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Goal progress and attainment of important personal goals is related to higher well-being. Obstacles in goal progress, such as holding multiple, conflicting goals, can lead to a negative change in well-being. However, most goal research has focused on single goals despite the reality that most individuals hold multiple goals at one time. Some research indicates that competition among goals negatively influences progress and emotional well-being, although results are mixed. The current study aimed to understand the influence of goal conflict on emotional well-being and to explore individual trait-level moderators of response to conflict. The moderator that was explored was causality orientations, or individuals' tendency to pursue goals for reasons of personal value or external pressure. First, it was hypothesized that goal progress would mediate the relationship between goal conflict and well-being. Second, it was hypothesized that causality orientations would moderate the relationship between goal conflict and goal progress. Progress on goals and self-reported well-being were measured a month after participants identified their goals to assess for the possibility that person-level conflict predicted emotional well-being through goal progress. Results indicated that goal progress mediates the relationship between conflict and certain well-being variables. Specifically, high goal conflict was related to low goal progress, which in turn lead to higher depressive symptoms and lower life satisfaction and positive affect. The hypothesis that causality orientations (controlled versus autonomous) would moderate the path between conflict and goal progress was not supported.

INDIVIDUAL DIFFERENCES IN RESPONSE TO GOAL CONFLICT: IMPACT OF
CAUSALITY ORIENTATIONS ON GOAL PROGRESS AND EMOTIONAL
WELL-BEING DURING GOAL CONFLICT

by

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CHAPTER I

INTRODUCTION

Setting and accomplishing important goals is necessary for emotional well-being (Emmons, 1986). Therefore, goals are fundamental to understanding individuals because they reflect values, personality, and the areas of life that are prioritized (Cantor et al., 1991; Elliot & Sheldon, 1997). In addition, progress or obstacles toward goal attainment strongly influence psychological well-being (Emmons, 1991). Unfortunately, most goal research has focused on single goals even though most individuals hold multiple goals at one time. Due to the lack of research focusing on multiple goals, little is known about the emotional impact of maintaining more than one goal when they compete for limited resources. Findings indicate that when competition exists, progress and emotional well-being can be negatively impacted, although debate exists about this relation. The current study attempted to add to this debate by increasing understanding of the direct and indirect impact of goal conflict on emotional well-being.

Importance of Goals

Goals have been defined as the internal cognitive portrayal of desired future outcomes or events that individuals are committed to pursue and accomplish (Emmons, 1986; Wrosch, Scheier, Carver, & Schulz, 2003). Due to their idiographic nature, goals vary in content and can vary on a number of other dimensions such as value, commitment, expectancy for success, concrete/abstract, observable/psychological, or short-term/long-term, to name a few (Emmons, 1986; Kruglanski & Kopetz, 2009). Also labeled as current concerns, personal strivings, personal projects and life tasks, goals are the things individuals care about, are motivated by, and are

attempting to achieve either in the current moment or long-term (Cantor et al., 1991; Carver & Scheier, 1990; Emmons, 1986; Sheldon & Kasser, 1998; Wrosch et al., 2003).

Goals reflect values, identities, and personality, making them essential for understanding daily life behavior, self-definitions, and individual differences (Elliot & Sheldon, 1997; Karoly, 1999; Sheldon & Kasser, 1998). The drive to align with core values leads to goals providing a sense of purpose, structure, and organization of behavior (Boudreaux & Ozer, 2013; Wrosch et al., 2003). In other words, goals direct and control all human behavior. Although not all goals lead to behavior, all behavior usually develops from goals (Moskowitz & Grant, 2009). As Karoly (1999) stated, “goals and their manner of cognitive organization provide a glimpse into each person’s on-line, directional ‘command center’” (p. 269). Thus, goals may be seen as the areas of life individuals are most invested in and prioritize (Cantor et al., 1991; Lavalley & Campbell, 1995).

Additionally, investment and responses to daily life events are influenced by the goals individuals hold (Lavalley & Campbell, 1995). In other words, individuals perceive some experiences and events as more relevant and more emotionally salient if their goals are in line with them (Cantor et al., 1991; Higgins, Shah, & Friedman, 1997; Karoly, 1999). Therefore, negative and positive life events only relate to well-being when they are related to an individual’s important goals (Emmons, 1991; Karoly, 1999). The more important a goal is, the greater likelihood of a negative emotional reaction following a goal-related stressful event (Karoly, 1999).

Goals and Well-being

Research has demonstrated that goals are useful in predicting psychological and physical well-being beyond what may be predicted by personality traits (Emmons, 1986, 1991). This may be because goals are one of the primary tools for individuals to determine current life satisfaction,

given that satisfaction is a subjective assessment of one's life (Emmons, 1986; Karoly, 1999; Locke & Latham, 2006). When important goals are pursued, individuals report higher life satisfaction and psychological well-being (Boudreaux & Ozer, 2013; Cantor et al., 1991; Emmons, 1986).

Further, when the goals are viewed as crucial and important, both achieving and failing to achieve them elicits strong emotions (Emmons, 1986; Higgins et al., 1997). Reducing the discrepancy between the current state and the goal state is highly satisfying (Sheldon & Kasser, 1998), and the perception of fast progress and attainment of important personal goals is related to an increase in positive affect, life satisfaction, and emotional well-being (Emmons, 1986; Higgins et al., 1997; Pomaki, Karoly, & Maes, 2009; Sheldon & Kasser, 1998). Obstacles in progress or failure to accomplish goals leads to negative affect (Emmons, 1986). There is increasing evidence to suggest that psychopathology may be explained by problems in goal progress and motivation, because happiness and adjustment depend on effective goal achievement (Barone, Maddux, & Snyder, 1997; Karoly, 1999). For these reasons, it is important to understand factors that may become obstacles in progress, such as multiple goals.

Multiple Goals & Goal Conflict

Individuals often set multiple goals across several domains of life, such as work, family, friends, romantic relationships, and health (Louro, Pieters, & Zeelenberg, 2007). Thus, it is typical for individuals to hold multiple goals at one time; however, most goal research and theories have predominantly focused on single goals (Boudreaux & Ozer, 2013; Kernan & Lord, 1990; Vancouver, Weinhardt, & Schmidt, 2010). Therefore, little is known about behavior, motivation, and well-being in the pursuit of multiple goals (Louro et al., 2007). Understanding the interaction between goals is important given that behavior cannot be truly understood by looking at goals individually (Austin & Vancouver, 1996; Lee, 2012).

Progress towards, and attainment of, multiple goals often requires balancing demands on limited resources (e.g., attention, energy, and time) in order to prevent the pursuit of a single goal from hindering the pursuit of another (Kernan & Lord, 1990; Louro et al., 2007). This is because performing well in the pursuit of one goal may lead to a depletion of resources and lowering performance on other goals (Boudreaux & Ozer, 2013; Vancouver et al., 2010). This often means that individuals must decide which goals they find more important or pressing (Louro et al., 2007). Therefore, recent research has started to explore how individuals cope with multiple goals and limited resources (Vancouver et al., 2010).

Goal Conflict and Facilitation

Multiple goals can interact in three ways: they can positively influence each other (*facilitation*), they can compete with each other (*conflict*), or they can be independent from one another (Kehr, 2003; Riediger & Freund, 2004). Facilitation occurs when the attainment of one goal aids in the attainment of a separate goal without requiring extra resources (Lee, 2012; Riediger & Freund, 2004). Facilitation is made possible as a result of two scenarios: *instrumental relations* and *overlapping strategies*. Instrumental relations occur when progress toward one goal also causes progress toward a separate goal (Riediger & Freund, 2004). For example, obtaining a promotion and saving money to buy a house are goals that share an instrumental relation (provided that the promotion involves an increase in pay). Overlapping strategies is defined as a situation in which the same behavior aids in the progress of more than one goal (Riediger & Freund, 2004) such as taking a Zumba class to become a better dancer and to stay in shape.

However, when the pursuit of one goal impairs the attainment of another goal, goal conflict occurs (Kehr, 2003; Riediger & Freund, 2004; Vancouver et al., 2010). Conflict can arise when multiple goals of equal importance require the same limited resources, thus forcing a decision on how to divide these resources (Boudreaux & Ozer, 2013; Riediger & Freund, 2004;

Schmidt & Dolis, 2009). Conflict also results when incompatible strategies are needed to pursue desirable goals, such as attempting to save money while also hoping to travel internationally more often (Boudreaux & Ozer, 2013; Ridiger & Freund, 2004). In this case, progress toward one goal means hindering progress toward the other goal (Seegerstrom & Nes, 2006). Therefore, individuals can only solve conflict if they find ways to accomplish all the goals by prioritizing and planning or by giving up some goals (Gray, Ozer, & Rosenthal, 2017; Kernan & Lord, 1990). With the need to balance multiple goals day to day, the experience of conflict among goals is common (Kelly, Mansell, & Wood, 2011). Consequently, an essential question concerns how conflict relates to goal progress as well as emotional outcomes.

Conflict and progress. With respect to goal pursuit and attainment, the number of goals held by an individual is not as important as whether people have facilitative or conflicting goals (Lee, 2012). When facilitation occurs, high performance in various domains of life may be observed (Ashford & Northcraft, 2003). For example, South Korean undergraduate students increased speed and performance (measured as percentage of correct answers) on given tasks when provided with goals that facilitated each other instead of conflicting.

