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Relationship Effects Of Action Control And Temperament Scale (reacts): Establishment And Validation Of An Interpersonal Sensitivity Scale

Alyssa Noelle Rowland

RELATIONSHIP EFFECTS OF ACTION CONTROL AND TEMPERAMENT SCALE (REACTS): ESTABLISHMENT AND VALIDATION OF AN INTERPERSONAL SENSITIVITY SCALE

by

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This thesis, submitted by Alyssa Noelle Rowland in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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Alyssa Noelle Rowland
08/20/2018

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ABSTRACT

Relationship Effects of Actions, Control, and Temperament Scale (REACTS) has been designed to fill a gap in the literature addressing emotional reactions to hypothetical partner behaviors. The REACTS (intially100 items) was reduced to 24 items following an exploratory factor analysis, resulting in 4 factors: Jealousy and Control, Relationship Consciousness, Infidelity, and Substance Use. Temporal stability was established using a college sample (n = 71). Internal consistency was established for both a college and an online national sample (N = 879) after accounting for inclusion/ exclusion criteria. While it was expected that convergent validity would be established with a measure of relationship maintenance difficulty and a weekly stress inventory, these correlations did not meet the a priori established cut off (r = .45). However, significant differences were found for gender and sexual orientation. Multiple one-way ANOVAs demonstrated no significant relationships among predictors and criterion factors. Future directions for research are discussed. and direct measurement of cortical functioning are warranted to clarify the impact of features on matrix reasoning performance.

CHAPTER I

INTRODUCTION

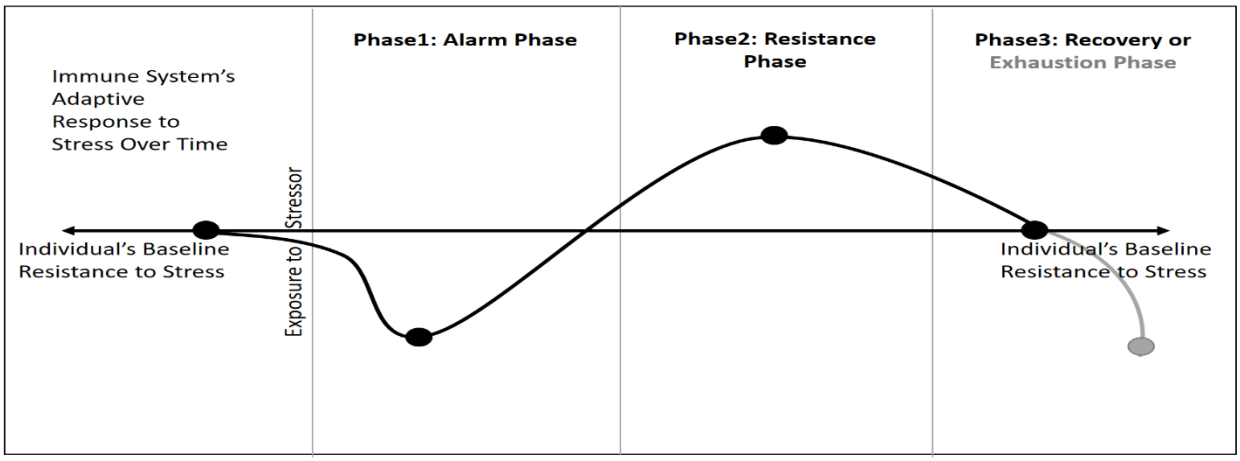
A vast amount of scientific literature has been developed exploring normative and pathologic physiological and psychological reactions to life stressors. Differences between daily normative exposures and episodic traumatic stressors remain a keen interest to researchers. The impact of interpersonal conflict, with specific regard to behaviors within romantic relationships, has not been thoroughly examined. A range of stress measurement strategies have been applied to advance these research objectives, however, there has not been a comprehensive scale developed to date that specifically examines interpersonal stressors and accompanying emotional reactions in the form of romantic relationships. A comprehensive inventory identifying groups of behaviors to which individuals are more sensitive to (e.g., infidelity, acts of control) would be useful to advance this line of research. The present study examines the psychometric properties of the Relationship Effects of Action, Control, and Temperament Scale (REACTS) for use in future stress and subsequent topics of research.

The Stress Adaptation Syndrome

Hans Selye's model for the physiological response to stressors (see Figure 1), set the precedent for stress reaction models (Selye, 1998). While stress is adaptive to an extent (Zapf, Dormann, & Frese, 1996), stress reactions can also take the form of physical, psychological, and/or emotional harm (Yehuda, Pratchett, & Pelcovitz, 2012; Ford, 2013). Selye described a three-phase process, which he labeled the "Stress adaption syndrome." The first phase, the alarm phase, is categorized by an activation of the sympathetic nervous system, otherwise known as the fight-or-flight response. During this

phase, the body produces catecholamines (e.g., adrenaline), which results in increased muscular tonus, and increased in both blood pressure and blood sugar. Additionally, an activation of the HPA axis produces cortisol (i.e., the stress hormone). Systems non-essential to the response, such as intestine and digestion, shut down. This can be thought of as the "get ready stage." During the second phase, the Resistance Phase, there is an even larger increase in cortisol. The body now adapts to stress and fights back. This can be damaging to the body if prolonged.

Figure 1. Hans Selye's model for the physiological response to stressors



The cessation or continuity of the exposure results in the last phase: either recovery or exhaustion. Selye posits that after the exposure to the stressor, (beginning 48 hours after the exposure and continues until the stressor no longer exists/posits a threat) the body will react accordingly; if the stressor no longer exists, the body will return to equilibrium and recover from the physiological changes. However, if the stressor persists for longer than 48 hours, the body remains in the fight mode and begins to wear down, as these resources cannot be maintained indefinitely. These resources are eventually depleted, and the body is unable to maintain normal function. Additionally, the initial

responses of the autonomic nervous system, such as sweating, increased heart rate, etc., may reappear. If this persists, long-term damage may result in ischemia and later even cell necrosis. The exhausted immune system no longer functions and is unable to fight back against the stressor and bodily functions become impaired, resulting in a breakdown in the system (Selye, 1998).

More recent research demonstrates that while similar patterns of stress adaptation syndrome occur for all humans, people react to stress in different severities (Hankin, Abramson, Miller, & Haeffel, 2004; Goldstein, 1995). Much current research, including meta-analyses, supports the claims of Selye regarding the physiological responses to stress such as increased heart rate and systolic and diastolic blood pressure increases (Lü, Wang, & You, 2016; Van der Vijgh, Beun, Van Rood, & Werkhoven, 2015). While the physiological responses have been well researched, a gap in the literature exists for emotional responses to forms of interpersonal stress. The REACTS seeks to fill this gap.

Differentiating Daily Hassles from Major Stressors

There is a distinction to be made regarding the form and consequences between what can be called "daily hassles" and major stressors. Examples of daily hassles include "having to wait," "preparing meals," "wasting time," or "filling out forms" (Kanner, Coyne, Schaefer, & Lazarus, 1981). Major stressors include life altering events such as a bereavement, rape, loss of a job, and different forms of physical and emotional trauma. For most daily stressors, people respond and recover within a day or two. However, for major stressors such as those previously mentioned, the impacts both psychologically as well as physically are much more severe and persevering.

