outcome scores towards greater health is related to the points in the semester when data was collected. For students, mental health may in part be tied to the rhythms of the academic semester, as demands ebb and flow. Baseline scores were collected in early-to-mid October, when many students may have been entering mid-term exams. Follow-up scores were collected in mid-December, when at least some students may have reached (or at least approached) the completion of their academic requirements. This would explain the fact that the Control group also experienced a decrease in negative affect, though not to a significant degree, and not to nearly the same extent as the Treatment group.

Still, there is statistical support for cautiously concluding the Treatment group experienced something helpful in the 9-10 weeks between baseline and follow-up. Certainly the elimination of significant differences between Treatment and Control conditions in levels of depression and stress suggests that group therapy was an effective agent of change.

Change in self-compassion over time followed a similar trajectory. While the Condition x Time interaction effect in the two-way ANOVA did not reach significance, Figure 4.4 demonstrated a clear difference between the two conditions on the slope of change in self-compassion between  $T_1$  and  $T_2$ . When these  $T_1 / T_2$  differences were

investigated using a post-hoc pairwise decomposition procedure, a significant change over time in self-compassion was found in the Treatment group, but not in the Control. While this is an exciting finding, and one consistent with a main hypothesis, again the results must be interpreted with caution, primarily due to the threat of regression towards the mean.

Still, the significant finding is encouraging, as is the general trend over time. It must be kept in mind that Treatment group participants were only in therapy for a total of approximately 10 weeks, and process therapy group participation often extends over a much longer time period. Even given this, for the Treatment group, the trend was clearly towards increased self-compassion. It is not a stretch to imagine that trend continuing up to some point of plateau; perhaps a longer treatment period might have resulted in even further increases in self-compassion, perhaps to levels that would be equivalent to those in the non-treatment Control. Of course, only future research can address this more substantially.

Decomposing the change in self-compassion over time, Fisher's LSD pairwise comparisons found significant T<sub>1</sub>/T<sub>2</sub> improvement within the Treatment group in each of the three components of self-compassion: positive change in Overall Self-Judgment ( $p = .037$ ), positive change in Overall Common Humanity ( $p = .044$ ), and positive change in Overall Mindfulness ( $p = .030$ ) were significant at the .05 level. These changes were not mirrored in the Control condition.

While this data should also be interpreted with caution (again, regression towards the mean is a complicating factor with this sample), as a preliminary finding it is encouraging. Chapter Two of this dissertation offered theoretical rationale for process

group therapy participation leading to significant change in each of the three components of self-compassion. The data lends some promising support to this rationale.

It was hypothesized that change in self-compassion would mediate the relationship between group therapy participation and mental health outcome. Mediation was not established, simply because the correlation between Condition and change in self-compassion approached but did not reach significance ( $r = .150$ ,  $p = .143$ ). This might be a confusing finding, given that the Fisher's LSD test showed a significant  $T_1/T_2$  increase in self-compassion for the Treatment condition, but not the Control. The failure to meet correlational significance is due, in part, to two factors: 1) in the Control condition, there was quite a bit more variability in SCS change than had been anticipated; given that self-compassion has been conceived as a trait construct (Kirkpatrick, 2006), Control participants were not expected to experience an increase in self-compassion between  $T_1$  and  $T_2$ , and yet they did (though, unlike in the Treatment group, not to a degree that reached statistical significance ( $p = .615$ )); and 2) there was insufficient power in this study for the difference between conditions in degree of change to register as a significant Pearson correlation for the mediation analysis. Though this study does not provide empirical support for it, it remains plausible to suggest that change in self-compassion may mediate the relationship between group therapy participation and mental health outcome; perhaps in the future an experimental design that allows for more inferential power may test this hypothesis again.

Change in self-compassion, did, however, have a quite significant zero-order correlation with change in each of the three outcome measures (depression, perceived

stress, and subjective happiness) within both the Treatment and Control conditions. This finding was hypothesized and consistent with previous findings (Neff et al., 2007).

The study compared the relationship between outcome and self-compassion to the relationship between outcome and two other variables often presented in the group literature as predictive of outcome: hope and altruism (Yalom, 2005). A multiple regression model was created for each of the three outcome measures (depression, perceived stress, and subjective happiness) in both the Treatment and Control conditions, for a total of six models. In all six models, the three predictors (change in self-compassion, change in hope, and change in altruism) explained roughly half the total variance in outcome change, which indicates a relatively strong predictive model.

In the depression model for the Treatment group, hope had the highest unique predicting power, followed by altruism (with *higher* altruism leading to *higher* depression), followed by self-compassion. In the depression model for the Control group, the order of unique influence was hope, self-compassion, and finally altruism, with altruism making only a quite small unique contribution (and in a more intuitive direction, with increased altruism contributing to decreased depression).

Relevant to understanding these findings in the depression models is the high correlation between hope and self-compassion ( $r$  between standardized residuals = .628,  $p < .001$ ). This multicollinearity somewhat complicates the interpretation of the multiple regression. For example, when predicting change in depression in the Treatment group, hope contributed a statistically significant degree of unique predicting power ( $\beta = -.473$ ,  $p = .012$ ), while the unique contribution of self-compassion approached significance but did not reach it ( $\beta = -.252$ ,  $p = .154$ ). However, when hope was dropped, leaving self-

compassion and altruism in the model, the unique predictive power of self-compassion was quite significant ( $\beta = -.537, p = .001$ ). This highlights the fact that change in hope and change in self-compassion both significantly predicted outcome in the clinical sample, and much of this predictive power was overlapping.

In other words, in the Treatment group, change in hope and change in self-compassion largely co-occurred; that is, hope and self-compassion, to a significant degree, changed in lock-step. An addition to the co-occurring variance of these two variables, both hope and self-compassion changed in a way that was not co-occurring - this is the unique variance. In the Treatment group, compared to that of self-compassion, hope's unique variance was a better predictor of change in depression.

Interestingly, this was not the case for the Control group, where self-compassion and hope had equivalent and statistically significant unique power to predict depression outcome, with altruism a distant third. In interpreting such findings, certainly relevant is the fact that the Control and Treatment samples were drawn from different populations, and there were substantial baseline differences between the two conditions. Again, since the Treatment group was a clinical sample and the Control group was not, differential findings in the two conditions cannot be attributed merely to the intervention.

In comparing the regression models for depression in Treatment and Control conditions, and especially in trying to understand why the unique contribution of self-compassion reached significance in the Treatment group and not the Control group, it is also relevant to look closely at the beta weights for each of the three predictors in both models. In the depression model for the Treatment condition, the self-compassion beta weight, which again represents the statistical degree of unique contribution for that

variable, was comparable to self-compassion's beta weight in the Control condition (Treatment model for depression outcome, self-compassion  $\beta = -.252$ ,  $p = .154$ ; Control model for depression outcome, self-compassion  $\beta = -.293$   $p = .016$ ). That the weight reached significance in the Control group model and not in the Treatment group model is more due to the larger sample size in the Control group (56 subjects) than the Treatment group (35), and less due to any differences between the two conditions in the power of change in self-compassion to predict change in depression.

One would perhaps expect the finding that, in the depression model, hope would make a larger unique contribution than self-compassion or altruism, given that the relationship between hope and depression is direct (Chang & DeSimone, 2001). That is, in some fundamental way, when depression is significant, it *is* a lack of hope. The relationship between self-compassion and depression may be less direct; that is, a lack of self-compassion and the presence of depression may be significantly related, but they are not really the *same thing*, and therefore change in self-compassion, compared to change in hope, may be a less powerful unique predictor of change in depression in a clinical sample. Still, the data suggests that change in self-compassion does make a substantial contribution, both unique and overlapping with hope, to change in depression, both in a clinical and non-clinical sample.

Results suggest that the relationship between change in self-compassion and change in stress is also quite significant, on par with that between hope and stress, and exceeding that between altruism and stress. Stress, like depression, is a form of negative affect, yet clearly it is not the *same thing* as a lack of hope, though there likely is, of course, a significant (though more indirect) relationship between the two constructs. In



the perceived stress model, for both the Treatment and Control groups, both hope and self-compassion were strong and equivalent predictors of outcome (for Treatment, hope  $\beta = -.411, p = .020$ , self compassion  $\beta = -.383, p = .025$ ; for Control, hope  $\beta = -.397, p = .003$ , self-compassion  $\beta = -.396, p = .003$ ). Altruism was a distant third in contributing unique power to predict stress outcome (for Treatment, altruism  $\beta = -.151, p = .262$ ; for Control, altruism  $\beta = .081, p = .413$ ).

