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# Effects of Self-Other Distinctions on Attributes of Anxiety Symptoms

Nicole Scott
*College of William and Mary*

**Effects of Self-Other Distinctions on Attributes of Anxiety Symptoms**


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By


Nicole Scott


Accepted for  _____
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_____
Glenn Shean


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Meghan Sinton


_____
Karen Schaepe


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Abstract

This research aims to investigate the impact of positivity bias on perceptions and attributes given to Panic Disorder without Agoraphobia (PD) and Generalized Anxiety Disorder (GAD).  To evaluate these perceptions and attributes, the study uses a self made measure, the Self Regulation Model Questionnaire which aims to assess the five components of Leventhal's illness representation—identity, timeline, consequence, cause, and cure/control.  Participants were presented vignettes that describe symptoms of PD or GAD and asked to complete the questionnaire when thinking of themselves and while thinking of an unknown other.  Initial analyses found that three variables Self Acceptance, Other Acceptance, and Other Cause Environment, significantly differed based on disorder.  Analyses demonstrated a significant self-other effect for Timeline, Planning, Substance Use, and Behavior Disengagement.  Finally, symptom duration had a significant impact on the following variables:  Self Identity, Other Identity, Self Timeline, Other Timeline, Self Consequence, Other Cause Genetics, Self Cause Environment, Other Cause Environment, Self Venting, and Other Venting.  Results were unable to support the influence of participant anxiety levels or duration on self-other effects.

Effects of Self-Other Distinctions on Attributes of Anxiety Symptoms

Anxiety disorders are among the least diagnosed mental disorders, while being among the most common (Prins, M. A., Verhaak, P. F. M., Bensing, J. M., & van der Meer, K., 2008). People experiencing psychological distress, especially anxiety, often do not seek psychological help (Prins et al., 2008). This study attempts to gain insight into the variables that influence help-seeking behavior among those who experience symptoms of anxiety, specifically Generalized Anxiety Disorder (GAD) and Panic Disorder without Agoraphobia (PD). GAD is characterized by excessive anxiety and worry that is difficult to control and interferes in daily functioning (PsychiatryOnline). PD is characterized by recurrent, unexpected panic attacks, along with persistent concern about having another panic attack (PsychiatryOnline).

Prins and collaborators (2008) found that persons in the general population often believe they can work out psychological distress themselves and would be able to manage themselves. As such, positivity bias could be an important factor when investigating help-seeking behavior. "When comparing self and others, people typically judge the self as more positive (or less negative) than they do others on a range of dimensions, such as health, social skills or achievement" (Pahl & Eiser, 2005). This "positivity bias" can be attributed to the tendency to focus on the self and its attributes but neglect the attributes of others (Pahl & Eiser, 2005). Specifically, discrepancies occur in three ways when comparing oneself to others—specific coping knowledge, knowledge of coping efficacy, and predicted duration of negative affect. People inherently have more knowledge about their own coping efficacy, and therefore, predict longer negative affect for others than for themselves (Igou, 2008). Based on evidence of "positivity bias", this study hypothesizes that participants will predict shorter durations of illness symptoms for themselves than for others.

Leventhal's Self Regulation Model also takes into account individuals' view of their environment and their selves.  "The model is based upon three simple propositions: (1) People are active problem solvers, they see and define their worlds, select and elaborate coping procedures to manage threats, and change the way they represent problems when they obtain disconfirming feedback; (2) Problem solving processes occur in context; and (3) The energy expended or motivation to enhance health and to prevent and cure disease is directed to what is perceived to be the most immediate and urgent threat and is limited by resources and a satisfaction rule" (Leventhal, H., Leventhal, E., & Contrada, R. J., 1998).

