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GOOD THINGS COME TO THOSE WHO (PEACEFULLY) WAIT: TOWARD A THEORY OF PATIENCE

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Abstract

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Patience is among the most common colloquially known virtues, and yet its empirical attention is

among the smallest of all virtues. In this dissertation, I focused on the conscientiousness-based

virtue of patience in terms of theory and intervention. In my first study, I examined the effects of

a preliminary intervention workbook designed to promote patience. In my second study, I

examined a number of correlates informed by patience literature as potential antecedents,

mechanisms, and outcomes of patience and, using structural equation modeling, present a theory

of patience. Finally, in my third study, I beta tested the patience intervention workbook along

with outcome measures posited in my proposed theory of patience in order to examine this

theory under experimental and longitudinal design. In Study 1, the patience workbook did indeed produce higher patience outcomes at post-test relative to the control condition but was not significantly different from a positivity workbook condition. Participants in the patience workbook condition also improved in trait self-control, trait forgivingness, and trait negativity. In Study 2, familiarity with an identified stressor and perceived stress related to that stressor predicted state patience for that stressor, consistent with an ego-depletion model of patience. Additionally, patience predicted mental (resilience, anxiety, satisfaction with life, depression, positive affect, and negative affect), physical, relational (communicative competence and perceived social support), and spiritual (spiritual attitudes and involvement) health outcomes. Study 3 replicated the support for an ego-depletion model of patience, and those in the patience intervention workbook improved in trait and state patience, anxiety, and depression, extending and partially supporting the outcomes found in Study 2. The present studies support the use of a workbook intervention to promote patience and additional virtue and mental health outcomes. Implications of these results and future research directions are discussed.

Good Things Come to Those Who (Peacefully) Wait: Toward a Theory of Patience

"A man who is a master of patience is a master of everything else." –George Savile

Virtues have been defined as "the character strengths that make it possible for individuals to pursue their goals and ideals and to flourish as human beings" (Fowers, 2005, p. 4). This flourishing has implications for both well-being and for behavior, making virtues of interest to psychology.

Definitional Diversity in Patience

If you were to ask a friend or neighbor to name some virtues, chances are that they would be able to name "patience." Patience has been defined as warmly as "a nurturing capacity" (Neben & Chen, 2010, p. 98), as sterile as a long-term reward response, (O'Malley, Davies, & Cline, 2010), and as vaguely as simply the behavioral act of waiting.

Patience versus an amalgam of virtues. Peterson and Seligman (2004), pioneers of the empirical study of character strength and virtue, conceptualized patience not as a distinct virtue, but as an amalgam of the virtues of persistence, open-mindedness, and self-regulation. Schnitker and Emmons (2007) argued this distillation, concluding that all 24-strengths included in the Values in Action Inventory of Strengths (Peterson & Seligman, 2004) accounted for only 26% of variance in patience scores. Thus, it seemed that patience was distinct, over and above any combination of 24 previously identified character strengths, and patience has thus received specific empirical attention as a unique psychological construct for little more than five years.

Reason can illuminate how patience differs from these three virtues identified by Peterson and Seligman. Though patience certainly can and does involve each of these in various ways in various circumstances, patience remains distinct from persistence, as one can persist in a state of manic anxiety; additionally, when persistence is futile, as when sitting in stalled traffic,

one can be patient without persisting, actively accepting a role of patient resignation. One can be open to hearing another's views while stirring with fury inside, just as one can be open to trying bungee jumping while experiencing frightening heart palpitations and fearful remorse. One can keep oneself from eating a second helping of birthday cake despite a fervent yearning for sweets, and one can regulate one's behaviors despite waves of emotional turmoil inside.

Patience versus self-regulation. This speaks to self-regulation, which in particular is often misconstrued as patience and vice versa. Though self-regulation skills such as distraction and reappraisal may serve to quiet impatient emotions, Schnitker and Emmons (2007) maintain that self-regulation, though often involving strong emotions, is characterized by its behavioral response, whereas patience is characterized by its emotional response.

Patience versus delay of gratification. Delay of gratification represents an area related to self-regulation that is also often associated or even confused with patience. It is true that at the mention of patience, many will sigh and tell you, "Good things come to those who wait." But is this an all-encompassing definition, to distill patience to delay of gratification, or even just to delay? In many studies, patience is defined as the ability to delay a "larger later" gratification or reward (Read, Frederick, & Scholten, 2013) above a "smaller sooner" gratification or reward. A patient person, per this definition, sacrifices time to attain higher reward, whether it be better product, more food, more money, etc. (Ainslie & Haslam, 1992; Frederick, Loewenstein, & O'Donoghue, 2003). While this may be an exhibition of behavioral patience, this idea is more congruent with delayed gratification and intertemporal choice than the internal virtue of patience.

Delaying gratification, while associated with a host of benefits such as higher academic performance and better coping with stress and frustration (Mischel, Shoda, & Rodriguez, 1989), is not found among any classification of virtues, despite its strong associations with the virtues of

self-regulation and even with patience. This is because *eudaimonia*, the Aristotelian concept of virtue for the sake of virtue, is inconsistent with this idea of reward. The motivation behind *eudaimonia,* as opposed to *hedonism*, is to do the right thing in order to do the right thing, not for personal gains. This does not mean that patience does not lead to personal gains, but rather that its purpose and motivation does not lie in gratification. Schnitker (2012) differentiates patience from delay of gratification as such: delay of gratification involves the choice between a "smaller sooner" versus a "larger later" outcome; patience, though related, "is often demonstrated in situations where there is no choice about whether or not to wait – the only choice is *how* one waits" (p. 264). This "how" component appears to be what sets patience apart from self-regulation and delay of gratification.

Though virtue is often related to mood (some hold that positive mood "broadens and builds," potentially leading to virtue; Fredrickson, 2001; and some hold that virtue produces positive mood as a byproduct; Seligman, 2002), this "how" may not be most accurately described as positive versus negative. People often experience waiting as negative (Loewenstein & Prelec, 1991), yet consider the agitation of a child on Christmas Eve or the night before a Disney vacation. "I can't wait!" is a phrase we so often hear in this instance. Waiting under these circumstances, though perceived as somewhat torturous and adverse as a child, is so fundamentally different from the frustration of an adult stuck in traffic on his way to work. Thus, it is not enough to say that patience involves waiting more positively, nor can it be said that patience is just "being positive," but perhaps more calm, a regression to the mean of excitement and stress.

Patience versus emotion regulation. This is consistent with Schnitker's (2012) definition of patience. She defines it as "the propensity of a person to wait *calmly* in the face of

frustration, adversity, or suffering" (p. 263) [italics mine]. At first glance, this sounds no different from another type of regulation: emotion regulation. Defined as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998, p. 275), emotion regulation describes many concepts, including mindfulness and relaxation, and even virtues like forgiveness, which require exacting control over one's emotional experience. Patience too involves emotion regulation, but it is not explained fully by emotion regulation. One can easily conceive of a person nurturing a lust for retributive violence against one who slighted him or her; the person regulates his or her emotions until the proper time to spring into violent retribution. Emotion regulation occurred, but not the virtue of patience.

A part of the distinction between patience and emotion regulation comes from this virtuous nature of patience. Matthew Hale (1675) historically identifies patience as an excellent virtue, which impacts "our condition in this life…and Comfortable passage through (it)" (p. 188). Patience in this context refers to encountering "disappointment, afflictions, and adversity, whereby we carry a quiet and submissive mind, without murmuring, passion, or discomposure of spirit, in all afflictions, whether sickness, loss of friends, poverty, reproach, disgrace, or the like" (p. 188). This is eerily similar to Schnitker's (2012) definition nearly 450 years later, in an era of instant gratification and psychotropic emotion regulation.

What makes this virtuous over and above other healthy lifestyle habits, even those requiring self-regulation of emotion-regulation? Virtues such as patience are held to be "extraordinary strengths" and "powerful resources" with which to respond to the human condition that tend to be beneficial to and morally considerate of the well-being of both the giver, the receiver, and to society (Aristotle, 2000; Peterson & Seligman, 2004). What makes

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virtues such as patience so extraordinary is that they engage in a higher functioning that

disciplines self-interest and transcends the immediate needs of the self in favor of long-term self

or other-interest. A uniting factor among all virtues, including forgiveness, humility, generosity,

self-control, responsibility, and so on, in that all require emotions and behaviors that we would

not do if we were purely and immediately self-interested. Patience, then, goes above emotion

regulation skills, and can be conceived as more of an active letting go, an inner attitude of

relinquishing control and self-interest in an act of long-term vision amid stressful circumstances.

Thus, while regulating one's emotions on an as-needed basis is a useful skill, the enduring virtue

of patience is more in line with what can be considered a virtuous lifestyle.

Patience Can Be a Trait or a State

Still, patience can manifest in both trait and state mediums. For example, one can choose

to be patient in a certain circumstance (state patience) but generally not be a patient person (trait

patience). Traits are personal characteristics that indicate some measure of consistency across

time and situations. However, to have a trait is not to be completely consistent across time and

situations; such rigidity would not be adaptive. Thus, one can be patient most of the time (trait

patience) but not in certain situations (state patience). Though obviously related, those higher in

trait patience are more likely to exhibit state patience in a given situation (Schntiker, 2012).

In the previous quote from Matthew Hale (1675), he describes adversity largely in terms

of what Schnitker (2012) would call life-hardship patience. Schnitker identifies two further

facets to patience: daily-hassles patience and interpersonal patience. Daily-hassles patience,

perhaps the most familiar of these three, is fundamentally grounded in temporal frustration, such

as waiting in line. Life-hardship patience is a more long-term version of daily-hassles, involving

calm endurance through difficult seasons of life in which one might be advised, "this too, shall

pass," including illness, loss (or graduate school). Interpersonal patience, a relatively new idea in empirical patience literature but not-so-new to ancient religious texts, involves being patient with others. Schnitker (2012) claims that interpersonal patience does not necessarily always involve a temporal component, such as when regulating negative emotions to manifest more calmly. Still, interpersonal patience may entail spending time helping someone to understand a lesson or taking time to be sure someone feels cared for.

Despite the role of patience in Levinas' other-oriented, philosophical brand of ethics (Kunz, 2002) and its valuation in a number of ancient religious texts (Schnitker & Emmons, 2007), Peterson and Seligman did not include patience among the character traits and virtues in their virtue classification system, the Values in Action Inventory of Strengths. Though Schnitker and Emmons (2007) went on to dispute that patience does indeed fit the criteria for character strengths and virtues, patience does have a role in another virtue classification system.

Worthington and Berry (2005) placed patience as one of nine conscientiousness-based virtues, alongside others such as justice and self-control. The aim of these virtues is fairness, reciprocity, and cooperation within the self and among others, and they tend to be enacted for the sake of inhibiting self-interest in the service of social responsibility. Alternatively, Worthington and Berry (2005) identify warmth-based virtues. While often related to conscientiousness-based virtues, warmth-based virtues tend to inhibit self-interest and activate the care of specific others. These include love, forgiveness, compassion, and generosity and are aimed toward an inner peace, comfort, and harmony. Given Schnitker's (2012) description of patience as a three-component process, which also includes interpersonal patience along with life-hardship patience and daily-hassles patience, the classification of patience as a conscientiousness virtue might now

be expected to straddle this warmth vs. conscientiousness-based line more so than previously conceived.

Can Patience Be Bad?

Before continuing on to explore questions such as the one posed immediately above, I pause to ask another: can patience be bad? It can be easy to assume that one who exercises patience may wear it as a guise for laziness, indecision, apathy, or passivity. Yet Tucker and Turner (2011) note that patience is not related to neglect or compliance. Consistent with Aristotle's conceptualization of virtues as "golden means," representing moderation between two extremes (Rorty, 1980), Schnitker (2012) considers patience as the mean of recklessness and sloth. One who is high in trait patience, according to Schnitker, does not default to patience at all times, but in fact has the patience to know when to wield state patience in certain situations. Thus, she concludes that this moderation inherent in the virtue of patience precludes a dark side to true patience.

Introduction to the Current Studies

The current studies seek to examine the promotion of patience as a virtue and psychological construct and to unite patience research into a unified theory of antecedents, mechanisms, and outcomes. This led me to develop a series of studies. The first is a preliminary test of a workbook intervention to promote patience. My second study draws heavily on literature reviewed below and presents a theory of patience in a duo of sub-studies, examining antecedents, mechanisms, and outcomes of patience. My final study seeks to replicate efficacy findings from the first study; however, in the final study, I make several key modifications of Study 1. First, I revise the workbook intervention, to provide a functional beta testing of the intervention workbook to promote patience. Second, in the spirit of translational research, using

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basic research findings to promote better efficacy research on interventions, I integrate the findings from Study 2 under experimental and longitudinal conditions to provide an experimental examination of the patience theory in Study 2 and of the beta version of the patience workbook relative to a positivity workbook and no-action control condition.

Given this framework for what patience is and is not, I turn to a review of empirical patience literature to better inform a theory of patience, including antecedents, mechanisms, and outcomes therein.

Review of Literature

"Every misfortune is subdued by patience." – Aeneid V.

Inherent to above definitions of patience is the presence of adversity, inciting the tendency to react negatively. To overcome this tendency is the challenge of patience. For this reason, I consider the patience literature in light of a stress and coping model.

Lazarus (1999) revised his original stress and coping model (Lazarus & Folkman, 1984), admitting to the complicated nature of accounting for so many variables relevant to stress and coping. In his 1999 model, Lazarus proposed that person variables (such as goals, beliefs, and personal resources) and environment variables (including harms, threats, challenges, and benefits) interact to form a person-environment relationship. This relationship of person variables and environmental stressors (or benefits) leads to an appraisal process. From this appraisal comes a corresponding stress response, which then determines the type of coping response. Following this coping response, the relational meaning is revised, and a number of social, health, and morale outcomes result. Lazarus (1999) cautioned against strict adherence to the directionality of this model, acknowledging the multiple feedback loops possible throughout the stages of this model.

Patience can be viewed within this framework as a coping response to stress. Qualitative inquiries in the young field of patience support this view in populations enduring life hardship stress, including submarine crews (Kimhi, Mindel, & Oget, 2011), leukemia patients undergoing stem-cell transplantation treatment (Farsi, Nayeri, & Negarandeh, 2010), liver transplant waitlist patients and their spouses (de Souza Brito Dias & Medeiros, 2010), and burn victims (Wallis, Renneberg, Neumann, Ripper, & Bastine, 2007). Correlational inquiries too find patience to be a viable coping response, as in populations of Korean-American immigrants reliance on patience to cope with mental health struggles (Bernstein, 2007) and differences in types of stressors and coping responses (including patience) in urban versus rural Chinese children (Qu, Zhong, Yan, & Yang, 2008). This preliminary evidence of patience as a coping response merits further conceptualization, in addition further exploration of the patience literature at large.

Purpose of the Present Review

This review will explore over 100 empirical studies from a number of academic disciplines, including psychology, economics, health care, and education. These studies will be divided by theme: qualitative observations, potential antecedents to patience, relational correlates, personality correlates, mental health correlates, physical health correlates, cultural considerations, potential mechanisms, existing models related to patience, measures of patience, and employed patience interventions. Results will be synthesized into a proposed theory of patience and considered within a stress and coping framework.

Method of the Review

A *PsycInfo* search for "patience" in November of 2013 yielded 1231 results. My criteria for inclusion of studies were empirical studies in peer-reviewed journals that treated patience as a focal concern. Of these 1231 initial results, 410 were empirical research, 264

of which were published in peer-reviewed journals. I narrowed the scope of my review to the last ten years (2013 through 2004), leaving 145 peer-reviewed empirical articles for initial review.

Of these 145, "patience" appeared as an author or other name within the publication in 14. "Patience" appeared a single word in the paper or was used anecdotally within the text (e.g., "researchers will need patience to continue the study of alcoholism") in 34 publications. Empirical research was not actually conducted in 4 papers, and one paper was focused on an animal population. Thus, 91 articles containing 113 studies were included in this review. As a caveat, very few of these studies refer to patience in its virtuous or psychological value. Rather, patience is often treated simply as a waiting behavior; results should be interpreted with caution.

Results of the Systematic Review

Of the 91 works reviewed, 42 were qualitative, 30 were correlational, 24 were experimental, 9 were scale-development studies, 4 were descriptive, 3 were observational, 3 were quasi-experimental, and 2 were numerical (derived from equations); this does not add to 113 because some studies had multiple design components. Of these, 95 studies were cross-sectional, 14 were longitudinal, and 2 were numerical. Some studies ($n = 24$) used university samples, and 41 used international samples; these latter figures are estimates, as sample details were not provided for all studies.

The present review revealed eleven major themes in the literature that might contribute to a theory of patience: qualitative observations, potential antecedents to patience, relational correlates, personality correlates, mental health correlates, physical health correlates, potential mechanisms by which patience occurs, existing models related to

patience, measures of patience; employed patience interventions, and cultural

considerations. All studies reviewed can be found in the attached summary table (see

Appendix A).

Qualitative observations. A large portion of the 42 qualitative studies reviewed (*n*

= 21, all qualitative and cross-sectional) emphasized the importance and necessity of

patience in helping professions, such as teaching and nursing. For example, a qualitative,

cross-sectional study of 20 mental health professionals in Florida (age *M* = 43.2) found that

patience was the most often cited personality characteristic described as needed for work in

the mental health field (70%; Sivis & McCrae, 2010).

Many strong themes emerged from the qualitative research. *Empathy* had the

strongest presence in this subset of research and was discussed alongside patience in seven

of these 21 studies (Blum & Gordon, 2009; Buchanan, Kemppainen, Smith, MacKain, &

Cox 2011; Cleary, Horsfall, Mannix, O'Hara-Aarons, & Jackson, 2011; de Carvalho &

Merighi, 2005; Einfeld & Collins, 2008; Klassen et al., 2012; Sivis, & McCrae, 2010).