The regression model for subjective happiness offered further support for the important relationship between self-compassion and outcome, in both a clinical and non-clinical sample. In the Treatment condition, self-compassion was by far the most powerful unique predictor of change in happiness, followed by hope, with altruism making a much smaller unique contribution (self-compassion  $\beta = .499, p = .003$ , hope  $\beta = .280, p = .089$ , altruism  $\beta = .138, p = .282$ ). The order of unique contribution was the same in the Control condition, though the difference between self-compassion and hope was smaller (self-compassion  $\beta = .448, p = .001$ , hope  $\beta = .348, p = .006$ ).

These are exciting findings, as the data suggests that self-compassion certainly warrants inclusion when considering the various factors that predict mental health outcome in psychotherapy groups.

One surprising finding warrants mention here: the direction of the relationship between altruism and negative affect – particularly depression - in the Treatment group. Again, in the Treatment group as a whole, as altruism decreased, so did negative affect. This was not the case in the Control group, where the direction of the relationship was consistent with predicted findings (increased altruism was associated with decreased negative affect).

For the Treatment group, decreased altruism reached significance at .10 as a predictor of decreased depression, while in the stress model it was not significant (in the depression model,  $\beta = .259, p = .074$ ; in the stress model,  $\beta = .151, p = .262$ ). Why would a lowering of altruism also lower depression in this Treatment group, when *increased* altruism has traditionally been associated with decreased depression (Yalom, 2005)? A key to understanding this phenomenon may rest in the scale used to measure altruism in this study.

The Attitudes Toward Helping Others Scale consists of four items, with subjects responding on a scale of 1-5, “strongly disagree” to “strongly agree”: 1) “People should be willing to help others who are less fortunate” 2) “Helping troubled people with their problems is very important to me;” 3) “People should be more charitable toward others in society;” and 4) “People in need should receive support from others.” It is certainly possible that people who are higher in depression may endorse these items for reasons other than because they are filled with a selfless desire *to connect with and help others* – that is, the altruistic feelings the measure is designed to tap. When considering questions about “troubled people” or “people in need,” perhaps depressed responders, who likely consider themselves “in need” since they are seeking treatment, are more likely to identify *themselves* with such people, and read the question as, for example, “People should be willing to help others who are hurting *like me*.” It is possible that in a clinical sample, then, the measure examines motivations that are perhaps more egoistic than altruistic. When the depression abates, perhaps subjects are less likely to see themselves as representative of the “people in need” mentioned in the items, and the measure then

becomes more accurate in its attempt to measure how the responder feels about giving to *others* (i.e. what is meant by “altruism”).

This proposed explanation of the current study’s counterintuitive relationship between altruism and depression is supported by the stark difference in levels of altruism between the Treatment and Control groups at baseline, with the Control group much *lower* in altruism than the Treatment group (on the AHO scale of 1 to 7, Treatment M = 4.22, Control M = 2.50;  $p$  of difference < .001). Of course, the most likely explanation for this difference is the fact that the Treatment group is a clinical sample, while the Control is not. This suggests that the higher score on the altruism measure is therefore related to less-desirable overall mental health. Since this has not traditionally been seen as a property of altruism as a construct, it is possible that this data stems from a weakness of the AHO measure itself. It must be noted that while the authors of the AHO demonstrated that the scale was valid (Webb, Green et al., 2000), the psychometric properties of the measure were not evaluated with a clinical sample.

There was a moderate correlation between change in self-compassion for individual group members and change in self-compassion for the rest of his or her group ( $r = .385, p = .022$ ). This may be due to several factors. Perhaps this is a function of the group leader, who may possess a certain degree of attunement to issues related to self-compassion, may make explicit mention of it during the therapy, or may embody a certain degree of it within his or her own person, and communicate this through implicit modeling (Yalom, 2005). This may lead to a certain group-level effect that would be bestowed to and shared by group members, and captured by this correlation statistic.

Or, perhaps, group members acquire self-compassion from each other. It is proposed here that self-compassion is, in a sense, a skill that is implicitly learned in the course of process group therapy, given a competent leader and a productive assemblage of participants. That is, as the group unfolds, change in each individual is in part a function of change at the group level, in that a ‘tone’ of discourse is established that is, relative to other groups, more or less conducive to fostering self-compassion. In that regard, the moderate correlation may be interpreted as an indication that such a ‘group-level tone’ will have a moderate, though significant, impact on the acquisition of self-compassion for each individual.

*Clinical implications.* The data suggests that participation in group therapy has a significant positive impact on levels of self-compassion. Further, results clearly suggests that both group psychotherapy participation and the acquisition of self-compassion are related to positive mental health outcome, particularly in the domain of lowering negative affect. It may be safe to suggest that many who enter psychotherapy are experiencing relatively low levels of self-compassion, and that a buttressing of these levels may make a significant contribution to positive outcome. Study data indicates that nurturing the development of self-compassion may be particularly useful in the raising of positive affect, which results indicate is a domain distinct from and more perhaps more difficult to impact than negative affect.

It has been proposed here that self-compassion is buttressed in the normal course of participating in a process group. It may be that such process groups may be more beneficial to participants if opportunities to address self-compassion are embraced by the group leader. This is not to say that self-compassion need become an explicit focus of the

therapy (though of course such focused interventions may be beneficial) or that specific skills need be taught during sessions. The suggestion here is that perhaps process group leaders would do well to listen for issues of self-compassion as they arise in the group, and facilitate the inter-member processing of such issues. Also, since a great deal of the leader's influence on the group comes from non-verbal modeling (Yalom, 2005), it may be that group leaders may benefit from monitoring and developing their own levels of self-compassion.

This dissertation has also asserted the importance of the therapist believing that what is being done in the consulting room is being done for a good reason. Perhaps this confidence in the process on the part of the therapist, and the verbal or non-verbal communication of it to the client, is as much a “therapeutic mechanism” as anything else. McWilliams (2004) has termed this confidence “faith,” by which she means faith that the process means something good for the person seeking help, and faith in what it is about the process that makes this so. Perhaps one clinical implication of this study's findings is that they offer a preliminary step towards the group therapist being armed with a somewhat clearer understanding of – and thus a deeper faith in – the often mysterious relationship between the therapy and the change that often arises from it.

Finally, it is hoped that this study will add a new dimension to the growing body of research investigating the usefulness and applicability of Buddhist concepts – and particularly self-compassion – in the development of Western psychological theory and practice. In this vein, it is hoped that this study will be seen as a small contribution to the continually unfolding dialogue between two great traditions.

*Strengths of the study.* A strength of the study lies in its expansion of the exploration of self-compassion into the realm of a well-established, though insufficiently understood, psychotherapeutic modality. The acquisition of self-compassion has been tested in studies that utilized interventions where the therapist was trained in the importance of self-compassion (Kirkpatrick, 2006) or where the acquisition was explicitly targeted (Gilbert, in press); it is a new contribution to investigate the role self-compassion implicitly plays in an intervention that does not target the construct. Further, such separation of the target construct from the stated purpose of the intervention is beneficial in reducing response bias; group therapy participants were unaware that self-compassion was a focus of the study, and therefore were less likely to respond favorably on the SCS than if the intervention had explicitly endeavored to increase their self-compassion.

Such an investigation of “treatment-as-usual” effects would not have been possible had the University of Texas at Austin Counseling and Mental Health Center (CMHC) not agreed to participate fully in the study. A significant strength of the study is derived from the degree of this cooperation from CMHC, both on the part of the clinic leadership and the individual group leaders, and the quality of authenticity it lent to the data. The intervention under investigation was delivered by experienced professionals. For an extremely busy agency to cooperate so enthusiastically on a doctoral dissertation is tremendously appreciated.