Illness representations are essential components of the Self Regulation Model.  An illness representation is the result of the interpretation and elaboration of symptoms and sensations that create a complete picture or representation of an illness threat (Leventhal, H., Diefenbach, M., & Leventhal, E., 1992) which leads to different coping mechanisms, such as neglect, denial, or help seeking (Prins et al., 2008).   Illness representations have five components: (1) identity (disease label and its symptom indicators), (2) time-line (acute, cyclic, or chronic), (3) causes, (4) consequences (physical, social, and economic), and (5) cure/control (Leventhal et al., 1992). "The representation of a health problem may change if symptoms worsen or decline, if new symptoms appear, and/or if early symptoms fail to respond to intervention" (Leventhal et al., 1998).  "The attributes or dimensions of coping procedures should overlap with those of representations…Coping procedures have a 'natural,' perceived relevance to cause, e.g. we apply to the source of distress and they produce feedback that confirm or disconfirm their utility" (Leventhal et al., 1998).   In that light, this study hypothesizes that participants' positivity bias will decrease after learning that illness symptoms have continued for a prolonged period of time.

Prins and colleagues (2008) conducted a systematic review of seventy-one studies that investigated health beliefs in relation to anxiety and depression. Study participants varied in clinical status including those with diagnosable disorders and those from the general population. Depressed patients attributed more biological causes to depressive symptoms when compared to the general population. The general population usually attributed symptoms to environmental circumstances, such as stress and interpersonal difficulties. Similarly, depressed patients had a more negative outlook of recovery than non-depressed patients. Based on that review, this study hypothesizes that participants with higher current anxiety levels will perceive the duration of illness symptoms as longer than those with lower anxiety levels and that patients with higher levels of current anxiety will be more likely to attribute illness symptoms to biological explanations.

Overall, this study hypothesizes significant differences between self and other ratings on a number of variables. Specifically, (1) participants will predict shorter durations of illness symptoms for themselves than for others, (2) participants' positivity bias will decrease after learning that illness symptoms have continued for a prolonged period of time, (3) participants with higher current anxiety levels will perceive the duration of illness as longer than those with lower anxiety levels and (4) patients with higher levels of current anxiety will be more likely to attribute illness symptoms to biological explanations.

**Method**

**Participants**

Participants were undergraduates attending the College of William and Mary who were enrolled in an Introductory Psychology course. Participants were given credit for taking part in the study. There were 57 participants with 16 men and 40 women. The Generalized Anxiety

Disorder condition had 29 participants with 10 men and 19 women.  The Panic Disorder

condition had 28 participants with 6 men and 21 women.

**Materials**

     **Vignettes**

     The study used four vignettes—two phases for each disorder, Panic Disorder without

Agoraphobia (PD) and Generalized Anxiety Disorder (GAD).  The vignettes were modified

versions of DSM-IV-TR case studies (Frances & Ross, 2001).  Phase one provides a general

description of symptoms that would be diagnosable as a mental disorder.  Phase two describes

the symptoms as persisting for the next two months.  In addition, each vignette had three

versions—male character, female character, and self-referent character using the pronoun you.

     **Self Regulation Model Questionnaire (SRMQ)**

     The Self Regulation Model Questionnaire (SRMQ; see Appendix) is designed to assess

the five components of the model.  The measure included the Brief Illness Perception

Questionnaire (IPQ) which was designed to assess the five components of Leventhal's Self

Regulation Model.  The measure is shown to have good test-retest reliability with significant

associations with the longer IPQ (Broadbent, E., Petrie, K. J., Main, J., & Weinman, J., 2006).

In addition to the IPQ, the measure included additional questions to help evaluate the five

components.  *Identity* was assessed through one question that simply asked, "Would you give a

label or mental disorder diagnosis to the experience described?"  *Timeline* was also assessed

through one question which asked, "How long do you expect the experience/problem to last?"

The participant was given nine responses to choose from which ranged from just the rest of today

to over a year.  To measure *cause*, participants were asked, "How likely is each of the following

to be a cause of or major contributor to onset of the problem?"  Participants were presented with

eight responses that they were asked to rate on a 7-point likert scale from very unlikely to very likely.  To evaluate *cure/control*, the Brief COPE, was included.  The Brief COPE has been found to have similar results to the full COPE (Carver, 1997).  In addition, participants were asked, "How helpful would each of the following items be?" and asked to rate each of five items on a 7-point likert scale from not at all helpful to very helpful.  Two versions of the measure were created with the questions in differing order.

### Anxiety Sensitivity Index (ASI)

The Anxiety Sensitivity Index (ASI) measures anxiety sensitivity defined as "the fear of anxiety and physical sensations related to anxiety, and consists of beliefs that the experiences of anxiety/fear and related physical sensations have harmful somatic, psychological, or social consequences" (Sandin, B., Chorot, P., & McNally, R. J., 2001).  The ASI is the most widely used measure of anxiety sensitivity and it is believed to be a risk factor for anxiety disorders (Sandin et al., 2001).