On the other hand, conflicting goals have been associated with negative performance (measured as productivity, quality, or company records of sales) and lower attainment (Kehr, 2003; Locke, Smith, Erez, Chah, & Schaffer, 1994; Slocum, Cron, & Brown, 2002). When goals are conflicting, commitment to these goals is likely lowered (Locke et al., 1994). When two goals are equally important, the choice of which goal requires the most dedicated resources is difficult (Ashford & Northcraft, 2003). As such, individuals with this dilemma spend more time ruminating on conflicting goals than on taking action to make progress towards those goals (Emmons & King, 1988). In Lee's (2012) study, those with conflicting goals took longer to complete tasks and obtained lower scores on provided tasks. Similarly, Locke and colleagues

(1994) found that goal conflict was related to less time spent on goal pursuit. However, in this case, the quality of the performance (measured as completed models that met 12 of 14 company criteria) was not related to conflict.

Conflict and psychological well-being. Given the relationship between goal attainment and psychological well-being, researchers have found higher goal conflict to be related to lower life satisfaction and higher psychological distress (e.g., negative affect and cognitions, depression, high stress, and psychosomatic complaints; Boudreaux & Ozer, 2013; Emmons, 1986; Emmons & King, 1988; Gray et al., 2017; Kehr, 2003; Riediger & Freund, 2004; Slocum et al., 2002). The impact conflict creates on well-being has been observed both short-term and long-term (Boudreaux & Ozer, 2013; Emmons & King, 1988). In addition, as mentioned above, conflict leads to negative cognitive processes such as increased rumination (Emmons & King, 1988).

Mixed findings. The literature regarding goal conflict is still in its infancy and various debates on this topic exist in the field (Boudreaux & Ozer, 2013). Some argue that conflict can be positive for human growth, creativity, and problem solving. Negative affect during conflict may serve as a signal that goal progress has been hindered and a reorganization of resources must occur (Boudreaux & Ozer, 2013; Kehr, 2003). Additionally, many theorists believe that the relationship between goal conflict, progress, and psychological well-being is not direct and have identified important mediators and moderators. For instance, goal commitment was found to mediate the relationship between goal conflict and performance (company records of sales; Slocum et al., 2002). Specifically, high goal conflict led to low goal commitment, which in turn led to decreased performance and well-being. In addition, several variables have been theorized and found to interact with goal conflict to influence well-being. For instance, pursuing multiple valued goals is suggested to protect individuals from the negative impacts of conflict (Kelly et al., 2011; Segerstrom & Nes, 2006). Attainment has also been found to moderate the relationship

between goal conflict and positive affect, meaning that higher goal attainment lead to decrease negative affect when faced with conflict (Kehr, 2003).

Mixed findings regarding the relationship between conflict and well-being have also been attributed to measurement differences. A possible problem is the assumption that conflict and facilitation are opposite, independent constructs; yet, studies have found that goals can be simultaneously conflicting and facilitating (Boudreaux & Ozer, 2013; Riediger & Freund, 2004). For example, the goal to increase exercise may conflict with the goal to receive a promotion at work because of time limitations, but concurrently the exercise goal could facilitate work performance and the promotion because it relieves stress (Riediger & Freund, 2004). Riediger and Freund (2004) were able to demonstrate that facilitation and conflict are separate constructs and differentially predict psychological well-being and goal pursuit. While facilitation was not predictive of psychological well-being, conflict was associated with negative psychological functioning, life satisfaction, and affect. It is possible that inconsistent findings or failure to find associations between conflict and psychological well-being may be attributed to the use of bipolar assessment scales that assume conflict and facilitation to be mutually exclusive. When researchers have used unipolar scales of conflict, which separate facilitation and conflict as two separate constructs, a relationship between conflict and lower well-being has clearly been identified (Boudreaux & Ozer, 2013; Perring, Oatley, & Smith, 1988; Riediger & Freund, 2004, 2008).

Another possible problem in the goal conflict literature is the lack of clarity regarding whether the fundamental difficulty with conflict has to do with the goals themselves or the person's experience of conflict. In other words, are conflicting goals themselves less likely to be attained, or are individuals with higher amounts of conflict less successful in managing their goals (perhaps due to feeling stressed or overwhelmed)? Boudreaux and Ozer (2013) evaluated

this questions by having undergraduate students provide eight goals and rate their level of conflict by using a matrix in which each goal was compared to another goal. Results indicated that goals rated as highly conflicting were not related to goal attainment; however, individuals with many highly conflicting goals did demonstrate a negative relationship to goal attainment. Of note, the goals that individuals with high conflict failed to obtain were not necessarily those in conflict. In addition, students with higher numbers of conflicting goals reported higher levels of negative affect and psychological distress. These findings support that higher person-level conflict (individuals with high amounts of goals in conflict), not goal-level conflict (goals reported to be in conflict with other goals) is related to lower progress and well-being.

Boudreaux and Ozer (2013) also demonstrated that some individuals are more skilled at handling conflict than others. Individuals experienced less conflict when they planned and maintained focus away from competing demands; on the other hand, individuals experienced higher conflict when they reported a tendency to ruminate on alternative goals, experience difficulty making decisions, or be affectively reactive. Similarly, Segerstrom and Nes (2006) hypothesized that a lack of connection between goal conflict and well-being may occur because objective conflict may not be as detrimental as subjective conflict. In other words, for conflict to negatively interfere with well-being, individuals must be aware that conflict between their goals exists and judge this conflict as an obstacle and problematic.

Goal Conflict and Motivational Orientations

Given the findings that conflict does not affect all individuals equally, further understanding of the factors that influence the relationship between conflict and well-being is important. As discussed, many researchers have studied variables that mediate and moderate the impact of goal conflict. Trait level variables may help further explain the variability in how individuals handle conflict (Boudreaux & Ozer, 2013). The tendency to pursue goals for reasons

of personal value versus external pressure may be an important individual difference variable that should be taken into account when evaluating the relationship between goal conflict and emotional well-being.

Self-determination Theory

Self-determination theory (SDT) highlights the role of motivation behind goal pursuit (i.e., why goals are pursued). There are two types of regulatory styles discussed in SDT: intrinsic motivation and extrinsic motivation (Deci & Ryan, 2000; Johnson, 2007). Intrinsic motivation occurs when participation in a behavior is due to personal interest and enjoyment (Deci & Ryan, 2000; Ryan & Deci, 2000). On the opposite end of the continuum, extrinsic motivation is guided by external factors and promotes reward acquisition or punishment avoidance. Unlike intrinsic behaviors, extrinsic behaviors do not tend to be personally interesting, and are only performed because of the need to relate to others (Ryan & Deci, 2000).

Most research related to SDT has focused on these motivations behind goal pursuit (intrinsic/extrinsic), however SDT also examines individual differences in the motivation to pursue goals (causality orientations; Deci & Ryan, 2008). Causality orientations are traits that predict how individuals consistently perceive their environment and therefore influence how they regulate goal pursuit (Deci & Ryan, 1985; Lee, Sheldon, & Turban, 2003). Individuals range in orientation across situations from autonomous (tendency to notice environmental information related to personal interests), controlled (higher awareness of cues related to external demands and expectations), and impersonal (lack of motivation to act due to belief of incompetency; Deci & Ryan, 2008; Lee et al., 2003; Patrick & Williams, 2012). Individuals may orient themselves to their environment using all three; however, individuals frequently gravitate towards one orientation. The orientation that individuals most often use is stable over time (Lee et al., 2003).

Autonomous orientation refers to noticing opportunities that lead to choice, inherent satisfaction, pleasure, or interest in an action that aligns with personal values. Autonomous oriented individuals tend to be intrinsically motivated. Autonomous orientation has been found to give rise to higher performance, interest, creativity, coping, psychological health, higher self-esteem, ego development, and viewing events as a challenge instead of a threat (Deci & Ryan, 1985, 2000; Wong, 2000). Autonomous orientation has also been linked to more positive social interactions (Hodgins, Koestner, and Duncan, 1996). Similarly, research focused on the motivation behind goal pursuit (intrinsic/extrinsic) has suggested intrinsic motivation may benefit goal progress through increased planning (Koestner, Otis, Powers, Pelletier, & Gagnon, 2008). For example, greater progress has been observed on leisure goals than on academic goals through planning, suggesting intrinsically motivated goals are given more importance than academic goals (Koestner et al., 2008). Intrinsic motivation has also been found to predict progress even when controlling for expectancy and value (Sheldon & Elliot, 1998).

Controlled orientation is defined by a focus on pressure to think, feel, or behave in certain ways, inducing an adherence to external controls and directives (Deci & Ryan, 1985, 2000, 2008). Controlled orientation is often associated with a need to enhance the self and suppress feelings of guilt, shame, and anxiety. However, studies suggest that controlled orientation is positively related to tension, fear, distress, guilt, defensiveness, and poor performance (Deci & Ryan, 1985; Hodgins et al., 1996). When focusing on motivation, extrinsic motivation is thought to arise from a lack of insight into personal needs, values, and interests (Sheldon & Elliot, 1998). External motivation is theorized to create internal conflict and promote psychologically unhealthy behaviors (Ntoumanis et al., 2014).

Conflict and Causality Orientations

Feeling ownership over goals may be a highly important aspect of goal pursuit and attainment in the face of obstacles (Sheldon & Elliot, 1998); therefore, the trait-level variable of causality orientation may explain important differences in individuals' responses to conflict. As mentioned, studies have mostly focused on the motivation behind pursuit (i.e., extrinsic/intrinsic) of a single goal in isolation instead of the broader trait-like orientations discussed above. For example, pursuing goals for intrinsic reasons (personal interest, enjoyment, and value) has been associated with higher persistence and has been theorized to lead to higher sustained effort and commitment in the face of difficult goals. When faced with an obstacle or difficulty, those with high intrinsic motivation view the situation as a challenge instead of a threat; therefore, persistence increases. This higher commitment to intrinsic goals likely arises due to the goals' closer relationship to personal interests and values. Therefore, these goals remain salient over long periods of time and receive continued effort. Intrinsically motivated individuals are also likely to remain more engaged because of their view of obstacles as challenges and opportunities for growth instead of threats (Ntoumanis et al., 2014; Sheldon & Elliot, 1998).