Similarly, six studies mentioned *listening* (Cheung, & Boutte-Queen, 2010; Cleary et al.,

2011; de Carvalho & Merighi, 2005; Koskenniemi, Leino-Kilpi, & Suhonen, 2013; Paul &

Sanders, 2009; Sivis, & McCrae, 2010), and five studies mentioned being *supportive*

(Ahrens, DuBois, Garrison, Spencer, Richardson, & Lozano, 2011; Buchanan, et al., 2011;

McCann, Lubman, & Clark, 2012; Schulte, Slate, & Onwuegbuzie, 2010; Urstad, Wahl,

Andersen, Øyen, & Fagermoen, 2012). Four studies discussed *respect* (Ahrens et al., 2011;

Einfeld & Collins, 2008; Koskenniemi, et al., 2013; Sivis, & McCrae, 2010), *compassion*

(Blum & Gordon, 2009; Celdran, Triado, & Villar, 2009; Klassen et al., 2012; Schout, de

Jong, & Zeelan, 2010), *understanding* (Buchanan et al., 2011; de Souza Brito Dias, &

Medeiros, 2010; McCann et al., 2012; Schulte et al., 2010), and *social functioning* (Carlos, Pires, Cabrita, Alves, Araujo, & Bentes, 2007; Johnson & Hawley, 2004; Kimhi, Mindel, & Oget, 2011; Yamada, Vass, Hvas, Igarashi, Hendriksen, & Avlund, 2011). Finally, constructs that were mentioned in three studies within the qualitative research of this review were *tolerance* (Clancy et al., 2007; Kimhi et al., 2011; McCann et al., 2012), a *supportive learning environment* (Cleary et al., 2011; Matsumoto, 2007; Urstad et al., 2012), *attention* (Karlawish, Barg, Augsburger, Beaver, Ferguson, & Nunez, 2011; Mishima et al., 2010; Naiff, Soares, Azamor, & Almeida 2008), *trust* (Einfeld & Collins, 2008; Mishima et al., 2010; Schout, de Jong, & Zeelan, 2010), and *caring* (Boggatz & Dassen, 2006; Naiff et al., 2008; Schulte et al., 2010; Sivis & McCrae, 2010).

Though these constructs are not necessarily correlates of patience, their strong thematic presence as relevant to patience literature may be an indication of warmth-based undertones to patience. This may be because the collection of these data occurred primarily within helping professions.

In addition to the generally positive potential relatives of patience listed above, a handful of studies in this qualitative dataset made comments about the negative impact of impatience. For example, in a study of 9 residential employees (8 female) at a community living organization for patients with developmental disabilities, participants reported that burnout decreased patience and engaged other negative feelings, including powerlessness, fatigue, disengagement, and frustration with patients (Neben & Chen, 2010). Similarly, 37 health and social professionals (33 female) reflected negatively on their neglect of basic needs, including time and patience, by pursuing his or her own agenda and only partially acknowledging the client (Malterud & Thesen, 2008).

We might surmise, then, that when helping professionals are seeking to assist the needy, it is necessary to be able (1) to listen to the troubled person, (2) to empathize and understand the nature and extent of the problems and the integration of the problems into the life and personality of the troubled person, and (3) to have patience—not expecting too much responsiveness from the troubled person and maintaining hope in the face of resistance to or inability to change.

Such reflections on impatience were also evident in parenting literature. In a study of 21 mothers who had been between the ages of 14-18 at the time of their child's birth, those who considered themselves "maternally unavailable" cited lack of patience, indifference, inadequate responses, difficulty in baby care, difficulty understanding the baby's signals, aggressive behavior, and attribution of negative characteristics to the baby (Carlos, Pires, Cabrita, Alves, Araujo, & Bentes, 2007). Lack of patience was also experienced negatively in fathers; 575 low-income fathers of twenty-four month-old children reported that lacking patience served as a barrier to spending time fathering (Summers, Boller, & Raikes, 2004).

From the parenting literature, similar themes arise as with professional helpers. A needy person (i.e., the child) requires, for the helper (i.e., the parent), listening, understanding, and patience with the person's (in this case, child's) lack of ability to respond to the level of the parent's (perhaps) expectations and hopes.

Potential antecedents to patience. Due to the general shortage of highly-relevant psychological studies of patience, as well as an even greater shortage of longitudinal work, very few studies could ascertain directionality in relationships between patience and other variables. Two studies, however, posed reasonable antecedent possibilities for developing patience.

The first, a cross-sectional study employing both qualitative and cross-sectional methods, examined 866 eighth-grade students (444 female) in a Georgia school district, along with 309 of their parents. The authors concluded that uncertainty surrounding housing was related to children's impatient behaviors; specifically, experiencing an eviction and being a part of a large family related to impatience. On the contrary, living in a single-family home with both parents was related to less impatience. Thus, stability in childhood in general may contribute to patience as a personality trait (Anil, Jordan, & Zahirovic-Herbert, 2011)

Second, Romer, Duckworth, Sznitman, and Park (2010) conducted a correlational and cross-sectional inquiry of 900 participants from the National Annenberg Survey of Youth (age $M = 17.75$ years). They found that high sensation-seeking and low delayed gratification in these youth may contribute to better ability to exhibit patience when they are older, having learned from their younger, sensation-seeking, instantly gratified ways. The authors suggest that individual differences in future time perspective were related to participants' ability to delay gratification.

Relational correlates. In addition to the studies described in the above section detailing qualitative research, eight further studies referred to patience relationally, consistent with Schnitker's (2012) identification of interpersonal patience. Patience has been investigated in a variety of interpersonal contexts—in behavioral economics, in parents, in couples, and in caregivers. Among these studies is a scale-development study, conducted cross-sectionally, with the goal of producing a measure of trait patience. In this study of 324 undergraduates at a large West coast university, patience was negatively correlated with avoidant attachment and not correlated with anxious attachment. This suggests that patient

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individuals are unlikely to have experienced attachments driving them toward avoidance or anxiety as an adult attachment style. Patience, on the other hand, is related to secure parental attachments (Schnitker & Emmons, 2007).

Behavioral economics too examines relational correlates of patience. In an experimental, cross-sectional study of 96 undergraduates (40 female) who participated in a public-good game in which the free-rider phenomenon was manipulated. Free-riders in behavioral economics are those who take advantage of a group's behavior by seeking to enjoy the benefits without investing a commensurate amount of effort in producing the results. In this manipulation, patient people were found to be more cooperative with others (Curry, Price, & Price, 2008). Under similar conditions, a recent correlational and cross-sectional inquiry examining 167 participants found that the patience of participants had no effect on game outcomes when playing alone. Yet, those who were more patient were not only more likely to coordinate with others, they also earned higher payoffs (Al-Ubaydli, Jones, & Weel, 2013).

Patience was also examined in pre-existing relationship conditions. In a correlational, cross-sectional study of 37 undergraduates who had been in a long-distance relationship for more than six months (age $M = 21.8$), patience was indicated as a relational skill for maintaining these long-distance relationships (Mietzner & Lin, 2005). Within marital relationships, a correlational and longitudinal study of 68 heterosexuals assessed pre and post-partum found that husbands' patience scores were consistently higher than their wives' scores. The authors suggest that this may be due to these husbands' attunement to their wives' moods (Onodera, 2005).

Patience has also been examined relationally between parents and children. A correlational, cross-sectional study sampled 63 Australian fathers (age M = 34.33, SD = 5.55) whose infants had endured heart surgery before they were three months old. Results indicated that patience and tolerance were significantly correlated with pleasure in interactions and with affection and pride toward their infants (Bright et al., 2013).

As one might guess from the quantity of caregiver research conducted qualitatively in this area, interpersonal patience has been conducted using quantitative methods as well. Stone, Townend, Kwan, Haga, Dennis, & Sharpe (2004) used correlational and cross-sectional methodology to examine caregivers of 35 patients who were nine months post-stroke. Caregivers tended to notice the personality change in these patients, which included a decrease in patience. This was associated with self-rated emotional distress in the caregiver, indicating that being treated with declining patience has interpersonal repercussions. This is consistent with a quasi-experimental, cross-sectional study of 88 hospitalized patients (31 female) with schizophrenia or schizoaffective disorders (age M = 37, SD = 13). These patients had weekly, hour-long interactions with a peer counselor who had been living with schizoaffective disorder for over 20 years. This peer counselor was rated as positive and effective by patients, and 96% of patients recommended as helpful to talk to, knowledgeable, and emotionally supportive. The counselor's patience and giving of emotional support was reported second in importance only to pharmacological considerations (Rummel-Kluge, Stiegler-Kotzor, Schwarz, Hansen, & Kissling, 2008).

To segue into my next section of personality correlates, I consider the relationship of one's present self to one's future self as an interpersonal relationship. In an experimental, longitudinal study of 193 Stanford staff members (151 women, age M = 41.32, SD = 11.14),

the authors posit that consumers may treat their future selves as more like another person than the present self, making it difficult to be patient by saving money for the future. Thus, it was people closer to their future selves who were better motivated by social responsibility than by self-interest to change their retirement rates. People who were not as close to their future selves were not motivated by either self-interest or social responsibility (Bryan & Hershfield, 2013).

Personality correlates. Patience, often considered as a personality trait, has been studied among other personality traits as well. Schnitker and Emmons (2007) assessed 324 undergraduates at a large West coast university in a scale development study for a measure of trait patience. Patience was significantly correlated with religious behaviors and spiritual transcendence, openness, extraversion, future, present hedonistic and past-positive time orientations, self-control, and mindfulness. Patience was negatively correlated with neuroticism and negative affect, and openness, neuroticism, and extraversion predicted patience scores.

In another scale development study, Büssing, Ostermann, and Matthiessen (2007) examined 488 adult participants (307 female) recruited from healthcare settings and various religious and atheist communities (age M = 49.2, SD = 13.0). A compassion, generosity, and patience subscale emerged from the Expressions of Spirituality Scale developed in this sample. This subscale was correlated with conscious interactions, insight, awareness, and wisdom. Patience was not correlated with religious or spiritual attitudes or with demographic variables (Büssing, Ostermann, & Matthiessen, 2007). Similarly, another correlational, cross-sectional study of 235 (117 female) who were eligible to vote at the time of the most recent election found that patience did not correlate with demographic variables,

but did correlate with church attendance, political interest, and voter turnout (Fowler & Kam, 2006). The findings from this study in particular speak to a potential relationship between patience and responsibility, in addition to religion. For example, Fowler and Kam (2006) cite Becker and Mulligan (1997), who claim that because religious people believe in an afterlife, they are likely to have higher discount rates (i.e., are willing to wait longer for rewards that might not seem as valuable as the smaller sooner reward) because of their perception of themselves in a longer amount of time.

Kesebir and Kesebir (2012) suggest that religious people's belief in an afterlife is an indication of optimism, hopefulness for a better future, and good things to come. This is consistent with research conducted in the context of social intelligence; in a correlational, cross-sectional of 300 working adult participants (130 female), optimism was correlated with a number of constructs, including patience (Hooda, Sharma, & Yadava, 2009).

Belief in a just world shed light on the relationship between patience and injustice. In a correlational, cross-sectional study of 84 teachers across various levels of education, those with high belief in a just world reacted more positively and with more patience when prompted with procedural injustice than those with low belief in a just world.

Persistence and perseverance were thematic in the personality literature as they relate to patience. In one correlational, cross-sectional study of 235 middle and high school band directors, personal characteristics were considered even more important than knowledge about music. Perseverance, conceptualized in this study as learning from mistakes, being patient, and long-term vision were three pieces of advice that directors would offer to first-year teachers (Miksza, Roeder, & Biggs, 2010). Similarly, in a correlational, longitudinal study of 23 undergraduate students learning C++ software, patience, persistence, and ability

to divide sub-problems (a skill critical to using C++) were significantly correlated (Vodounon, 2006). On a related note, Schnitker (2012) examined 259 undergraduates (179 female) from a large West coast university in correlational, longitudinal inquiry. Patience revealed itself to be correlated with goal pursuit over time.

Risk aversion has been a popular personality trait to examine in traditional business and economics literature. However, in an experimental, cross-sectional inquiry of 183 undergraduates at a small private East coast university, participants did not tend to be consistently risk-taking or risk-averse. Still, risk and patience were negatively correlated, and the authors concluded that risk does not always depend on the length of the delay (Anderson & Stafford, 2009). This inverse relationship between patience and risk is mostly consistent with findings from traffic literature. In a mixed-method observational/correlational study conducted longitudinally, 774 pedestrians (441 female) in Israel (age $M = 43.9$, $SD = 18.07$) were observed for their pedestrian behavior. Those with a stronger orientation to safety waited longer at islands between traffic. Though this is purely a behavioral observation of potential patience, it speaks to the relationship of safety and waiting (Rosenbloom & Pereg, 2012). I will revisit this topic in the potential mechanisms section of this review, but Rosenbloom and Pereg (2012) concede to conflict in the risk aversion/risk tolerance literature and how it relates to patience.

Mental health correlates. A very small subset of literature in this review examines the mental health correlates of patience. A broad-strokes examination of this relationship comes from a correlational and longitudinal study of 259 undergraduates (179 female) from a large West coast university. In this sample, patience and well-being were positively correlated, particularly when participants were facing difficulties (Schnitker, 2012).More

specifically, Hong, Deng-Feng, and Han-Ying (2005) conducted an experimental, longitudinal study of 98 patients with cardio-vascular disease, cerebral-vascular disease, and cancer. In this sample, personality characteristics including patience, optimism, generosity, and gregariousness predicted anxiety.

Receiving patience appeared to lead to positive mental health outcomes in two studies within this review. A qualitative, cross-sectional analysis of 26 Australian participants (16 female) with depression but no plans for suicide (age $M = 18$, $SD = 1.78$) also examined well-being. Participants who experienced their families as supportive reported this support as involving patience, tolerance, understanding, and encouragement. Being on the receiving end of these qualities led to a reported increase in resilience in these depressed participants (McCann, Lubman, & Clark, 2012). In an entirely different sample, a quasi-experimental, longitudinal design was employed to examine a group of low-status women in a computer training program. These women reported that positive feelings toward learning to use computers were facilitated by instructors who demonstrated patience (Shieh, Chang, & Liu, 2011).

Physical health correlates. Physical health garners much more attention in this body of literature than mental health. A pun enthusiast may appreciate the idea that they are called "patients" for a reason, given the implications for patience (and the situations that require it) in physical health. In a very fundamental qualitative and cross-sectional study not unlike those qualitative studies which began the results section, researchers interviewed 43 medication-treated adult patients with hypertension (20 female). Participants reported feelings of fear, ignorance, reluctance to discuss their concerns with their doctors, and the negative impact of their hypertension. For this reason, the authors recommend that doctors

need to be patient when prescribing medication, because the subjective experience of the patient will likely affect their willingness to adhere to a medication regimen, thereby affecting their physical health outcomes (Marx, Witte, Himmel, Kuhnel, Simmenroth-Nayda, & Koschack, 2011).

Other health behaviors correlated with patience include physical exercise. In a correlational, cross-sectional inquiry of 169 African American and Hispanic adults (106 female) from a low-income community (age $M = 43.2$, $SD = 13$), those participants who were more patient and tolerant of financial risks were more likely to be in a more advanced stage of intention of physical activity (Leonard, Shuval, de Oliveira, Skinner, Eckel, & Murdoch, 2013). A potentially related correlational and longitudinal study examined 151 adults (70 female) in two villages with varying market exposure in Bolivia. Participants who had been patient at baseline data collection had more mid-arm muscle area, more favorable weight, and fewer days ill at five-year follow-up (Reyes-Garcia et al., 2007). Though generally unrelated to physical health outcomes, results from this study also demonstrated that participants who had been patient at Time 1 had greater wage, earnings, and better credit. The authors posit a causal link between patience, accumulating capital, occupational choice, and income inequality.

Health symptoms have also been correlated with patience. In an aforementioned scale development study conducted by Schnitker and Emmons (2007), patience was negatively correlated with some physical health symptoms, including headaches, acne flare-ups, ulcers, pneumonia, and diarrhea. In a correlational, cross-sectional study of 128 adults (44 female) with HIV, fatigue was associated with lower levels of patience, lower

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motivation, difficulty concentrating, increased drowsiness, and interpersonal, vocational, and family interference (Harmon, Barroso, Pence, Leserman, & Salahuddin, 2008).

One study that seems to combine mental and physical health considerations is an experimental, longitudinal study examining physical health interventions in 160 adult patients (70 female) in Sweden with acute or sub-acute back pain (age $M = 41$, $SD = 8.5$). Physical health interventions targeting back pain improved quality of life as it related to health, which included components of well-being such as patience, energy, and mood (Grunnesjo, Bogefeldt, Blomberg, Strender, & Svardsudd, 2011).

Patience has also been considered neurologically. O'Malley, Davies, and Cline (2010) cite previous studies indicating that visceral motivations and the higher cognitive functioning operate in two different areas of the brain, the striatum and the lateral prefrontal cortex, respectively. The striatum responds to dopamine in the brain, causing a preference for sensation-seeking and immediate gratification; whereas, the lateral prefrontal cortex is less reliant on dopamine for its rational and patient responses (Aharon et al., 2001). A correlational, cross-sectional study of 56 participants at a large Midwestern university examined time and risk preferences. Though the results of this study are more fitting for the mechanisms section of this review, the author (Takeuchi, 2011) notes that the perception of a short time interval, or present bias, is a function of dopamine in the brain.

Cultural considerations. Eastern cultures with less intense individualistic tendencies may have a greater predisposition for virtues such as patience. The Nepalese have a saying in situations that are out of their control that would make most Westerners' skin crawl with impatient anxiety: "kay garnay," which roughly translated means, "what to do?" This sentiment accurately embodies the "letting go" aspect of patience as outlined in my definition of patience

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in the introduction of this dissertation. Similarly, harmony is emphasized in the Chinese culture as engagement in acceptance, tolerance, respect, equality, and patience (Feng & Newton, 2012).