As mentioned, one of the major differences between a daily hassle and a major stressor is the amount of time a person is impacted by such event. In the DSM-V there are currently two disorders that typically occur in response to major stressors and/or trauma: Acute Stress Disorder (ASD) and Post-Traumatic Stress Disorder (PTSD). Acute Stress Disorder can be diagnoses from two days after an exposure to a trauma situation up until one month after, and Post-Traumatic Stress Disorder (PTSD) is marked by a persistency of symptoms of at least one month or more. Apart from the time length requirements, PTSD and ASD have similar criteria for symptomology and experiences including depersonalization/derealization, numbing, and avoidance behaviors (e.g., avoiding the activity or area in which the trauma occurred) in addition to arousal behaviors (e.g., increased heart rate).

One previous review on ASD examined the distinction between normal and pathological stress reactions. One major factor identified in this study was impairment to day-to-day function (Bryant, Friedman, Spiegel, Ursano, & Strain, 2010). A person undergoing day-to-day stress can readily recover and continue to function, whereas a person suffering from ASD or PTSD is inhibited in their functions due to their lingering symptoms. Bryant et al. further indicated that the importance of distinguishing between pathological and normal-stress response lies in whether intervention in needed (2010). Typical day-to-day hassles do not require intervention or treatment, however, if these stressors are prolonged and ongoing, they can lead exhaustion and a development in pathology which would in-turn require a form of intervention if pathology persists.

Maladaptive reactions to everyday stress can also lead to a perpetual increase in stress and decrease life satisfaction (Moksnes & Haugan, 2015). While most daily

stressors are relieved relatively quickly, chronic stressors such as an illness, divorce, or a move, possess distinct theoretical implications for stress and illness (Hammen, Kim, Eberhart, & Brennan, 2009; Berntsen, Rubin, & Bohni, 2008). Previous research demonstrates the large impact persistent stress can have on aspects of life such as increasing rates of depression (Conway, Slavich, & Hammen, 2015; Hankin, Abramson, Miller, & Haeffel, 2004; Monroe & Reid, 2009). Furthermore, other studies conducted with young adults demonstrate the impact that life stressors as well as frequency of interpersonal conflicts can have on the development of unipolar depression (Davilla, Hammen, Burge, Paley, & Dail, 1995; Flynn et al., 2010; Hankin et al., 2005; Shih, 2006). One study looked at how cognitive styles (i.e., inferences about causes and consequences of events) interact with negative events, which included forms of life stressors, and found that this interaction between reactions and the stressors predicted depressive symptomology (Hankin, Abramson, Miller, & Haeffel, 2004).

In addition to depression symptomology as a whole, interpersonal stress has been demonstrated to specifically impact self-worth, negative affect, and feelings of hopelessness (Rudolph, 2009). Among adolescents, the reactions to interpersonal stress, especially maladaptive coping mechanisms, have been associated with symptoms of depression (Connor-Smith et al. 2000; Flynn and Rudolph 2007, 2010; Wadsworth and Berger, 2006). Previous research suggests that self-generated interpersonal stress, such as stress created internal worries associated with attachment, is associated with anxiety (Hankin et al., 2005). These findings suggest that maladaptive coping mechanisms associated with insecure attachment styles put those who engage in these coping styles at a higher risk for anxiety. More extreme reactions to stressors could include the

development of a personality disorder and other severe forms of pathology (Chanen, 2017; Scott, Zalewski, Beeney, Jones, & Stepp, 2017).

Interpersonal Stress and Conflict (Relationship Strain)

Many studies examine relationship preferences, such as personality types, hobbies, and other traits (Jonason Garcia, Webster, & Fisher, 2015; Kenrick, Groth, Trost, & Sadalla, 1993; Li, Bailey, Kenrick, & Linsenmeier, 2002; Li & Kenrick, 2006). These studies tend to focus on positive aspects regarding other individuals and had participants produced preferences and rated these preferences according to their impact and importance. Others have looked at specific "deal breakers" (i.e., reasons for rejection or breaking up) for relationships (Jonason et al., 2015). Specifically, Jonason et al. (2015) ran multiple studies: one study examined differences between men and women and "deal breakers" for relations by having participants rate their level of likelihood (i.e., yes or no) of either having sex with, or have a long-committed relationship for seven categories of deal breakers (i.e., unattractiveness, unhealthy lifestyle, undesirable personality traits, different religious beliefs, different relationship goals, and divergent mating psychologies).

In a second study, Jonason et al. (2015) weighed "deal breakers" and "deal makers" against one another to determine whether the desired traits or the undesired traits would be more impactful on an individual's decision to pursue a relationship. The authors concluded that people will weigh negative traits more than positive traits when evaluating potential mates (Jonasen, et al. 2015). These findings were consistent with Prospect Theory which posits that negative information and/or losses are typically weighed more heavily than gains and positive information (Kahneman & Tversky, 1979).

However, most studies typically looked at all-or-nothing situations and to date, no single measure has examined specific reactions to behaviors within a current relationship. As opposed to a dichotomous choice of yes and no to a relationship based on a factor, the current study aims to create and validate a scale for measuring the emotive reactions of individuals to specific hypothetical behaviors within a current relationship; specifically, the scale will measure how bothered and upset an individual is/would be by their romantic partner engaging in the stated behavior. Simpson, Laham, and Fiske (2016) examined how relational context effects on moral judgment and found mixed results on the impact of relational context on moral decision-making. Given these potential impacting factors, the phrasing of the proposed scale posits that a behavior occurs within an established relationship, as opposed to having the participant make a decision on whether to begin a relationship or not.

Moreover, previous research has supported the theory that maladaptive interpersonal tendencies predict interpersonal stress and conflict within relationships (Shih & Eberhard, 2008; Potthoff, Holahan, & Joiner, 1995; Davila, Hammen, Burge, Paley, & Daley, 1995). Part of these maladaptive interpersonal tendencies may include or be mediated by the emotional response; the specifics of these responses may be better predicted and intervened with by identifying which types of interpersonal conflicts (i.e., hypothetical behaviors) result in the largest negative emotional response (e.g., by means of the REACTS).

Interpersonal Stress Measurement Considerations

General stress has become an area of interest in the pathology and assessment literature. One of the most widely known and used measures was created by Brantley and

Jones in 1989, and since, there has been a surge in research on the topic as well as other domains for measuring stress. Harkness and Monroe (2016) examined the ways in which stress is defined and researched. In their study a model is provided demonstrating how the physiological and psychological response to a stressor is not only brought on by the exposure to a stressor, but the response is then mediated by the behavioral (e.g., sleep, diet), psychological (e.g., personality, cognitive styles), environmental (e.g., prior stress exposures), and neurological (HPA axis, genetics) components and reactions in-turn resulting in the development or no development of illness.

Many measurements used however, typically focus on exposure to stressors (i.e., frequencies of exposure) and/or the physiological response to the stressors. One example of a check list of stressors is Holmes and Rahe's 1967 scale: Social Readjustment and Rating Scale (SRRS) which consists of 42 life events (e.g., pregnancy, divorce) used to measure life changes that cause stress (Noone, 2017). While researchers attempted to unbias people's responses by giving each event an apriori weight, such a decision takes away the individual factor of peoples' reactions to stress (e.g., a single woman becoming pregnant vs. a secure relationship planning a pregnancy). A later developed measure which used Holmes and Rahe's measure as a basis for theirs, took the checklist idea further by providing a 7-point Likert-scale for the responses (Simons, Angell, Monroe, & Thase, 1993). The Life Experiences Survey (LES) is a checklist of up to 60 life events which can be rated 1 ("extremely negative") to 7 ("extremely positive"). This aspect of the scale allows for individual differences of the impact of the stressor to be measured. However, as Harkness and Monroe pointed out in their study, this too introduces new concerns. For example, the Simons task (1993) demonstrates that an individual's

personality, cognitive schemas, and other individual specific aspects can bias response in addition to their predisposition to psychological conditions (De Houwer, 2003).