The study was a significant first step in the introduction and testing of a new mechanism by which group therapy processes may be more fully understood. Recent research has called for the introduction of new constructs in the investigation of group

outcome factors (Magen & Mangiardi, 2005), and this study, though preliminary, has attempted to respond with a new and significant contribution to the discourse.

Another strength of the study lies in the use of a Control condition and its impact on the analysis. Although the Control group in this study was drawn from a different population than the Treatment group (a significant limitation that will be discussed below), the presence of a Control allowed for more rigorous statistical analysis than otherwise would have been possible. Traditionally, many group therapy studies have utilized analysis methods lacking in sophistication, a state of affairs that contributes to the relative lack of understanding of therapeutic factors (Yalom, 2005). For example, in outcome research, it is quite common to see  $T_1/T_2$  change scores tested for significance using paired-sample t-tests. Such a test would not take into account confounding factors such as repeat measure response bias or any other movement over time that might be mirrored in a non-treatment group. The presence of a Control in this study allowed for changes in the Treatment group to be measured against changes in Control, allowing for more rigorous and conservative tests of significance.

The study endeavored to move beyond the predominant method used to investigate therapeutic factors in group: the post-termination questionnaire administered at a single collection point (MacKenzie, 1987; Bednar & Kaul, 1994). While such a methodology has been enormously useful and influential, it was felt here that an investigation of the relationship between *change over time* in constructs theorized as therapeutic factors and change in mental health outcome would provide a somewhat richer view of what happens over the lifespan of a working group, and would tie changes in therapeutic factors to changes in actual mental health outcome. This effort was in part

motivated by recent reviewers (Kivlighan, Coleman et al., 2000) who have called for dynamic (multiple time points) rather than static (single time point) analysis of group process. Further, measuring constructs independent of established questionnaires that presuppose therapeutic factors, such as Yalom's TFQ and the many derivations thereof, allowed for the investigation of a new potential mechanism of change (self-compassion).

Finally, the study attempted to take into account a group-level effect, which is largely ignored in group therapy studies that do not have the sample sizes required to utilize more sophisticated, multilevel modeling techniques (Bonito, 2002). While a greater number of groups in the study would have allowed for more a more robust investigation of the relationship between group- and individual-level variables, this study attempted to take preliminary steps utilizing inferential techniques appropriate to the current sample size.

*Limitations.* Several limitations to the study are based in the convenience sampling method employed. First, the use of UT students resulted in a restriction of age, ethnicity, and education level, and the use of a clinical sample resulted in a skew towards female participation. These factors restrict the generalizability of results to the general population.

A very serious limitation to the validity of the study arose from the use of distinctly different populations for the Treatment and Control groups. This was the result of practical realities of running such a study, and carried with it restrictions on the interpretability of the findings. Had the Control group been comprised of, say, a wait-list group drawn from the same clinical population as the Treatment group, differences between the conditions would have been much more easily attributed to the intervention.



Further, the statistical procedures utilized by the study would have been more powerful, as the two groups would not have differed so greatly on baseline measures.

Perhaps the main problem this poses is that findings cannot truly be said to address direction of causality between the investigated variables and the intervention. That is, since there are greater differences between Treatment and Control than just participation in a therapy group, we do not know if the intervention itself improved mental health.

Further, the distinction between variables investigated as predictors and those investigated as outcome was, to a degree, arbitrary. A theoretical argument can be made that the outcome measures employed in the study (depression, stress, happiness) are normally considered to be the result of some other process or processes, while self-compassion is here proposed as a therapeutic factor developed during the course of therapy. Still, this study does not provide a firm statistical basis for any true claims as to causality, and establishment of causality would be a more significant discovery than correlation.

The size of the sample was another issue. Again, practical considerations came into play, as there were only so many participants in group therapy at CMHC during the collection period. There is no doubt that a greater number of participants would have led to increased statistical power, and the impact of data points that were extreme (but did not meet criteria for exclusion) would have been minimized.

Further, there might have been some sampling bias within the Control condition, given that 48 group therapy participants completed the survey at baseline, and only 35 of these comprised the final Control condition by completing the survey at follow-up.

Again, 4 students dropped out of group therapy during the semester, and an additional 8 remained in therapy but did not attend the final group meeting (when follow-up surveys were completed) and did not respond to emails directing them to complete the questionnaire online. (An additional student completed the follow-up survey, but did not respond to any items on the Self-Compassion Scale). There was no statistical difference between the baseline scores of those who completed the follow-up survey and those who did not; however, it is certainly possible that those who dropped out of group or did not attend the final meeting were having a different, less favorable experience than those who comprised the final Control group. This would mean the final sample was somewhat skewed towards those more likely to give positive ratings.

The relatively modest sample size limited the range of appropriate statistical analytic techniques that could be utilized. Specifically, because many more subjects and many more groups would have been needed to pursue a more sophisticated method, the current analysis treated subjects as individuals and did not take into account the fact that subjects were collected in groups. This is a violation of the assumption of independence of observations, and it is possible that this violation led to an overestimation of effects (Kenny & Judd, 1986).

Another limitation is the duration of the therapy groups under investigation. Again, this was an issue of practicality, as the study groups at CMHC typically run for about 10 weeks. This time period was sufficient to capture change, but it is not uncommon for people to remain in group therapy for many years. Perhaps change over time would have been more significant had a longer treatment period been possible.

The design of the study also would have been strengthened by using multiple assessments, and perhaps longer ones, over shorter time intervals (as opposed to mere pre-test/post-test). The use of only pre-test/post-test collection points and as short a survey as possible was a concession made in order to conduct the study in a working clinic. Longer and more frequent surveying would have allowed for a richer examination of the interaction effects between time and the study's predictive and outcome variables. Also, an assessment at, say, one year after group termination would provide additional interesting data on the nature of the observed mental health changes: for example, how tied they are to an active, ongoing participation in groups, and how lasting such changes are.

The Attitudes Toward Helping Others scale was perhaps an insufficient measure of altruism within a clinical sample. What was needed was a scale that measured altruistic, rather than egoistic, motivation; for reasons explored above, there is reason to believe that within the clinical sample, truly altruistic motivation was inaccurately measured.

Finally, the use of self-report measures introduced the possibility that data was contaminated by biased or distorted responses. Participants' responses may have been influenced by their perceptions of the researcher's expectation, or perhaps by their own internal pressures to respond in more socially desirable ways (Hanita, 2000).

*Implications for future research.* The current study is a significant preliminary step in the establishment of self-compassion as a construct worthy of investigation in relation to group psychotherapy outcome. Future research should attempt to replicate significant findings and address many of the limitations outlined above.

Perhaps the primary need is a true experimental design, with sample sizes large enough to employ multilevel modeling techniques. Ideally, Control and Treatment conditions would be comprised of a single population, and the participants would be randomly assigned to one or the other condition. With clinical populations, of course, true control conditions are difficult to achieve; perhaps some sort of wait-list control could be utilized. Only with such a true experimental design can internal validity be maximized and causality more confidently addressed.

Significantly increased sample sizes would allow for the kind of sophisticated statistical modeling that was impossible with this sample, particularly with regard to multilevel modeling and the use of baseline and post-test scores for predictors and outcome measures (as opposed to post-regression standardized residuals). This would allow for more rigorous investigation of group-level factors and more sensitive detection of significant effects. A lengthier longitudinal investigation is also called for, particularly one that follows participants post-treatment and investigates the degree of more lasting change.

Building on the clinical implications of this study, it would perhaps be fruitful to compare the efficacy of general process groups to themed groups specifically tailored to address issues of self-compassion, such as Compassion Mind Training (Gilbert, 2005), both in terms of general outcome and levels of self-compassion. Future research along these lines might also include an investigation of process groups lead by leaders who have been trained and primed on the importance of self-compassion, even if they do not then engage in any didactic training in the construct during the course of conducting the group therapy.

Future research might compare self-compassion to other constructs theorized as important mechanisms of change in groups. This study has taken a preliminary step towards establishing self-compassion as a construct worthy of inclusion among two well-established therapeutic factors, hope and altruism. Along with these two constructs, Yalom (1970) proposed others, such as group cohesiveness and cathartic relating, that have remained extremely influential in group theory. Future research with sample sizes sufficient to support larger regression equations may endeavor to compare the importance of self-compassion to these (and perhaps other, newer) constructs.