Extrinsic motivation (driven by external pressures), on the other hand, is often related to lower persistence and disengagement during difficult goals (Deci & Ryan, 2000; Patrick & Williams, 2012; Sheldon & Elliot, 1998; Sheldon & Kasser, 1998). This may be because individuals motivated by external reasons may be more vulnerable to competing goals or view lack of progress as a threat (Ntoumanis et al., 2014; Sheldon & Elliot, 1998). In other words, giving up on these goals seems more satisfactory than competing with other goals or facing the constant frustration (Sheldon & Elliot, 1998). Additionally, extrinsically motivated goals are likely to conflict with intrinsically motivated goals (Gore & Cross, 2006; Slocum et al., 2002), possibly leading to extrinsic goals to be abandoned for more personally important goals. This

conflict and lack of progress is then likely to be related to lack of energy and negative affect due to dissatisfaction and stress (Ntoumanis et al., 2014; Sheldon & Kasser, 1998).

Results from studies examining multiple goals, conflict, and motivation are consistent with research on single goals. For example, goals that have been found to facilitate each other are positively associated with intrinsic motivation (Sheldon and Kasser, 1995). Supporting this view, a review of research on conflict found that individuals with less conflict reported more intrinsically motivated goals, or vice-versa, intrinsically motivated individuals reported less conflict (Gorges, Esdar, & Wild, 2014; Kelly, Mansell, & Wood, 2015).

Only one published study has taken these findings further and examined the relationship between conflict and motivation to well-being (Gorges et al., 2014). Of note, this study focused on motivation behind specific goals rather than broader orientations. Gorges et al. (2014) tested whether the motivation behind two conflicting goals influenced the impact conflict had on well-being. Results indicated that intrinsically motivated conflicting goals were protective, whereas extrinsic goals were associated with negative affect. In other words, the impact of goal conflict on emotional well-being was dependent on the motivation behind goal pursuit. The authors concluded that conflict between two intrinsically motivated goals is seen as a challenge and therefore not detrimental to well-being. On the other hand, conflict between extrinsic goals may be viewed as an additional demand (Gorges et al., 2014).

These select studies focusing on the motivation behind goal pursuit provide a foundation for understanding how causality orientations may influence responses to conflict. However, at present, the field lacks an understanding of exactly how causality orientations relate to well-being at a time of conflict. Some individuals may gravitate towards choosing to pursue intrinsic goals, whereas other individuals may tend to choose extrinsic goals. This trait-like tendency to be

motivated to pursue goals for various reasons may predict how individuals react when faced with conflict.

Current Study

Fast goal progress and attainment of important personal goals are related to higher well-being (Emmons, 1986; Higgins et al., 1997; Pomaki, Karoly, & Maes, 2009; Sheldon & Kasser, 1998). Obstacles in goal progress, such as holding multiple, conflicting goals, can lead to a negative impact on well-being (Emmons, 1986). Yet debate exists on whether goal conflict consistently interferes with well-being under every circumstance. Many theorists believe that there is an indirect relationship between goal conflict and psychological well-being and important mediators and moderators must be considered. Therefore, the present study aimed to explore goal progress as a mediator in the relationship between goal conflict and well-being. Additionally, there are indications that some individuals are better able to handle goal conflict than others due to individual trait-level differences. Hence, a second aim of the current study was to explore causality orientations, or individuals' tendency to pursue goals for reasons of personal value versus external pressure, as a moderator to the response to goal conflict.

The current study examined how goal conflict at the start of the semester (Time 1) predicted emotional well-being one month later (Time 2). Specifically, well-being and progress on goals were measured a month after goals were initially reported to assess for the possibility that conflict affected emotional well-being through goal progress. In addition, the study explored the influence that causality orientations had on how individuals reacted to conflict (both reported at Time 1). A measure of person-level conflict was used for this study given Boudreaux and Ozer's (2013) finding that higher person-level conflict, not goal-level conflict, is related to lower progress and well-being. Further, conflict was measured independently from goal facilitation due

to the demonstrated success of unipolar scales (Boudreaux & Ozer, 2013; Perring, Oatley, & Smith, 1988; Riediger & Freund, 2004, 2008).

Hypothesis 1: Goal Progress as a Mediator

In the current study we sought to extend existing literature by exploring progress towards goals as a mediator in the relationship between conflict and emotional well-being. Low goal progress due to conflict is theorized to be one of the reasons that conflict negatively relates to well-being, yet this effect has not been established empirically. Some researchers have found that conflict leads to low progress and that conflict also leads to lower well-being suggesting a mediating relationship; however, the potential relationship between these variables remains unclear due to the lack of research that includes all variables in the same model. Therefore, it was hypothesized that goal progress (Time 2) would mediate the relationship between goal conflict (Time 1) and well-being at a later time of the semester (Time 2).

Hypothesis 2: Autonomous and Controlled Orientations

Next, the current study examined the potential influence of motivational orientations on the experience of conflict. We assumed that, while conflict would be negatively related to well-being, there would be individual differences in orientation that would influence the strength of this relationship. In other words, although conflict would have a negative impact overall, some individuals would be more affected by conflict than others. Specifically, in the current study it was proposed that autonomous and controlled orientations could explain some of this variability. The select number of studies previously discussed that focused on motivation are useful in understanding how causality orientations may relate to well-being during conflict. Recognizing that intrinsically motivated individuals are more engaged and view difficulties as a challenge may point to autonomously oriented individuals feeling more confident and focused when faced with conflict. In addition, Gorges and colleague's (2014) findings indicate that in times of conflict,

having more intrinsically motivated goals is beneficial. Therefore, it was hypothesized that autonomous and controlled orientation (Time 1) would moderate the relationship between goal conflict at Time 1 and goal progress at Time 2, which would then indirectly predict well-being at Time 2 (see Figure 1). In other words, despite conflict negatively interfering with goal progress and well-being, higher levels of autonomous orientation were expected to predict more goal progress, whereas higher controlled orientation were not, which would then lead to less negative impact from conflict on emotional well-being for those with high autonomous orientation.

CHAPTER II

METHODS

Participants

The study included 276 University of North Carolina at Greensboro undergraduate students enrolled in introductory psychology courses. The sample included 217 females (78.62%) and 58 males (21.01%; 1 participant did not report gender), 17 to 53 years old ($M = 18.70$, $SD = 2.89$). Participants were 51.4 % Caucasian, 33.0 % African American, 5.4 % Asian, 3.3 % Latino, and 6.9 % mixed or other. Participants were volunteers who received partial course credit in return for their participation. The study was approved by the UNCG Institutional Review Board (IRB); informed consent was obtained from all participants.

Measures and Procedure

Participants were asked to attend a lab session at Time 1 to complete one paper and pencil measure and various computer questionnaires. At Time 1 participants completed measures of well-being, causality orientations, conflict, and goal importance. Participants were asked to complete follow-up questionnaires one month after their initial visit. Time 2 questionnaires were administered online via Qualtrics; participants had one week to complete the survey after receiving the email. Time 2 questionnaires included all well-being measures, a goal progress measure, and a goal importance measure

Adapted Striving Instrumentality Matrix (SIM)

Participants completed a paper and pencil matrix to assess for conflict between goals (a sample of this measure can be found in Appendix B). Although various ways to measure conflict have been used in the literature, the SIM is the measure most often used (Gray et al., 2017). The

SIM (Emmons & King, 1988) was adapted slightly for the purpose of this study. First, participants were asked to generate six goals, instead of fifteen, that they were hoping to focus on in the current semester. Six goals were collected instead of fifteen to decrease participation time. Second, instead of using a bipolar scale of conflict and facilitation, a unipolar scale was used (Boudreaux & Ozer, 2013). The 6 x 6 matrix consists of rows and columns labeled with the participants' goals. Participants were asked to compare each goal with every other goal to rate conflict. Specifically, participants were told to "judge whether working toward this goal interferes with working toward attaining the other goal." Ratings were made on a scale from 1 (*not at all conflicting*) to 5 (*very conflicting*). A person-level conflict score was obtained by taking the mean of all the pair ratings for each participant. Although participants provided scores for every pair, only one rating for each pair was used during scoring due to the assumption that conflict ratings are symmetrical; correlations for each pair are close to 0.8 (Boudreaux & Ozer, 2013; Emmons et al., 1993). Internal consistency in this study was good (Cronbach's $\alpha = .77$). This measure was administered only at Time 1.

General Causality Orientations Scale

The GCOS (Deci & Ryan, 1985) assesses for three orientations: autonomy, controlled, and impersonal orientation (a sample of this measure can be found in Appendix B). The GCOS consists of 12 hypothetical vignettes about various life domains, such as applying for a job, failing an exam, going to a party, and organizing a picnic. Each vignette includes three ways of responding to the situation (autonomous, controlled, or impersonal). Participants rated how likely they are to respond in each of the three ways with a 7-point scale (ranging from *very unlikely* to *very likely*). Three subscale scores were obtained for each of the orientations by averaging across the 12 items for each subscale. Higher scores on a subscale indicates that the person endorsed more of that orientation. The GCOS autonomy subscale was internally consistent in this study

(Cronbach's $\alpha = .77$), however, the control subscale had lower consistency (Cronbach's $\alpha = .56$).