Fortunately, one of the aims of the REACTS is to identify personal sensitivity to relationship stressors in addition to identifying response patterns within groups. The concept of interpersonal stress has been researched mostly with the checklist form and a majority of the research has been conducted on adolescents. One of the adult measures which includes a section dedicated to relationships is the Daily Stress Inventory(DSI) by Brantley and Jones (1989). A more temporally encompassing form of the Daily Stress Inventory, labeled the Weekly Stress Inventory and Weekly Stress Inventory-Short Form (WSI-SF) have been validated against the DSI and are able to measure the occurrence and impact of stressors over the course of a week, rather than a single day (Brantley, Bodenlos, Cowles, Whitehead, Ancona, & Jones, 2007). This measure, while also valid, takes less time to complete and therefor will be used in the current study.

While the Daily Stress Inventory and Weekly Stress Inventory (Brantley & Jones, 1989; Brantley et al., 2007) is a commonly used measure which exists to measure everyday stress and includes a subscale for interpersonal sensitivity, there is no comprehensive scale to date measuring the emotional response and sensitivity to behaviors performed by a partner. The REACTS fills this gap in the literature by providing a comprehensive measure for interpersonal sensitivity to stressors that occurs within the context of a romantic relationship. Given that the DSI provides this subscale which contributes to overall measures of occurrence of stressors and their emotional impact, the WSI it will be used as a measure for convergent validity of the REACTS.

A similar scale that will also be used for convergent validity is the Acquaintance Description Form-F2 (ADF-F2). The 70- item ADF- F2 (Wright, 1985, 1989) has been used widely in friendship research. The ADF- F2 generates subscale scores on 13 different dimensions measuring aspects of the respondent's relationship with a target friend and is designed to permit customization in terms of defining characteristics of the friendship. The current study will rely on an abbreviated version of the ADF- F2 that focuses exclusively on the personal maintenance difficulty (MD- P subscale) of the respondent's "best friendship." Personal maintenance difficulty is defined by the ADF-F2 as the extent to which the relationship was seen to be "frustrating, inconvenient, or unpleasant due to the habits, mannerisms, or personal characteristics" of the best friend. Internal ($r = .62$) and test- retest ($r = .79$) reliability has been established previously for the MD- P subscale of the ADF- F2. The ADF- F2 subscales have been linked to a wide range of concurrent validity indices (Green & King, 2009; King & Terrance, 2006; Mugge et al., 2009; Walter & King, 2013; Wise & King, 2008). Specifically, the Best Friendship Maintenance Difficulty subscale of the ADF-F2 will serve as a convergent validity indicator. Similarities in items such as behavior traits are expected to be a similar stressor in both a best-friendship as well as a romantic relationship, thus a person may be similarly bothered in both scenarios providing further evidence for convergent validity. While the Weekly Stress Inventory (DSI; Brantley et al., 2007) is a commonly used measure which exists to measure everyday stress over the course of a week, including interpersonal stressors, there is no comprehensive scale to date measuring the emotional response and sensitivity to behaviors performed by a partner within a current relationship. The current study will further the work of Brantley and Jones while opening new avenues

in the field of psychology. Given the utility of stress measures in both research and clinical settings, a scale specific to interpersonal sensitivity within romantic relationships would add to a researcher's possibilities within the realm of studies and a clinician's store of available assessment tools.

REACTS Content Domain

The Relationship Effects of Action, Control, and Temperament Scale (REACTS) consists of 100 items. The items consist of behaviors that a romantic partner could engage in (i.e., hypothetical behaviors occurring within the context of a relationship). Appropriately, the REACTS designed measure the amount of emotional reactivity in the form of "bothersome/upsetting" responses. The participant is instructed "When reading the following behaviors, imagine how you would feel if your romantic partner engaged in these behaviors. Think of how you would feel most often, or most of the time, about the given situation. Rate the extent to which the following behaviors bother and upset you." After reading each item the participant rates their emotional proposed reaction to the hypothetical behavior from on a 6-point Likert scale. The scale ranges from 1 ("does not bother me at all") to 5 ("extremely bothered and upset"), thus determining behaviors performed by a romantic partner that serve as emotionally reactive triggers for the person completing the questionnaire. Given the general logic of the nature of this new content domain, this information would likely be valuable to stress researchers. The items include a range of behaviors from "Your partner rolls their eyes at something you've said" to "Your partner appears to be overly friendly with your same-sex friends."

Potential Research and Clinical Implications

As Vanaelst, De Vriendt, Huybrechts, Rinaldi, and De Henauw demonstrate, it is possible to maintain a clear and reliable focus on recent stressful exposures without needing to evaluate previous exposure to childhood or lifetime stress events (2012). Although this information may be useful for implication and conclusions, the current scale aims to measure and examine current emotional reactions to potential relationship stressors as opposed to previous experiences of exposure to stressors.

Previous research demonstrates a relationship between emotional dysregulation and the development of Borderline Personality Disorder (BPD; Neacsiu, Herr, Fang, Rodriguez, & Rosenthal, 2015). Neuroticism, which contributes to Narcissistic Personality Disorder (NPD) Obsessive Compulsive Personality Disorder (OCPD), Avoidant Personality Disorder (APD), and Dependent Personality Disorder (DPD; Miller, Lynam, Vize, Crowe, Sleep, Maples-Keller, & ... Maples-Keller, 2018; Fang, Siev, Minichiello, & Baer, 2016; Wright, Pincus, & Lenzenweger, 2013; Bienvenu & Brandes, 2005; Bachrach, Croon, & Bekker, 2012) has been found to be associated with interpersonal sensitivity (Bech & Rickels, 2016). In a study conducted by Vater and Schroder-Abe (2015), the authors demonstrate supportive evidence that personality and traits such as neuroticism, are linked to relationship satisfaction through intrapersonal and interpersonal processes throughout social interactions.

Another study looked at how cognitive styles (i.e., inferences about causes and consequences of events) interact with negative events, which included forms of life stressors, and found that this interaction between reactions and the stressors predicted depressive symptomology (Hankin, Abramson, Miller, & Haeffel, 2004). In addition to

depression symptomology as a whole, interpersonal stress has been demonstrated to specifically impact self-worth, negative affect, and feelings of hopelessness (Rudolph & Zimmer-Gembeck, 2014; Rudolph & Klein, 2009). Among adolescents, the reactions to interpersonal stress, especially maladaptive coping mechanisms, have been associated with symptoms of depression (Compas, Connor-Smith, 2004; Flynn and Rudolph 2010, 2012). Given the relationship between emotional dysregulation, neuroticism, and interpersonal sensitivity, the REACTS could serve as concurrent tool in the evaluation and differentiation in personality disorder diagnosis.

In addition to individual therapy with regard to anxiety, depression, and personality disorders, the REACTS could be used as a tool in couple's therapy. The REACTS potentially could help identify, acknowledge, and address common relationships stressors within a specific relationship. Previous research indicates that suppression of expressed emotions (i.e., emotional responses to behaviors and conflicts within relationships) is linked to negative relationship outcomes (Gross, 1998), such as consideration of ending the relationship (Impett, Kogan, Enlish, John, Oveis, Gordon & Keltner, 2012; Impett, Le, Kogan, Oevis & Keltner, 2014). Therefore, the REACTS would provide a medium to bring suppressed emotions to light.