### Big Five

The Big Five or Five-Factor Model is a widely used personality trait system.  The five factors were identified in non-clinical populations, but further research has indicated its possible utility in psychiatric patients as well (Costa & McRae, 2010).  The five factors include extraversion, neuroticism, openness, agreeableness, and conscientiousness.

## Procedure

Participants were presented with Phase 1 of a vignette with the following directions: "Please read the following description carefully.  Imagine that someone you don't know had the following experience.  The proceeding questions will refer to what you have read."  Participants were then asked to complete the SRMQ.  Next, Phase 2 of the vignette was presented with the

following directions: "Please read carefully the following description. It is an extension of the previous story. Continue to imagine that someone you don't know had the following experience. The proceeding questions will refer to what you have read." The participants then completed the SRMQ again. Next, participants completed the ASI and Big Five. The participants then reread the vignettes and completed two SRMQs like before, except the directions asked them to imagine that they were experiencing the described symptoms and the self-referent version of the vignettes were presented. Participants were randomly assigned disorders. In addition, each disorder had two versions where the order of presentation was varied.

Measures were presented to participants via a pdf file on computers. Participants were given a paper answer sheet to fill in responses.

## Results

The SRMQ used several questions to address each of the components of Leventhal's illness representations. To create variables more manageable for analysis, questions were combined for ease of analysis. *Identity* and *timeline* were both addressed by a singular question. Items that addressed *cause* created two variables—genetic and environmental. Cause Genetics consisted of one question. Cause Environment was created by finding the average rating of the seven questions related to environment. The *Cure/control* variable was encompassed by the items of the Brief COPE which includes fourteen scales. I created variables that correspond to each scale based on the sum of the ratings for those questions. The *consequence* variable is the sum of the ratings of two questions included in the IPQ that measure this dimension. From here forward Self will be used to refer to participants' responses when asked to think of themselves, while Other will be used to refer to participants' responses when asked to think of another unknown person.

**Differences Based on Disorder**

MANOVA tests revealed a significant difference between ratings based on disorder. Multivariate Tests were significant (Wilks' Lambda F(48)=3.907, p=.003) where the fixed factor was the condition/disorder while Self Emotional Support, Other Emotional Support, Self Acceptance, Other Acceptance, Self Cause Environment and Other Cause Environment were the dependent variables (DV). As shown in Table 1, Tests of Between-Subject Effects related significance to the following variables: Self Acceptance (a *Cure/Control* variable) (F(48)=7.221, p=.010), Other Acceptance (a *Cure/Control* variable) (F(48)=8.576, p=.005), and Other Cause-Environment (F(48)=7.394, p=.009). Differences based on disorder approached significance in the following variables--Self Emotional Support (a *Cure/Control* variable) (F(48)=3.412, p=.070) and Self-Cause Environment (F(48)=2.816, p=.099). Since the majority of variables did not significantly differ based on disorder, subsequent analyses did not distinguish by disorder.

The majority of participants' ratings were not significantly different based on presented disorder. However, results indicate that participants were less likely to attribute unknown others' symptoms to genetic causes for GAD than PD. Similarly, Self Acceptance and Other Acceptance were considered more likely for PD than GAD. In addition, Self Emotional Support was considered more likely for PD than GAD, while Self Cause-Environment was more likely for GAD than PD.

**Self-Other Effects**

Paired Samples T-tests were used to directly compare Self and Other ratings of each variable. As shown in Table 2, T-test analyses revealed a significant difference between Self and Other Timeline (t(55)=2.901, p=.005), Self and Other Planning (a *Cure/Control* variable) (t(54)=-2.813, p=.007), Self and Other Substance Use (a *Cure/Control* variable) (t(55)=2.761,

p=.008), and Self and Other Behavior Disengagement (a *Cure/Control* variable) (t(55)=2.766, p=.008).  T-test analyses also revealed that Self and Other Acceptance (t(55)=-1.923, p=.060) approached significance.