The different virtue climate in the East is evident in a correlational, cross-sectional study of 61 advertising agencies in various Arab countries and 12 advertising agencies in the United States. Results indicated that advertising tends to appeal to the cultural views of the intended audience, which in the Middle East, was more aimed at obedience, customs, in-group loyalty, honor, and patience (Kalliny & Ghanem, 2009). Additionally, far fewer U.S. agencies responded to this inquiry than in Arab countries; this may be due to the fast pace of life and strict adherence to plans without deviating to spend time on other things, compared to the heightened collectivist attitudes not only in Arab countries, but within the group dynamic of an advertising agency. This in itself may be a clue into the patience of Eastern vs. Western cultures.

In another correlational, cross-sectional study, Bernstein (2007) studied Easterners living in a Western culture. Korean American immigrant adults ($N = 34$; 28 female) living in New York City and who had been living in the U.S. for at least ten years described their needs for mental health services. Instead, many chose to cope with life stressors related to immigrant life with endurance, patience, and religion. This is neither a positive nor a negative conclusion; while mental health services may have been helpful for these participants, they may have been able to handle issues adequately with the coping methods they provided.

It is important to acknowledge the heterogeneity both among and within Eastern cultures. For example, a correlational, cross-sectional study compared 364 Japanese elementary school students with 347 Korean elementary school students. Japanese students scored higher than Korean students on apprehension and patience in their emotions. Korean students scored higher

than Japanese students on endurance, and the student groups did not differ on acceptance or observation skills.

Potential mechanisms. Many studies in this review pointed to mechanisms that may be at work when one decides whether to be patient. A prominent theme among these potential mechanisms is the orientation of the self in time (e.g., present-oriented vs. future-oriented). For example, an experimental, longitudinal study of 193 Stanford staff members (151 women; age M = 41.32, SD = 11.14) concluded that addressing financial savings in a way that acknowledged social responsibility to the future-self increased savings more than a self-interest message. However, this happened only to the extent that one felt strongly connected to the future self (Bryan & Hershfield, 2012). Similarly, Takeuchi (2011) conducted a correlational, cross-sectional study of 56 participants at the University of Michigan. In this study, the immediate future seemed to represent an extended present for participants. This type of orientation may lead to feelings of closeness to the future self, and also to a more patient response to stress.

Time perspective appears to be an important theme, as another correlational, cross-sectional study of 900 participants from the National Annenberg Survey of Youth (age M = 17.75) found that individual differences in future time perspective were related to one's ability to delay gratification. Furthermore, future time perspective increased linearly with age, perhaps due to the increasingly limited amount of time in the future as time goes by (Romer, Duckworth, Sznitman, & Park, 2010). This collective subset of research on time perspective is consistent with previous research beyond the scope of this review conducted on mindfulness, a state in which engagement in the present moment decreases time estimates and thereby increases patience (Glicksohn, 2001).

Appraisal of conditions also appeared in this subset of literature. In a set of five studies conducted experimentally and cross-sectionally in populations of 84, 144, 145, 239, and 234 undergraduates respectively from the Midwest and from Hong Kong, the relationship between waiting time and patience was mediated by increased valuation of the end result, rather than the decreased cost of waiting. Furthermore, waiting to make a choice about waiting longer increased patience because after waiting, people valued the outcomes more (Dai & Fishbach, 2013). Thus, it appears that starting to be patient is the hard part; once you start, it becomes easier. Appraisal also seemed to differ depending on who the decision was being made for. Albrecht, Volz, Sutter, Laibson, and von Cramon (2011) conducted an experimental, cross-sectional study of 28 participants (14 female) and found that participants show less emotional engagement when they are making choices (a) for themselves that only involve options in the future or (b) for someone else; that is, participants selected more patient behavioral choices when they were making the choice for someone else. The authors concluded that this may be due to activation of different parts of the brain when considering delayed options as well as options for others.

Sensibly, the nature of the stressor and the magnitude of the reward itself seem to impact patience. Speaking to the nature of the stressor, Gago and Correia's (2010) correlational and cross-sectional inquiry of 84 teachers concluded that the type of injustice (procedural or distributive) interacted with participants' level of belief in a just world to determine patient outcomes. In terms of the reward, Anderson and Stafford (2009) conducted an experimental, cross-sectional study in a sample of 183 undergraduates at a small, private East coast university. When small amounts were at stake, subjects were more willing to wait than when large amounts were at stake.

It may be that there is a type of "budget" associated with patience, in a similar way that ego depletion occurs when an individual exercises self-control for an extended amount of time (Baumeister, Bratslavsky, Muraven, & Tice, 1998). This stands to reason, given the close theoretical relationship between patience and self-regulation. Rosenbloom and Pereg (2012) conducted an observational/correlational, longitudinal study of 774 pedestrians (441 female) in Israel (age M = 43.9, SD = 18.07). The results indicated that waiting at one pedestrian crossing predicted waiting at the next, which predicted waiting at the next. The authors concluded from this that starting a new waiting task may replenish a person's budget for patience. Further results from this study demonstrated that greater past usage of the crosswalk was correlated with shorter waiting times. This also informs the idea of a "patience budget," such that one may feel that he has spent too much time waiting at this crosswalk in the past and feels that he or she has less patience to spare. In other words, the supply for a particular location may not replenish very easily. Therefore, one's status in one's patience budget may determine how patient one will feel and behave and may have implications for a neurological depletion of glucose that weakens cognitive functioning, as has been indicated for self-regulation (Baumeister et al., 1998).

Schnitker (2012) found in a correlational, longitudinal study of 259 undergraduates (179 female) from a large West coast university that patience facilitated goal pursuit, which mediated the relationship between patience and life satisfaction, a mental health outcome. Furthermore, the difficulty of the goals moderated the relationship between patience and goal satisfaction. Thus, it seems that, if patience serves the pursuit of a goal, it may be more likely to lead to a satisfying outcome. This is an interesting contrast to a qualitative, longitudinal inquiry conducted by Farsi, Nayeri, and Negarandeh (2010), who studied 10

Muslim Irani adults with leukemia undergoing hematopoietic stem cell transplantation treatment (age M = 29.3). The patience was described as a coping strategy for dealing with this stressor. It tended to be employed only when other coping strategies were not helpful. Thus employing patience appeared to be a last resort. This illuminates the difference in people's perceptions of the value of patience for pursuing goals.

Existing models of patience and related constructs. The only potential model in this literature that related to patience as a virtue and psychological construct comes from Schnitker (2012). In a trio of scale development and correlational studies, including 389 undergraduates (296 female), 259 undergraduates (179 female), and 71 undergraduates (61 female), respectively, Schnitker found support for a three-factor structure of patience including interpersonal patience, life-hardship patience, and daily-hassles patience as described in the introduction section of the current dissertation.

Interpersonal patience was found to be correlated with agreeableness, avoidant and anxious attachment (negative), and mindfulness. It was predicted most strongly by agreeableness, but also by neuroticism (negative). Interpersonal patience predicted goal effort /goal progress/goal achievement satisfaction after controlling for the Big Five, loneliness (negative), hope, life satisfaction, and self-esteem.

Life-hardship patience was found to be correlated with agreeableness, anxious attachment (negative), and mindfulness. It was predicted by conscientiousness and neuroticism (negatively). Life-hardship patience predicted hope and self-esteem.

Daily-hassles patience was found to be correlated with agreeableness, avoidant and anxious attachment (negative), and mindfulness. It was predicted by openness and mindfulness. Daily-hassles patience predicted life satisfaction and depression (negative).

All three types of patience were correlated with patience enacted on goals (i.e., patience directed specifically at achieving a goal) and goal effort, as measured by ratings of personal projects and the amount of patience required to achieve them. These correlations were stronger for interpersonal and life-hardship patience than for daily-hassles patience. The same was true for goal progress and satisfaction with goal achievement. Satisfaction with goal achievement mediated the relationship between total patience scores and well-being over time. Goal difficulty and obstacles moderated the relationship between total patience scores and satisfaction with goal achievement.

Two other models were related to patience-like constructs: (1) inter-temporal choice of larger later over smaller sooner rewards and (2) trade-off model of inter-temporal choice. The inter-temporal choice of larger later over smaller sooner rewards model (DRIFT model) focuses on differences (between outcomes), ratio (proportional difference between outcomes), interest rates, finance, and time (delay). Four experimental, cross-sectional studies conducted by Read, Frederick, and Scholten (2013) investigated the DRIFT model. The studies consisted of $N = 373$ participants (239 female, age $M = 36$, $SD = 12.6$); $N = 630$ participants (378 female, age $M = 35$, $SD = 11.6$); $N = 219$ participants (120 female, age $M = 37$, $SD = 12.75$); and $N = 265$ participants (146 female, age $M = 34$, $SD = 12$), respectively. The authors concluded that framing delays in different ways, such as using investment language, increased patient responses. This speaks to the value of framing and appraisal.

A similar study by Read and Scholten (2012) posited the second model related to patience-like constructs, a tradeoff model of inter-temporal choice. In this model, responses are determined by weighing accumulated outcomes against delays. The authors conducted

two descriptive, cross-sectional studies (132 participants, 81 female, age $M = 46$; 277 participants, 161 female, age $M = 30$) and two experimental, cross-sectional studies (470 participants, 291 female, age $M = 40$; 349 participants, 199 female, age $M = 36$). Findings from these studies supported the tradeoff model.

Measures of patience. The first measure of trait patience was developed in a correlational, cross-sectional study sampling 324 undergraduates at a large West coast university. This Patience Scale (PS-10; Schnitker & Emmons, 2007) is a ten-item measure of trait patience ($\alpha = .78$). Items such as "in general, waiting in lines doesn't bother me" are rated on a 5-point scale ranging from 1 (very much unlike me) to 5 (very much like me).

The Three-Factor Patience Questionnaire (3-FPQ; Schnitker, 2012) was developed to accommodate for three types of patience: interpersonal, life-hardships, and daily-hassles patience. This 11-item measure was developed primarily on a sample of 389 undergraduates (296 female) from a large West Coast university (age $M = 19.8$; $\alpha = .66$-$.80$). Items such as "When someone is having difficulty learning something new, I will be able to help them without getting frustrated or annoyed" are rated on a scale ranging from 1 = *very much unlike me* to 7 = *very much like me.*

Patience has been measured quantitatively by subscales of other measures. For example, patience in workplace safety is measured by the Exit, Voice, Patience, and Neglect Scale (EVPN; Tucker & Turner, 2011). This 22-item measure includes a 2-item subscale measuring safety surrounding issues in the workplace ($\alpha = .59$-$.69$ for patience subscale) and was developed over the course of four studies ($N = 39$ participants, 19 female, $M = 16.56$, $SD = .94$; $N = 93$ participants, 46 female, $M = 17.12$, $SD = 1.06$; $N = 309$ participants, 151 female, $M = 19.04$, $SD = 1.86$; $N = 315$ participants 176 female, $M = 17.61$, $SD = 1.31$,

respectively). Items such as "Adapt to safety conditions until the situation improves" are rated on a scale ranging from 1= *not descriptive* to 5= *very descriptive.*

The Paternal Postnatal Attachment Questionnaire (PPAQ; Condon, Corkindale, & Boyce, 2008) was developed on 206 first-time Australian fathers (age *M* = 29.7, *SD* = 5). This 19-item measure of fathers' postnatal attachment to their babies includes a 7-9-item subscale measuring patience and tolerance (α = .70-.81 for total scale; .70-.75 for patience and tolerance subscale). Items such as "frequency of enjoyment/satisfaction" are rated on a scale ranging from 1 to 5 (5 indicates high attachment). Patience/tolerance accounted for 27% of variance at 6 months and represented an absence of irritability and other negative emotions (e.g., boredom) towards the infant. The patience subscale also includes items suggesting a lack of resentment about the effects of fatherhood and the presence of patience and tolerance with the infant. Patience/tolerance accounted for twice as much variance at six months than at 12 months, suggesting that patience differs over time in early fatherhood.

The Expressions of Spirituality Scale (ASP; Büssing, Ostermann, & Matthiessen, 2007) was developed on a sample of *N* = 488 adults (307 female) in Europe, recruited from healthcare settings and various religious and atheist communities (age *M* = 49.2, *SD* = 13.0). This 40-item measure of spirituality includes a subscale assessing the factor of compassion, generosity, and patience (α = .94; compassion, generosity, and patience subscale = 0.76). Items such as "trying to practice patience and tolerance" are rated using a 4-point scale ranging from 0 = *does not apply* to 4 = *applies very much*.

Patience subscales not developed in this review include Qingnian Zhongguo (Chinese) Personality Scale (QZPS; Wang & Cui, 2003) and the Social Intelligence Scale (Chadha & Ganeshan, 1986). Psychometric data in English were not available for the

QZVP, but the Social Intelligence Scale is a 66-item measure of social intelligence, containing eight factors (patience, cooperativeness, confidence, sensitivity, recognition of social environment, tactfulness, sense of humor, and memory). Cronbach's alpha for the entire scale was .89-.96 for total scale, but no sample items or rating scales were available at the time of this dissertation.

Employed patience interventions. Kunz (2002) argued in his recounting of Levinas ethics that any active effort to develop patience is counterintuitive and that it cannot be directly observed. Though there may be a nugget of truth to this statement, based on empirical research, I would disagree. In a correlational, cross-sectional inquiry sampling 169 African American and Hispanic adults ($N = 106$ female) from a low-income community (age $M = 43.2$, $SD = 13$), results suggest that a logical patience intervention may be to remove one's decision when the behavioral outcome is immediately available. In this situation, less patient individuals must more carefully consider their choices that lead to future benefits (Leonard et al., 2013). This is consistent with the aforementioned five studies conducted by Dai and Fishbach (2013), who posit that time already spent waiting influences participants to be make more patient decisions.

The first direct intervention intended to affect trait patience was conducted by Schnitker (2012). This intervention was delivered over the course of two weeks in four half-hour sessions to groups of three to six participants. Content was derived from meditation, Type A personality literature, cognitive behavioral therapy, and character-strengths literature. It included psychoeducational didactic methodology and guided meditation exercises, emphasizing interpersonal components of patience.

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In a study of $N = 71$ undergraduates (61 female), Schnitker's (2012) intervention to promote patience did indeed promote trait patience at Time 2 while increasing positive but not negative affect. Depression decreased following this intervention, and the intervention may have affected reappraisal, despite not seeming to influence emotional suppression. Trait patience improvements were not maintained at Time 3; however there was an effect on life hardships patience at time 3, indicating the necessity of experiencing real-life obstacles in order to truly learn life hardships patience.

Beyond this intervention, two other interventions appeared in the review that were not explicitly designed to promote patience but demonstrated potential for doing so. These are PREP's Within My Reach and Within Our Reach marriage and relationship education curricula (20 hours), used in Daire et al. (2012) to promote marriage communication skills and a 40-hour crisis-intervention training (CIT) program used in Hanafi, Bahora, Demir, and Compton (2008) for law enforcement officers. Further detail of outcomes associated with these interventions can be found in Appendix A.

Discussion

Patience research is in an exploration stage, and many results within this review must be interpreted with caution due to loose and inconsistent definitions of patience. Despite mixed results surrounding the role of demographic variables, particularly religion and spirituality, it is evident in this body of research that patience is considered a positive thing, and its promotion in psychology is merited.

A number of concepts from this review stand out as worthy of investigation for a theory of patience. These might be roughly characterized as a need for diversity of theories to promote investigation of patience along a broad front and a need for the thorough investigation of factors

affecting patience, which might be summarized within three general headings: antecedents of patience, mechanisms by which patience might be achieved, and outcomes of patience.

Theoretical diversity. A primary connection between this research and Lazarus' (1999) stress-and-coping model is that because such a great many number of factors have been proposed as related to patience, parsimony will be key to developing a comprehensive model of patience. As a reminder from the introduction of this review, Lazarus proposed that person variables (such as goals, beliefs, and personal resources) and environment variables (including harms, threats, challenges, and benefits) interact to form a person-environment relationship. This relationship of person variables and environmental stressors (or benefits) leads to an appraisal process. From this appraisal comes a stress response, which then determines the type of coping response. Following this coping response, the meaning of the stressor is revised, and a number of social, health, and morale outcomes result (see Figure 1).

Antecedents. To parallel this model based on the above research, it may be that a corresponding model of patience as a coping mechanism may include person variable antecedents such as *future time perspective/closeness to future self* (Bryan & Hershfield, 2013; Romer et al., 2010), *empathy* as indicated by the qualitative literature, *Big 5 personality factors* (Schnitker, 2012), *warmth-based virtues such as compassion, forgiveness, and humility as well as conscientiousness-based virtues such as self-control, perseverance, and responsibility* (Fowler & Kam, 2006; Mikzsa, Roeder, & Biggs, 2010; Worthington & Berry, 2005), and *religiousness and spirituality* (Büssing, Ostermann, & Matthiessen, 2007; Fowler & Kam, 2006; Schnitker & Emmons, 2007).

Environmental variable antecedents should also be included in a model of patience. From this body of literature, these include *childhood stability* (Anil et al., 2011) and *culture* (Bernstein, 2007; Kalliny & Ghanem, 2009).

Mechanisms. Appraisal is an integral component of Lazarus' stress-and-coping model, and it retains its importance in the context of patience. Factors to consider within this appraisal include *familiarity and risk of stressor* (Rosenbloom & Pereg, 2012), *value of stressor versus value of time* (Read & Scholten, 2012), *availability of alternative coping responses* (Farsi, Nayeri, & Negarandeh, 2010), and *framing of the stressor* (Read, Frederick, & Scholten, 2013).