Furthermore, Gross (2002) found that cognitive appraisal (i.e., reexamination of the interpretation of an event) of conflicts was associated with more positive outcomes in relationships. In a study examining marital quality, a 2-year follow up demonstrated positive effects of cognitive appraisal in relationship quality (Finkel, Slotter, Luchies, Walton & Gross, 2013). Through the REACTS, an individual would be able to compare

their level of emotional reaction to a normative group and facilitate reappraisal of similar situations (e.g., use of substances after becoming upset).

Not only is there support for cognitive reappraisal improving romantic relationship satisfaction, but similar trends of emotional suppression leading to negative outcomes have been found among non-romantic interpersonal relationships (English, John, Srivastava & Gross, 2012; Srivastava, Tamir, McGonigal, John & Gross, 2009). As previous research suggests, emotion suppression leads to communication disruptions (Butler, Lee, & Gross, 2007) while also increasing interpersonal behavior (Ben-Naim, Hirschberger, Ein-Dor, & Mikulincer, 2013), in turn leading to relationship dissatisfaction (Vater & Schroeder-Abe, 2015). By identifying triggers of negative emotions within the behaviors performed by a partner, interventions may help target behavior change as well as the incorporation of cognitive appraisal to improve relationship satisfaction.

Project Aims

This study aimed to identify a comprehensive list of behaviors that could pose as interpersonal stressors specific to romantic relationships for respondents. These hypothetical behaviors performed by partners in relationships were clustered into 16 categories (Abuse, monitoring, infidelity, ego and pride, support, life goals, behaviors, relationship effort, arguments, emotional expression, jealous, friends, life style, communication, lying, and substance use), and the factor structure of the inventory will be established and validated in the current study. Four factors are expected to emerge during the factor analysis (Relationship Factors, Trust, Traits of Partner, Partner Behaviors). The internal and test-retest reliability of each scale was established, along

with evidence of convergent, discriminant, concurrent, and criterion-related validity. An attempt was also made to establish score cutoffs for the identification of respondents at elevated risk of psychological problems due to elevated sensitivity to interpersonal stress.

The current investigation aimed to examine the factor structure of the REACTS using exploratory and confirmatory factor analytic techniques and cross validation within a national sample; high-risk groups were defined operationally using 90^{th} percentile threshold scores.

Internal consistency and test-retest reliability estimates were calculated using both dimensional and "high risk" categorical REACTS scores. Concurrent and criterion-related validity estimates were derived using a variety of comparable interpersonal stress indices and maladjustment indicators. Discriminant validity was established through tests of the significance of correlation strength differences (Lee & Preacher, 2013) between REACTS-concurrent and REACTS-extraneous indicators. The following standards were set a priori to define acceptable evidence of reliability and concurrent validity provided by: alphas ≥ .70 (Nunnally, 1967); test-retest coefficients ≥ .70 (Cook & Beckman, 2006; Cronbach, 1951, 1970; Peterson, 1994; DeVon et al., 2007); kappa coefficients ≥ .50 (Cicchetti & Sparrow, 1981; Viera & Garrett, 2005); and concurrent validity coefficients ≥ .45 (DeVon et al., 2007). Missing scores were excluded pairwise.

CHAPTER II

METHOD

Participants

Undergraduate College Sample. Participants were undergraduate students who were recruited through the on-campus psychology research participant pool at a small American university in the Midwest. A total of 71 students (females = 68.5%, males = 30.5%) completed the first in-person REACTS and demographic questionnaire and 57 of those students completed the REACTS on a second occasion. The mean age for the sample was 19.74 (SD = 1.40, range from 18 to 29). Of those who reported ethnicity, 84.2% of the sample identified themselves as Caucasian, 4.0% as Black or African American, 7.9% as Hispanic or Latina, 2.5% as Asian, 1.5% as American Indian or Alaskan Native, 0.5% as Native Hawaiian or Pacific Islander, and 0.5% as other. During data-cleaning procedures, fourteen cases were excluded because the participants only completed the first phase of the study.

National Sample. An initial online national participant sample (N = 1416) was recruited through Amazon's Mechanical Turk (MTurk). Participant's whom completed less than 10% of the survey questions (n = 479) were excluded from the analyses. Participants whom completed more than 10% were compensated financially for their time. A validity check was incorporated into the surveys to ensure careful reading of questions: participants were instructed to select "yes" to the question, indicating they were reading carefully. Those who did not select yes (n = 5) or did not answer the validity check question (n = 7) were removed from the sample. To ensure participants took a sufficient amount of time and answered carefully, a cut-off point of the 10% of

remaining participants who answered fastest (n = 47) were removed from the data set. Extreme outliers may bias or distort the results of statistical tests (Tabachnick & Fidell, 2007). Therefore, these participants were excluded from the sample. The remainder of participants (N = 879) were used for data analyses. Of the 879 remaining participants, 78.5% identified as female, 19.7% identified as male, and 1.5% identified as a non-binary gender term (e.g., transgender, gender-non-conforming). Participants were given the opportunity to select all race/ethnicities they identified with and 88.7% of the sample identified themselves as Caucasian, 11.3% as Black or African American, 7.2% as Hispanic or Latina, 4.6% as Asian, 2.5% as American Indian or Alaskan Native, 0.5% as Native Hawaiian or Pacific Islander, and 8.4% identified as multiracial or other. Regarding sexual orientation, 84.3% of the sample self-identified as heterosexual, 9.3% as bisexual or pansexual, 0.9% identified as asexual, 3.5% as gay or lesbian, and 2% of respondents did not report their sexual orientation.

Procedure

The national sample (N = 1,000) was recruited through Amazon's Mechanical Turk (MTurk). Participants were given an online consent form and provided an electronic signature if they choose to participate in the study. Following informed consent, participants were directed to and completed the surveys and assessments in the following order: Relationship Effects of Action, Control, and Temperament Scale (REACTS), Weekly Stress Inventory (WSI), Acquaintance Description Form (ADF-F2), Experiences in Parental Relationships (EPRS), Center for Epidemiologic Studies Depression Scale-Revised (CESD-R), and Generalized Anxiety Disorder 7-item (GAD-7) scale, and a

demographic questionnaire. Participants received financial compensation for their participation in the study, distributed by Amazon.

The test-retest sample of 71 undergraduate psychology students was asked to complete the REACTS twice over a period of two weeks, and 57 of these students completed both testings. Informed consent forms were given to the undergraduate psychology student participants and the form and nature of the experiment were verbally explained. For those who chose to participate in the study, the participants were given a participant code to maintain confidentiality. The participant codes and names were kept on a code sheet for the follow up session, to maintain that participants use the same code both times. A separate sign in sheet was used to grant participants credit. The participants received paper copies of the REACTS. A demographic information sheet was also given. Participants were instructed to fill out the surveys in order and to answer as honestly as possibly. Two weeks later, student participants were given the REACTS scale again (N = 57) to assess for test-retest reliability. Instructions for the scale were given. Following the second session, a verbal debriefing of the study, along with a debriefing form was given with information regarding the purpose of the study and contact information for the researcher and advisor.