This measure was administered only at Time 1.

Depression Anxiety Stress Scales - Short Form

The DASS-21 (Lovibond & Lovibond, 1995) is a self-report measure of depression, anxiety, and stress (a sample of this measure can be found in Appendix B). This measure contains 21 items rated on a 4-point Likert scale ranging from 0 (does not apply to me at all) to 3 (*applied to me very much/most of the time*). The measure captures experiences over the past week.

Subscale scores were obtained by summing the 7 items for each scale and multiplying by two.

Higher numbers indicate higher symptoms. At Time 1, the DASS-21 Cronbach's α were found to be .88, .80, and .78 for the depression, anxiety, and stress subscales, respectively (Kelly et al., 2011). Time 2 Cronbach's α were .88, .85, .82, respectively.

Positive and Negative Affectivity Schedule

The PANAS (Watson, Clark, & Tellegen, 1988), is a self-report measure of affective states over the past week. It contains a 10 item positive affect subscale and a 10 item negative affect subscale. Given the use of the DASS to measure negative psychological well-being, only the positive affect subscale of the PANAS was used. Item scores were summed to obtain a total negative affect score. Cronbach's α were .88 for the positive affect subscale at Time 1 and .91 at Time 2.

Satisfaction With Life Scale

The SWLS (Diener, Emmons, Larsen, & Griffin, 1985) is a 5-item self-report measure of current satisfaction with life. Items, such as "the conditions of my life are excellent," are rated on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Items were summed; higher numbers indicate higher satisfaction. A Cronbach's α of .82 was found at Time 1 and .86 at Time 2.

Goal Progress

At Time 2, participants were asked to report progress made towards all six of their Time 1 goals. Participants received a list of their reported goals and answered "how much progress have you made towards this goal?" using a likert scale (0 = *none, haven't even tried* to 5 = *I've already met this goal*). A mean of all 6 goal ratings was used for each participant.

Goal Importance

Participants received a list of their six reported goals and were asked to rate each goal on their level of importance at Time 1 and Time 2. Participants answered "how important each goal is to you in your life?" using a Likert scale (1 = *not very important* to 5 = *extremely important*). A total score was created for each person at Time 1 and 2. This data was collected for exploratory purposes.

CHAPTER III

RESULTS

Descriptives

Means and standard deviations for all measures can be found in Table 1 and Table 2. Examples of the kinds of conflicting personal goals participants generated included: “keep a job” conflicting with “receive all As in my classes,” or “become proficient at guitar” conflicting with “earn a doctorate.”

Correlations

The correlations between Time 1 measures were calculated (see Table 1). As expected, conflict was positively related to controlled orientation, DASS stress, DASS depression, and DASS anxiety and negatively related to satisfaction with life. Autonomous orientation was found to be positively correlated with PANAS positive affect and satisfaction with life. Of surprise, controlled orientation and autonomous orientation were moderately correlated, and controlled orientation was also found to be positively correlated with PANAS positive affect.

Correlations for Time 2 measures were also calculated (see Table 2). Conflict at Time 1 was negatively related to goal progress at Time 2 and, similar to Time 1, was positively related to DASS stress at Time 2. As expected, progress was negatively correlated with DASS stress and DASS depression and positively correlated with PANAS positive affect and satisfaction with life. Additionally, autonomous orientation was found to be negatively correlated with DASS depression and positively related to satisfaction with life at Time 2.

Hypothesis 1

The SPSS Macro Model 4 was utilized to run a mediation analysis (Preacher & Hayes, 2004). This macro provided both the Sobel and the Baron and Kenny tests of mediation. This mediation analysis was run to determine if the independent variable (conflict) and dependent variables (well-being questionnaires) were related. In addition, we were able to test the mediational effect of goal progress on this relation. Five separate analyses of mediation were run for each of the well-being measures: DASS depression, DASS anxiety, DASS stress, PANAS - positive affect, and satisfaction with life. Results indicated a full mediation for the models with DASS depression, PANAS positive affect, and satisfaction with life. Results can be found in Table 3.

Results indicated that conflict was a significant predictor of progress, $b = -.19$, $SE = .09$, $p < .05$, and that progress was a significant predictor of DASS depression, $b = -2.70$, $SE = .63$, $p < .01$. Conflict was not a significant predictor of DASS depression after controlling for progress $b = 1.11$, $SE = .90$, $p = .21$, consistent with full mediation. Approximately 8% of the variance in DASS depression was accounted for by the predictors ($R^2 = .08$, $F(2, 264) = 10.81$, $p < .01$).

A full mediation was also observed with PANAS positive affect as the outcome variable. Results indicated that conflict was a significant predictor of progress, $b = -.21$, $SE = .09$, $p < .05$, and that progress was a significant predictor of PANAS positive affect, $b = 3.46$, $SE = .61$, $p < .01$. Conflict was not a significant predictor of PANAS positive affect after controlling for progress $b = -.33$, $SE = .87$, $p = .70$, consistent with full mediation. Approximately 11% of the variance in PANAS positive affect was accounted for by the predictors ($R^2 = .11$, $F(2, 266) = 16.70$, $p < .01$).

Finally, the relationship between conflict and satisfaction with life was also fully mediated by progress. Results indicated that conflict was a significant predictor of progress, $b = -$

.22, $SE = .09$, $p < .05$, and that progress was a significant predictor of satisfaction with life, $b = 2.65$, $SE = .44$, $p < .01$. Conflict was not a significant predictor of satisfaction with life after controlling for progress $b = -.19$, $SE = .64$, $p = .77$, consistent with full mediation. Approximately 12% of the variance in satisfaction with life was accounted for by the predictors ($R^2 = .12$, $F(2, 270) = 18.51$, $p < .01$).

Results for the mediation models with DASS anxiety and DASS stress can be seen in Table 3. The model with DASS anxiety as the outcome variable indicated that conflict was a significant predictor of progress. However, progress was not a significant predictor of DASS anxiety, and conflict was also not a significant predictor of DASS anxiety after controlling for progress. A similar pattern was observed in the model with DASS stress. Results indicated that conflict was a significant predictor of progress. However, progress was not a significant predictor of DASS stress. In this case, conflict was a significant predictor of DASS stress after controlling for progress. Indicating that conflict has a direct effect on DASS stress.

Hypothesis 2

A moderated mediation was used to determine the impact of causality orientations on the mediation between conflict, progress, and well-being (see Figure 1). Model 7 from the MODMED macro for SPSS developed by Preacher, Rucker, and Hayes (2007) was utilized. In Model 7, the path between the independent variable and the mediator is moderated. In this study, we examined whether the path between goal conflict and progress was moderated by the autonomous orientation subscale. A second model was run to test the moderating effect of the controlled orientation. The hypotheses were not supported by the data.

The interaction between conflict and autonomous motivation did not significantly predict progress with DASS depression as the outcome variable ($b = .03$, $SE = .12$, $p = .80$), DASS anxiety as the outcome ($b = .02$, $SE = .11$, $p = .86$), DASS stress as the outcome ($b = .04$, $SE =$

.21, $p = .74$), PANAS positive affect as the outcome ($b = .04$, $SE = .11$, $p = .74$), and satisfaction with life as the outcome ($b = .04$, $SE = .11$, $p = .72$).

Findings were similar with control motivation as the moderator. The interactions were not significant with DASS depression as the outcome variable ($b = .08$, $SE = .13$, $p = .54$), DASS anxiety as the outcome ($b = .06$, $SE = .13$, $p = .66$), DASS stress as the outcome ($b = .07$, $SE = .13$, $p = .60$), PANAS positive affect as the outcome ($b = .07$, $SE = .13$, $p = .59$), and satisfaction with life ($b = .07$, $SE = .13$, $p = .60$).

Exploratory

Mediation with Well-Being Difference Scores

A difference score variable was calculated for each of the well-being measures (DASS, PANAS, and satisfaction with life) in order to account for baseline well-being scores at Time 1. A slope was calculated between Time 1 and Time 2 and the difference variable was calculated with the following formula: $\text{Time 2} - (\text{slope} * \text{Time 1})$. The difference score was entered as the dependent variable in the mediation analyses explained in Hypothesis 1. Results supported the full mediation for the models with DASS depression and PANAS positive affect. However, the full mediation was not supported for satisfaction with life. The model with the DASS anxiety difference score also remained the same as in Hypothesis 1. Finally, the model with the difference score for DASS stress did not indicate a direct relationship between conflict and stress as in Hypothesis 1. Results can be found in Table 4.

Impersonal Orientations

Impersonal orientation was also scored for exploratory analyses. Mean, standard deviation, and correlations can be found in Table 1 and Table 2. Impersonal orientation did not correlate with either autonomous or controlled orientation. This orientation was found to positively correlate with conflict and all three DASS subscales at Time 1 and 2. Additionally,

impersonal orientation negatively correlated with progress and PANAS positive affect and satisfaction with life at Time 1 and 2. Similar to autonomous and controlled orientations, impersonal orientation was not found to moderate the relation between goal conflict and progress.