Additional mechanisms that stand out from the literature as potential moderators for getting to the patience response include *mindfulness skills* (Schnitker & Emmons, 2007) and *emotion regulation* (Schnitker, 2012). These have the potential to moderate two relationships: that of appraisal and stress response as well as between stress response and patience response. For example, for those who are emotionally reactive, a stronger stress response might occur for those who are better able to regulate their emotions or be more mindful in the present moment. Similarly, one who can regulate emotions better or ground themselves in awareness of the present moment *after* the stress response may be more likely to cope with patience.

Outcomes. Outcomes of patience can be considered in four domains: mental health, physical health, relational, and spiritual. Mental health outcomes to be considered include *resilience* (McCann, Lubman, & Clark, 2012), *low anxiety* (Hong, Deng-Feng, & Han-Ying, 2005), *well-being, low depression, and positive affect* (Schnitker, 2012). Potential physical health outcomes include *more energy* (Grunnesjo et al., 2011), *fewer sick days, healthier weight* (Reyes-Garcia et al., 2007), and *more physical exercise* (Leonard et al., 2013). It also stands to

reason that *better sleep* would follow from higher patience, given the proposed influence of

patience on anxiety.

Relational outcomes may include *better communication,* (Daire et al., 2012), *more*

cooperation (Al-Ubaydli, Jones, & Weel, 2013; Curry, Price, & Price, 2008), and overall *more*

social support. Spiritual outcomes, though met with mixed results in the literature review, may

include *spiritual transcendence* (Schnitker & Emmons, 2007), as well as *connection to the*

sacred and *meaning in life.*
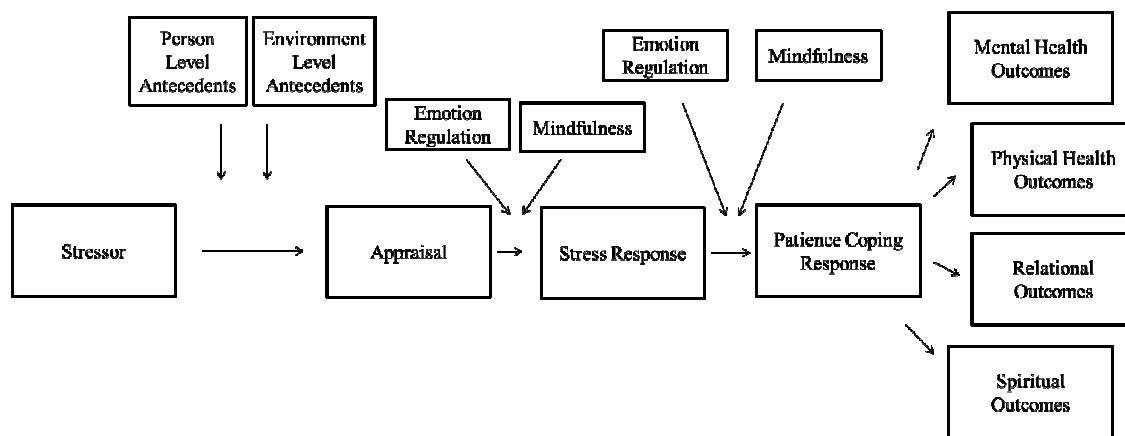
Figure 1. Hypothesized stress and coping model of patience

As patience research moves forward, limitations of the past and possibilities of the future

need to be taken into account so that the most efficient research can be conducted.

Limitations. There are a number of important limitations within the literature that apply

to the interpretation of findings within this review. These include inconsistent definitions, and

lack of consensual theory, restrictions on the participants who have thus far been studied,

measurement of patience, and the design of studies examining patience. Limitations of the

method of the present review are also discussed, specifically in terms of its limited time-scope.

Definitions and lack of consensus on theory. It is evident from the present review of the

literature that little consideration has been given to theoretical or definitional underpinnings of

patience as an empirical construct. Though the theoretical drought in patience research is an area

for growth, the greatest limitation of the research in the present review is the inconsistent and

often behavioral definitions of patience; only a very select few define patience as a virtuous or

psychological construct for empirical study; others tend to view patience as solely a pattern of

interpersonal choice. Thus, results must be interpreted with caution.

Participants. This research in patience has generally over-represented Caucasian young

adults, though the number of internationally conducted studies is impressive given the infancy of

the empirical study of patience. This may be because other cultures tend to value and practice

patience more readily than in individualist, Western cultures. Furthermore, a large percentage of

the studies in this review draw on undergraduate samples. College students, admittedly, represent

a group of individuals who by virtue of matriculating into higher education have already engaged

in ''one form of investment in future-oriented capital'' (Becker & Mulligan, 1997, p. 751). These

individuals already possess some disposition for delayed gratification—a baseline level of

patience, one might argue. As a consequence, variation in the underlying level of patience is

likely to be smaller within our convenience sample, compared with what we might see using a

more representative sample (Fowler & Kam, 2006). Though this is consistent with findings from

Reyes-Garcia et al., 2007, which found impatience to be associated with fewer years of

schooling, and with Schnitker (2012), who found goal striving to be correlated with patience,

these effects may be counteracted by the still-developing prefrontal cortex of most

undergraduates, who may not be able to fully rely on their neurology to make patient decisions.

Measures. While a number have been employed in the present research, very few have to

do with patience as a psychological or virtuous construct. Behavioral measures are largely

hypothetical (e.g., would you choose "a" amount after one week or "b" amount after two

weeks?) and limited to tests of delayed gratification, which is an incomplete consideration of patience given its conceptualization in psychological terms. Though tests of delayed gratification could be a behavioral outcome of patience, this does not encompass the emotional quiet of internal patience.

Self-report measures for patience do exist, but established validity is limited, and given the lack of an agreed-upon definition of patience, these measures may not all exhibit appropriate construct validity. Aside from Schnitker's (2012) 3-FPQ and Schnitker and Emmons' (2007) PS-10, remaining measures of patience are specifically intertwined in the work environment, spirituality, etc.

Experimental designs. As demonstrated in the results of the present review, a large percentage of the current research has been conducted qualitatively. Though valuable and rich data has emerged from these studies, their generalizability is limited, and they do not employ validated measures of patience. Further, patience in these qualitative studies is often described by participants colloquially, per their own personal experiences with and definitions of patience, adding to the confusion about what exactly patience is.

Another large portion of this research is correlational in design, which is reasonable given how young the empirical study of patience is at this time. Still, this limits causal inference, as does the large portion of studies employing cross-sectional designs. Very few experimental and longitudinal designs are present in this literature, and intervention studies are typically limited to explorations of delayed gratification. Patience intervention studies in which patience is considered a virtue or psychological construct in this body of research are extremely limited.

Time restriction in the present review. A final limitation of this review is the ten-year scope. A larger review, encompassing more research modalities such as dissertations, case

studies, etc. over a longer period of time would have certainly yielded a more nuanced presentation of patience literature.

Research agenda. Nearly every study examined in this review noted that future research must include longitudinal and experimental studies with more generalizable populations. To do this efficiently and with credibility, it is essential that researchers adopt a consistent definition of patience and continue to validate measures of patience. Physiological and behavioral measures of patience should continue to be explored, and greater attention to culture's impact on patience is warranted. In many ways, a new field of the study of patience is merited.

The role of patience in day-to-day life as it relates to mental health and mental illness is of interest to psychologists, particularly in disorders of attention in the present moment (e.g., Attention Deficit Hyperactivity Disorder) and long-term trauma recovery (e.g., Post-Traumatic Stress Disorder). Future investigation of a "patience budget," both in clinical and non-clinical population, is another direction for continued growth in patience literature. .

Among the suggestions for future research outlined in Appendix A, Schnitker (2012) recommends that future studies examine the trait-state relationship within patience and that more research investigate the situational characteristics involved in patience. Furthermore, her 3-FPQ measure of patience will benefit from further validation, which future studies of patience as a virtue can provide. This is particularly important because of the large percentage of Asian Americans whom the 3-FPQ was developed on; we can see from cultural considerations of the literature that this may have impacted normative data. Importantly, Schnitker (2012) provides a jumping-off point for future studies in the theoretical consideration of patience, its implications for *eudaimonic* well-being, and its potential intervention.

However, Schnitker does not point out the definitive research agenda. In fact, in this present dissertation I hope to achieve the goals she suggests (and hopefully to moderate them with patience), but also add the following objectives. First, I investigate an intervention to promote patience. Second, I conduct a programmatic duo of studies to inform the theoretical stress-and-coping model I have championed in this review. Third, with the findings from this programmatic set of studies, I will employ a translational science research paradigm and translate those findings from basic scientific research into an improved intervention and clinical efficacy study, which uses also an improved assessment of stress-and-coping-theory-of-patience-relevant measures of antecedents, mechanisms, and outcomes.

Conclusions

Current research depicts patience as a positive construct, though it is in desperate need of unification under an agreed-upon definition in empirical, psychological, and virtuous terms. Steps have been taken toward this goal, and the literature exhibits strong themes in qualitative observations, relational correlates, personality correlates, mental health correlates, physical health correlates, cultural considerations, potential mechanisms, measures of patience, and interventions to promote patience. From this research, a tentative model has been proposed and will be tested in the current dissertation.

<div align="center">

Statement of the Problem

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"It is by attempting to reach the top in a single leap that so much misery is produced in the world."—William Cobbett

We live in an era of speed. E-mail, Instagram, even fast food, allow us to fulfill a number of basic needs in the most efficient ways imaginable in order to keep up with the demanding pace of Western life. Time pressure has been demonstrated to differ cross-culturally, and those

countries near the top of the list tend to experience worse physical health outcomes (Levine & Norenzayan, 1999). Among these countries are industrialized nations including Japan, those in Western Europe, and in the United States. A more recent study depicts the relationship between pace of life and technology use, indicating that as technology advances, the pace of life gap between industrialized and non-industrialized nations only continues to grow (Chesley, 2010).

The millennial generation has been raised with the expectation of progress and gratification that has happened at a far swifter pace than ever before. This has caused concern among older generations, fearing their children's dependence on technology that fulfills their desires in a blink of an eye. This is no secret in popular media; a recent article in the Huffington Post laments the potential for helplessness and laziness under these conditions (Goodman, 2012).

This dissertation is hardly intended to be a diatribe against millennials. Though many might see millennials as lazy, the other side of the coin is that doing something slowly, inefficiently, or even patiently could be considered lazy. Speed and technological advances have allowed younger generations to be more productive than ever before. Millennials are the most relentlessly educated generation to date; 63% of millennials born between 1982 and 1993 have a Bachelor's degree, and more have a Master's degree in business administration than are unemployed (PayScale, 2012). The astounding rate of technological advances is testament to this change in educational and motivational climate.

Thus, it is difficult to say that the new generation is resting on their laurels. However, a more fair hypothesis is that the millennial generation may have a larger degree of self-interest than previous generations. Even social psychology began expanding their inquiry of the self in the 1980s, around the time the first millennials were born, which speaks to the self-*Zeitgeist* of the times. Self-portraits have gone from painstaking works of art from only the most talented

artists with the time and resources, to a daily ritual for sharing one's new shade of lipstick or post-workout flexing on social media. The influx of personal blogs and public profiles serves as evidence of a generation craving attention. It seems that the term "selfie" is an approximation of the generation at large. Twenge (2013) has informally captured the self-focus and electronic-focus of the millennials as "Generation Me."

Self-interest may have increased in our social climate as a result of a decline in dialogue surrounding virtue. In a pair of descriptive and cross-sectional studies of American books published in the 20th century, usage of terms related to morality (virtue, decency, conscience, etc.) decreased significantly. More specifically, 50 virtue words, including patience, declined by 74%! The decline in the term "patience" in particular was 48.07%, and similar declines were particularly prominent in those virtues held traditionally in Christian values, such as humility, kindness, gratitude, and charity (Kesebir & Kesebir, 2012). This appears to be a parallel decline in religious affiliation, which has traditionally supported the idea of a disciplined ego and a greater focus on the public good (Chaves, 2011). This is consistent with the *Zeitgeist* of self-interest, and one can conclude that this decline of virtue in our social and literary context may make it more difficult or unlikely to act virtuously.

It is possible that one-on-one interventions between client and therapist may not be the best method for promoting virtues. Kazdin and Rabbitt (2013) describe the state of one-on-one intervention in psychology as often falling short of reaching those who need it the most, calling for novel methods of intervention that can be widely and more easily disseminated. Among these methods are workbook interventions. Self-completed workbooks have demonstrated their utility in many areas of psychology, including depression and anxiety (e.g. Craske & Barlow, 2005; Gilson, Freeman, Yates, & Freeman, 2009), but only recently in positive psychology

(Lavelock, Worthington, Greer, Lin, & Griffin, under review). For example, a recent study demonstrated efficacy of an intervention workbook to promote humility (Lavelock et al., 2014) that also improved forgivingness and patience. Though research in the empirical study of virtue is young, the existing knowledge of virtues provides a strong foundation for the formation of virtue-promoting workbook interventions.

Purpose of the Present Studies

In light of the statement of the problem and previous research found in the review of the literature, the fundamental purpose of the current studies is to better understand and promote patience. I seek to support a proposed theory of patience and to increase patience in participants via a self-directed workbook intervention that both promotes patience and informs future research inquiries of patience. The wide dissemination of successful patience-promoting interventions could have a positive impact our social climate, accessing a young generation while there is still time to impact a lifetime of handling adverse situations. Providing virtuous direction is a healthy and often pleasant experience, which resonates not only within the individual but outward toward society. The development of patience in particular may best address our stressful pace of life problems, promoting a ripple effect that can hopefully be sustained through this intervention research. Our stressed and fast-paced society could certainly use the breather that patience provides.

Hypotheses

Based on the statement of the problem and available literature of patience and virtue, I conducted three studies. The first was a preliminary test of the efficacy of an intervention workbook to promote patience. I compared outcomes of a patience workbook to a similarly structured positivity workbook, which served as an active control condition, in addition to a non-

action control condition. I use some of the data collected in my master's thesis study, but I analyzed additional data on religious commitment and spiritual transcendence not dealt with in the master's thesis in light of the conflicted literature on patience and religious and spiritual variables reviewed above. In this first dissertation study, I test three hypotheses: (1) that a workbook intervention to promote patience will indeed promote patience, over and above that gained from a positivity workbook and a non-action control group, (2) that the promotion of patience will contribute not only to simultaneous promotion of other virtues, both warmth and conscientiousness based, and (3) that baseline levels of religious commitment and spiritual transcendence will predict the success of the patience intervention workbook.

My second study drew heavily on literature reviewed above and presents a theory of patience, including antecedents, mechanisms, and outcomes in these relationships with patience. The hypothesized model suggested that person factors and environment factors serve as moderating antecedents to one's appraisal of a situation as stressful, leading to a stress response, after which patience is a potential coping response. Mindfulness and emotion regulation were hypothesized to serve as moderators before and after the stress response, contributing to patience as a coping response. A number of physical health, mental health, relational, and spiritual outcomes were hypothesized to result. Due to a large volume of self-report measures of interest, Study 2A examined hypothesized antecedents and mechanisms to reaching patience, and Study 2B examined hypothesized outcomes of patience.

My final study sought to replicate findings from the first study, a functional beta testing of the intervention workbook to promote patience. In the spirit of translational research, I also sought to replicate significant predictors of patience as determined by Study 2A and to examine significant outcome measures from Study 2B longitudinally and experimentally, as opposed to

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correlationally and cross-sectionally as in Study 2B. For this study, I hypothesized: (1) significant antecedents to patience from Study 2A would again predict patience, and (2) a workbook intervention to promote patience would indeed promote patience and significant outcomes from Study 2B, over and above that gained from a similarly structured workbook intervention to promote positivity as well as a non-action control group.

Study 1: Efficacy Trial of Patience Intervention Workbook

Study 1 is a preliminary test of a workbook intervention to promote patience. I chose to compare outcomes of a patience workbook to a similarly structured positivity workbook, which served as an active control condition, in addition to a non-action control condition. I use a portion of the data collected in my master's thesis study, but I analyze additional data on religious commitment and spiritual transcendence not dealt with in the master's thesis in light of the literature reviewed above. In this first dissertation study, I test three hypotheses: (1) that a workbook intervention to promote patience will indeed promote patience, over and above that gained from a positivity workbook and a non-action control group, (2) that the promotion of patience will contribute not only to simultaneous promotion of other virtues, both warmth and conscientiousness based, and (3) that baseline levels of religious commitment and spiritual transcendence will predict the success of the patience intervention workbook. This study aims to add longitudinal, experimental, and intervention research to the existing patience literature and respond to the call of Kazdin and Rabbitt (2013) for novel intervention methods using the self-directed workbook format.

Method – Study 1

Participants. Data for Study 1 were collected in the Fall of 2012. A convenience sample from the psychology curriculum at a large mid-Atlantic university yielded 104 participants.