Measures

Weekly Stress Inventory (WSI). Brantley's Weekly Stress Inventory (WSI) is an 87-item self-report measure for assessing the number and relative degree of stress that minor stress-inducing life events incur over the course of a week. For each item, an individual indicates whether or not the event occurred, the level of stress experienced for those which occurred (1 "occurred but not stressful" – 7 "extremely stressful") and

indicate whether the event occurred on three or more occasions over the course of the week. Two scores can be derived from the WSI: a WSI-Event score which indicates the number of stress events the person experienced over the course of the week and the WSI-Impact score which is the total of the perceived stress ratings. The scale was based on the original Daily Stress Inventory (DSI) and created to encompass relatively minor events that have a high potential of occurring during an average individual's week (Brantley & Jones, 1989). There are eight broad domains included in the WSI: Work/school, Money, Transportation, Marital/Family, Household, Social, Personal, and Leisure. The WSI has been normed for adults. High internal consistency (WSI-Event, $\alpha = .92 - .96$; WSI-Impact, $\alpha = .93 - .97$) has been established across multiple studies (Brantley, 1989; Mosley et al., 1991). Test-retest reliability (WSI-Event, $r = .83$; WSI-Impact, $r = .80$) has been established for the scale as well, suggesting this is a stable, reliable measure.

Acquaintance Description Form-Short Form (ADF-SF). The Acquaintance Description Form-F2 Short Form (ADF-F2 SF) is a 70-item self-report assessment is a measure intended to various aspects of non-romantic close relationships (Wright, 1969). The ADF-F2 SF scales include: Measures of Relationship Strength, Measures of Relationship Values, Measures of Tension/Strain, Relationship differentiation, and a Measure of Response Bias. The ADF-F2 SF subscale Maintenance Difficulty, personal (MD-P), which includes six items, was used for the current study. This scale measures the extent to which an individual finds their relationship with a designated person (i.e., Target person-TP) difficult, inconvenient, or irritating due to one or more of the TP's behaviors, interpersonal communication style, or personality characteristics, specifically relating to the person, rather than situational circumstances. The six items were rated on a

6-point Likert scale ranging from 0 ("never, definitely not") to 6 ("always, without exception, definitely"). Two of the items on the MD-P were reversed scored. If items were skipped, the average of the remaining items are used to fill this score. Internal (α = .62) and test- retest (r = .79) reliability has been established previously for the MD- P subscale of the ADF- F2 (Wright, 1985, 1989). Additionally, the ADF- F2 subscales have been linked to a wide range of concurrent validity indices (Green & King, 2009; King & Terrance, 2006; Mugge et al., 2009; Walter & King, 2013; Wise & King, 2008).

Experience of Parental Relationships Scale (EPRS). The Experience of Parental Relationships Scale (EPRS) is a based on the Experiences in Close Relationships scale (ECR; Brennan, Clark, & Shaver, 1998) and was designed to specify the attachment styles directed toward each parent (Limke, A., & Mayfield, P. B., 2011). The EPRS consists of 22 items, using a 7-point Likert scale (1 = *disagree strongly*; 7 = *agree strongly*) to identify the attachment style to either mother and/or father as secure, anxious, or avoidant. Internal consistency is reported as being high for all subscales on the EPRS (Cronbach's $\alpha \geq .84$). EPRS of anxious attachment style and avoidant attachment style directed toward relations with the respondent's father are labeled EPRS-Fanx and EPRS-Fav, respectively. EPRS anxious attachment style and avoidant attachment style directed toward the respondent's mother are labeled EPRS-Manx and EPRS-Mav, respectively.

Center for Epidemiologic Studies Depression Scale-Revised (CESD-R). The Center for Epidemiologic Studies Depression Scale-Revised (CESD-R) is a 20-item scale based on criteria for a major depressive episode in the DSM-V. Items are rated on the extent to which an individual experienced each symptom over the prior week and gives a

rating of overall depressive symptomology. Sub-scores of Anhedonia, dysphoria, sadness, decreased interest, appetite, sleep, thinking and concentration, guilt, tiredness/fatigue, movement/agitation, and suicidal ideation may also be calculated. Based on these scores, the likelihood that the person is experiencing a major depressive episode is stated categorically (i.e., Probable, possible, sub-threshold, but criteria not met, no clinical significance); otherwise, a cut-off score of greater than 16 points services as the threshold for a potential major depressive episode. Multiple studies have demonstrated the CESD-R to exhibit good psychometric properties, such as high internal consistency, strong factor loadings, and theoretically consistent convergent and discriminant validity with positive and negative affect and anxiety measures, suggesting that the CESD-R is a valid and accurate measure of depression in the general population **(**Van Dam & Earleywine, 2011; Williams, Hirsch, Anderson, Bush, Goldstein, Grill, & ... Marsh, 2012).

Generalized Anxiety Disorder 7-item (GAD-7) scale. The Generalized Anxiety Disorder Scale-7 (GAD-7) is a 7-item scale based on the DSM-V criteria for a diagnosis of Generalized Anxiety Disorder. Spitzer et al. (2006) developed the scale as a screening tool for GAD. Many studies have validated the psychometric properties of the scale in multiple treatment settings, which have also demonstrated good sensitivity (89%) and specificity (82%) (Spitzer, 2006; Kroenke et al., 2007; Löwe et al., 2008; Beard & Björgvinsson, 2014; Kertz et al, 2013; Mills et al., 2014). Items are rated on a 4-point Likert scale (0-3) measuring the extent to which an individual experienced each anxiety symptom over the prior week and gives a rating of overall anxiety symptomology. Total scores are used to classify individuals as experiencing one of three levels of anxiety (5 =

mild, 10 = moderate, 15 = severe. As such the scores can be used as categorical or continuous variables (Rutter & Brown, 2017).

Satisfaction with Life Scale (SWLS). The Satisfaction with Life Scale was initially created by Diener, Emmons, Larsen, and Griffen (1985) to assess for general satisfaction and/or dissatisfaction with one's life (Pavot & Diener, 1993). Rather than assessing the number of positive and negative events or levels of positive and negative affect, the SWLS measures the participant's judgement of their subjective overall well-being (Pavot, Diener, Colvin, & Sandvik, 1991). The 5-item scale has participants rate each item on a 7-point Likert scale ranging from 1 ("strongly disagree") to 7 ("strongly agree). In addition to be used widely in studies across the United States, the SWLS has been validated across international samples in different European and Asian countries (Jovanović, & Brdar, 2018).

Demographic Information. Participants completed a brief demographic questionnaire in which they were asked to indicate their identified gender, ethnicity, sexual orientation, and current relationship status.