Goal Importance

A total goal importance score was calculated for each participant for exploratory analyses. A higher importance score indicated individuals reported goals with higher importance. Progress was positively correlated with importance at Time 1 ($r = .21, p < .01$) and Time 2 ($r = .39, p < .01$). A regression was conducted with progress as the dependent variable and conflict and importance as the interaction variables (see Figure 2 for results). There was a significant main effect for conflict ($\beta = -.66, p < .01$) predicting progress. Additionally, the interaction between goal importance and conflict predicted progress ($\beta = .64, p < .01$). The main effect for importance was not significant ($\beta = .01, p = .87$). The full model resulted in an $adj R^2 = .13, F(270) = 12.77, p < .01$. The significant interaction demonstrates that when individuals rate their goals as more important, they are protected from the negative effect of conflict on progress. In other words, progress is not as impacted by conflict when individuals view their goals as highly important.

CHAPTER IV

DISCUSSION

Goals and their attainment have been established as important for understanding individuals, behavior, and emotional well-being (Cantor et al., 1991; Elliot & Sheldon, 1997; Emmons, 1986). A majority of the extant literature is primarily focused on studying single goal characteristics, although most individuals hold multiple goals at a given time (Boudreaux & Ozer, 2013; Kernan & Lord, 1990; Vancouver, Weinhardt, & Schmidt, 2010). Therefore, further exploring consequences of balancing multiple goals on behavior and well-being is essential. The current study addressed this gap by examining the pursuit of multiple goals when faced with conflict related to limited resources or incompatible strategies related to well-being.

Existing literature on goal conflict is mixed. Some studies indicate competition between goals negatively interferes with progress and emotional well-being (Boudreaux & Ozer, 2013; Emmons, 1986; Emmons & King, 1988; Gray et al., 2017; Kehr, 2003; Locke et al., 1994; Riediger & Freund, 2004; Slocum et al., 2002), whereas other studies have not found a significant negative relation between goal conflict and emotional well-being (Boudreaux & Ozer, 2013).

Previous studies have identified potential mediators and moderators, such as goal commitment and goal value, that may explain mechanisms by which goal conflict relates to progress and well-being (Gray et al., 2017; Kehr, 2003; Kelly et al., 2011; Segerstrom & Nes, 2006; Slocum et al., 2002). Therefore, the current study expanded on this research and examined the potential mediating role of goal progress on the relation between goal conflict and well-being.

Additionally, literature supports the notion that conflicting goals themselves are not harmful (goal-level conflict); however, an individual's experience of conflict relates to low progress and well-being (person-level conflict; Boudreaux & Ozer, 2013; Segerstrom & Nes, 2006). Given that conflict does not impact all individuals equally, further understanding variables that impact the relationship between conflict and well-being is important. One such variable is causality orientations, or the tendency to pursue goals for personal value versus external pressure. Although there is extensive research in the area of Self-Determination Theory (SDT), a majority of studies focus on single goal research. This study aimed to bridge research on causality orientations in SDT and response to conflict from multiple goals. Although conflict was hypothesized to be negative for progress and well-being, it was expected that some individuals would be more impacted by conflict than others. Specifically, autonomously oriented individuals were expected to make more goal progress in the face of conflict than their controlled oriented counterparts, which would then lead to less impact on emotional well-being.

Implications of Results

Correlational Relationships

As expected, results indicated that conflict and well-being variables at Time 1 were correlated. Specifically, higher conflict was correlated with lower life satisfaction and higher depression, anxiety, and stress. High conflict was also related to higher stress at Time 2. These findings support past literature that indicates that conflict is related to an increase in negative affect (depression, anxiety, stress) but not a decrease in positive affect (Emmons, 1986; Emmons & King, 1988; Kehr, 2003). Additionally, correlational analyses in the present study indicated that high conflict was related to lower goal progress at Time 2. Lower goal progress was also found to be related to higher stress and depression and lower positive affect and satisfaction with

life at Time 2. These results add to the existing debate on goal conflict by supporting the connection between conflict and both progress and well-being.

With regard to motivational orientations, as predicted, controlled orientation was positively correlated with conflict. Autonomous orientation was not significantly related to conflict but was found to be correlated with positive affect and satisfaction with life at Time 1 and lower depression and satisfaction with life at Time 2. These correlations support theories that point to autonomous orientation being related to positive psychological outcomes (Deci & Ryan, 1985, 2000). Further, these findings increase insight into the impact of controlled orientation on multiple goal pursuit. Although extrinsic motivation is known to create vulnerability to conflict (Ntoumanis et al., 2014; Sheldon & Elliot, 1998), the relationship between controlled orientation and conflict had not yet been established.

Contrary to expectations, neither motivational orientation was found to relate to progress. Previous studies have suggested autonomous orientation relates to higher performance, persistence, and goal attainment; whereas controlled orientation has been linked to poor performance and failure in goal attainment (Deci & Ryan, 1985, 2000; Wong, 2000). However, Lee and colleagues (2003) posited that controlled orientation may be beneficial when the focus on expectations and standards motivated these individuals to act on their goals. This claim is supported by findings that highly controlled students were more alert and active in their school work (Wong, 2000). Being that participants in this study are college students, it is plausible that controlled orientation in an academic environment may help individuals become more focused on the goals they must accomplish. Hence, the expected negative influence of controlled orientation on goal progress may be cancelled out in this setting. Additionally, the strength of motivational orientations has also been suggested to depend on the environment. For example, someone who is autonomously motivated may not benefit from this orientation in an academic environment

consisting of strict schedules and deadlines. Considering that those who are high on autonomous orientation show positive performances in autonomy promoting situations (Deci & Ryan, 1985; Gagné & Deci, 2005; Vallerand, 1997), autonomous orientation may not be related to progress given the lack of opportunities for autonomous behavior in the academic environment.

Furthermore, controlled orientation was found to correlate with positive affect at Time 1. This finding is inconsistent with previous literature that identified a relation between controlled orientation and negative emotions such as guilt, tension, and fear (Deci & Ryan, 1985; Hodgins et al., 1996). Once again, the academic environment in which this study was conducted is important to consider. Previous literature suggests individuals high on controlled orientation report being happier in controlling environments than in environments promoting autonomy (Deci & Ryan, 1985).

Finally, controlled orientation was found to positively correlate with autonomous orientation. This finding was also contrary to expectation, as previous literature has not found a significant relation between the two constructs (with the exception of Blustein, 1988 and Williams & Deci, 1996 who did not provide an explanation). However, the three GCOS subscales have previously demonstrated only weak correlations, suggesting some independence between the subscales (Deci & Ryan, 1985; Koestner & Zuckerman, 1994). Also of importance, researchers have noted that individuals interpret events using all three orientations captured by the GCOS and the strength of each orientation depends on the environment (Deci & Ryan, 1985; Lee et al., 2003; Wong, 2000). Thus, a high score on one orientation does not necessarily mean a low score on the other, as the GCOS only measures strength of each orientation within a person and is not meant to classify individuals as one or the other (Deci & Ryan, 1985; Koestner & Zuckerman, 1994; Wong, 2000).

The observed correlation in this study between controlled and autonomous orientation may be due to several factors. College students may present a unique developmental stage in which individuals feel high autonomy (from being independent from their parents and free to pursue their interests), yet also experience high external control due to their academic environment (deadlines, scheduled classes, etc.). As highlighted by Deci and Ryan (1985), control oriented individuals focus on external events such as deadlines and surveillance to motivate themselves. Therefore, the academic environment may lead individuals who are normally only high on autonomy to also report high controlled orientation. Indeed, college students have been found to have higher mean scores on controlled orientation than professionals who completed the GCOS (Deci & Ryan, 1985).

Hypothesis 1

Five mediation analyses were conducted with depression, anxiety, stress, positive affect, and life satisfaction as dependent variables. In all five models high conflict was found to lead to lower progress. This direct effect contributes to the current debate about goal conflict, indicating that when conflict is measured at the person-level with unipolar scales it significantly predicts lower goal progress. However, conflict was not found to directly predict well-being, with the exception of stress (high conflict lead to higher stress at Time 2). Considering the view that conflict relates to well-being through other variables (Gray et al., 2007), the mediation analyses were relevant in adding to the existing debate. As predicted, progress significantly mediated the relationship between goal conflict and depression, positive affect, and life satisfaction. Despite past studies separately linking conflict to lower progress and lack of progress to well-being, this was the first study to examine these paths within the same model. Consequently, the present study demonstrated that conflict can lead to higher depressive symptoms, lower positive affect, and lower life satisfaction through a lack of progress in goals.

These findings were mostly supported by mediation models that included well-being difference scores. A difference score was obtained between Time 1 and Time 2 well-being variables to account for the baseline well-being scores and changes during that month. Results showed that progress significantly mediated the relationship between goal conflict and depression as well as positive affect, indicating that even when accounting for scores at Time 1 and looking at a change in depression and positive affect scores, progress explained the increase in depression and decrease in positive affect following conflict at Time 1. Results also supported the previous findings, demonstrating that conflict was not found to directly predict well-being, even for the difference in stress.

The nonsignificant mediations obtained with regard to anxiety and stress as dependent variables may relate to individual emotional response variability to a lack of progress when goals conflict. Prior literature has highlighted differences between depression and anxiety that could possibly explain the difference in the current findings. Depression, for example, is known to stem from a lack of motivation (Dickson & MacLeod, 2004). Therefore, when individuals experience decreased progress in their goals, they may lose motivation to continue the pursuit of their goals. This lack of motivation and engagement in their goals may relate to an increase in depressive symptoms. Previous studies have pointed to decreased action towards conflicting goals and an increase in rumination (Emmons & King, 1988). Secondly, self-conflict theories have identified that depression arises when there is a discrepancy between individuals' goals and their current state of goal achievement (Higgins, Klein, Strauman, 1985). Consequently, the lack of progress may have increased this discrepancy for individuals and therefore increased depressive symptoms. Furthermore, literature identifies a relation between depression and failure; whereas anxiety has been found to relate to future questions of danger and harm (Beck, Brown, Steer, Eidelson, & Riskind, 1987; Clark, Beck, & Stewart, 1990; MacLeod, Tata, Kentish, & Jacobsen,

1997). In the present study, a lack of progress during conflicting goals would be expected to increase depressive symptoms due to the failure of not achieving goals. However, anxiety may not be significantly related, because the lack of progress may not necessarily relate to future danger or harm.