In support of the hypothesis, participants predicted shorter durations of illness symptoms for themselves when compared to predicted duration for an unknown other.   It should also be noted that participants rated themselves as more likely to use positive cure/control strategies, Planning and Acceptance, than an unknown other, while the opposite effect was shown for negative cure/control strategies, Substance Use, and Behavior Disengagement.

**Symptom Duration Effects**

Additional Paired Samples T-tests were used to investigate the impact of symptom duration on self-other effects by directly comparing differences between Phase 1 and Phase 2 which, as mentioned earlier, indicated that symptoms had continued for two months.  To conduct these analyses, new variables were created using the sum of all the questions designed to assess each variable while distinguishing by phase.  As shown in Table 3, T-test analyses revealed significant differences between phases for Self Identity (t(55)=3.042, p=.004), Other Identity (t(56)=3.218, p=.002), Self Timeline (t(55)=-5.758, p=.000), Other Timeline (t(56)=-.5.81, p=.000), Self Consequence (t(54)=-3.421, p=.001), Other Genetics (t(56)=2.203, p=.032), Self Cause Environment (t(54)=4.195, p=.000), and Other Cause Environment (t(56)=3.325, p=.002). These results demonstrate that for a number of variables the additional information indicating that the anxiety symptoms persisted for two months impacted participants' responses.

Among the variables that displayed significant differences between Phase 1 and Phase 2, additional Paired Sample T-tests were conducted to determine if the difference between Phase 1 and Phase 2 would be significantly different between Self and Other.  To conduct these analyses,

new variables were created that were the result of subtracting Phase 1 from Phase 2 for each Self and Other variable and then directly comparing the Self Difference with Other Difference. Significant differences were found for only one variable Cause Genetics, $(t(55)=2.194, p=.032)$. These results indicate that while the two month interval impacted participant ratings, the degree of influence was not mediated by Self or Other condition, except in one instance.

**Associations with Big Five and Anxiety Sensitivity Index**

Multivariate Analysis of Covariance with gender, disorder, and ASI median-split groups as fixed factors; and Self Consequence, Other Consequence, Self Timeline, Other Timeline, all Cause variables, and all Cure/control variables as dependent variables; and the Big Five factors (extraversion, neuroticism, agreeableness, conscientiousness, and openness) as covariates was conducted. Multivariate tests were insignificant for all variables. Moreover, Pearson correlations were conducted between ASI scores and genetic causes and timeline. No significant correlations were found.

## Discussion

This study hypothesized significant differences between Self and Other ratings on a number of variables. Specifically, (1) participants will predict shorter durations of illness symptoms for themselves than for others, (2) participants' positivity bias will decrease after learning that illness symptoms have continued for a prolonged period of time, (3) participants with higher current anxiety levels will perceive the duration of illness as longer than those with lower anxiety levels, and (4) patients with higher levels of current anxiety will be more likely to attribute illness symptoms to biological explanations.

**Differences Based on Disorder**

Initial analyses revealed significant differences between PD and GAD based on participant responses. Significance was related to three variables—Self Acceptance, Other Acceptance, and Other Cause Environment, while it approached significance in Self Emotional Support and Self Cause Environment. Acceptance was measured by the following statements— I've been accepting the reality of the fact that it has happened; and I've been learning to live with it. Participants were more likely to engage in Acceptance in the PD condition than in the GAD condition. It can be inferred that participants view GAD as more controllable or subject to change than PD, making Acceptance more likely in PD than GAD. In contrast, participants saw environmental variables as a greater contributor to symptom onset in GAD than PD. Environment includes failing a class, failing an exam, ending a romantic relationship, family problems/difficulties, losing a friend, stress, and excessive worry. This finding can be directly related to the diagnostic criteria for each disorder—GAD is characterized by worry and anxiety about life events while PD is characterized by unpredictable panic attacks. Lastly, Self Emotional Support, as measured—I've been getting emotional support from others; and I've been getting comfort and understanding from someone--was considered more likely with PD than GAD. The use of Emotional Support can also be related to feelings of control and the diagnostic criteria for PD versus GAD. Since the majority of variables did not significantly differ based on disorder, subsequent analyses did not distinguish by disorder.