Analytic Strategy

An exploratory factor analysis of the REACTS items will be conducted initially using the statistical program SPSS (version 25). The EFA relied on a Varimax rotation of the covariance matrix with Eigenvalues exceeding 1 and factor loadings greater than .6. Pairwise exclusions were used for missing data. The total and factor scores will then be used to create high (> 90th percentile) and normative (remainder of respective distribution) risk groups for purposes of categorical analyses. Descriptive statistics will be conducted with an emphasis on examining possible gender and/or sexual orientation

differences in REACTS scores. Bivariate correlation analyses will be used to establish strengths of relationship between the dimensional predictors and each of the criterion variables. Analyses will be conducted using the categorical predictor groups (high versus normative risk) to see if the criterion scores differ as a function of the risk classifications. REACTS scores are expected to correlate strongly with the WSI and ADF concurrent validity measures. Criterion validity will be established by associations between the REACTS scores and the remaining range of maladjustment indicators. The following standards were set a priori to define acceptable evidence of reliability and concurrent validity was to be provided by: alphas ≥ .70 (Nunnally, 1967); test-retest coefficients ≥ .70 (Cook & Beckman, 2006; Cronbach, 1951, 1970; Peterson, 1994; DeVon et al., 2007); kappa coefficients ≥ .50 (Cicchetti & Sparrow, 1981; Viera & Garrett, 2005); and concurrent validity coefficients ≥ .45 (DeVon et al., 2007). Missing scores were excluded pairwise

CHAPTER III

RESULTS

REACTS Exploratory Factor Analysis

A total of 879 participants were utilized in the REACTS exploratory factor analysis. A Kaiser-Meyer-Olkin score of .98 and Bartlett test of sphericity, $\chi 2 = 64191.61$, $df = 4950$, $p < .001$, provided evidence of sample adequacy for the EFA. A number of the initial 100 items were excluded after a preliminary analysis of their high intercorrelations; of the items that correlated, the items which accounted for the larger amount of variance were retained. The EFA relied on a Varimax rotation of the covariance matrix with Eigenvalues exceeding 1 and factor loadings greater than .6. Pairwise exclusions were used for missing data. A scree plot analysis indicated that a four-factor solution best fit the data set (see Table 1). These factors were labelled Jealousy and Control (8 items, 36.10% of variance), Relationship Consciousness (4 items, 7.22% of variance), Infidelity (8 items, 4.50%), and Substance Use (4 items, 2.85% of variance). A total REACTS score was also calculated from these 24 items. Participants were classified as having elevated risk for total or factor scores that exceeded the 90th percentile. They were contrasted with normative respondents from the remaining distribution of each index.

Descriptive Statistics

Descriptive statistics for the REACTS total and factor scores along with the concurrent validity indices are presented in Table 2. Gender and sexual orientation differences are summarized in Table 3. Given the small number of participants who identified within each of the sexual minorities individually, sexual orientation was

segregated into two groups: heterosexual (n = 741) and Lesbian, Gay, Bisexual, Asexual, other (LGB+, n = 132).

Correlation Analyses

Table 4 documents the bivariate relationships between the REACTS indices and each of the criterion variables. None of these correlation coefficient strengths differed significantly by gender or sexual orientation.

Reliability Analyses

Internal consistency reliability estimates were generated from both the national and college samples (see Table 5). Two-week test-retest reliability estimates were generated from the college sample for both dimensional and categorical REACTS scores. Additionally, Kappa coefficients were calculated from the dichotomous high-risk group assignments (> 90th percentile versus remainder of sample; see Table 5).

Concurrent Validity Analyses

REACTS scores were expected to correlate more strongly with Weekly Stress Inventory scores and best friendship relationship maintenance difficulties than the remaining criterion indices. A number of those bivariate relationships (see Table 4) were statistically significant but not in excess of the concurrent validity standard (r > .45) set at the outset of analysis. Analyses were conducted as well to determine if the "high risk" (> 90^{th} percentile) respondents for each factor scored significantly higher on selected criterion measures. Table 6 presents the results of these group comparisons. Extreme REACTS scores were found to be associated with a range of maladjustment indicators without evidence of differentiation based on the nature of the indicator.

Analysis of Variance

Weekly Stress Inventory Total (WSIt). The RiskGroup main effect was not significant, $F(1, 859) = .18$, $p = .669$. The Gender main effect was not significant, $F(1, 859) = .01$, $p = .906$. The Gender by RiskGroup interaction was not significant, $F(1, 859) = .43$, $p = .510$.

Weekly Stress Inventory Severity (WSIs). The RiskGroup main effect was not significant, $F(1, 859) = .47$, $p = .493$. The Gender main effect was not significant, $F(1, 859) = .05$, $p = .833$. The Gender by RiskGroup interaction was not significant, $F(1, 859) = .00$, $p = .954$.

Acquaintance Descriptor Form, Friendship Maintenance Difficulty (ADF-F2). The RiskGroup main effect was not significant, $F(1, 857) = .34$, $p = .562$. The Gender main effect was not significant, $F(1, 857) = .79$, $p = .373$. The Gender by RiskGroup interaction was not significant, $F(1, 857) = 1.43$, $p = .232$.

Satisfaction with Life Scale (SWLS). The RiskGroup main effect was not significant, $F(1, 859) = .38$, $p = .535$. The Gender main effect was not significant, $F(1, 859) = .04$, $p = .833$. The Gender by RiskGroup interaction was not significant, $F(1, 859) = .18$, $p = .671$.

Center for Epidemiological Studies Depression Scale – Revised (CESD-R). The RiskGroup main effect was not significant, $F(1, 859) = .02$, $p = .886$. The Gender main effect was not significant, $F(1, 859) = .03$, $p = .869$. The Gender by RiskGroup interaction was not significant, $F(1, 859) = 1.17$, $p = .279$.

Generalized Anxiety Disorder 7 Items (GAD-7). The RiskGroup main effect was not significant, $F(1, 858) = 2.25$, $p = .134$. The Gender main effect was significant,

$F(1, 858) = 3.94$, $p = .048$. The Gender by RiskGroup interaction was not significant, $F(1, 858) = .47$, $p = .491$.

EPRS-Mother Avoidant. The RiskGroup main effect was not significant, $F(1, 859) = 1.21$, $p = .272$. The Gender main effect was significant, $F(1, 859) = .00$, $p = .959$. The Gender by RiskGroup interaction was not significant, $F(1, 859) = .31$, $p = .576$.

EPRS-Mother Anxious. The RiskGroup main effect was not significant, $F(1, 859) = .19$, $p = .663$. The Gender main effect was significant, $F(1, 859) = 4.22$, $p = .040$. The Gender by RiskGroup interaction was not significant, $F(1, 859) = 1.79$, $p = .181$.

EPRS-Father Avoidant. The RiskGroup main effect was not significant, $F(1, 859) = .09$, $p = .761$. The Gender main effect was not significant, $F(1, 859) = .24$, $p = .623$. The Gender by RiskGroup interaction was not significant, $F(1, 859) = 1.58$, $p = .209$.

EPRS-Father Anxious. The RiskGroup main effect was not significant, $F(1, 859) = .02$, $p = .902$. The Gender main effect was not significant, $F(1, 859) = 3.87$, $p = .534$. The Gender by RiskGroup interaction was not significant, $F(1, 859) = .78$, $p = .376$.

CHAPTER IV

DISCUSSION

The purpose of the current study was to establish and validate a new scale, the Relationship Effects of Action, Control, and Temperament scale (REACTS), creating a comprehensive measure of interpersonal sensitivity with regard to emotional reactions to hypothetical partner behaviors within romantic relationships. Following elimination of participants due to low response frequency, failure to pass validation checks, and atypically fast respondents, a factor structure was derived from an exploratory factor analysis. Four interpretable factors emerged from the EFA. The psychometric properties of these four factors and the total score derived from the 24-item REACTS scale was subsequently analyzed along with the value of segregating respondents into high risk (> 90^{th} percentile) categories.

In addition to establishing a sound factor structure, the REACTS did demonstrate significant reliability. The college sample gave support for temporal stability, both with overall REACTS factor scores as well as good-to-moderate effects of accurately categorizing normative and at-risk groups across time. Good internal consistency was established for both the college and national samples for overall scores and factor scores.

While scale scores were often significantly correlated with the criterion measures, these associations fell below the pre-established threshold for convergent validity ($r \geq .45$). Thus, while correlations were found to be statistically significant, there appears to be no meaningful relationships between the REACTS scores and other scales. Extreme REACTS (90% threshold) scores were not identified as a risk factor for any of the maladjustment indicators examined in this study.