A different explanation for the lack of a significant mediation with anxiety may be due to the measure used in this study. The DASS anxiety subscale includes questions that tend to mostly capture physiological symptoms of anxiety (e.g., dry mouth, difficulty breathing, trembling, etc.). The possibility exists that a measure of anxiety that includes a broader range of items, including those assessing cognitive symptoms of anxiety, may have yielded different results. In other words, a measure that captures the cognitive aspects of anxiety may have demonstrated a different relationship with conflict and lack of progress.

Hypothesis 2

Neither autonomous nor controlled orientation were found to moderate the relation between goal conflict and goal progress. As discussed above and contrary to present findings, previous studies have found performance to vary depending on the orientation (Deci & Ryan, 1985, 2000; Wong, 2000). Although performance measures vary widely in the literature (number of sales, school grades, quality of work, etc.) and are not always equivalent to progress measures. Further, intrinsic motivation has been associated with higher persistence and engagement in the face of difficult goals, whereas extrinsic motivation has been related to lower persistence and disengagement (Deci & Ryan, 2000; Ntoumanis et al., 2014; Patrick & Williams, 2012; Sheldon & Elliot, 1998). Finally, lower goal conflict has been associated with intrinsic motivation (Gorges et al., 2014; Kelly, Mansell, & Wood, 2015). Nonetheless, previous studies have primarily focused on single goal progress (with the exception of Gorges et al., 2014). In addition, the current hypothesis was largely based on research focused on the motivation behind goal pursuit

(extrinsic/intrinsic) due to the lack of existing literature discussing causality orientations, multiple goals, and conflict. Hence, despite the observed nonsignificance in analyses, the current study significantly contributed to extent literature, as the first to integrate causality orientations and the response to multiple goal conflict.

Several factors may explain the lack of moderation in the proposed model. As previously noted, controlled and autonomous orientations simply may not differ in their goal progress (see previous discussion under correlations). Therefore, progress may not differ in response to conflict for either orientation for this specific student sample. The negative impact of conflict may not have been decreased for individuals high on autonomy, as progress was not found to have a significant relation with this orientation.

Alternatively, causality orientations may provide a moderating effect not captured due to a lack of sufficient time between Time 1 and Time 2 (one month). Literature examining intrinsic/extrinsic motivation suggests extrinsic motivation relates to initial effort towards goals; however, effort was observed to slowly decline with presented obstacles. Specifically, both intrinsic and extrinsic motivation were correlated with intended effort mid-semester, but only intrinsic motivation was related to end of semester attainment (Sheldon & Elliot, 1998). These data suggest extrinsically motivated individuals initially demonstrate equivalent goal progress when compared to intrinsically motivated individuals; however, as their initial effort declines, goal progress may also decrease (Ntoumanis et al., 2014; Sheldon & Elliot, 1998). Thus, there is a likelihood that controlled orientation did not moderate the relationship between conflict and progress because the participants were still experiencing high intention and effort when data were collected at Time 2.

Of note, the earlier explanation that controlled orientation may not be related to a decline in progress due to an environment that provides constant cues of the importance of goals may

only be relevant during short periods of time. Koestner and colleagues (2008) hypothesized that if controlled oriented individuals experience constant feedback for longer periods of time, they would begin to demonstrate the expected maladaptive responses. In this sample, participants focused on external academic goals may have initially made rapid progress due to their exposure to an environment with constant deadlines and reminders of the saliency of their academic goals. Accordingly, a longer period of time between Time 1 and Time 2 may afford an opportunity to uncover a moderating effect.

Finally, appropriate use of the GCOS measure remains under debate. Considering the scale measures general orientations across different settings, predicting specific actions based on the orientations can be difficult (Deci & Ryan, 1985). Some have argued that in order to increase predictive ability, the scale should be used categorically rather than dimensionally. In other words, the GCOS can be utilized to predict differences between individuals who are either mostly autonomous or mostly controlled (Koestner & Zuckerman, 1994). Hence, the lack of moderation may have been related to using the scale dimensionally instead of examining group differences between controlled and autonomous participants.

Exploratory Analyses

Impersonal orientation was scored for exploratory analyses. Impersonal orientation has been found to inversely correlate with autonomous orientation (although they were uncorrelated in the current sample; Deci & Ryan, 1985). Additionally, impersonal orientation has been found to be related to higher BDI scores, self-consciousness, and anxiety. Accordingly, the conclusion has been made that impersonal orientation is more harmful than controlled orientation (Deci & Ryan, 1985). For this reason, the question emerged of whether impersonal orientation would demonstrate a relationship with progress, well-being, and moderate the relationship between conflict and progress.

Findings indicated that there was no correlation between impersonal orientation and the other two causality orientations. However, impersonal orientation correlated with goal conflict, as was found with controlled orientation. Interestingly, unlike controlled orientation, impersonal orientation was related to depression, anxiety, stress, lower positive affect, and lower satisfaction with life at Time 1 and 2. Finally, impersonal orientation was negatively correlated with progress. This supports the notion that, at least in the current sample, impersonal orientation is the most harmful of the three orientations. Finally, a moderating effect was also explored using the impersonal variable. No significant effects were observed with regard to impersonal orientation and goal progress.

Further, goal importance was explored to expand on theories indicating an interaction between conflict and variables related to well-being (Kelly et al., 2011; Segerstrom & Nes, 2006). Existing literature suggests goal importance is related to life satisfaction and influences individual interpretations of life events (Cantor et al., 1991; Emmons, 1986). Therefore, the potential moderating role of importance on the relationship between goal conflict and progress was analyzed.

Data from this study revealed that individuals who rated their goals as more important did not experience more progress in their goals. However, these individuals were protected from the negative impact of conflict on progress. This finding provides evidence for theories proposing that pursuing multiple valued goals could protect individuals from the negative impacts of conflict (Kelly et al., 2011; Segerstrom & Nes, 2006). In other words, goal importance may be one of the variables that account for the irregularity in how individuals react to goal conflict. Having a high number of important goals has been found to increase individuals' motivation (Karoly, 1999); therefore, individuals with a high number of important goals may be more motivated to continue to pursue their goals despite the existing obstacle of conflict.

Limitations and Future Directions

The present study was the first to address a gap in the literature by bridging SDT and multiple goal conflict. Current findings revealed new questions and additional gaps in further areas of examination. Future studies will be necessary to explore the interpretations made throughout this discussion. For example, gathering data on participants' environments will help increase understanding on how autonomous/controlled environments can change how individuals pursue multiple competing goals. Additionally, understanding possible developmental changes in orientation strength can expand existing knowledge on how college students may differ in their orientations as compared to younger adolescents or older adults.

Future studies will benefit from continuing to adopt a longitudinal approach in examining these constructs. As previously discussed, a limitation of this study may be the lack of sufficient time between Time 1 and 2 (only one month). Collecting data at the beginning and end of the semester, or more frequently repeated measures during the semester, may provide the necessary time and data for those with a controlled orientation to begin demonstrating negative effects. Moreover, gathering information about initial intended effort and actual goal related behavior over time will help understand the longitudinal and mechanistic changes formerly explained (Ntoumanis et al., 2014; Sheldon & Elliot, 1998). Similar to intended effort, assessing individual implementation plans may provide information regarding short-term versus long-term effects of motivational orientations on progress (Koestner et al., 2008).

Future examinations of these constructs should continue to examine potential mechanisms and buffers as they relate to orientation and multiple goal pursuit. For instance, measuring motivation and disengagement will provide information on individuals' experiences with depression following a lack of progress. Future studies may also benefit from measuring goal commitment to answer the question of whether controlled oriented individuals demonstrate

lower commitment to goals. This lower commitment could relate to lower progress and well-being in the longer term. Finally, another important variable to consider may be coping mechanisms, given findings that autonomously oriented individuals use more task-based coping, whereas controlled oriented individuals use disengagement coping (Ntoumanis et al., 2014).

Finally, the use of college students as participants is a limitation of this study. As extensively discussed, college students may present a unique demographic due to their restricted environment. However, data from college students is beneficial for exploratory studies and initial identification of proposed hypotheses. Future studies may consider reexamining these constructs with adult samples in order to assess potential cohort and group differences as they relate to orientation and goal progress. Additionally, the idiographic goals provided may be used in future studies by providing qualitative information regarding the life categories individuals set goals in within various populations. The number of life categories represented in participants' goals may also be used to compare to their level of reported conflict and the relation to goal progress.