## Appendices

## **Appendix A: Study Survey Packet**

### **Group Therapy Study Questionnaire Packet**

You will remain completely anonymous throughout this study.

To link the two questionnaire packets you will complete for this study, please indicate:

**The first 4 letters of your mother's first name:**    \_\_\_\_\_

**The first 4 letters of the high school from which you graduated:**    \_\_\_\_\_  
\_\_\_\_\_

## Beck Depression Inventory – Short Form

Instructions: The questionnaire consists of groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during **the past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group.

- 1)    0      I do not feel sad.  
      1      I feel sad much of the time.  
      2      I am sad all the time.  
      3      I am so sad or unhappy I can't stand it.
  
- 2)    0      I am not discouraged about my future.  
      1      I feel more discouraged about my future than I used to be.  
      2      I do not expect things to work out for me.  
      3      I feel my future is hopeless and will only get worse.
  
- 3)    0      I do not feel like a failure.  
      1      I have failed more than I should have.  
      2      As I look back, I see a lot of failures.  
      3      I feel I am a total failure as a person.
  
- 4)    0      I get as much satisfaction out of things as I used to.  
      1      I don't enjoy things as much as I used to.  
      2      I don't get real satisfaction out of anything anymore.  
      3      I am dissatisfied or bored with everything.
  
- 5)    0      I don't feel particularly guilty.  
      1      I feel guilty a good part of the time.  
      2      I feel quite guilty most of the time.  
      3      I feel guilty all the time.
  
- 6)    0      I don't feel disappointed in myself.  
      1      I am disappointed in myself.  
      2      I am disgusted with myself.  
      3      I hate myself.
  
- 7)    0      I don't have any thoughts of killing myself.  
      1      I have thoughts of killing myself, but I would not carry them out.



- 2 I would like to kill myself.  
3 I would kill myself if I had the chance.
- 8)** 0 I have not lost interest in other people.  
1 I am less interested in other people or things than before.  
2 I have lost most of my interest in other people or things.  
3 It's hard to get interested in anything.
- 9)** 0 I make decisions about as well as ever.  
1 I find it more difficult to make decisions than usual.  
2 I have much greater difficulty in making decisions than I used to.  
3 I have trouble making any decisions.
- 10)** 0 I don't feel I look any worse than I used to.  
1 I am worried that I am looking old or unattractive.  
2 I feel that there are permanent changes in my appearance that make me look unattractive.  
3 I believe that I look ugly.
- 11)** 0 I can work about as well as before.  
1 It takes an extra effort to get started at doing something.  
2 I have to push myself very hard to do anything.  
3 I can't do any work at all.
- 12)** 0 I don't get more tired than usual.  
1 I get tired more easily than I used to.  
2 I get tired from doing almost anything.  
3 I am too tired to do anything.
- 13)** 0 My appetite is no worse than usual.  
1 My appetite is not as good as it used to be.  
2 My appetite is much worse now.  
3 I have no appetite at all anymore.

## Perceived Stress Scale

Instructions: The questions in this scale ask you about your feelings and thoughts within the last month. Please indicate how often you felt of thought a certain way.

| Never | Almost<br>Never | Sometimes | Fairly<br>Often | Very<br>Often |
|-------|-----------------|-----------|-----------------|---------------|
| 0     | 1               | 2         | 3               | 4             |

- \_\_\_ 1) In the last month, how often have you been upset because of something that happened unexpectedly?
- \_\_\_ 2) In the last month, how often have you felt that you were unable to control the important things in your life?
- \_\_\_ 3) In the last month, how often have you felt nervous and “stressed”?
- \_\_\_ 4) In the last month, how often have you felt confident about your ability to handle your personal problems?
- \_\_\_ 5) In the last month, how often have you felt that things were going your way?
- \_\_\_ 6) In the last month, how often have you found that you could not cope with all the things that you had to do?
- \_\_\_ 7) In the last month, how often have you been able to control irritations in your life?
- \_\_\_ 8) In the last month, how often have you felt that you were on top of things?
- \_\_\_ 9) In the last month, how often have you been angered because of things that were outside of your control?

\_\_\_\_ 10) In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

## Subjective Happiness Scale

For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

**1**                    **2**                    **3**                    **4**                    **5**                    **6**  
**7**

NOT A  
VERY                    A VERY  
HAPPY                    HAPPY  
PERSON                    PERSON

2. Compared to most of my peers, I consider myself:

**1**                    **2**                    **3**                    **4**                    **5**                    **6**  
**7**

LESS  
HAPPY                    MORE  
                                  HAPPY

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?

**1**                    **2**                    **3**                    **4**                    **5**                    **6**  
**7**

NOT  
A GREAT  
AT ALL  
DEAL

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?

**1**  
**7**

**2**

**3**

**4**

**5**

**6**

**NOT  
A GREAT  
AT ALL  
DEAL**

## State Hope Scale

*Directions:* Using the scale shown below, please select the number that best describes how you think about yourself *right now* and put that number in the blank before each sentence.

| Definitely<br>False<br>1 | Mostly<br>False<br>2 | Somewhat<br>False<br>3 | Slightly<br>False<br>4 | Slightly<br>True<br>5 | Somewhat<br>True<br>6 | Mostly<br>True<br>7 | Definitely<br>True<br>8 |
|--------------------------|----------------------|------------------------|------------------------|-----------------------|-----------------------|---------------------|-------------------------|
|--------------------------|----------------------|------------------------|------------------------|-----------------------|-----------------------|---------------------|-------------------------|

\_\_\_ 1. If I should find myself in a jam, I could think of many ways to get out of it.

\_\_\_ 2. At the present time, I am energetically pursuing my goals.

\_\_\_ 3. There are lots of ways around any problem that I am facing now.

\_\_\_ 4. Right now, I see myself as being pretty successful.

\_\_\_ 5. I can think of many ways to reach my current goals.

\_\_\_ 6. At this time, I am meeting the goals that I have set for myself.



**Strongly  
Strongly  
Disagree  
Agree**

**Neutral**



## Self-Compassion Scale

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

- |     | <b>Almost<br/>never</b> |          |          |          |  | <b>Almost<br/>always</b>   |
|-----|-------------------------|----------|----------|----------|--|--|
|     | <b>1</b>                | <b>2</b> | <b>3</b> | <b>4</b> |  | <b>5</b>   |
| ___ | 1.                      |          |          |          |  | I'm disapproving and judgmental about my own flaws and inadequacies.   |
| ___ | 2.                      |          |          |          |  | When I'm feeling down I tend to obsess and fixate on everything that's wrong.                                      |
| ___ | 3.                      |          |          |          |  | When things are going badly for me, I see the difficulties as part of life that everyone goes through.             |
| ___ | 4.                      |          |          |          |  | When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world. |
| ___ | 5.                      |          |          |          |  | I try to be loving towards myself when I'm feeling emotional pain.   |
| ___ | 6.                      |          |          |          |  | When I fail at something important to me I become consumed by feelings of inadequacy.                              |
| ___ | 7.                      |          |          |          |  | When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.         |
| ___ | 8.                      |          |          |          |  | When times are really difficult, I tend to be tough on myself.   |
| ___ | 9.                      |          |          |          |  | When something upsets me I try to keep my emotions in balance.   |
| ___ | 10.                     |          |          |          |  | When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.  |
| ___ | 11.                     |          |          |          |  | I'm intolerant and impatient towards those aspects of my personality I don't like.                                 |
| ___ | 12.                     |          |          |          |  | When I'm going through a very hard time, I give myself the caring and tenderness I need.                           |
| ___ | 13.                     |          |          |          |  | When I'm feeling down, I tend to feel like most other people are probably happier than I am.                       |
| ___ | 14.                     |          |          |          |  | When something painful happens I try to take a balanced view of the situation.                                     |
| ___ | 15.                     |          |          |          |  | I try to see my failings as part of the human condition.   |
| ___ | 16.                     |          |          |          |  | When I see aspects of myself that I don't like, I get down on myself.  |
| ___ | 17.                     |          |          |          |  | When I fail at something important to me I try to keep things in perspective.                                      |
| ___ | 18.                     |          |          |          |  | When I'm really struggling, I tend to feel like other people must be having an easier time of it.                  |
| ___ | 19.                     |          |          |          |  | I'm kind to myself when I'm experiencing suffering.  |
| ___ | 20.                     |          |          |          |  | When something upsets me I get carried away with my feelings.  |
| ___ | 21.                     |          |          |          |  | I can be a bit cold-hearted towards myself when I'm experiencing suffering.  |

- \_\_\_ 22. When I'm feeling down I try to approach my feelings with curiosity and openness.
- \_\_\_ 23. I'm tolerant of my own flaws and inadequacies.
- \_\_\_ 24. When something painful happens I tend to blow the incident out of proportion.
- \_\_\_ 25. When I fail at something that's important to me, I tend to feel alone in my failure.
- \_\_\_ 26. I try to be understanding and patient towards those aspects of my personality I don't like.