**Self-Other Effects**

Data analyses confirmed the overarching hypothesis that there would be significant differences between Self and Other ratings on variables pertaining to illness representations; however, this significant difference occurred for only four variables, Timeline, Planning,

Substance Use, and Behavior Disengagement, out of nineteen. As hypothesized, participants predicted a shorter duration of illness symptoms for themselves than for an unknown other. Planning, a subscale of the Brief COPE, was measured by the following statements—I've been trying to come up with a strategy about what to do; and I've been thinking hard about what steps to take. Participants believed they were more likely to engage in Planning than an unknown other. The opposite pattern was found for Substance Use and Behavior Disengagement which are also subscales of the Brief COPE; participants believed that they were less likely than an unknown other to participate in those behaviors. Substance Use was measured by the following statements—I've been using alcohol or other drugs to make myself feel better; and I've been using alcohol or other drugs to help me get through it. Behavior Disengagement was measured by the following statements—I've been giving up trying to deal with it; and I've been giving up the attempt to cope. In addition, Acceptance approached significance with participants rating themselves as more likely to engage in Acceptance than an unknown other.

This pattern of results aligns with research on positivity bias which asserts that people believe they are more positive AND less negative than others on a range of dimensions (Pahl & Eiser, 2005). Participants believed that they were more likely to engage in positive coping strategies, Planning and Acceptance, but less likely to engage in negative coping strategies, Substance Use and Behavior Disengagement. However, not all of the strategies included in the Brief COPE reached significance. Most research on positivity bias use positive and negative traits, not behaviors. Future research on behaviors may shed some light on how positivity bias influences perceptions of behaviors.

Igou (2008) compared self-other effects between highly exceptional negative events (i.e. death of mother) with less exceptional negative events (i.e. a misunderstanding about money).

Results indicated a less pronounced self-other effect for the highly exceptional event than the

less exceptional event (Igou, 2008).  The difference was related to a decline in coping knowledge

for the self and other (Igou, 2008).  In that light, the experience of anxiety symptoms could have

been viewed as an exceptional event for participants who had no coping knowledge or strategies,

possibly decreasing self-other effects.

**Symptom Duration Effects**

This study failed to support the second hypothesis-- participants' positivity bias will

decrease after learning that illness symptoms have continued for a prolonged period of time.

Analyses found significant differences between Phase 1 and Phase 2 for the following

variables—Self Identity, Other Identity, Self Timeline, Other Timeline, Self Consequence, Other

Cause Genetics, Self Cause Environment, Other Cause Environment, Self Venting, and Other

Venting.  For Self Identity and Other Identity, participants were more likely to believe the

symptoms described a mental disorder in Phase 2 than in Phase 1.  For Self Timeline and Other

Timeline, participants predicted longer durations of symptoms in Phase 2 than in Phase 1.  Self

Consequence, as measured by "How much will the problem affect life?" and "How much does

the problem affect someone emotionally?" was given a higher rating in Phase 2 than Phase 1.

Participants believed that the knowledge that the symptoms have persisted for two months

implied that they impacted life significantly more.  Other Cause Genetics, or the belief that

genetics was a major contributor to the onset of the problem, decreased between Phase 1 and

Phase 2.  Interestingly, Self Cause Environment and Other Cause Environment decreased

between Phase 1 and Phase 2, as well.  When participants thought of themselves, they believed

the impact of environment decreased while the impact of genetics increased from Phase 1 to

Phase 2.  However, when participants thought of an unknown other, the impact of environment

and genetics decreased from Phase 1 to Phase 2.  Lastly, participants believed Venting was more

likely in Phase 2 than in Phase 1.   Venting was measured by the following statements—I've

been saying things to let my unpleasant feelings escape; and I've been expressing my negative

feelings.  Participants believe expressing emotions increases in importance as time elapses.

These findings indicate that symptoms persistence for two months had a noteworthy impact on

all components of illness representations—identity, timeline, consequence, cause, and

cure/control.