Participants were randomly assigned to one of three conditions, and at the end of data collection, 88 participants were available for analysis: patience (n= 28), positivity (n = 27), and a non-action control condition (n = 33) (see Figure 2 for CONSORT flow chart). The total sample ranged in age from 18-48 (M = 21.59, SD = 4.71) and was 78.40% female (n = 69) and 21.60% male (n = 19). Ethnicities of participants were 46.60% Caucasian/White, 26.10% African American/Black, 10.20% Asian-American, 4.50% Hispanic, 1.10% Native American, and 11.4% Other.
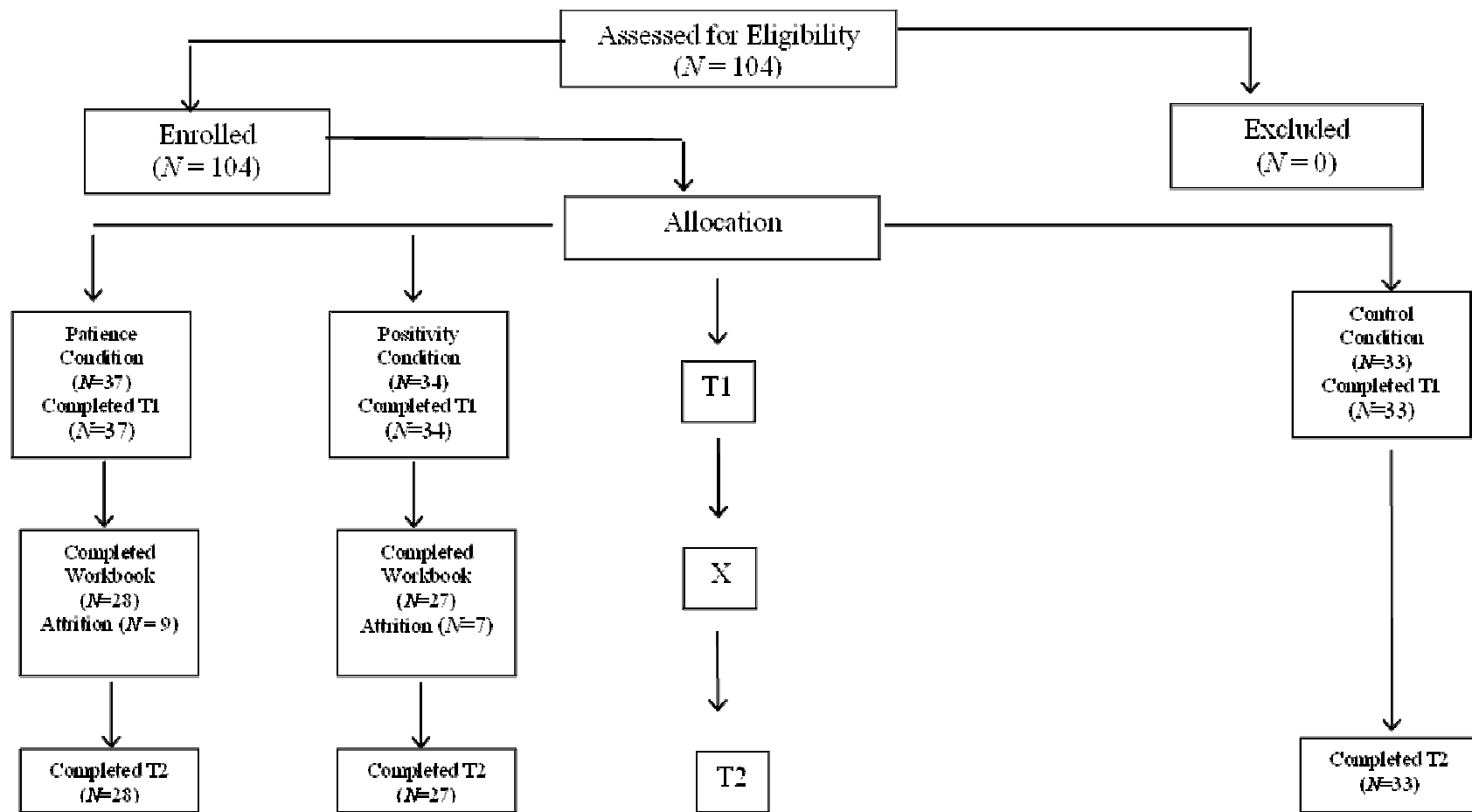
Figure 2. CONSORT Flow Chart depicting students' progression through the present study

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Design. This study employed mixed between and within-subjects design, employing experimental and longitudinal methods. It was a between subjects (3 condition groups), x within subject (2 time points for trait measures). Graphically:

●P: OdOt **X**   Ot

●+:   OdOt **X**   Ot

●C: OdOt   Ot

●Od = demographic observation; Ot = trait observation

●P = Patience condition; + = Positivity condition; C = Non-action control condition

Measures.

Demographic information. A demographics data page included single-item questions concerning age, sex, ethnicity, and year in school.

Trait measures. Because I was interested in lasting changes over time, the following *trait* measures were administered to assess change in dispositional virtue. Higher scores on these scales indicate higher levels of the construct.

Patience Scale (PS-10; Schnitker & Emmons, 2007). In order to assess trait patience, participants completed ten items of the PS-10. Items such as, "In general, waiting in lines doesn't bother me" are rated using a 5-point rating scale, from 1 = *very much unlike me* to 5 = *very much like me*. The Cronbach's alpha for this measure is .78 and was .78 in the present study.

Brief Self-Control Scale (Brief SCS; Tangney, Baumeister, & Boone, 2004). The Brief SCS is a 13-item measure, in comparison to its full 36-item counterpart, the Self Control Scale. The Brief SCS measures trait self-control using a 5-point scale rating such items as "I am good at resisting temptation," where 1 = *very much unlike me*, and 5 = *very much like me*. Cronbach's alphas for the Brief SCS ranged from .83-.85 and was .84 in the present study.

Trait Forgivingness Scale (TFS; Berry et al., 2005). To complete the TFS, participants scored ten items on a 5-point rating scale relating to their likelihood to forgive; 1 = *strongly disagree,* to 5 = *strongly agree*. It includes such items as "I have always forgiven those who have hurt me." Cronbach's alphas for this measure range from .74-.80 and was .73 in the present study.

Values in Action Inventory of Strengths – Modesty/Humility Scale (VIA-IS; Peterson & Seligman, 2004). The Modesty/Humility Scale is a 9-item subtest within the VIA-IS, a well-known inventory for assessing constructs of positive psychology. Items such as "I don't act as if I'm a special person" are scored on a 5-point rating scale from 1 = *strongly disagree* to 5 = *strongly agree.* Cronbach's alpha for this scale is .70 and was .80 in the present study.

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Participants were asked to complete the twenty items of the PANAS according to emotions they generally feel on a regular basis. Each item is simply an emotion, such as interested, distressed, or excited, and participants rated using a 5-point rating scale the extent to which they generally feel those emotions in their everyday lives, where 1 =*very slightly or not at all,* and 5 = *extremely*. Cronbach's alphas for this measure have ranged between .84-.90; in the present study, the Cronbach's alpha for the positivity subscale was .88 and .86 for the negativity subscale.

Religious Commitment Inventory (RCI-10; Worthington et al., 2003). This 10-item measure was used to assess individuals' commitment to a religion. Participants rated their agreement with each item (e.g., "My religious beliefs lie behind my whole approach to life") on a 5-point rating scale from 1 = *not at all true of me* to 5 = *totally true of me*. Cronbach's alphas for this measure have ranged between .88-.98 and was .96 in the present study

Spiritual Transcendence Index (STI; Seidlitz et al., 2002). This 8-item scale is used to assess sense of spiritual transcendence. Items (e.g., "My spirituality gives me a sense of fulfillment") were rated on a 6-point rating scale, ranging from 1 = *strongly disagree* to 6 = *strongly disagree.* Cronbach's alpha for this measure is .97 and was .98 in the present study.

Intervention workbooks. I created two intervention workbooks in a previous study (for development procedure, see Lavelock et al., under review) as the independent variables, based on promoting either patience or positivity. Workbooks are roughly 80 pages long each, and the format for each is based on Worthington's (2006) REACH Forgiveness intervention, adapted to workbook form and tailored in content to the focal virtue. I controlled all style variables within the workbooks so that only the content would vary, and all exercises paralleled in style. This highly controlled format will strengthen confidence in any differences in outcome variables caused by the workbooks in promoting their target virtues.

Patience workbook. The workbook intended to promote patience was based on the research of Stokes (2011), who presented five aspects of patience to access for promotion: perseverance, tolerance of boredom, serenity, patient listening, and comfort with delays. Further, Schnitker (2011) suggested including activities which divert attention from temporal orientation, enjoying the present moment, viewing the past positively, coping with restraint, and practicing open-mindedness and flexibility. Mindfulness techniques are also employed within the workbook.

Each section of the workbook focuses on one of the five steps to reach a patient SPACE; S=Serenity, P=Patient listening and perspective, A=Allow boredom, C=Comfort with delays, and E=Endure with perseverance. These steps are engaged in a variety of methods, including

responding to YouTube videos which exhibit patience, drawing representations of patience using Paint, and identifying pop culture references related to the benefits of patience.

The workbook begins with instructions and self-monitoring assessments intended to focus the participant on his or her experience with patience. These assessments include the Patience Scale (Schnitker & Emmons, 2007b), and the Honesty/Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness Personality Inventory – Patience Subscale (HEXACO-PI; Lee & Ashton, 2004).

Six sections, roughly ten exercises each, then define patience and engage the participant through the SPACE model. At the end of the workbook, an identical group of assessments is given so that the participant can get an idea of his or her progress.

Positivity workbook. This workbook was also developed in Lavelock et al. (under review) and is intended to promote general positivity, not necessarily along the lines of any warmth or conscientiousness-based virtue. The rationale behind the inclusion of such a workbook is to support that simply completing any type of workbook will not produce the same results as one that specifically targets patience. The format was consistent with the patience workbook, along with similar exercises to promote positivity. The acrostic for positivity was HAPPY; H=Have a meaningful outlook, A=Apply your strengths, P=Put things in perspective, P=Paint a positive picture of your future, Y=Yes to others. Research informing exercises was drawn from Fredrickson (2009), including searching for meaning, savoring that which is good, counting your blessing, being kind in relationships and deeds, dreaming positively about the future, exercising strengths, and connecting with nature.

The workbook begins with instructions and self-monitoring assessments intended to focus the participant on his or her experience with positivity. These include the Positivity Self-

Test (Fredrickson, 2009), and the PANAS (Watson, Clark, & Tellegen, 1988). Six sections, roughly ten exercises each, ten define positivity and engage the participant through steps to promote positivity, after which an identical group of assessments is given so that the participant can get an idea of his or her progress.

Procedure. Participants signed up for the study over the course of a semester using the SONA-Systems©. A waiver of documentation of consent was requested due to the purely electronic nature of the study; completing the surveys and workbook on a computer presented no more than minimal risk of harm and involves no procedures for which written consent is normally required outside the research context. In lieu of traditional consent, the participant was e-mailed information about the content of the study and was given the option to terminate their participation at any time.

Once the participants received this information and chose to proceed with the study, they were e-mailed a pre-test battery of demographic and trait measures as described above.

When they returned the completed battery via e-mail, participants were e-mailed the intervention workbook to which they were randomly assigned. Those randomly assigned to the non-action control condition participants did not receive a workbook and were told they would receive their next set of surveys in four weeks. Workbook condition participants had two weeks to complete and return the workbook, and workbooks were checked for completion upon receipt.

Two weeks after returning the workbook, participants were e-mailed a post-test battery, including all measures described above. Control condition participants were simply e-mailed this battery four weeks after they returned their pre-test measures. Participants were given a week to return the post-test battery; thus, each participant took roughly five weeks to complete the entire study, including non-action control condition participants, who simply completed the batteries

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with no interventions workbooks. Non-action control condition participants were given their choice of workbook at the conclusion of the study

Analysis. Preliminary efficacy of the workbooks (Hypothesis 1) was tested using paired-samples t-tests, simply to determine whether patience and positivity workbooks did indeed improve their targets and were fit for further analysis. Success of the patience workbook in promoting additional outcomes relative to the positivity workbook and control condition (Hypothesis 2) was tested using mixed (between and within) multivariate analysis of variance (MANOVA) for condition by time(S) interaction effects. This conducted the largest amount of tests at once, minimizing the risk of Type 1 error that might be expected with conducting multiple mixed analyses of variance (ANOVAS). Multivariate condition by time(S) interaction effects were followed by univariate condition x time Fs, and when significant, these were followed by simple main effects analyses comparing scores for each condition over time. Planned contrasts were also performed using mixed linear modeling (MLM) in order to examine differences in slopes between the intervention conditions and the control condition. The value of baseline religious commitment and spiritual transcendence for predicting growth in trait patience between Time 1 and Time 2 (Hypothesis 3) was tested using multi-level modeling within the patience intervention condition.

Results – Study 1

Preliminary analyses. I conducted a one-way multivariate analysis of variance (MANOVA) comparing completing participants versus the participants who dropped out on the initial values of the eight outcome variables at Time 1. There was a significant multivariate effect, multivariate $F(8, 96) = 2.37$, $p = .022$. Univariate ANOVAs determined that this effect was driven by scores on trait self-control at Time 1, $F(1, 103) = 4.16$, $p = .044$, with completers exceeding non-completers on trait self-control. No other measures were significantly different

between those who completed the first time point only and those who completed both time points. It stands to reason that the mean trait self-control score for those who completed the study ($M = 41.18$, $SD = .84$) would exceed that of those who did not complete the study ($M = 36.94$, $SD = 1.90$), given the longitudinal and self-directed nature of the study. I thus assumed that completion status did not further affect potential changes in character. Those participants who completed measures at only Time 1 ($n = 9$ from the patience workbook condition; $n = 7$ from the positivity workbook condition, none from the control condition) were omitted from further analyses (see Figure 2).

The remaining data ($N = 88$; patience workbook condition $n= 28$, positivity workbook condition $n = 27$, and control condition $n = 33$) were then checked for normality, missing data, and outliers; no concerns were identified. I conducted a one-way MANOVA to compare initial values of outcome variables at Time 1 across conditions. There was no significant multivariate effect, multivariate $F(12, 162) = .59$, $p = .852$, and no univariate effects were significant, indicating that outcome values did not differ significantly across conditions at Time 1. Means and standard deviations for all variables are reported in Table 1. Correlations are reported in Table 2.

Table 1.

Study 1 Means and Standard Deviations for Outcome Measures, N = 88

Condition	Patience		Positivity		Control	
	T1	T2	T1	T2	T1	T2
Patience Scale M	36.39	39.21	35.96	37.56	36.48	36.47
(SD)	(6.28)	(5.92)	(5.20)	(5.44)	(6.67)	(6.97)
Self-Control Scale M	41.68	44.36	40.70	42.20	41.15	40.69
(SD)	(10.19)	(10.64)	(4.98)	(6.60)	(8.95)	(9.34)
Trait Forgivingness	32.29	36.43	35.33	38.04	33.39	33.45
Scale M	(7.18)	(5.51)	(5.45)	(5.56)	(5.73)	(6.11)
(SD)						
Values in Action M	35.29	35.14	34.44	35.20	33.42	33.13
(SD)	(6.38)	(6.73)	(6.94)	(6.42)	(4.87)	(5.88)
Positive and Negative	34.82	34.04	35.37	35.28	35.00	33.63
Affect Scale Positivity	(7.66)	(8.36)	(4.91)	(7.04)	(5.84)	(5.66)
M (SD)						
Positive and Negative	19.61	17.36	20.93	17.19	19.61	20.13
Affect Scale	(5.70)	(6.37)	(6.26)	(3.99)	(7.68)	(7.99)
Negativity M						
(SD)						
Religious	21.36	22.11	23.78	24.32	23.51	23.97
Commitment	(9.72)	(10.64)	(11.41)	(12.47)	(12.16)	(11.47)
Inventory M (SD)						
Spiritual	30.25	30.36	29.26	28.88	29.85	31.56
Transcendence Index	(12.62)	(11.75)	(13.20)	(12.43)	(13.68)	(12.82)
M (SD)						

Note. PS (Patience Scale) values range from 10-50; SCS (Self-Control Scale) values range from 13-65; TFS (Trait Forgivingness Scale) values range from 10-50; VIA (Values in Action) values range from 9-45; Pos (Positive and Negative Affect Schedule values range from 10-50; Neg (Positive and Negative Affect Schedule) values range from 10-50. RCI (Religious Commitment Inventory) values range from 10-50; STI (Spiritual Transcendence Index) values range from 10-50.

Table 2.

Study 1 Intercorrelations for Outcome Variables at Time 1, N =88

	PS	SCS	TFS	VIA	Pos	Neg	RCI	STI
PS	--							
SCS	.323*	--						
TFS	.369*	.153	--					
VIA	.205	.380*	.191	--				
TPos	.338*	.392*	.146	.201	--			
TNeg	-.324*	--.446*	-.062	-.231	-.209	--		
RCI	.188	.070	.179	.195	.397*	-.152	--	
STI	.210	.141	.241	.306	.427*	-.263	.796*	--

*p =.002 (Bonferroni corrected alpha)
Note. PS = Patience Scale; SCS = Self-Control Scale; TFS = Trait Forgivingness Scale; VIA = Values in Action (humility); Pos = Positive and Negative Affect Schedule (positivity); Neg = Positive and Negative Affect Schedule (negativity); RCI = Religious Commitment Inventory; STI = Spiritual Transcendence Index

Manipulation check on treatment fidelity. Because participants completed workbook interventions on their own time and without direct researcher supervision, data were collected to examine the fidelity and engagement with which the workbooks were completed. After determining one high outlier (in the positivity workbook condition), a one-way analysis of variance (ANOVA) was conducted to determine whether differences existed in self-reported completion time among conditions. The overall mean workbook completion time across conditions was M = 8.53 hours (SD = 6.85). No significant differences were detected between workbooks in completion time, $F(1, 50) = 1.58$, $p = .215$ (see Table 3).

Table 3.

Study 1 Manipulation Check on Workbook Completion by Condition

	Patience	Positivity
Mean hours to completion (SD)*	7.38 (3.81)	9.76 (8.99)
Mean total word count**	4354.43 (1804.75)	5323.63 (2444.58)
Mean words per prompt**	30.24 (12.53)	24.65 (11.31)
Mean percentage of prompts completed**	93.82% (7.91%)	96.42% (4.20%)
Mean words related to patience in participant responses**	75.82 (35.25)	1.92 (1.89)
Mean words related to positivity in participant responses**	12.54 (7.78)	99.54 (35.29)
Mean words related to negativity in participant responses**	12.14 (9.85)	20.92 (11.82)

*Note: patience ($n = 27$), positivity ($n = 25$)
**Note: patience ($n = 28$), positivity ($n = 24$).