Gender and sexual orientation differences in REACTS scores were also examined. Significant differences were found between males and females for all REACTS scores, GAD-7 total anxiety score, and EPRS-M anxious attachment tendencies. For REACTS Average and RF1, women reported significantly higher emotional reactions to the hypothetical behaviors compared to men, with large effect sizes ($d \geq .7$), suggesting that women are significantly more sensitive to overall negative behaviors performed by partners, including acts of jealousy and control. Women were significantly more sensitive to behaviors of infidelity and substance use compared to men, with a small effect sizes ($d = 35$) which suggested that there may be some clinical implications to these differences. Women also scored significantly higher on emotional reactions to hypothetical partner-behaviors involving acts lacking relationship conscientiousness (e.g., cancelling plans late, not returning phone calls). This difference exhibited a moderate effect size ($d = .59$) suggesting that there is a practical difference in interpersonal sensitivity with regard to relationship conscientiousness between men and women; women are more sensitive to these behaviors. Additionally, women endorsed significantly more anxiety symptoms compared to men, however these effect sizes were found to be small ($d = .28$). Women also demonstrated significantly larger endorsement of anxious-attachment behaviors toward mothers compared to men, however, this too featured a small effect size ($d = .19$) suggesting there is not a practical difference between the two groups.

With regard to sexual orientation, two groups were created consisting of self-identified belonging to a heterosexual group and self-identified association with the Lesbian, Gay, Bisexual and other sexual orientation minorities (LGB+). Results from

one-way ANOVAs suggested that individuals who identify as heterosexual have an overall (REACTS Average) higher level of interpersonal sensitivity. However, the effect size for this finding was found to be small (d = .32). Heterosexual individuals also demonstrated greater sensitivity to behaviors involving relationship conscientiousness and partner substance use behaviors. Effect sizes ($d \geq .5$) suggest that these differences have practical implications in addition to statistical significance. Individuals who identified within the LGB+ group, scored significantly higher on depressive measures, however the effect size (d = .29) suggests there is not a practical significance to this finding, contrary to previous findings which suggest that individuals within the LGBT+ community experience significantly higher levels of depression (Hatzenbuehler, McLaughlin, Nolen-Hoeksemen, 2008; Galliher, Rostosky, Hughes, 2004; Faulkner, Cranston, 1998).

Limitations

Several limitations to the current study must be noted. One of the main goals of the current study was to establish convergent validity, which the scale did not. Thus, as is, the scale cannot be considered a valid measure of any given construct (Cronbach, 1955; Trochim, 2006), at least in regard to the validity indicators examined in this study. One limitation with regard to the wording of the scale, is that all items were worded in a positive fashion (i.e., partner *does* this). Crocker and Algina (2008) suggest that scales ought to display an equal number of negative and positive statements, stating that when all items are worded in the positive direction, respondents may be prone to rely more on their response patterns and be less attuned to the individual items, thus introducing a

greater probability for error. Additionally, the scale only contained negative behaviors, making comparisons between positive and negative reactions impossible.

While the scale was worded in such a way as to remain gender neutral, given the differences in response sets between males and females, the scale may be more reliable if directed at a specific gender, as opposed to being worded gender neutral. Given stereotypes of women being "over emotional" and expectations for men to not react emotionally, these may have affected individual's response patterns due to stereotype threat or a desire to not fall into stereotyped responses (Brabech, 1983; Watson, Rubie-Davies, & Hattie, 2017; Freedman, Green, Flanagan, Fitzgerald, & Kaufman, 2018). Additionally, the sample was disproportionately made up of women respondents (about 75%) which could have significantly impacted the results according to previous studies (Sharp, 1997).

Future Directions

There are several directions regarding future research for the REACTS. Given that the factor structure is sound, the scale measures *some* construct, but this construct has yet to be determined and established, and thus future studies may be able to establish convergent validity with other variables. Based on the interpretation of the factors, it is likely that topics such as toxic masculinity and hostile femininity, in addition to loneliness may provide a basis for convergent validity (Russell & King, 2017; Norton-Bakker, Russell, & King, 2018). Furthermore, convergent validity may be established in future studies for a measurement of relationship satisfaction, given that "deal breakers" and general negative behaviors performed within a relationship lead to decreased satisfaction and termination of relationships (Jonasen et al., 2015). In order to create a

scale that is relevant to both sexes, creating individual scales for men and women with language directed at the corresponding groups may be more beneficial in further development of this scale. Further word-choice may also be explored for the REACTS such as varying negative and positively worded items, both directionally in language as well as positive and negative behaviors exhibited by partners.

In addition to changing the language with regard to gender, the scale could also be re-worded to include positively directed items (e.g., my partner *engages in* x) as well as negatively directed items (e.g., my partner *does not engage* in x). This would likely increase more careful reading by the respondents (Crocker & Algina, 2008). Furthermore, in addition to changing the direction of items, including positive partner behaviors may also be of use. Specifically, by including both negative and positive behaviors, the scale would be more encompassing of interpersonal sensitivity to *all* types of partner behaviors and not only negative ones. As has been demonstrated by previous research, individuals typically have larger reactions to negative behaviors (Jonasen, et al. 2015), but there may be individuals who have overall higher or lower levels of emotional reactions regardless if the behavior is negative or positive.

Conclusion

Theories of stress suggest relatively consistent patterns of physiological arousal in response to stressors (Carroll, Ginty, Whittaker, Lovallo, & de Rooij, 2017). While emotional reactions have been less researched, there is a larger gap within the literature for emotional reactions to hypothetical partner behaviors within the context of a romantic relationship. The REACTS sought to close this gap. However, the findings of the current study would suggest that overall frequency of stressors, perceived severity of experienced

stressors, and best-friendship maintenance difficulty are not accurately measured using the proposed REACTS scale.

While significant differences were found among response patterns for gender, sexual orientation, and identified At-risk REACTS respondents, practically significant differences were found between genders for REACTS Average, Scale 1: Jealousy and Control and Scale 4: Substance use, with women demonstrating significantly higher levels of interpersonal sensitivity. Practically significant differences between sexual orientation identities were found for Scale 3: Infidelity and Scale 4: Substance use, suggesting that individuals who identity as heterosexual tend to be more sensitive to these behaviors compared to those who identify within the LGB+ group.

Overall the scale seems to reflect interpersonal strain as a generalized stressor that seems to be associated with a range of maladjustment indicators, which may or may not be diagnostic. Additionally, the current scale shows promise for clinical applications among female populations, and has potential use for couple's therapy in addressing interpersonal sensitivity to hypothetical partner behaviors. Future research is needed to fully establish convergent validity; however, the factor structure of the scale demonstrates good fit and excellent internal consistency and temporal consistency.