When considering the variables that exhibited significant differences between Phase 1

and Phase 2, additional analyses were conducted to directly compare differences in Self (Self

Phase 2 – Self Phase 1) with differences in Other (Other Phase 2 – Other Phase 1).  Significance

was related on only one variable—Cause Genetics.  For Self, genetics was considered a greater

contributor to onset in Phase 2 than Phase 1.  In contrast, for Other, genetics was considered a

greater contributor to onset in Phase 1 than Phase 2.  Participants' perception of the influence of

genetics were in direct opposition when considering themselves versus an unknown other.  When

participants thought of themselves, they considered environment as the trigger, but when

symptoms persisted the possibility of genetic influence increased.  For unknown others,

participants seemed unsure of cause since the perceived influence of genetics and environment

decreased in Phase 2.  Overall, this analysis indicates that symptoms persisting for two months

affect participants' perception of themselves and of others in similar ways.

Leventhal and colleagues (1998) assert that coping procedures are related to perceived

cause.  Participants were asked to list the top three important factors they believed caused the

presented problem.  The most reported answer for Self and Other, in both phases, was stress.

Since stress was viewed as the cause of onset, this may have mediated the impact of illness

duration on self-other effects.

**Association with Anxiety Sensitivity Index**

The final two hypotheses--participants with higher current anxiety levels will perceive

the duration of illness as longer than those with lower anxiety levels and patients with higher

levels of current anxiety will be more likely to attribute illness symptoms to biological

explanations—were also unsupported.  Research on health beliefs in relation to anxiety and

depression often disproportionately investigate depressive symptoms.  In addition, these studies

often include clinical populations as well.  More research on health beliefs specifically related to

anxiety symptoms need to be conducted to determine if the results found with depressive

symptoms apply to anxiety symptoms.

**Limitations**

This study has several limitations regarding its sample.  First of all, the sample is not

representative of the general population.  Subjects were recruited from Introductory Psychology

courses, and therefore, most likely were not even representative of the college's population by

age or social class.  In addition, the sample was predominantly female, and therefore, cannot be

generalized to males.

The questionnaire designed for this study could also be considered a limitation.  Three

components, timeline, identity and consequence, were each measured by only one or two

questions.  However, cure/control was measured using twenty-eight questions which were

subsequently turned into fourteen variables.  This large variation in measurement could have a

negative impact on analyses.  Moreover, the questionnaire included fifty-two questions that each

participant completed four times, introducing the possibility of response-sets.

The final limitation of the current study was the method of analysis. Paired-sample T-tests were used to assess the major hypotheses. Although this analysis was the only method that allowed the direct comparison of two groups, the method also introduced substantial error and the possibility of false significance.

**Summary**

This study offers preliminary insight into how positivity bias could be an important factor in discussing help-seeking behavior among those experiencing anxiety symptoms. As hypothesized, participants predicted longer durations of illness symptoms for an unknown other than for themselves. Unfortunately, other hypotheses were not validated, but future research with an improved research design needs to be conducted to make conclusive statements. Future research would aim to examine a larger, more representative sample. In addition, similar studies could be conducted with variations in method such as using different participants for the self and other conditions, including more anxiety symptoms, and attempting to streamline the questionnaire to more effectively assess the five components of illness representations. Additional demographic variables could also be included to account for possible confounds, such as stress. Subsequent research could also attempt to integrate how illness representations' five components and positivity bias influence factors that lead to help-seeking behavior and the types of treatments participants perceive to be the most helpful.

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**Table 1.**

*Significant Differences Between Ratings Based on Disorder*

| Variable | Disorder | Mean | SD | F | Sig. |
|---|---|---|---|---|---|
| Self Acceptance | GAD | 18.58 | 6.10 | 7.221 | .010* |
|  | PD | 22.42 | 4.17 |  |  |
| Other Acceptance | GAD | 17.41 | 5.94 | 8.576 | .005* |
|  | PD | 21.30 | 3.43 |  |  |
| Self Emotional Support | GAD | 21.86 | 7.19 | 3.412 | .070 |
|  | PD | 24.73 | 3.48 |  |  |
| Other Emotional Support | GAD | 22.27 | 6.29 | 0.679 | .414 |
|  | PD | 23.46 | 3.97 |  |  |
| Self Cause Environment | GAD | 5.70 | 0.96 | 2.816 | .099 |
|  | PD | 5.27 | 0.96 |  |  |
| Other Cause Environment | GAD | 5.73 | 0.61 | 7.394 | .009* |
|  | PD | 5.08 | 1.10 |  |  |