Next, I examined the total word count, word count per prompt, and percentage of prompts completed in the patience and positivity workbooks. (Note: one positivity workbook was not available for analysis.) The overall mean word count of participant responses was 4801.75 words ($SD = 2158.11$).Total mean words per response to a prompt was 27.66 ($SD = 12.20$). Univariate ANOVAs were conducted to determine whether differences existed among conditions. Neither workbook yielded greater word count, $F(1, 50) = 2.69$, $p = .107$; greater word count per prompt, $F(1, 50) = 2.81$, $p = .100$; nor greater percentage of prompts completed, $F(1, 50) = 208$, $p = .156$ (see Table 3), than the other.

I also examined the content of the words written by participants by running searches throughout the workbooks for roots of words related to patience or positivity, respectively.

"Patien" was searched for in all workbooks and appeared significantly more in participant responses in the patience condition than in the positivity condition $F(1, 50) = 104.94, p < .001$. Root words related to positivity, including "happ" ("happen" was excluded from these results), "positiv," "warm," and "love" were also searched for in the workbooks and appeared significantly more in the positivity condition than in the patience condition $F(1, 50) = 161.59, p < .001$. Finally, I searched for words related to negativity, because this was also a prevalent concept in the positivity workbook, including "sad" "depress" "anxi "afraid" "fear" "anger" "angry" "upset" "mad" "hate" "veng," and "disgust." These appeared significantly more in the positivity than in the patience workbook, $F(1, 50) = 8.53, p = .005$ (see Table 2).

Considering these aspects, I deemed each workbook to be an appropriate manipulation for achieving the participant's discussion of concepts related to patience or positivity, respectively. I conclude that participants, on average, devoted sufficient time and writing relevant to the topics of each workbook. These data support the workbooks as an appropriate manipulation.

Hypothesis 1: Workbook interventions will promote their targets. Before comparing the treatments against each other and the control, I sought to determine whether the workbooks were achieving their desired purposes and were fit for further analysis. I conducted paired-samples *t*-tests on each condition individually at Time 1 and Time 2 prior to further multivariate analysis. The patience condition ($n = 28$) increased significantly in patience scores, $t(27) = 2.37$, $p = .025$. The positivity condition ($n = 27$) significantly decreased in negativity, $t(26) = -4.02$, p < .001, but no significant changes occurred in positivity between Time 1 and Time 2, $t(26) = .08$, $p = .939$. No significant changes in patience or positivity occurred in the control condition; effect sizes are reported in Table 4. These analyses suggest that workbooks were affecting the

appropriate target dependent measures; thus both conditions could be considered in tests of multivariate effects.

Table 4.

Study 1 Effect sizes for workbooks on their respective targets versus control condition, N =88

	Patience Workbook	Positivity Workbook (on Positivity)	Positivity Workbook (on Negativity)
Cohen's *d*	.42	.26	.47

Hypothesis 2: The promotion of patience will contribute to promotion of other warmth- and conscientiousness-based virtues more than a positivity workbook and control condition. Multivariate and univariate effects of the workbook interventions against the control condition were analyzed using a mixed (between x within subjects) 3 x 2 (condition x time) MANOVA. Overall, there was a significant multivariate interaction effect of condition membership and time on the six outcome measures, multivariate $F(12, 162) = 1.92$, $p = .036$. Thus, univariate condition by time effects and simple main effects were also examined, and when significant, I conducted planned contrasts using mixed linear modeling (MLM) to compare change over time across conditions.

Trait patience. The univariate condition x time (S) interaction effect approached significance for trait patience; thus, improvement in trait patience scores differed slightly but not significantly across conditions, $F(2, 85) = 2.67$, $p = .075$. Contrasts demonstrated greater change in trait patience (i.e., slope) in the patience workbook condition than in the control condition, $t(85) = 2.29$, $p = .024$, but no significant difference between the patience and positivity workbook conditions, $t(85) = .94$, $p = .349$. Trait patience values changed significantly over time within the patience workbook condition, $F(1, 85) = 9.60$, $p = .003$. No significant change in trait patience occurred in the positivity workbook condition, $F(1, 85) = 2.97$, $p = .089$, or the control condition (see Figure 3).
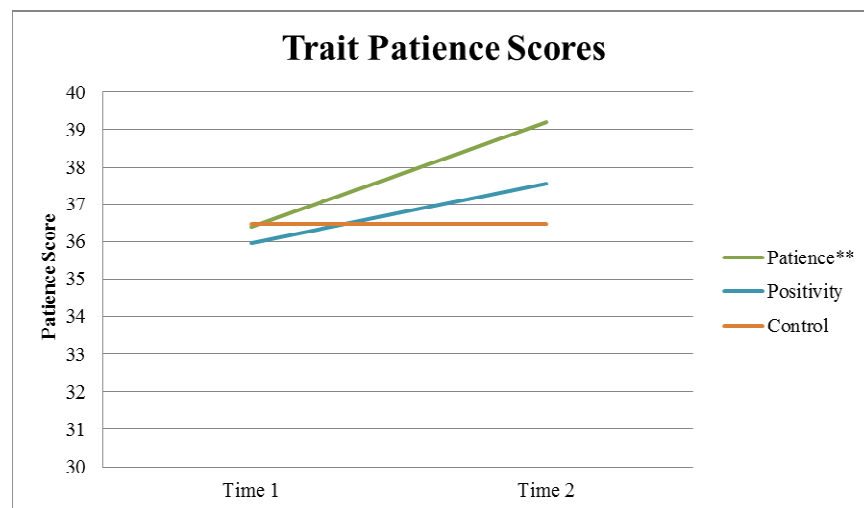
Figure 3. Change in trait patience over time (Study 1).
*Note: *$p < .05$, **$p < .01$, *** $p < .001$.

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Trait self-control. No significant univariate time by condition interaction effect occurred on trait self-control; thus, improvement in trait self-control scores did not differ significantly across conditions. Trait self-control values changed significantly over time within the patience workbook condition, $F(1, 85) = 5.75$, $p = .019$, but not in the positivity condition, $F(1, 85) = 1.73$, $p = .192$, or in the control condition. (see Figure 4).

Figure 4. Change in trait self-control over time (Study 1).
*Note: *p < .05, **p < .01, *** p < .001.*

Trait forgivingness. A significant univariate condition by time interaction effect occurred

on trait forgivingness; thus, improvement in trait forgivingness scores differed significantly

across conditions, $F(2, 85) = 5.07$, $p = .008$. Contrasts demonstrated greater change in trait

forgivingness (i.e., slope) in the patience workbook condition than in the control condition, $t(85)$

$= 3.12$, $p = .003$, and in the positivity workbook condition than in the control condition , $t(85) =$

2.00, $p = .049$, but not between the patience and positivity workbook conditions, $t(85) = 1.04$, p

$= .299$. Trait forgivingness values changed significantly over time within the patience workbook

condition, $F(1, 85) = 18.48$, $p < .001$, and the positivity workbook condition, $F(1, 85) = 7.61$, $p =$

$.007$. No significant change in trait forgivingness occurred from Time 1 to Time 2 in the control

condition (see Figure 5).
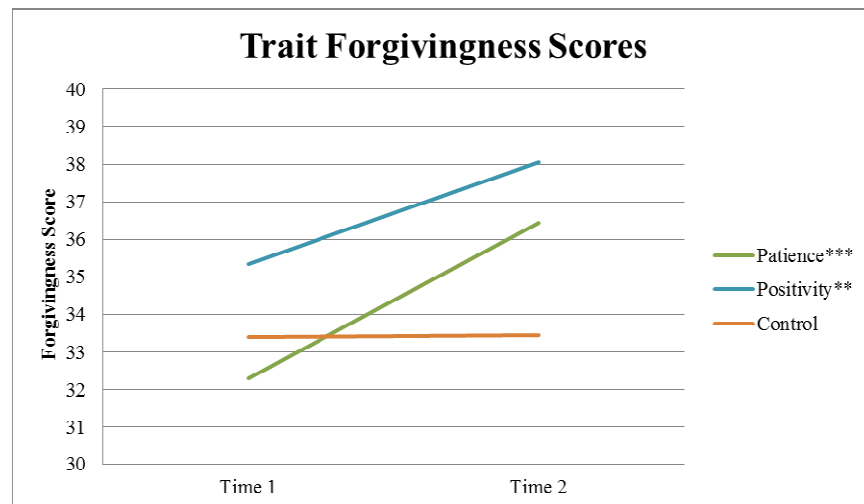
Figure 5. Change in trait forgivingness over time (Study 1).
*Note: *p* < .05, **p* < .01, *** *p* < .001.

Trait humility. No univariate significant condition x time interaction effect occurred on trait humility; thus, improvement in trait humility scores did not differ significantly across conditions. Trait humility did not change significantly in any condition over time (see Figure 6).
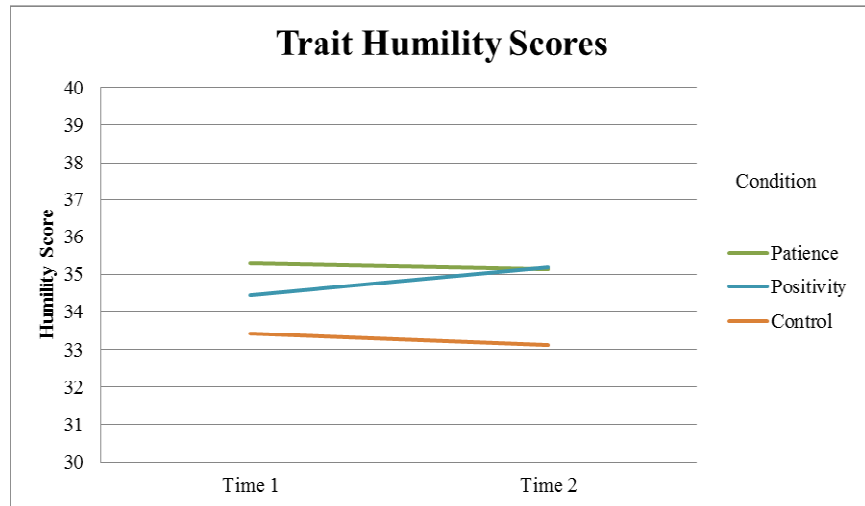
Figure 6. Change in trait humility over time (Study 1).
Note: *p < .05, **p < .01, *** p < .001.

Trait positivity. No univariate significant time by condition interaction effect occurred on trait positivity; thus, improvement in trait positivity scores did not differ across conditions. Trait positivity did not change significantly in any condition over time (see Figure 7).
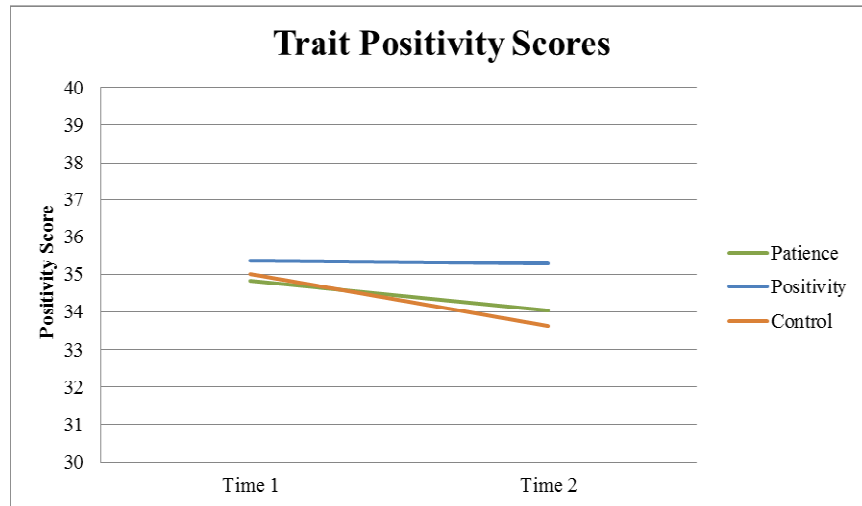
Figure 7. Change in trait positivity over time (Study 1).
*Note: *p < .05, **p < .01, *** p < .001*
.

Trait negativity. A significant time by condition interaction effect occurred on trait

negativity; thus, improvement in trait negativity scores differed significantly across conditions,

$F(2, 85) = 3.96$, $p = .023$. Contrasts demonstrated greater change in trait negativity (i.e., slope) in

the positivity workbook condition than in the control condition, $t(85) = 3.12$, $p = .003$, and

marginally in the patience workbook condition than in the control condition $t(85) = -1.80$, $p =$

.075, but not between the patience and positivity workbook conditions, $t(85) = .92$, $p = .359$.

Trait negativity values decreased significantly over time within the patience workbook condition,

$F(1, 85) = 3.97$, $p = .050$, and the positivity workbook condition, $F(1, 85) = 10.56$, $p = .002$. No

significant change in trait negativity occurred in the control condition (see Figure 8).
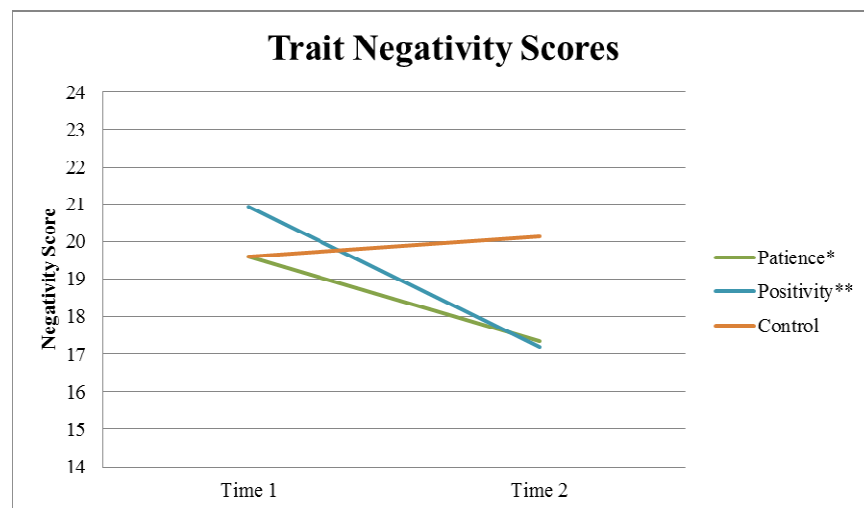
Figure 8. Change in trait negativity over time (Study 1).
*Note: *$p < .05$, **$p < .01$, *** $p < .001$.

Hypothesis 3: Baseline religious commitment and spiritual transcendence will

predict the success of the patience intervention workbook. Hypothesis 3 was that religious

commitment and spiritual transcendence would predict greater change in patience outcomes (i.e.,

stronger slopes) for participants in the patience condition. Because I was not interested in the

change of religious commitment or spiritual transcendence over time in this hypothesis but rather

their predictive value for changes in patience, I did not conduct analyses for multivariate interaction effects as in Hypothesis 2. Instead, I used multi-level modeling (MLM) to investigate the extent to which religious commitment or spiritual transcendence of the participant at baseline influenced the growth of patience in our patience intervention condition over time.

In MLM, the baseline model selected is based on the hypothesis. Because the question of interest for Hypothesis 3 is about why growth in patience occurred, the random-intercepts-and-slopes-as-outcomes model was selected. Time, religious commitment, and time x religious commitment were entered into the random intercepts and slopes as outcomes model, with trait patience scores over time as the dependent variable. Trait patience intercepts did not differ based on baseline religious commitment, $t(28) = .63$, $p = .628$, nor did baseline religious commitment interact with time to predict change in trait patience scores, $t(55.76) = -1.08$, $p = .287$. Similarly, trait patience intercepts did not differ based on baseline spiritual transcendence, $t(28) = 1.41$, $p = .170$, nor did baseline spiritual transcendence interact with time to predict change in trait patience scores, $t(55.43) = .41$, $p = .687$. The patience intervention was equally efficacious among participants regardless of participants' levels of religious commitment and spiritual transcendence.

Discussion – Study 1

Hypothesis 1. In Study 1, I sought to alpha test an intervention to promote patience. I initially hypothesized that both the patience workbook would promote patience over and above a similar positivity workbook designed to promote more positive and less negative mood, but not necessarily virtue. The patience workbook did indeed promote patience, indicating that research used to construct the five steps and exercises in the patience workbook was both valid and efficacious for the promotion of patience (Stokes, 2011). Importantly, the positivity condition did

not produce a significant increase in patience, adding to our inquiry that simply completing any workbook of this nature, even one designed to improve mood, is not enough to improve patience. Though the positivity workbook did not improve positive mood, it did decrease negative mood. Increasing positive emotions and decreasing negative mood are not necessarily connected to each other (Watson et al., 1988), and often positive and negative moods do not respond the same way to interventions. Thus, this workbook still served as an active control that promoted a construct besides virtue. The results examined in Hypothesis 1 run contrary to Kunz's (2002) claim that any active effort to develop patience is counterintuitive and futile. These results add a workbook modality to the patience intervention research successfully performed by Schnitker (2012), who promoted patience using a four-hour group therapy invention.

Hypothesis 2. In Hypothesis 2, I sought to test whether that the promotion of patience would generalize to promote other warmth and conscientiousness-based virtues over time, more so than the promotion of positivity. This hypothesis was partially supported. Correlations among variables at Time 1 provide initial support (Table 2) for the association between patience and other virtues, both warmth (forgivingness) and conscientiousness-based (self-control). This is consistent with Worthington and Berry's (2005) determination that virtues of either classification are still related to those in the other classification (simply by being virtues). The correlation of patience, a conscientiousness-based virtue, with a warmth-based virtue (forgivingness) in the present study supports Schnitker's (2012) conceptualization of patience as involving an interpersonal and potentially warmth-based component.

Consistent with Hypothesis 2, there was an overall multivariate interaction effect of condition on the six outcome measures over time, driven by significant overall differences among conditions on trait patience, trait forgivingness, and trait negativity. Contrary to my

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hypothesis, contrasts between conditions over time determined that the patience and positivity

workbooks were never significantly different from one another in promoting any given outcome.

Thus, it cannot be definitively asserted from these analyses that a patience workbook promoted

patience better than a positivity workbook would (see Table 5).