Summary

This study successfully added to the existing debate on the effects of goal conflict on progress and well-being. Conflict was found to be negative related to both progress and well-being, supporting previous studies stating that goal conflict is damaging (Boudreaux & Ozer, 2013; Perring, Oatley, & Smith, 1988; Segerstrom & Nes, 2006; Riediger & Freund, 2004, 2008). Additionally, findings from this study further emphasized the importance of using unipolar, person-level scales of conflict. Furthermore, conflict was found to negatively impact emotional well-being through a lack of progress. This was the first study to explore the mediation effect of progress as it relates to goal conflict. Interestingly, exploratory analyses found that goal importance can have a protective effect on the impact of conflict on progress. These findings support theories that state that conflict impacts well-being through various moderators and

mediators (Kelly et al., 2011; Segerstrom & Nes, 2006; Slocum et al., 2002). Finally, the present study connected SDT and multiple goal research. Data indicated that autonomous orientation was related to positive psychological outcomes and controlled orientation was related to goal conflict. The relation between conflict and controlled orientation was particularly meaningful given the lack of previous literature examining multiple goals and causality orientation. Exploratory analyses revealed that impersonal orientation may be an area for continued examination. The current study found impersonal orientation was similarly linked to conflict, lack of progress, and decreased well-being in exploratory analyses.

Overall, the study of multiple goals is important for increasing our understanding of how individuals interact with their daily lives. Balancing multiple goals and overcoming conflict is key for human growth, psychological health, and adequate functioning in employment and educational settings (Lee et al., 2003). Distinguishing differences in how individuals respond to these situations can be beneficial for psychiatric and medical providers, employment companies, and educators. Discovering how individuals differently respond to conflict and resolve the conflict will inform treatment modalities, teaching approaches, and productivity and satisfaction at work.

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APPENDIX A
TABLES AND FIGURES

Table 1
Descriptive Statistics and Correlations of Time 1 Data

| | Mean (Standard Deviation) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---------------------------|------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|
| 1. Conflict | 2.07 (.59) | | | | | | | | |
| 2. Autonomous Orientation | 5.53 (.76) | -.01 | | | | | | | |
| 3. Controlled Orientation | 4.35 (.66) | .13* | .32** | | | | | | |
| 4. DASS Stress | 25.68 (8.10) | .19** | -.07 | .05 | | | | | |
| 5. DASS Depression | 21.90 (8.72) | .26** | -.09 | -.02 | .59** | | | | |
| 6. DASS Anxiety | 21.98 (7.89) | .17** | -.02 | -.03 | .70** | .61** | | | |
| 7. PANAS Positive | 28.59 (8.10) | .02 | .21** | .17** | -.13* | -.29** | -.10 | | |
| 8. Satisfaction with Life | 22.77 (6.41) | -.22** | .14* | .03 | -.35** | -.53** | -.33** | .33** | |
| 9. Impersonal Orientation | 3.52 (.86) | .21** | .07 | .10 | .26** | .41** | .36** | -.15* | -.28** |

* $p < .05$. ** $p < .01$. *Note.* DASS = Depression anxiety stress scales; PANAS = positive and negative affectivity schedule.

Table 2

Descriptive Statistics and Correlations of Time 2 Data

| | Mean (Standard Deviation) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----------------------------------|------------------------------|-------|-------|------|--------|--------|--------|--------|--------|-------|
| 1. Conflict T1 | 2.07 (.59) | | | | | | | | | |
| 2. Autonomous Orientation T1 | 5.53 (.76) | -.01 | | | | | | | | |
| 3. Controlled Orientation T1 | 4.35 (.66) | .13* | .32** | | | | | | | |
| 4. Progress T2 | 3.44 (.86) | -.15* | .06 | .07 | | | | | | |
| 5. DASS T2 Stress | 25.62 (8.57) | .14* | -.10 | .08 | -.13* | | | | | |
| 6. DASS T2 Depression | 22.40 (8.83) | .11 | -.14* | -.04 | -.26** | .68** | | | | |
| 7. DASS T2 Anxiety | 21.17 (7.93) | .05 | -.07 | -.01 | -.09 | .71** | .66** | | | |
| 8. PANAS Positive T2 | 28.54 (8.88) | -.07 | .11 | .04 | .34** | -.20** | -.25** | -.12 | | |
| 9. Satisfaction with Life T2 | 22.48 (6.60) | -.07 | .25* | .07 | .35** | -.33** | -.48** | -.25** | .38** | |
| 10. Impersonal Orientation T1 | 3.52 (.86) | .21** | .07 | .10 | -.20** | .25** | .32** | .22** | -.20** | -.14* |

* $p < .05$. ** $p < .01$

Note. T1 = Time 1; T2 = Time 2; DASS = Depression anxiety stress scales; PANAS = positive and negative affectivity schedule.

Table 3

Mediation Analyses Results

| Dependent Variable | N | A Path | | B Path | | C Path | |
|------------------------|---|----------|----------|----------|----------|----------|----------|
| | | <i>b</i> | <i>T</i> | <i>b</i> | <i>T</i> | <i>b</i> | <i>T</i> |
| DASS Depression | 267 | -.19* | -2.23 | -2.70** | -4.27 | 1.11 | 1.23 |
| <i>Overall Model</i> | $R^2 = .08, F(2, 264) = 10.81, p < .01$ | | | | | | |
| PANAS Positive Affect | 269 | -.21* | -2.47 | 3.45** | 5.64 | -.33 | -.38 |
| <i>Overall Model</i> | $R^2 = .11, F(2, 266) = 16.70, p < .01$ | | | | | | |
| Satisfaction with Life | 273 | -.22* | -2.55 | 2.65** | 5.96 | -.19 | -.29 |
| <i>Overall Model</i> | $R^2 = .12, F(2, 270) = 18.51, p < .01$ | | | | | | |
| DASS Anxiety | 271 | -.20* | -2.36 | -.75 | -1.28 | .45 | .55 |
| <i>Overall Model</i> | $R^2 = .01, F(2, 268) = 1.10, p = .34$ | | | | | | |
| DASS Stress | 272 | -.22* | -2.52 | -1.07 | -1.75 | 1.81* | 2.07 |
| <i>Overall Model</i> | $R^2 = .03, F(2, 269) = 4.34, p < .05$ | | | | | | |

* $p < .05$ ** $p < .01$

Note. DASS = Depression anxiety stress scales; PANAS = positive and negative affectivity schedule.

Table 4

Mediation Analyses with Difference Scores

| Dependent Variable | N | A Path | | B Path | | C Path | |
|------------------------|---|----------|----------|----------|----------|----------|----------|
| | | <i>b</i> | <i>T</i> | <i>b</i> | <i>T</i> | <i>b</i> | <i>T</i> |
| DASS Depression | 266 | -.19* | -2.20 | -1.83** | -3.35 | -.63 | -.82 |
| <i>Overall Model</i> | $R^2 = .04, F(2, 263) = 5.69, p < .01$ | | | | | | |
| PANAS Positive Affect | 268 | -.23** | -2.62 | 2.36** | 4.36 | -.62 | -.79 |
| <i>Overall Model</i> | $R^2 = .07, F(2, 265) = 10.17, p < .01$ | | | | | | |
| Satisfaction with Life | 272 | -.22* | -2.53 | 1.07** | 3.40 | 1.21** | 2.66 |
| <i>Overall Model</i> | $R^2 = .06, F(2, 269) = 8.13, p < .01$ | | | | | | |
| DASS Anxiety | 268 | -.20* | -2.34 | -.54 | -1.11 | -.76 | -1.11 |
| <i>Overall Model</i> | $R^2 = .01, F(2, 265) = 1.08, p = .34$ | | | | | | |
| DASS Stress | 271 | -.22* | -2.49 | -.95 | -1.82 | .43 | .57 |
| <i>Overall Model</i> | $R^2 = .03, F(2, 269) = 4.34, p < .05$ | | | | | | |

* $p < .05$ ** $p < .01$

Note. DASS = Depression anxiety stress scales; PANAS = positive and negative affectivity schedule.