**\*** Significance ≤ .01

**Table 2.**

*Significant Differences Between Direct Comparisons of Self-Other Ratings*

|         | **Variable**                  | **Mean** | **SD** | **t**   | **Sig.** |
|---------|-------------------------------|----------|--------|---------|----------|
| Pair 1  | Other Timeline                | 12.01    | 3.55   | 2.901   | .005*    |
|         | Self Timeline                 | 10.71    | 3.85   |         |          |
| Pair 2  | Other Planning                | 21.65    | 4.30   | -2.813  | .007*    |
|         | Self Planning                 | 22.94    | 4.27   |         |          |
| Pair 3  | Other Substance Use           | 9.50     | 6.07   | 2.761   | .008*    |
|         | Self Substance Use            | 7.83     | 4.75   |         |          |
| Pair 4  | Other Behavior Disengagement  | 9.78     | 5.95   | 2.766   | .008*    |
|         | Self Behavior Disengagement   | 8.14     | 4.73   |         |          |
| Pair 5  | Other Acceptance              | 19.12    | 5.29   | -1.923  | .060     |
|         | Self Acceptance               | 20.28    | 5.59   |         |          |

* Significance < .01

**Table 3.**

*Significant Differences Between Phase 1 and Phase 2*

| Variable | Phase | Mean | SD | t | Sig. |
|---|---|---|---|---|---|
| Self Identity | Phase 1 | 1.51 | .50 | 3.042 | .004** |
|  | Phase 2 | 1.32 | .47 |  |  |
| Other Identity | Phase 1 | 1.54 | .50 | 3.218 | .002** |
|  | Phase 2 | 1.31 | .46 |  |  |
| Self Timeline | Phase 1 | 4.44 | 2.32 | -5.758 | .000** |
|  | Phase 2 | 6.26 | 2.19 |  |  |
| Other Timeline | Phase 1 | 5.22 | 2.37 | -5.810 | .000** |
|  | Phase 2 | 6.89 | 1.79 |  |  |
| Self Consequence | Phase 1 | 14.49 | 3.90 | -3.421 | .001** |
|  | Phase 2 | 15.72 | 3.41 |  |  |
| Other Consequence | Phase 1 | 14.78 | 3.11 | -1.708 | .093 |
|  | Phase 2 | 15.34 | 3.18 |  |  |
| Self Cause Genetics | Phase 1 | 4.37 | 1.81 | -0.521 | .605 |
|  | Phase 2 | 4.46 | 1.89 |  |  |
| Other Cause Genetics | Phase 1 | 4.66 | 1.76 | 2.203 | .032* |
|  | Phase 2 | 4.29 | 1.84 |  |  |
| Self Cause Environment | Phase 1 | 40.49 | 6.88 | 4.195 | .000** |
|  | Phase 2 | 36.54 | 8.44 |  |  |
| Other Cause Environment | Phase 1 | 39.38 | 6.65 | 3.325 | .002** |
|  | Phase 2 | 36.68 | 7.55 |  |  |
| Self Venting | Phase 1 | 7.80 | 7.80 | -1.936 | .058 |
|  | Phase 2 | 8.33 | 8.33 |  |  |
| Other Venting | Phase 1 | 7.85 | 7.85 | -2.068 | .043* |
|  | Phase 2 | 8.47 | 8.47 |  |  |

* Significance <.05
** Significance ≤.01

## Appendix

*Self Regulation Model Questionnaire*

Please answer the following questions based on your opinions.

Please indicate your answers on your answer sheet.

### *Timeline: Question\**

1.  How long do you expect the experience/problem to last?
    a.  Just the rest of today
    b.  The rest of the week
    c.  Two weeks to a month
    d.  Over a month
    e.  2 months
    f.  3-6 months
    g.  6-9 months
    h.  9 months to a year
    i.  Over a year

### *Cause Genetic: Question 2\**
### *Cause Environment: Questions 3-9\**

**How likely is each of the following to be a cause of or major contributor to onset of the problem?**

|  | Very Unlikely 1 | Somewhat Unlikely 2 | Not at all Unlikely 3 | Neutral 4 | Not at all Likely 5 | Somewhat Likely 6 | Very Likely 7 |
|---|---|---|---|---|---|---|---|
| 2. Genetics | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Failing a class | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. Failing an exam | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. Ending a romantic relationship | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. Family problems/difficulties | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. Losing a friend | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. Stress | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. Excessive worry | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### *Brief COPE\**
### *Cure/Control: Questions 10-37\**