Table 5.

Study 1 Summary of Results

Condition	Simple Main Effects	Change (Slope) Significantly Different from Positivity Condition	Change (Slope) Significantly Different from Control Condition
Patience Condition	Trait patience, trait self-control, trait forgivingness, and trait negativity	None	Trait patience, trait forgivingness, and trait negativity (marginal)
Positivity Condition	Trait forgivingness, trait negativity	-	Trait forgivingness and trait negativity
Control Condition	None	-	-

Thus, participants were not necessarily more likely to improve in any given outcome

measure based on which workbook they completed. However, consistent with Hypothesis 2,

simple main effects analyses determined that the patience workbook condition also saw

significant improvement in two additional virtues besides patience (self-control and

forgivingness) and in more outcome variables overall, including improved mood (decreased

negativity), than did the positivity workbook (which decreased negativity and increased

forgivingness) or control conditions (which produced no changes over time on any outcome

measure). The promotion of patience led to improvement in all measured virtues examined as

might be expected by Worthington & Berry (2005), with the exception of humility; this is

consistent with previous research on humility as a potential "master virtue" that is implicated in

many other virtues but may be difficult to promote indirectly (Lavelock et al., 2014).

Though perhaps partially inconsistent with Hypothesis 2, the absence of significant difference between patience and positivity workbooks is somewhat consistent with the literature in terms of how mood and patience may be related. Loewenstein and Prelac (1991) describe waiting as a negative experience; thus it stands to reason that increasing patience would decrease negative mood, as in Study 1. This demonstrates a nuanced relationship between patience and mood, such that it is not enough to say that patience involves waiting more positively, nor can it be said that patience is just "being positive," but perhaps patience indicates more calm and less excitement and stress (i.e., returning to baseline levels after negative stress of waiting). Results from Study 2 and Study 3 may help to clarify the relationship between mood, stress, and patience.

Hypothesis 3. In Hypothesis 3, I suggested that baseline religious commitment and spiritual transcendence might predict the growth of patience in those who completed the patience workbook. This hypothesis was not supported; neither religious commitment nor spiritual transcendence levels at Time 1 predicted the success of the patience workbook. This does not necessarily mean that there is no predictive value to these variables for patience as a construct, but rather that people on varying levels of religious commitment and spiritual transcendence are just as likely to experience similar growth in patience as a result of the workbook.

Results from Hypothesis 3 are inconsistent with those by Schnitker and Emmons (2007), who found that patience was significantly correlated with spiritual transcendence. However, previous literature has demonstrated mixed results regarding the relationship between patience and religious and spiritual variables. For example, patience has been correlated with church attendance (Fowler & Kam, 2006), but it has been found to be uncorrelated with religious and

spiritual attitudes (Büssing, Ostermann, & Matthiessen, 2007). Patience might relate to only certain aspects of the nuanced constructs of religious and spiritual variables. In particular, it may be that religions, especially those that believe in an afterlife, are related to delay of gratification and optimism, which are related to patience but are not necessarily patience (Becker & Mulligan, 1997; Fowler & Kam, 2006; Hooda, Sharma, & Yadava, 2009; Kesebir & Kesibir, 2012).

Limitations. A fundamental limitation of this study is the use of a convenience sample in the introductory to psychology course. However, given the experimental nature of the interventions in question, a convenience sample is justified for these preliminary studies. Still, it should be noted that college students represent a group of individuals who, by virtue of matriculating into higher education, have already engaged in ''one form of investment in future-oriented capital'' (Becker & Mulligan, 1997, p. 751). These individuals already possess some disposition for delayed gratification—a baseline level of patience, one might argue. As a consequence, variation in the underlying level of patience is likely to be smaller within our convenience sample, compared with what we might see using a more representative sample (Fowler & Kam, 2006). Though this is consistent with findings from Reyes-Garcia et al., 2007, which found impatience to be associated with fewer years of schooling, and with Schnitker (2012), who found goal striving to be correlated with patience, these effects may be counteracted by the still-developing prefrontal cortex of most undergraduates, who may not be able to fully rely on their neurology to make patient decisions.

Due to the design of this study and the use of workbooks over an extended period of time, I cannot guarantee that participants were engaged or participating fully in each workbook activity. Additionally, participants were randomly assigned to one of several conditions; they did not volunteer for a study in patience (versus controls) but for a study in virtue. Thus, their

motivation to engage with a patience workbook might have been suspect. To minimize potential

treatment infidelity, I was careful in the design of each workbook to make certain that the

participant could not simply breeze through it, but actually had to watch the videos, read the

quotes, etc., in order to complete the workbook. That the workbook is completed in the end

indicates at least minimal engagement, and further analysis of workbook content (see:

Preliminary Analyses) demonstrated adequate word count, percentage of prompts completed, and

other markers of completion and engagement.

A potential concern for the study is that workbook effects may be limited by formatting

constraints. In order to let the idiosyncrasies of each construct shine through and thereby to have

the best chance of finding differences, I also wanted the workbooks to be comparable in format

for their maiden voyage into testing. Thus, I kept the variety of exercises consistent across

workbooks, which may have made it difficult to differentiate effects the workbooks could

otherwise have if created individually. I was fortunate to have the experts in the field from whom

I requested suggestions, who helped to make each workbook unique and relevant to its virtue

while maintaining a format consistent with the others.

An additional design limitation of this study is the lack of immediate post-test measures

immediately following workbook completion. Still, two-week post-test measures are valuable for

indicating any lasting changes that remain following the workbook. Further, the use of trait

measures may preclude the need for immediate post-test measures; if a trait has truly changed,

the change is inherently lasting and will still be present at follow-up.

A final threat to validity is the tendency toward self-reports for assessing trait virtues.

Given the limited research available on assessment of virtues, in addition to the nature and

design of the study, performing behavioral and other-report measures were not a realistic option.

Thus, I selected self-report measures that have strong psychometric support, and many of them have been widely accepted as the authority in measurement for their construct.

Implications for Study 3. Because Study 3 aims to replicate results from Study 1, I approach Study 3 with consideration for content and methodological changes supported by Study 1. For Study 3, I plan to minimize similarities among the patience and positivity workbooks by editing them away from their centralized format to make them more idiosyncratic in content and format. This may yield more observable differences in outcome measures based on condition. I also plan to shorten the workbooks by trimming redundant exercises and consolidating related exercises in order to ease participant burden and perhaps minimize attrition. Finally, I plan to include an immediate post-test measurement occasion in addition to pre-test and two-week follow-up, given that the outcomes of interest in Study 3 may not fall into the trait realm and would be best assessed immediately following workbook completion.

Study 2A: Predictors of Patience

My second study drew heavily on existing patience literature and presents a theory of patience, including antecedents, mechanisms, and outcomes related to patience. The hypothesized model suggests that person factors and environment factors serve as moderating antecedents to one's appraisal of a situation as stressful, leading to a stress response, after which patience is a potential coping response. Mindfulness and emotion regulation were hypothesized to serve as moderators before and after the stress response, contributing to patience as a coping response. A number of physical health, mental health, relational, and spiritual outcomes were hypothesized to result. Due to a large volume of self-report measures of interest, Study 2A examined hypothesized antecedents and mechanisms to reaching patience, and Study 2B examined hypothesized outcomes of patience (see Figure 9).
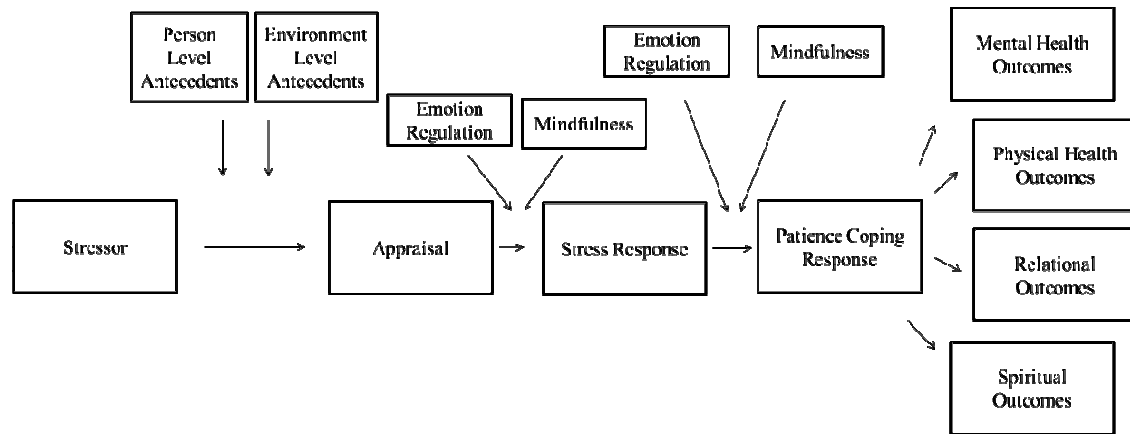
Figure 9. Hypothesized stress and coping model of patience.

Method - Study 2A

      Participants. Data for Study 2A was collected in the spring of 2014. A convenience sample from the psychology curriculum at a large mid-Atlantic university yielded 200 participants in order to accommodate for the number of measures included in the study. The sample ranged in age from 18-45 ($M = 20.67$, $SD = 3.53$) and was 73.00% female ($n = 146$) and 27.00% male ($n = 54$). Ethnicities of participants were 47.50% Caucasian/White, 27.50% African American/Black, 13.00% Asian-American, 4.50% Hispanic, and 7.5% Other.

      Design. This study was a between-subjects design, employing correlational and cross-sectional methods.

      Measures.

      Demographic information. A demographics data page includes single-item questions concerning age, sex, ethnicity, country of origin, religious affiliation, and year in school.

      Patience measures.

      Patience Scale (PS-10; Schnitker & Emmons, 2007). The PS-10 was described in Study 1. The Cronbach's alpha was .82 in the present study.

3-Factor Patience Questionnaire (3-FPQ; Schnitker, 2012). This 11-item measure is designed to measure three types of patience: interpersonal patience, life hardships patience, and daily hassles patience. Items such as "When someone is having difficulty learning something new, I will be able to help them without getting frustrated or annoyed" are rated on a 7-point scale ranging from 1 = *very much unlike me* to 7 = *very much like me.* The Cronbach's alpha for this measure in the present study was .87.

Honesty/Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness Personality Inventory – Patience Subscale (HEXACO-PI, Lee & Ashton, 2004). The entire HEXACO-PI measures twenty-four character traits, grouped under the six main types listed above. The patience scale is found under the agreeableness group, and uses eight items such as "I am usually a patient person," to assess patience using a 5-point rating scale from 1 = *very much unlike me* to 5 = *very much like me*. In order to assess state patience, participants were asked to identify a situation in which he or she tends to have difficulty being patient, and answer the items in reference to thoughts and feelings about that situation. Cronbach's alpha for this measure is .88 and was .91 in the present study.

The stressor. The stressor identified by the participant in the HEXACO-PI was classified by researchers as involving interpersonal patience, life hardship patience, or daily hassles patience.

Person variables.

Time Perspective Questionnaire (Fong & Hall, 2003). The Time Perspective Questionnaire is a three-item assessment of the tendency to have a long-term time perspective when making decisions. Items such as "Living for the moment is more important than planning for the future" is rated on a 1 = *strongly disagree* to 4 = *strongly agree* rating scale. Cronbach's

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alpha for this scale is > .80 but was only .38 in the present study. Any significant findings related to the TPQ were therefore interpreted cautiously.

Connection to future self. A modified version of the Inclusion of Other in Self Scale (Aron, Aron, & Smollan, 1992) was used to study connectedness to future self in Bartels and Rips (2010). This six-item measure asks participants to rate the degree of connectedness between the current self and the future self by choosing a percentage of overlap between circles. Items represented current self vs. future self at one year, five years, ten years, twenty years, thirty years, and forty years. Psychometric data for this measure were not available; however, this has become an increasingly popular method of assessing for closeness between the self and another entity (e.g., Schulz, 2000, Tropp & Wright, 2001). The Cronbach's alpha for this measure in the present study was .89.

Batson Empathy Adjective Checklist (BEA; Archer, Diaz-Loving, Gollwitzer, Davis, and Fouchsee 1981; Batson, Bolen, Cross, and Neuringer-Benefiel, 1986). This eight-item measure of empathy lists the following adjectives: sympathetic, empathetic, concerned, moved, compassionate, warm, soft-hearted, and tender. Each adjective is rated using a 5-point rating scale from 0 = *not at all* to 5 = *extremely*. Cronbach's alphas for this measure have ranged from (.79-.95) and was .92 in the present study.

Big Five Inventory (BFI-44; John, Donahue, & Kentle, 1991). This 44-item measure of neuroticism, agreeableness, openness, extraversion, and conscientiousness includes item such as "I see myself as someone who is emotionally stable, not easily upset." Participants use a 7-point rating scale where 1 = *disagree strongly* and 7 = *agree strongly*. Cronbach's alphas of the five BFI scales typically range from .75 to .90 and average above .80. Cronbach's alphas in the present study ranged from .75 to .86 and averaged .82.

Compassionate Love for Humanity Scale (Sprecher & Fehr, 2005). This twenty-one item measure of compassion for others consists of items such as, "I tend to feel compassion for people even though I do not know them." Items are rated on a 7-point rating scale from 1 = *not at all true of me* to 7 = *very true of me*. Cronbach's alpha for this scale was .95 at the time of development and was .96 in the present study.

Trait Forgivingness Scale (TFS; Berry et al., 2005). The TFS was described in Study 1. Cronbach's alphas was .84 in the present study.

Values in Action Inventory of Strengths – Modesty/Humility Scale (VIA-IS; Peterson & Seligman, 2004). The VIA-IS Modesty/Humility Scale was described in Study 1. Cronbach's alpha for this scale is .70 and was .83 in the present study.

Brief Self-Control Scale (Brief SCS; Tangney, Baumeister, & Boone, 2004). The Brief SCS was described in Study 1. Cronbach's alpha was .84 in the present study.

The Grit Scale (Duckworth, Peterson, Matthews, & Kelly, 2007). The Grit Scale is a twelve-item measure of perseverance. Items such as "I have overcome setbacks to conquer an important challenge" are rated on a 5-point scale from 1 = *not like me at all* to 5 = *very much like me.* Cronbach's alphas ranged from .79-.80 and was .80 in the present study.

Responsibility Attitude Scale (RAS; Salkovskis et al., 2000). This twenty-six item measure of beliefs about one's responsibility includes items such as "If I can have even a slight influence on things going wrong, then I must act to prevent it." Participants rated items on a 7-point scale from 1 = *totally disagree* to 7 = *totally agree*. Cronbach's alpha for this measure is .89 and was .91 in the present study.

Religious Commitment Inventory (RCI; Worthington et al., 2003). The RCI-10 was described in Study 1. Cronbach's alpha coefficient was .96 in the present study.

Spiritual Transcendence Index (STI; Seidlitz et al., 2002). The STI was described in Study 1. Cronbach's alpha was .98 in the present study.

Environmental variable.

Self-Construal Scale (SCS; Singelis, 1994). This twenty-four item scale measures one's tendency to think of oneself as interdependent or independent from others, indicating individualist or collectivist cultural tendencies. Participants rated each item on a 7-point rating scale from 1 = *strongly disagree* to 7 = *strongly agree.* Cronbach's alphas range from .69-.74 and ranged from .82-.83 in the present study.

Mechanism measures.

Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003). This fifteen-item measure is intended to assess dispositional mindfulness. Items such as "It seems I am 'running on automatic,' without much awareness of what I'm doing" are answered on a 6-point rating scale from 1 = *almost always* to 6 = *almost never.* Cronbach's alphas range from .80-.87 and was .90 in the present study.

Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). This ten-item measure is designed to assess for emotional suppression and cognitive reappraisal as they relate to emotion regulation. Items include "I control my emotions by *changing the way I think* about the situation I'm in" and are rated on a 7-point rating scale from 1 = *strongly disagree* to 7 = *strongly agree.* Cronbach's alphas range from .70-.82 and ranged from .74-.90 in the present study.

Appraisal measures.

Familiarity of stressor. A single-item measure asked participants "have you ever experienced this type of stressor before?"

Risk of stressor. Participants were asked to rate on a scale of 1 = *not risky at all* to 10 = *extremely risky* the following two: "How much risk is involved in the stressor you identified in the PS-10?" and "How much risk is involved if you *take your time* with the stressor you identified in the PS-10?" The Cronbach's alpha for these items was .78 in the present study.

Value of stressor vs. value of time. Participants were asked to rate on a scale of 1 = *not worth it at all* to 10 = *extremely valuable* the following item: "How valuable is it for you to resolve this stressor, one way or another?" On a scale of 1 = *not true at all* to 10 = *extremely true*, participants rated the following item: "This stressor is worth the time to resolve, no matter how long it takes."

Availability of alternate coping responses. Participants were asked to rate on a scale of 1 = *not true at all* to 5 = *very true* "I have exhausted all options for dealing with this stressor" and "There is nothing left for me to do but wait when it comes to this stressor." The Cronbach's alpha for these items was .65 in the present study.

Framing the stressor. Participants were asked to rate on a scale of 1 = *not true at all* to 5 = *very true* "Dealing with this stressor is teaching me a valuable lesson" and "Struggles such as this are a valuable investment for the future." The Cronbach's alpha for these items was .82 in the present study.

Stress response measure.

Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). This 10-item measure of perceived stress was modified to assess for the amount perceived stress of the event participants identified in the HEXACO-PI. Items such as "In the situation you identified on the HEXACO-PI, how much did you feel that you could not cope with all the things you had to do?"

are rated on a 5-point rating scale from 0 = *not at all* to 4 = *very much.* Cronbach's alpha for this measure is .78 and was .81 in the present study.