## Demographic Information

1. Age: \_\_\_\_\_

2. Grade Level:

Freshman

Sophomore

Junior

Senior

Graduate Student

3. Sex:

Female

Male

4. Ethnicity:

African American/Black

Asian/Southeast Asian

European American/White

Latino/Hispanic/Mexican American

Mixed ethnicity

Other (please specify) \_\_\_\_\_

5. Have you ever participated in a therapy group before?

Yes, in the past.

Yes, I am currently in a therapy group.

No, I have never been in a therapy group

6. If you selected either 'yes' option above, what is the approximate total number of months you have been in group therapy?

## Appendix B: Group Leader Demographic Request Form

This information is being requested as part of the Group Therapy Study currently being run at CMHC. Your responses will help provide background to the data; this kind of demographic data on group leaders is standard in group therapy research. Your responses will remain completely anonymous.

Questions or comments about any portion of this demographic form may be directed to Eric Jannazzo ([esjannazzo@gmail.com](mailto:esjannazzo@gmail.com), 512-707-7372).

1. Age: \_\_\_\_\_

2. Sex: Female  
Male

3. Professional Degree:

4. Number of years you have been leading therapy groups:

5. Approximate number of therapy groups you have lead in your career:

## **Appendix C: Group Leader Information Sheet**

### Group Therapy Study Information Sheet for Group Leaders

#### Study Overview

This study will look at several important variables that have been overlooked in group research. It is posited that these variables may play a significant role in the change in mood and affect often brought about by process group therapy, and that the identification of the key role played by these variables may assist group leaders in focusing their intervention. In the interest of maintaining the integrity of the data, a full explanation of the theoretical underpinnings of the study will be given after the data collection period.

#### Subject Recruitment

All study subjects will remain completely anonymous throughout the study.

Group leaders are being asked to **briefly** introduce the study to students during the PGI. This introduction will consist of no more than reading a provided script explaining that a study is being run during the semester on various aspects of group therapy, and that all process group therapy participants are being asked if they would like to participate. Group leaders will then present the student an information sheet/consent form for students that outlines the study from the participants' perspective. Due to the anonymity of the data, no signatures will be necessary.

Those who agree to participate in the study and complete both questionnaire packets will be enrolled in a raffle for one of two \$50 gift certificates to Alamo Drafthouse.

#### Data Collection

Data collection will consist of an identical questionnaire packet being administered at two time points: at the beginning of the first group meeting of the semester, and immediately following or at the end of the final group meeting of the semester. The packet should take 5-10 minutes to complete. Group leaders are asked to hand out and collect the survey during the first 10-15 minutes of the first group meeting of the semester (this will allow enough time for those members who have not attended a PGI to read the Student Information Sheet and decide if they'd like to participate), and the final 5-10 minutes of the final group meeting of the semester. The completed surveys will then be collected in the provided envelope and placed in Eric Jannazzo's mailbox.

#### Results

Results of the study and a full explanation of theoretical underpinnings of the study will be provided towards the end of the Spring 2008 semester.

#### Contact Info

**Any** questions or comments about the study can be directed to Eric Jannazzo, Doctoral Candidate in UT Austin's Counseling Psychology Program. My email is [esjannazzo@gmail.com](mailto:esjannazzo@gmail.com), and my home phone is 512-707-7372.

I know that in leading these process groups, time and energy are *extremely* valuable resources, and I'm aware that this study is to some degree an imposition on both. Please do not hesitate to voice your concerns to me at any time. Your cooperation is HUGELY appreciated!!!

## **Appendix D: Recommended Group Leader Script for Potential Participants**

### Group Therapy Study – Script for PGI

This semester, a research study is being conducted at the Counseling Center. The study is looking at some factors that relate to the process of group therapy, and all group members are being asked if they would like to participate. Participation will involve merely filling out a set of questionnaires at two separate times: first at the beginning of the initial meeting of the semester, and then again at the end of the final meeting of the semester. The questionnaires should take 5-10 minutes to complete.

You are free to decline participation. If you do choose to participate, in addition to contributing to potentially valuable research, you'll be entered into a drawing for one of two \$50 gift certificates to the Alamo Drafthouse.

Here is an Information Sheet that gives more details about the study. If you have any questions or comments, contact the principle researcher, and he'll be happy to discuss any issues with you. His name is Eric, and his contact information is on the Information Sheet.

## **Appendix E: Group Leader Summary**

### Group Therapy Study – Group Leader Summary

What Group Leaders Need to Do:

1. At PGI, read provided script to students and hand out Information Sheet for Students.
2. At the beginning of the first group meeting, hand out and collect Survey Packets, and place completed forms in Eric's box. Please include the short Group Leader Demographic Sheet.
3. During the last meeting of the semester, repeat Step 2 (minus Leader Demographic Sheet, which only needs to be completed once).



## Appendix F: Information Sheet for Treatment Group Participants

### Group Therapy Study Information Sheet for Students

You are being asked to participate in a research study; this form provides you with information about this study. Please read the information below and contact the researcher with questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

#### Title of Research Study:

An examination of process group therapy.

#### What will be done if you take part in this research study?

For this study, you will **anonymously** take a survey at two separate times: the first time will be at the beginning of the first group therapy session of the fall semester; the second time will be at the end of the last group therapy session of the fall semester. The survey involves filling out several questionnaires that focus on your experience of various emotions, including hope, altruism, and self-compassion. We anticipate that completing the entire questionnaire packet will take approximately **5-10 minutes**.

Whether or not you agree to participate, this study will in no way affect the regularly conducted treatment group that you have already agreed to join.

#### Principal Investigator, UT Affiliation, and Contact Information

Eric Jannazzo

Doctoral Candidate, Counseling Psychology 707-7372 esjannazzo@gmail.com

#### What is the purpose of this study?

The purpose of this study is to better understand the processes involved in group therapy. This information may contribute to research on improving group treatment. **Your contribution therefore may be an integral part of improving your and other students' experiences in group therapy.** You will be one of approximately 120 participants in this study.

#### What are the possible discomforts and risks?

There are no known risks involved with answering the survey questionnaires, but at any time you may decide not to answer specific questions, or may terminate the survey. If you experience undue distress at any point during the study you may also contact UT's Telephone Counseling Hotline (471-CALL) or the UT Counseling and Mental Health Center (471-3515).

#### Will you receive compensation for your participation in this study?

Should you choose to participate, you will also be entered into a raffle for one of two **\$50 gift certificates to the Alamo Drafthouse**.

If you do not want to take part in this study, what other options are available to you?

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with The University of Texas at Austin, the UT Counseling and Mental Health Center, any employees thereof, or with the investigator of the study.

How can you withdraw from this research study and who should you call if you have questions?

If you wish to stop your participation in this research study for any reason, you should contact: Eric Jannazzo at 707-7372 or [esjannazzo@gmail.com](mailto:esjannazzo@gmail.com). You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits to which you may be entitled. Throughout the study, the researcher will notify you of new information that may become available and might influence your decision to remain in the study.

In addition, if you have questions about your rights as a research participant, please contact Jody Jensen, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects at (512) 232-2685 or the Office of Research Support and Compliance at (512) 471-8871 or email: [orsc@uts.cc.utexas.edu](mailto:orsc@uts.cc.utexas.edu).