**How likely would guess each of the following might be a response to the experience/problem described in the vignette?**

Not at

| | Very Unlikely 1 | Somewhat Unlikely 2 | Not at all Unlikely 3 | Neutral 4 | all Likely 5 | Somewhat Likely 6 | Very Likely 7 |
|---|---|---|---|---|---|---|---|
| 10. Concentrating my efforts on doing something about the situation I'm in. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. Taking action to try to make the situation better. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. Trying to come up with a strategy about what to do. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13.  Thinking hard about what steps to take. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. Trying to see it in a different light, to make it seem more positive. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. Looking for something good in what is happening. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. Accepting the reality of the fact it has happened. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. Learning to live with it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. Making jokes about it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. Making fun of the situation. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. Trying to find comfort in my religion or spiritual beliefs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. Praying or meditating. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. Getting emotional support from others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. Getting comfort and understanding from someone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. Trying to get advice or help from other people about what to do. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. Getting help and advice from other people. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. Turning to work or other activities to take my mind off things. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. Doing something to | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

think about it less, such as
going to movies,
watching TV, reading,
daydreaming, sleeping, or
shopping.

| | | | | | | |
|---|---|---|---|---|---|---|
| 28. Saying to myself "this isn't real." | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. Refusing to believe that it has happened. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. Saying things to let my unpleasant feelings escape. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. Expressing my negative feelings. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. Using alcohol or other drugs to make myself feel better. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 33. Using alcohol or other drugs to help me get through it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34. Giving up trying to deal with it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35. Giving up the attempt to cope. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 36. Criticizing myself. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 37. Blaming myself for things that happened. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### *Cure/Control: Questions 38-42\**

**How helpful would each of the following items be?**

| | Not at all helpful 1 | 2 | Somewhat helpful 3 | 4 | Helpful 5 | 6 | Very Helpful 7 |
|---|---|---|---|---|---|---|---|
| 38. Get comfort and understanding from someone (e.g., family, friend) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 39. Refuse to believe the experience is happening | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 40. See a family doctor | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 41. Take prescribed medication | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 42. Exercise | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### *Identity: Question 43\**

43.  Would you give a label or mental disorder diagnosis to the experience described?

Yes or No
If yes, what label/diagnosis would you use? _____

### *Brief Illness Perception Questionnaire\**
### *Consequence: Question 44and 51\**

**Indicate the number that best corresponds to your views:**

| | | | |
|---|---|---|---|
| 44. How much will the problem affect life? | 0<br>No affect at all | 1  2  3  4  5  6  7  8  9 | 10<br>Severely affects my life |
| 45. How long will the problem continue? | 0<br>A very short time | 1  2  3  4  5  6  7  8  9 | 10<br>Forever |
| 46. How much control does someone have over the problem? | 0<br>Absolutely no control | 1  2  3  4  5  6  7  8  9 | 10<br>Extreme amount of control |
| 47. How much does treatment help the problem? | 0<br>Not at all | 1  2  3  4  5  6  7  8  9 | 10<br>Extremely helpful |
| 48. How much would someone experience symptoms from the problem? | 0<br>No symptoms at all | 1  2  3  4  5  6  7  8  9 | 10<br>Many severe symptoms |
| 49. How concerned would someone be about the problem? | 0<br>Not at all concerned | 1  2  3  4  5  6  7  8  9 | 10<br>Extremely concerned |
| 50. How well does someone feel they understand the problem? | 0<br>Don't understand at all | 1  2  3  4  5  6  7  8  9 | 10<br>Understand very clearly |
| 51. How much does the problem affect someone emotionally? (e.g. does it make you angry, scared, upset or depressed?) | 0<br>Not at all affected emotionally | 1  2  3  4  5  6  7  8  9 | 10<br>Extremely affected emotionally |

52. Please list in rank-order the three most important factors that you believe caused the problem.

      1.   _____

      2.   _____

      3.   _____

      *Not included in participant questionnaire*