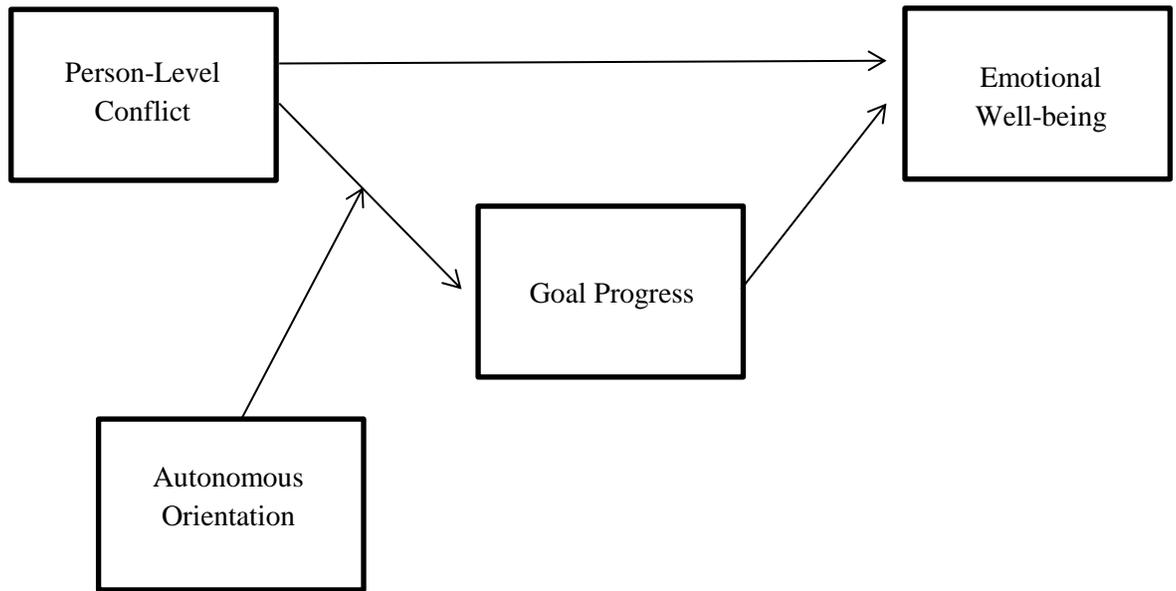


Figure 1. Moderated Mediation Model for Hypothesis 2

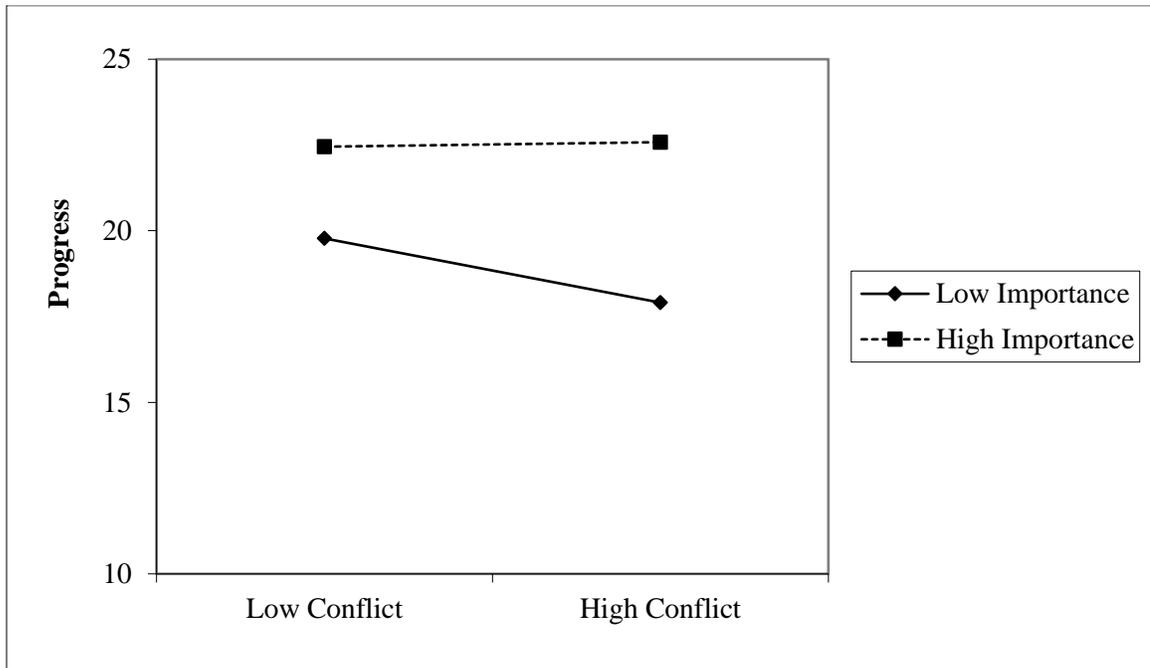


Figure 2. Importance as a Moderator Between Goal Conflict and Progress

APPENDIX B

MEASURES

Conflict Matrix

A personal goal is something that you are typically trying to accomplish or attain. Examples of personal goals include "trying to be in good health" or "trying to avoid being noticed by others." These goals can have to do with your job, school, social/romantic life, religion, family, health or anything else that you are typically trying to do. In the blanks in the table below, please write your 6 most important personal goals you will be focusing on this semester, one in each blank. You will need to write each goal twice, once in the top column and once in the first row.

Next judge whether working toward the top row goal interferes with working toward attaining the first column goal for each pair. Use the following scale:

1 = *not at all conflicting* 2 = *rarely conflicting* 3 = *sometimes conflicting*

4 = *often conflicting* 5 = *very conflicting*

| | Goal 1: | Goal 2: | Goal 3: | Goal 4: | Goal 5: | Goal 6: |
|---------|---------|---------|---------|---------|---------|---------|
| Goal 1: | | | | | | |
| Goal 2: | | | | | | |
| Goal 3: | | | | | | |
| Goal 4: | | | | | | |
| Goal 5: | | | | | | |
| Goal 6: | | | | | | |

The General Causality Orientations Scale (GCOS)

These items pertain to a series of hypothetical sketches. Each sketch describes an incident and lists three ways of responding to it. Please read each sketch, imagine yourself in that situation, and then consider each of the possible responses. Think of each response option in terms of how likely it is that you would respond that way. (We all respond in a variety of ways to situations, and probably most or all responses are at least slightly likely for you.) If it is very unlikely that you would respond the way described in a given response, you should circle answer 1 or 2. If it is moderately likely, you would select a number in the mid range, and if it is very likely that you would respond as described, you would circle answer 6 or 7.

1. You have been offered a new position in a company where you have worked for some time. The first question that is likely to come to mind is:

a) What if I can't live up to the new responsibility?

1 2 3 4 5 6 7
very unlikely moderately likely very likely

b) Will I make more at this position?

1 2 3 4 5 6 7
very unlikely moderately likely very likely

c) I wonder if the new work will be interesting.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

2. You have a school-age daughter. On parents' night the teacher tells you that your daughter is doing poorly and doesn't seem involved in the work. You are likely to:

a) Talk it over with your daughter to understand further what the problem is.

1 2 3 4 5 6 7

very unlikely moderately likely very likely

b) Scold her and hope she does better.

1 2 3 4 5 6 7

very unlikely moderately likely very likely

c) Make sure she does the assignments, because she should be working harder.

1 2 3 4 5 6 7

very unlikely moderately likely very likely

3. You had a job interview several weeks ago. In the mail you received a form letter which states that the position has been filled. It is likely that you might think:

a) It's not what you know, but who you know.

1 2 3 4 5 6 7

very unlikely moderately likely very likely

b) I'm probably not good enough for the job.

1 2 3 4 5 6 7

very unlikely moderately likely very likely

c) Somehow they didn't see my qualifications as matching their needs.

1 2 3 4 5 6 7

very unlikely moderately likely very likely

4. You are a plant supervisor and have been charged with the task of allotting coffee breaks to three workers who cannot all break at once. You would likely handle this by:

a) Telling the three workers the situation and having them work with you on the schedule.

1 2 3 4 5 6 7

very unlikely moderately likely very likely

b) Simply assigning times that each can break to avoid any problems.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

c) Find out from someone in authority what to do or do what was done in the past.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

5. A close (same-sex) friend of yours has been moody lately, and a couple of times has become very angry with you over "nothing." You might:

a) Share your observations with him/her and try to find out what is going on for him/her.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

b) Ignore it because there's not much you can do about it anyway.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

c) Tell him/her that you're willing to spend time together if and only if he/she makes more effort to control him/herself.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

6. You have just received the results of a test you took, and you discovered that you did very poorly. Your initial reaction is likely to be:

a) "I can't do anything right," and feel sad.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

b) "I wonder how it is I did so poorly," and feel disappointed.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

c) "That stupid test doesn't show anything," and feel angry.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

7. You have been invited to a large party where you know very few people. As you look forward to the evening, you would likely expect that:

a) You'll try to fit in with whatever is happening in order to have a good time and not look bad.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

b) You'll find some people with whom you can relate.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

c) You'll probably feel somewhat isolated and unnoticed.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

8. You are asked to plan a picnic for yourself and your fellow employees. Your style for approaching this project could most likely be characterized as:

a) Take charge: that is, you would make most of the major decisions yourself.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

b) Follow precedent: you're not really up to the task so you'd do it the way it's been done before.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

c) Seek participation: get inputs from others who want to make them before you make the final plans.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

9. Recently a position opened up at your place of work that could have meant a promotion for you. However, a person you work with was offered the job rather than you. In evaluating the situation, you're likely to think:

a) You didn't really expect the job; you frequently get passed over.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

b) The other person probably "did the right things" politically to get the job.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

c) You would probably take a look at factors in your own performance that led you to be passed over.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

10. You are embarking on a new career. The most important consideration is likely to be:

a) Whether you can do the work without getting in over your head.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

b) How interested you are in that kind of work.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

c) Whether there are good possibilities for advancement.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

11. A woman who works for you has generally done an adequate job. However, for the past two weeks her work has not been up to par and she appears to be less actively interested in her work. Your reaction is likely to be:

a) Tell her that her work is below what is expected and that she should start working harder.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

b) Ask her about the problem and let her know you are available to help work it out.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

c) It's hard to know what to do to get her straightened out.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

12. Your company has promoted you to a position in a city far from your present location. As you think about the move you would probably:

a) Feel interested in the new challenge and a little nervous at the same time.

1 2 3 4 5 6 7
very unlikely moderately likely very likely

b) Feel excited about the higher status and salary that is involved.

1 2 3 4 5 6 7

very unlikely moderately likely very likely

c) Feel stressed and anxious about the upcoming changes.

1 2 3 4 5 6 7

DASS-21

Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree, or a good part of time

3 Applied to me very much, or most of the time

1. I found it hard to wind down

2. I was aware of dryness of my mouth

3. I couldn't seem to experience any positive feeling at all

4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)

5. I found it difficult to work up the initiative to do things

6. I tended to over-react to situations

7. I experienced trembling (e.g., in the hands)

8. I felt that I was using a lot of nervous energy

9. I was worried about situations in which I might panic and make a fool of myself

10. I felt that I had nothing to look forward to

11. I found myself getting agitated

12. I found it difficult to relax

13. I felt down-hearted and blue

14. I was intolerant of anything that kept me from getting on with what I was doing

15. I felt I was close to panic
16. I was unable to become enthusiastic about anything
17. I felt I wasn't worth much as a person
18. I felt that I was rather touchy
19. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)
20. I felt scared without any good reason
21. I felt that life was meaningless