How will your privacy and the confidentiality of your research records be protected?

**You will remain completely anonymous throughout the study.** Your data at the two collection points will be linked by a unique identifier; this identifier will not reveal your identity to the researcher or anyone else.

Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. If the research project is sponsored then the sponsor also has the legal right to review your research records. Otherwise, your research records will not be released without your consent unless required by law or a court order.

If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.

By completing the survey, you agree that you have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you begin, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By completing the survey, you are not waiving any of your legal rights.

## **Appendix G: Information Sheet for Subject Pool (Control Group) Participants**

You are being asked to participate in a research study. This form provides you with information about the study. Please read the information below and contact the researcher with questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study:  
Process study.

### **STUDY INSTRUCTIONS - THE FOLLOWING INSTRUCTIONS WILL TELL YOU WHAT TO DO TO FULFILL YOUR RESEARCH REQUIREMENT**

For this study, you will take an online survey from a computer of your choice that has Internet access. You will be asked to take the identical online survey three times:

**Time 1: any time between now and before 11:59pm on Friday, October 12.**

**Time 2: any time BETWEEN Monday, November 12 and 11:59pm on Friday, November 16<sup>th</sup>.**

**Time 3: sometime between your last class and December 21<sup>st</sup>.**

You will receive credit for fulfilling your research requirement after completing the survey at **\*\*\*BOTH TIME 1 AND TIME 2\*\*\***.

You are also being asked to complete the survey at TIME 3, though you do not have to complete the survey at TIME 3 in order to receive credit for fulfilling your research requirement. If you choose to complete the survey at TIME 3, in addition to helping greatly with the research, you will be enrolled in a raffle to win a **\$50 gift card to Alamo Drafthouse**. Winners of the raffle will be contacted via email by December 23<sup>rd</sup>.

The online survey involves filling out several questionnaires that focus on your emotions, how you handle stress, your feelings of hope, altruism, and self-compassion. **Your answers to the survey will be kept confidential at all times.** We anticipate that completing the entire survey will take approximately 10 minutes.

You may take the online survey at any time within the designated windows and any place that you choose. Sometime within the week after you have completed the survey at Time 2, you will receive a confirmation email from the researcher, along with a receipt you may keep for your records.

### **YOU WILL BE RESPONSIBLE FOR COMPLETING DURING THE APPROPRIATE WINDOWS THE TIME 1 AND TIME 2 SURVEYS**

**FOR CLASS CREDIT, AS WELL AS THE TIME 3 SURVEY TO ENTER THE RAFFLE. YOU MAY WISH TO RECORD THE DATES OF THESE WINDOWS SO THAT YOU APPROPRIATELY COMPLETE THE SURVEY.**

**Principal Investigator, UT Affiliation, and Telephone Number(s):**

Eric Jannazzo

Doctoral Candidate, Counseling Psychology 707-7372 [esjannazzo@gmail.com](mailto:esjannazzo@gmail.com)

**What is the purpose of this study?**

The purpose of this study is to better understand the processes involved in group therapy. (The surveys that you are being asked to complete do not directly deal with group therapy.) This information may contribute to research on improving group psychological treatment. You will be one of approximately 120 participants in this study.

**What are the possible discomforts and risks?**

There are no known risks involved with answering the survey questionnaires, but at any time you may decide not to answer specific questions, or may terminate the survey. If you experience undue distress at any point during the study you may also contact UT's Telephone Counseling Hotline (471-CALL) or the UT Counseling and Mental Health Center (471-3515).

**Will you receive compensation for your participation in this study?**

You will receive class credit to fulfill your research requirement for participation in this study. Should you also complete the survey at Time 3, you will be entered into a raffle with a chance to win a \$50 gift card to Alamo Drafthouse.

**If you do not want to take part in this study, what other options are available to you?**

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with The University of Texas at Austin or with the investigators of the study.

**How can you withdraw from this research study and who should you call if you have questions?**

There are alternative ways to fulfill your research requirement. If you wish to stop your participation in this research study for any reason, you should contact: Eric Jannazzo at 707-7372 or [esjannazzo@gmail.com](mailto:esjannazzo@gmail.com). You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits to which you may be entitled. Throughout the study, the researchers will notify you of new information that may become available and that might influence your decision to remain in the study.

In addition, if you have questions about your rights as a research participant, please contact Jody Jensen, Ph.D., Chair, The University of Texas at Austin Institutional Review

Board for the Protection of Human Subjects at (512) 232-2685 or the Office of Research Support and Compliance at (512) 471-8871 or email: [orsc@uts.cc.utexas.edu](mailto:orsc@uts.cc.utexas.edu).

How will your privacy and the confidentiality of your research records be protected?

Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. If the research project is sponsored then the sponsor also has the legal right to review your research records. Otherwise, your research records will not be released without your consent unless required by law or a court order.

If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.

By completing the survey, you agree that you have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you begin, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By completing the survey, you are not waiving any of your legal rights.

## **Appendix H: Initial Correspondence (E-mail) to Subject Pool (Control Group) Participants**

Hello subject pool participant:

You have been assigned to a research study that will ask you to fill out the same online survey 3 times at 3 different, designated time points during the semester. The online survey involves filling out several questionnaires that focus on your emotions, how you handle stress, and your feelings of hope, altruism, and self-compassion. **Your answers to the survey will be kept confidential at all times.** We anticipate that completing the entire survey will take approximately 10 minutes each time.

You are being asked to complete the online survey at each of the following three time points:

**TIME 1: any time between now and before 11:59pm on Friday, October 12.**

**(NOTE: IF YOU HAVE COMPLETED THE SURVEY PRIOR TO THE RECEIPT OF THIS EMAIL, YOU WILL HAVE TO RETAKE THE SURVEY FOR TIME 1. Unfortunately, the survey was not meant to be accessed prior to the receipt of this email.)**

**TIME 2: any time BETWEEN 12:01am on Monday, November 12 and 11:59pm on Friday, November 16<sup>th</sup>.**

**TIME 3: sometime between your last class and 11:59pm on December 21<sup>st</sup>.**

To fulfill your research requirement you **MUST COMPLETE THE SURVEY AT BOTH TIME 1 AND TIME 2!!!!** Failure to do so will mean you will not receive credit for participation. You will not be able to access the survey outside of the above windows.

You are also being asked to complete the survey at TIME 3, though you do not have to complete the survey at TIME 3 in order to receive credit for fulfilling your research requirement. If you choose to complete the survey at TIME 3, in addition to helping greatly with the research, you automatically will be enrolled in a raffle to win a **\$50 gift card to Alamo Drafthouse**. Winners of the raffle will be notified by December 23<sup>rd</sup>.

**Remember, if you are among the few who have completed the survey prior to receiving this email, you MUST complete it again before the end of Friday, October 12 to receive credit for TIME 1 participation.**

To be directed to the survey for Time 1, click the link below.

TIME 1 survey link: [http://www.surveymonkey.com/s.aspx?sm=Osu7\\_2fzdKb\\_2b9un2R9y4Hhiw\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=Osu7_2fzdKb_2b9un2R9y4Hhiw_3d_3d)

You will receive another email at the opening of the TIME 2 window; that email will contain another link you will need to click to complete the survey at TIME 2. You will also receive several emails in December with a link to the survey for TIME 3.

Once you have completed the survey at both TIME 1 **AND** TIME 2, within approximately one week you will receive a receipt for your research participation.

Attached is an information sheet with more details about the study. To understand what you need to do to fulfill your research requirement, the text in this email will be sufficient.

If you have any questions, please contact the primary investigator at [esjannazzo@gmail.com](mailto:esjannazzo@gmail.com).

Thanks so much for your cooperation.

## Appendix I: Second Correspondence (E-mail) to Subject Pool Participants

Hello all:

Below is the link to the TIME 2 Survey:

[http://www.surveymonkey.com/s.aspx?sm=x7qMbeLOwAqZa\\_2bUWF7gSMQ\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=x7qMbeLOwAqZa_2bUWF7gSMQ_3d_3d)

You have from now until 12 noon on **Friday, Nov 16th** to complete this survey. If you are unable to complete the survey within the specified window, you will not receive credit for subject pool participation. If that is the case, please do not contact the researcher, as at that point nothing can be done.