Appendix A

Table 1

REACTS Items and Factor Loadings from CFA

Final REACTS Item Numbers	Factor 1	Factor 2	Factor 3	Factor 4
1.Your partner uses substances after they've become upset.	0	0	0	**.67**
2. Your partner lies about who they were with last night.	0	0	**.62**	0
3. Your partner cheats on you with a woman.	0	0	**.74**	0
4. Your partner demands to see who you're texting/talking to.	**.69**	0	0	0
5. Your partner flirts with another person in front of you.	0	0	**.69**	0
6. Your partner follows you to make sure you go where you said you did.	**.69**	0	0	0
7. Your partner does not pick up the phone when you call.	0	**.66**	0	0
8. Your partner receives a nude picture from another individual.	0	0	**.71**	0
9. Your partner cancels plans last minute	0	**.62**	0	0
10. Your partner goes through your phone when you're in the bathroom.	**.71**	0	0	0
11. Your partner had sex with another person one time during the relationship.	0	0	**.78**	0
12. Your partner tells you to change your outfit.	**.64**	0	0	0
13. Your partner does not respond to a text message	0	**.73**	0	0
14. Your partner cheats on you with a man.	0	0	**.77**	0
15. Your partner smokes marijuana often.	0	0	0	**.65**
16. Your partner often does not pick up the phone when you call.	0	**.64**	0	0

17. Your partner gets jealous when you go out with friends.	**.69**	0	0	0
18. Your partner goes through your phone while you're sleeping.	**.75**	0	0	0
19. Your partner kissed another person.	0	0	**.75**	
20. Your partner drinks alcohol often.	0	0	0	**.65**
21. Your partner gets jealous when you are texting other people.	**.69**	0	0	0
22. Your partner insists on reading your messages when you are on Facebook	**.71**	0	0	0
23. Your partner uses substances after experiencing frustrating situations.	0	0	0	**.68**
24. Your partner is sending flirty messages and comments on Facebook.	0	0	**.77**	0

Table 2

Descriptive Statistics for the Predictor and Criterion Indices

Predictor & Criterion Indices	**Label**	***n***	***M***	***SD***	**Range**	**Skew**
REACTS Average	REACTS Average	879	3.88	.63	4	-.66
Factor 1	Jealousy and Control	879	3.70	1.00	4	-.59
Factor 2	Relationship Conscientiousness	879	3.25	.98	4	-.07
Factor 3	Infidelity	879	4.47	.75	4	-2.07
Factor 4	Substance Use	879	3.71	1.05	4	-.55
Weekly Stress Inventory	WSI Total Index	879	33.93	20.31	87	1.19
	WSI Severity Index	879	107.77	102.33	691	2.16
Acquaintance Description Form	Best Friendship Maintenance Difficulty	877	20.50	5.84	25	-.29
Satisfaction With Life Scale	Life Satisfaction	877	20.34	8.69	30	-.22
CESD-R	Depression	879	38.35	17.19	80	1.05
GAD-7	Anxiety	876	13.20	5.90	22	.94
EPRS	Mother Avoidant	879	44.92	15.58	77	-.17
	Mother Anxious	879	50.97	15.27	77	-.71
	Father Avoidant	879	38.83	19.82	77	-.41
	Father Anxious	879	45.41	21.11	77	-.822

Note. CESD-R = Center for Epidemiologic Studies Depression Scale-Revised; GAD-7 = Generalized Anxiety Disorder Scale; EPRS = Experience of Parental Relationships Scale.

Table 3

Gender and Sexual Orientation Differences

Predictor & Criterion Indices	Label	Gender		Sexual Orientation	
		p	*d*	*p*	*d*
REACTS Average	REACTS Average	**< .001**	.79	**.002**	.32
Factor 1	Jealousy and Control	**< .001**	.70	.09	
Factor 2	Relationship Conscientiousness	**< .001**	.34	.09	
Factor 3	Infidelity	**< .001**	.59	**< .001**	.56
Factor 4	Substance Use	**< .001**	.35	**< .001**	.53
Weekly Stress Inventory	WSI Total Index	.22		.65	
	WSI Severity Index	.78		.57	
Acquaintance Description Form	Best Friendship Maintenance Difficulty	.65		.20	
Satisfaction With Life Scale	Life Satisfaction	.61		.49	
CESD-R	Depression	.06		**.002**	.29
GAD-7	Anxiety	**.001**	.28	.20	
EPRS	Mother Avoidant	.20		.63	
	Mother Anxious	**.03**	.19	.92	
	Father Avoidant	.12		.33	
	Father Anxious	.74		.66	

Note. CESD-R = Center for Epidemiologic Studies Depression Scale-Revised; GAD-7 = Generalized Anxiety Disorder Scale; EPRS = Experience of Parental Relationships Scale. *F*-test differences determined on basis of Gender (male versus female) and Sexual Orientation (straight versus LGBT) dichotomous classifications.

Table 4

Bivariate Correlation Matrix of REACTS and Concurrent Validity Indices

Predictor & Criterion Indices	Label	REACTS Indices				
		Total	Factor 1	Factor 2	Factor 3	Factor 4
Weekly Stress Inventory	WSI Total Index	-.09**	-.032	.08*	-.19**	-.09**
	WSI Severity Index	-.01	.04	.15**	-.15**	-.04
Acquaintance Description Form	Best Friendship Maintenance Difficulty	.01	.04	-.11**	.03	.01
Satisfaction With Life Scale	Life Satisfaction	-.001	-.04	-.08	.02	.12**
CESD-R	Depression	-.01	.05	.06	-.03	-.12**
GAD-7	Anxiety	.03	.05	.06	.04	-.10**
EPRS	Mother Avoidant	.07	.02	.04	.08*	.09**
	Mother Anxious	.05	.04	-.06	.06	.07
	Father Avoidant	.06	.04	.02	.02	.12**
	Father Anxious	.01	.01	-.04	-.02	.07*

Note. CESD-R = Center for Epidemiologic Studies Depression Scale-Revised; GAD-7 = Generalized Anxiety Disorder Scale; EPRS = Experience of Parental Relationships Scale.

Table 5

REACTS Reliability Analyses

Index	Label	National Sample		College Sample			
		n	α	*n*	α	*r*	*κ (SE)*
Mean Score	REACTS	925	.92	86	.91	.77**	.60 (.09)
Factor 1	Jealousy and Control	925	.92	86	.87	.75**	.61 (.10)
Factor 2	Relationship Consciousness	925	.85	86	.82	.69**	.60 (.09)
Factor 3	Infidelity	925	.91	86	.70	.67**	.60 (.08)
Factor 4	Substance Use	925	.81	86	.87	.88**	.61 (.10)

Note. The retest interval for the college sample was two weeks. Kappa coefficients calculated from the dichotomous high-risk group assignments (> 90th percentile versus remainder of sample)

Table 6

High Risk REACTS Group Analyses

Criterion Indices	Label	High Risk		Normative Risk			
		M	*SD*	*M*	*SD*	*p*	*d*
		Total REACTS Scores					
Weekly Stress Inventory	WSI Total Index	33.72	19.63	33.98	24.87	.669	
	WSI Severity Index	119.01	139.29	105.48	96.83	.493	
Acquaintance Description Form	Best Friendship Maintenance Difficulty	20.06	6.62	20.56	5.74	.560	
Satisfaction With Life Scale	Life Satisfaction	20.88	8.96	20.34	8.69	.535	
CESD-R	Depression	35.02	16.76	38.49	17.17	.886	
GAD-7	Anxiety	12.30	6.60	13.23	.5.81	.134	
EPRS	Mother Avoidant	42.90	17.45	45.23	15.29	.272	
	Mother Anxious	48.64	20.13	51.28	14.70	.663	
	Father Avoidant	36.24	21.33	39.05	19.63	.761	
	Father Anxious	41.95	23.96	45.79	20.81	.902	

Note. CESD-R = Center for Epidemiologic Studies Depression Scale-Revised; GAD-7 = Generalized Anxiety Disorder Scale; EPRS = Experience of Parental Relationships Scale.

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