After completing the survey, you will receive a confirmation message that you have completed your subject pool requirement. Please do NOT check the EDP Subject Pool website to see your status, as this WILL NOT BE UPDATED until the end of the day on Friday, Nov 16. The confirmation message at the end of the survey will be your way of knowing you have satisfied your requirement. You will also receive a confirmation email from this email address sometime shortly after the 16th.

In mid-December, you will receive an email asking you if you would like to take the survey again at TIME 3, and a link to the identical survey at TIME 3 will be included. Taking the survey at TIME 3 would greatly help the research, and it would automatically enroll you in a drawing for one of the study's available \$50 gift cards to Alamo Drafthouse.

Thanks so much to everyone for their cooperation.  
Eric



## **Appendix J: Third Correspondence (E-mail) to Subject Pool Participants**

Hello again study participants:

Here is a link to the study survey at Time 3. It is identical to the surveys you have taken at Times 1 and 2.

[http://www.surveymonkey.com/s.aspx?sm=whlf2nPAv2BnSrpvHP5JMw\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=whlf2nPAv2BnSrpvHP5JMw_3d_3d)

Participation is not for class credit, and has no bearing on a class grade. Your continued participation, however, is GREATLY appreciated; in fact, the worthiness of this research depends on it.

In addition, should you participate, you will automatically be enrolled in a raffle for one of the \$50 gift cards to Alamo Drafthouse the study is giving away. Winners will be contacted via email by December 23, 2007.

The study will be available online until December 22.

After taking the survey, you will be brought to a short debriefing page that describes the purpose of the study.

Thanks again for all your cooperation.

Eric

**Appendix K: Follow-up Webpage After Final Subject Pool Collection Point**

(posted at

[http://www.surveymonkey.com/s.aspx?sm=khFm9YKjCM4Ld5J\\_2baQtIfA\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=khFm9YKjCM4Ld5J_2baQtIfA_3d_3d))

Entering your name and email address will allow the researcher to enter you into the Alamo Drafthouse gift card raffle. Your contact information will NOT BE LINKED TO YOUR SURVEY RESPONSES, WHICH WILL REMAIN COMPLETELY ANONYMOUS.

If you have won a gift card, the researcher will contact you by 12/23/07 at the email address you leave below. Instructions on receiving the gift card will be included in that email.

Thanks so much for your cooperation.

Please enter your FIRST AND LAST name:

---

Please enter the email address associated with your subject pool participation:

---

**Appendix L: Webpage Announcing Raffle Winners**  
(Posted at <https://webspaces.utexas.edu/esj92/www/rafflepage.html?uniq=nlafir>)

HERE ARE THE RESULTS FROM THE RAFFLE DRAWING FOR THE 3 ALAMO DRAFTHOUSE GIFTCARDS:

From the groups, the winning raffle numbers are 1009 and 1047.

From the EDP Subject Pool, the prizewinner is the student who entered: FERR, AUST.

Raffle winners should contact Eric Jannazzo at 512-707-7372 for instructions on how to claim the prize. Those in a group will need to turn in their winning raffle ticket.

Due to the holidays, prizewinners should expect to wait til early next semester to receive their giftcards.

For a debriefing on the study you have just participated in, please click [here](#).

Thank you so much for participating. Please contact Eric Jannazzo at [esjannazzo@gmail.com](mailto:esjannazzo@gmail.com) with any questions.

## **Appendix M: Study Debriefing Webpage for Treatment Group Participants**

(Posted at <https://webspace.utexas.edu/esj92/www/debriefing.html?uniq=nlafim>)

THANK YOU FOR PARTICIPATING IN THE STUDY! This page will provide you with some information on the study you just participated in. Please read on if you feel this information might be of interest to you.

### **PROCESS STUDY/GROUP THERAPY STUDY DEBRIEFING**

Recent reviewers of the group therapy literature have reached a consensus: dozens of studies in the past fifty years designed to investigate the mechanisms of change of group psychotherapy have failed to adequately answer a basic question: how does group psychotherapy work?

One construct that may shed light on the process of change in group psychotherapy is self-compassion. Drawing on the writings of various scholars of Buddhism, Professor Kristin Neff has theorized that self-compassion consists of three main components: self-kindness (the act of being gentle with oneself in instance of pain or failure); mindfulness (holding painful thoughts and feelings in balanced awareness, without over-identifying with them); and common humanity (the perception of one's experiences as part of the larger human experience).

This study examined the role of self-compassion in group psychotherapy. Participants in the study fell into two groups: a treatment group, formed by group members during the Fall, 2007 semester at UT Counseling Center; and a control group, formed by those participating in the EDP Subject Pool during the same semester.

An analysis of the data will demonstrate to what degree group therapy participants increase their levels of self-compassion over time when compared to a control group. It will then be determined to what degree this change in self-compassion might have led to other mental health changes, such as increased happiness, and decreased depression and anxiety. The role of self-compassion in change will be compared to the role played by two other constructs often cited as powerful predictors of group therapy outcome: hope and altruism.

Please feel free to contact Eric Jannazzo at [esjannazzo@gmail.com](mailto:esjannazzo@gmail.com) with any questions.

## **Appendix N: Study Debriefing Webpage for Control Group Participants**

(posted at <https://webpace.utexas.edu/esj92/www/debriefing.html?uniq=wx7n1c>)

THANK YOU FOR PARTICIPATING IN THE STUDY! This page will provide you with some information on the study you just participated in. Please read on if you feel this information might be of interest to you.

### **PROCESS STUDY/GROUP THERAPY STUDY DEBRIEFING**

Recent reviewers of the group therapy literature have reached a consensus: dozens of studies in the past fifty years designed to investigate the mechanisms of change of group psychotherapy have failed to adequately answer a basic question: how does group psychotherapy work?

One construct that may shed light on the process of change in group psychotherapy is self-compassion. Drawing on the writings of various scholars of Buddhism, Professor Kristin Neff has theorized that self-compassion consists of three main components: self-kindness (the act of being gentle with oneself in instance of pain or failure); mindfulness (holding painful thoughts and feelings in balanced awareness, without over-identifying with them); and common humanity (the perception of one's experiences as part of the larger human experience).

This study examined the role of self-compassion in group psychotherapy. Participants in the study fell into two groups: a treatment group, formed by group members during the Fall, 2007 semester at UT Counseling Center; and a control group, formed by those participating in the EDP Subject Pool during the same semester.

An analysis of the data will demonstrate to what degree group therapy participants increase their levels of self-compassion over time when compared to a control group. It will then be determined to what degree this change in self-compassion might have led to other mental health changes, such as increased happiness, and decreased depression and anxiety. The role of self-compassion in change will be compared to the role played by two other constructs often cited as powerful predictors of group therapy outcome: hope and altruism.

Please feel free to contact Eric Jannazzo at [esjannazzo@gmail.com](mailto:esjannazzo@gmail.com) with any questions.

## **Appendix O: Study Proposal to University of Texas Counseling and Mental Health Center**

### **Study: Self-Compassion in Relation to Group Therapy Eric Jannazzo, Doctoral Candidate, Investigator CMHC Proposal**

#### Overview of the Study

The consensus formed by the abundance of research on the efficacy of group psychotherapy is that it works. Generally it is found to be as efficacious as individual forms of psychotherapy, and superior to control conditions.

Yet despite a great many studies that have addressed the question, far less of a consensus has been reached in identifying the underlying mechanisms of change mobilized by the group therapy format. In the first edition of his widely-acclaimed book, “The Theory and Practice of Group Psychotherapy,” Irvin Yalom, generally considered to be the single most influential theorists in the group counseling arena, first posed a question that has inspired decades of research:

How does group therapy help clients? A naïve question, perhaps. But if we can answer it with some measure of precision and certainty, we will have at our disposal a central organizing principle with which to approach the most vexing and controversial problems of psychotherapy. Once identified, the crucial aspects of the process of change will constitute a rational basis for the therapist’s selection of tactics and strategies to shape the group experience and maximize its potency with different clients and in different settings (Yalom, 1970, p. 1).

Several recent reviewers of the group therapy literature have reached a consensus: dozens of studies in the past fifty years designed to investigate the mechanisms of change – or “therapeutic factors” - of group psychotherapy have failed to adequately answer Yalom’s question. In fact, “in spite of an ever-growing clinical and research literature... the specific mechanisms by which groups help people to change remain elusive” (Magen & Mangiardi, 2005, p. 352).

One construct that may shed light on such a “mechanism of change” in group psychotherapy is self-compassion. Drawing on the writings of various scholars of Buddhism, Neff has theorized that self-compassion consists of three main components: self-kindness (the act of being gentle with oneself in instance of pain or failure); mindfulness (holding painful thoughts and feelings in balanced awareness, without over-identifying with them); and common humanity (the perception of one’s experiences as part of the larger human experience). There are strong parallels between each of these three components and existing theory on the mechanisms of change in group psychotherapy; these parallels form the theoretical basis of this study, and will be explored in detail in my dissertation (a completed integrated analysis that explores these connections is available and may be furnished to CMHC upon request).

The purpose of the proposed study is to advance our understanding of the factors underlying the effectiveness of group psychotherapy. The study will be the first to investigate the potential for the construct of self-compassion to serve as the basis for a theoretical, organizing lens through which the power of group psychotherapy may be more clearly understood. The theoretical framework guiding this research is that involvement in process group psychotherapy can lead to fundamental changes within the client as evidenced by increased levels of self-compassion, and that these increased levels may predict and explain increased life-satisfaction and decreased psychopathology.

#### Relevance to the Practice and Training of Group Therapists

The group leader (indeed, any psychotherapist) is constantly confronted with the challenge of making therapeutic decisions, and has a nearly infinite number of options at every turn. How to be in the consulting room, how to respond to predictable patient behavior, how to respond to unpredictable patient behavior, what to encourage, what to discourage, what to illuminate, what to flesh out: these are but a small fraction of the general concerns intrinsic to the practice of psychotherapy. Central to the psychotherapists' ascension of the steep and at times daunting learning curve of therapeutic practice is an increased understanding of and comfort with what it is about the intervention being offered that works. McWilliams (2004) has termed this 'faith,' by which she means faith that the process means something good for your client, and faith in what it is about the process that makes this so.

By contributing to a theoretical understanding of what it is about group therapy that works, it is my hope that the proposed study will offer some guidance to the group therapist and the group therapy trainee who must choose among the myriad options in any given moment in the therapeutic process. Ultimately, such a central orientating principal may contribute to the creation of more 'faithful' group therapists and more effective group therapy.

#### Research Hypotheses

1) *Participants in a psychotherapy process group will have increased levels of self-compassion over time.*

No study has investigated the relationship between change in self-compassion and participation in process group psychotherapy. Findings in support of the significance of this relationship could assist clinicians in referring patients deemed deficient in self-compassion to therapy groups. Further, self-compassion researchers looking to investigate the effects of change in self-compassion levels could utilize the process group format as a method of self-compassion induction.

2) *Change in self-compassion will serve as a significant predictor of group psychotherapy participants' increased well being as evidenced by lowered depression and anxiety, and increased life satisfaction.*

If the second hypothesis is supported, this could have significant implications for group therapy research, as it would offer foundational support for a new answer to Yalom's important question: "how does group therapy help clients?" If this support is found, the clinical and training implications could be significant, as it may provide guidance to group therapists as they attempt to implement a maximally efficient and effective group intervention.

*3) Change in self-compassion will serve as a more powerful predictor of group therapy outcomes than another variable – hope - often presented in the literature as being predictive of outcome.*

Many lists of variables have been proposed as elements contributing to the change mechanism underlying group therapy, with by far the most influential being Yalom's 11-factor model, from which the hope variable is drawn. Dissatisfied reviewers of the group literature have called for an 'organizing theoretical structure' for these variables and any others that may not have as yet been targeted by researchers. If self-compassion were found to be a more powerful predictor of outcome than a different, theoretically well-established predictive construct, this would provide further foundational support for self-compassion as the kind of organizing theoretical structure that has been missing in the literature.

Two supplemental, exploratory questions will examine the effects of group level variables on individual participants. Each group, of course, has its own particular "tone" that may be conceived along a variety of dimensions; one of these dimensions is self-compassion. Due to any number of possible factors (self-compassion level of the leaders, vagaries of random sampling, members mutually influencing each other, etc.), some groups will be more self-compassionate than others. The following questions will provide potentially useful data on the impact the "group level tone" can have on group members.

*4) What is the relationship between change in self-compassion at the group level (i.e. how much the group as a whole gains in self-compassion) and change in depression, anxiety, and life satisfaction at the individual level (i.e. for individual group participants)?*

*\* This is an examination of a simple effect at the group level*

*5) To what extent does change in self-compassion at the group level impact the relationship between the individual's change in self-compassion and change in his/her psychopathology?*

*\* This is an examination of the interaction effect between group and individual level variables*

### Participants

A total of roughly 90 participants will provide good power; if fewer than 90 participants are available, research questions (see Hypothesis 3) may be modified to maintain good power for the primary investigation. These participants will be members of therapy groups containing the typical number of members (6-10 students).



Participants will sign a consent form giving details about the study and will be told that the study will investigate the experience of participating in a therapy group. Students will be debriefed as to the full purpose of the study on-line after they finish filling out the final set of measures and will be given phone numbers and an e-mail to reach the primary researcher if they have concerns or questions.

### Questionnaires

A pre-test/post-test design will be employed, with data collected at the first group meeting and the last meeting of the fall semester. Other than the consent form and a brief demographic form filled out only at pre-test, the pre-test and post-test assessment packet will be identical and will be comprised of five questionnaires: the Self-Compassion Scale, the State Hope Scale, the Beck Depression Inventory, the Beck Anxiety Inventory, and the Satisfaction with Life Scale. Each of these questionnaires may be found at the end of this proposal.

To test the length of time required to complete the packet, I have given the packet to five people; the length of time taken to complete all forms has ranged from 6-10 minutes, with an average of about 8 minutes, 30 seconds.

### Analysis

Multiple regression and contextual analysis will be employed to investigate changes in predictive variables (self-compassion and hope) and outcome variables (depression, anxiety, and life satisfaction), as well as the relationship between these changes, at both the individual and group level.

### Additional Data

In addition to my research questions, the dataset culled from this proposed study would foundationally address many questions potentially useful to CMHC. Such questions do not pertain to my research hypotheses and would not be directly addressed in my dissertation; I would, however, be more than happy to analyze the data and provide this kind of information to CMHC should CMHC decide it would be useful.

For example:

- 1) What is the degree of depression and anxiety within the population of UT students entering CMHC therapy groups? What is the level of life satisfaction?
- 2) How much do these variables vary across groups?
- 3) To what extent do these variables change over a semester of group therapy?
- 4) What is the relationship between these variables and the age, gender, and ethnicity of students participating in group therapy?
- 5) In which specific groups have students gained the most benefit over the semester, as measured by levels of depression, anxiety, and life satisfaction?
- 6) How do the levels of self-compassion, depression, anxiety, and life satisfaction on the part of the *group leader(s)* relate to the change in group members' psychopathology over a semester? (This would of course require giving the assessment packet to group leaders.)

Certainly other questions could be posed, as well, and we could brainstorm over what these might be and what would be useful. Additionally, if CMHC wanted to add additional forms to the assessment packet to widen the dataset for additional information, I would provide analysis of this data and a report of any findings.

#### Requirements of CMHC Group Leaders

- 1) During the PGI, briefly alerting students to the study being run, and explaining that group members have the right to choose to participate or not.
- 2) During the first group meeting, reading the consent form to the group and distributing the assessment packet to each participating student. (It is quite conceivable that the questionnaires could stimulate potentially useful conversation within the group.)
- 3) During the last group meeting, or perhaps at the end or even immediately after, distributing the post-test packet to each participating student.
- 4) At both time points, collecting the forms and bringing them to a pre-arranged drop-off location within CMHC.

Over the course of the semester, a total of 10-20 minutes of group meeting time (depending on whether the post-test packet is completed during or after the last meeting) would be devoted to the study.

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