Procedure. Participants signed for the study over the course of the spring 2014 semester using the SONA-Systems©. A waiver of documentation of consent was requested due to the purely electronic nature of the study; completing the surveys present no more than minimal risk of harm and involved no procedures for which written consent is normally required outside the research context. In lieu of traditional consent, participants were provided information about the content of the study and were given the option to terminate their participation at any time Once participants signed up for the study, they were immediately provided to a link taking them to the Research Electronic Data Capture (REDCap) Consortium (Harris, Taylor, Thielke, Payne, Gonzalez, & Conde, 2009), where they spent about one hour completing the surveys. Upon completion, participants were compensated with research credits.

Analysis. Study 2A hypothesized a stress-and-coping model of antecedents to patience, in which type of stressor would impact appraisal variables, moderated by person and environment variables. These appraisal variables were hypothesized to then predict perceived stress, which was hypothesized to predict patience as a coping response. After checking for normality of responses, bivariate correlations were conducted among measures using a Bonferroni-corrected p-value to accommodate for the number of measures collected. Regression and moderation analyses were performed to assess for predictive value and moderation of variables as hypothesized. Path analysis and tests of direct and indirect effects were used to determine overall model fit.

Results – Study 2A

Data were checked for normality and outliers; no concerns were identified. Means and standard

deviations for all variables are reported in Table 6. Correlations are reported in Table 7.

Table 6.

Study 2A Means and Standard Deviations for Outcome Measures, N = 190

Variable	*M*	*SD*
Trait Patience (PS-10)	42.97	6.71
Trait Patience (FPQ)	38.59	7.46
State Patience	27.53	8.23
Time Perspective	8.59	1.49
Closeness to Future Self – 1 year	66.41	22.50
Closeness to Future Self – 5 years	60.75	22.14
Closeness to Future Self – 10 years	55.11	26.45
Closeness to Future Self – 20 years	49.75	29.56
Closeness to Future Self – 30 years	46.12	32.52
Closeness to Future Self – 40 years	43.62	35.83
Empathy	24.56	8.44
Extraversion	25.14	6.82
Agreeableness	34.30	6.04
Conscientiousness	32.48	6.13
Neuroticism	23.65	6.36
Openness	35.83	5.96
Compassionate Love	96.62	24.55
Forgivingness	34.37	7.65
Humility	34.14	6.27
Self-Control	39.93	8.83
Perseverance	39.27	6.69
Responsibility	108.43	22.26
Religious Commitment	21.93	11.44
Spiritual Transcendence	28.09	13.69
Interdependence	60.05	10.28
Independence	60.42	10.87
Appraisal – Risk	6.12	4.13
Appraisal - Value	5.89	2.94
Appraisal – Worth Time	5.29	2.93
Appraisal – All Options Exhausted	5.18	2.44
Appraisal – Investment	6.19	2.56
Mindfulness	56.04	13.74
Emotion Regulation	45.94	9.02
Perceived Stress	19.07	6.85

Note. See Measures section for scale values

Table 7.

Study 2A Intercorrelations for Outcome Variables at Time 1, N =190

	PS	FPQ	HEX	TPQ	CFS1	CFS5	CFS10	CFS20	CFS30	CFS40	BEA	BFI-E	BFI-A	BFI-C	BFI-N	BFI-O	CLS	TFS	VIA	BSCS	GRIT	RAS	RCI	STI	INTER	IND	RISK	VALUE	TIME	OPTIONS	INVEST	MAAS	ERS	PSS
PS	-																																	
FPQ	.80*	-																																
HEX	.45*	.55*	-																															
TPQ	0.08	0.06	0.00	-																														
CFS1	0.06	0.00	-0.02	0.07	-																													
CFS5	-0.06	-0.04	0.05	0.13	.58*	-																												
CFS10	-0.08	-0.04	0.09	0.12	.31*	.82*	-																											
CFS20	-0.10	-0.03	0.08	0.05	0.08	.68*	.89*	-																										
CFS30	-0.06	-0.01	0.11	0.03	-0.03	.57*	.82*	.94*	-																									
CFS40	-0.06	-0.02	0.13	-0.01	-0.11	.46*	.75*	.89*	.96*	-																								
BEA	.36*	.36*	.29*	0.01	0.09	0.09	0.11	0.10	0.13	0.10	-																							
BFI-E	0.00	0.09	0.07	-0.11	0.03	0.01	0.01	-0.01	0.00	0.01	0.12	-																						
BFI-A	.46*	.56*	.39*	0.03	0.09	0.12	0.12	0.10	0.10	0.10	.62*	.23	-																					
BFI-C	0.23	.31*	0.19	.28*	0.07	0.18	0.19	0.12	0.08	0.04	.36*	.25*	.50*	-																				
BFI N	-0.32*	-.44*	-.42*	-0.03	0.01	-0.06	-0.07	-0.02	-0.02	-0.04	-0.08	-.39*	-.35*	-.36*	-																			
BFI-O	0.15	0.18	0.08	0.13	0.02	-0.04	-0.03	-0.09	-0.06	-0.07	0.15	0.15	0.25	0.22	-0.16	-																		
CLS	.31*	.33*	0.23	0.11	0.15	0.07	0.09	0.04	0.06	0.02	.60*	0.19	.60*	.31*	-0.10	.28*	-																	
TFS	.43*	.53*	.39*	0.00	0.16	0.17	0.13	0.13	0.11	0.08	.40*	0.24	.61*	.30*	-.42*	0.13	.49*	-																
VIA	0.21	0.23	0.16	0.18	0.08	0.09	0.06	0.04	0.03	0.00	.33*	-0.08	.50*	.29*	-0.14	0.20	.34*	.32*	-															
BSCS	.33*	.38*	.32*	0.20	0.06	0.17	0.16	0.11	0.08	0.05	.31*	0.20	.45*	.68*	-.50*	0.12	.29*	.35*	.25*	-														
GRIT	0.16	.26*	0.13	.28*	-0.01	0.08	0.11	0.09	0.04	0.01	.28*	.28*	.44*	.64*	-.33*	0.13	.29*	0.22	.26*	.58*	-													
RAS	-0.01	-0.04	0.03	-0.01	-0.02	-0.06	-0.09	-0.09	-0.05	-0.07	0.22	-0.06	0.12	-0.06	.27*	0.12	.35*	0.03	0.08	-0.01	-0.11	-												
RCI	0.08	-0.04	0.08	0.14	-0.11	-0.02	-0.01	0.00	0.02	0.00	0.18	0.08	0.16	0.25	-0.15	0.07	0.19	0.18	0.12	.28*	0.20	0.23	-											
STI	0.03	-0.02	0.06	0.11	-0.08	-0.01	0.00	0.02	0.04	0.03	0.24	0.13	.30*	.29*	-0.12	0.04	.27*	0.22	0.25	.28*	.32*	0.21	.77*	-										
INTER	0.23	0.20	0.14	-0.03	0.10	0.06	0.01	0.02	0.02	0.00	.35*	-0.06	.34*	0.12	0.13	-0.05	.42*	.29*	.35*	0.06	0.02	.42*	0.18	.28*	-									
IND	0.15	0.22	0.12	0.15	0.04	0.04	-0.04	-0.07	-0.09	-0.11	0.00	.38*	0.19	.31*	-.33*	0.22	0.19	0.17	0.13	.26*	0.24	-0.12	0.16	0.17	0.08	-								
RISK	-0.16	-0.05	-0.09	-0.06	-0.11	-0.08	-0.09	-0.10	-0.12	-0.09	-0.06	-0.02	-0.07	-0.12	0.13	0.03	0.00	-0.07	-0.15	-0.19	-0.03	0.12	0.06	0.06	0.01	0.02	-							
VALUE	0.17	0.17	0.03	0.10	0.05	-0.05	-0.11	-0.12	-0.11	-0.12	0.12	0.01	0.12	0.15	0.03	0.15	0.00	0.11	-0.04	-0.01	0.17	0.06	0.07	0.05	0.07	0.08	0.24	-						
TIME	0.09	0.13	0.09	0.07	0.01	-0.04	-0.09	-0.07	-0.05	-0.07	0.13	0.05	0.10	0.10	0.06	0.12	0.03	0.06	-0.02	-0.05	0.16	0.06	0.09	0.07	0.05	0.06	0.19	.70*	-					
OPTIONS	-0.14	-0.12	-0.11	0.02	0.15	0.06	-0.04	-0.04	-0.04	-0.07	0.07	-0.06	0.23	-0.04	0.12	0.00	0.05	0.04	0.03	-0.09	-0.02	0.04	-0.04	-0.01	0.05	0.03	0.20	0.02	0.02	-				
INVEST	0.09	0.11	0.06	0.03	0.07	-0.04	-0.08	-0.04	-0.03	-0.07	0.18	0.06	0.17	0.07	0.01	.30*	0.13	0.15	0.07	0.00	0.14	0.13	0.21	0.15	0.03	0.07	0.09	.46*	.49*	0.02	-			
MAAS	0.25	.37*	.27*	0.03	0.02	0.14	0.13	0.12	0.08	0.07	0.14	0.18	.28*	.43*	-.38*	0.09	0.11	.25*	0.17	.46*	.41*	-0.16	0.08	0.07	-0.06	0.24	0.09	-0.01	-0.02	-0.01	0.02	-		
ERS	0.08	0.17	0.13	0.15	0.01	0.09	0.07	0.05	0.02	-0.02	0.04	0.01	0.19	0.12	-0.20	0.17	0.09	.26*	0.22	0.09	0.02	0.21	0.18	0.19	0.19	0.24	0.05	0.12	0.14	0.07	0.21	0.07	-	
PSS	-.28*	-0.28*	-.53*	-0.02	-0.02	-0.02	-0.07	-0.05	-0.03	-0.04	-0.14	-.26*	-.28*	-.26*	.52*	-0.14	-0.14	-.28*	-0.21	-.37*	-0.15	0.08	-0.11	-0.07	0.05	-0.13	.34*	0.17	0.14	0.18	0.11	-.30*	-0.15	-

*p < .001

Role of stressor type on appraisal. I first examined the initial hypothesized step of the proposed model, the role of stressor classification (interpersonal, life hardship, or daily hassles) on appraisal variables. Due to weak representation, participants who identified life hardships struggles ($n = 10$) were omitted from the analyses, and interpersonal ($n = 64$) and daily hassles ($n = 126$) remained for analysis. Ordinary least-squares regression analyses determined that type of stressor predicted the appraisal of the stressor as valuable to resolve, $F(1, 188) = 22.85$, p < .001, $R^2 = .108$, β = -.33, $p < .001$, such that individuals who identified interpersonal stressors tended to endorse higher value of resolution (see Figure 10).
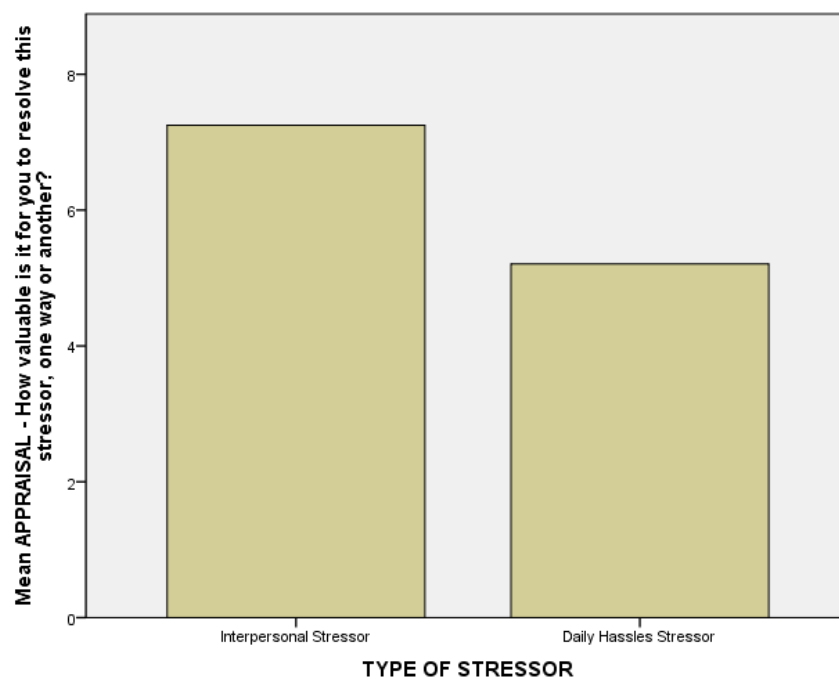
Figure 10. Predictive role of type of stressor on appraisal of stressor resolution as valuable.

Similarly, type of stressor predicted the appraisal of the stressor as worth time to resolve, $F(1,188) = 13.34$, $p < .001$, $R^2 = .07$, $\beta = -.26$, $p < .001$, such that individuals who identified interpersonal stressors tended to experience the stressor as worth time to resolve (see Figure 11).
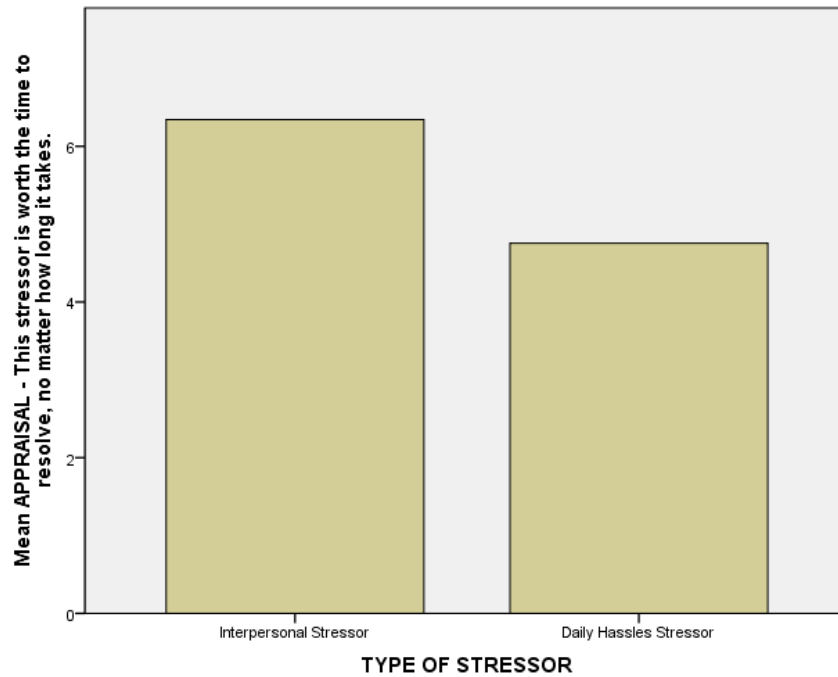
Figure 11. Predictive role of type of stressor on appraisal of stressor as worth time to resolve.

Finally, type of stressor predicted the appraisal of the stressor as an investment in the long term, $F(1,188) = 12.69$, $p < .001$, $R^2 = .06$, $\beta = -.25$, $p < .001$, such that individuals who identified interpersonal stressors tended to experience the stressors as an investment (see Figure 12). Appraisal of the stressor as familiar (using logistic regression), risky, or as addressable with multiple remaining options were not predicted by type of stressor.
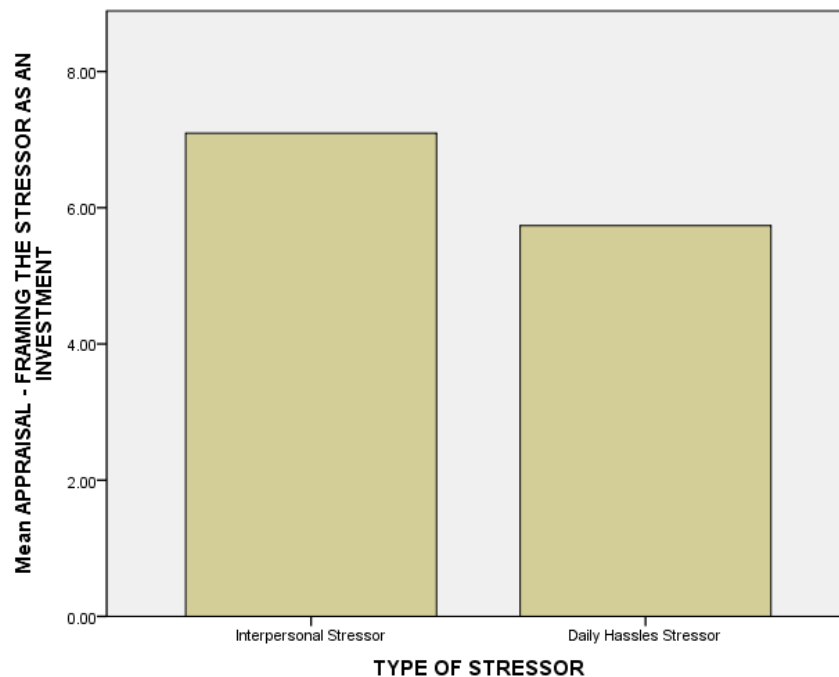
Figure 12. Predictive role of type of stressor on appraisal of stressor as an investment.

Moderators of the relationship between stressor and appraisal. Next, I tested the hypothesized moderating effects of person and environment variables on the relationship between type of stressor and appraisal using hierarchical linear regression and simple slopes analyses. Prior to analyses, the independent and moderator variables were centered and a product term created from the centered variables (Baron & Kenny, 1986). Type of stressor did not have a significant effect on any moderating variables analyzed. Significant moderating relationships

occurred only within the significant stressor/appraisal relationships outlined above.

Moderators of the relationship between stressor and appraisal of stressor as valuable to resolve. Religious commitment moderated the relation between type of stressor and appraisal of stressor as valuable to resolve, $\beta = .289$, $p = .007$, such that religious commitment only predicted appraisal of a stressor as valuable to resolve for those who identified a daily hassles stressor, $\beta = .22$, $p = .012$, but not for those who identified an interpersonal stressor, $\beta = -.15$, $p = .15$. Thus, religious commitment only amplified the relationship between type of stressor and value appraisal when an individual experienced a daily hassles stressor (see Figure 13).
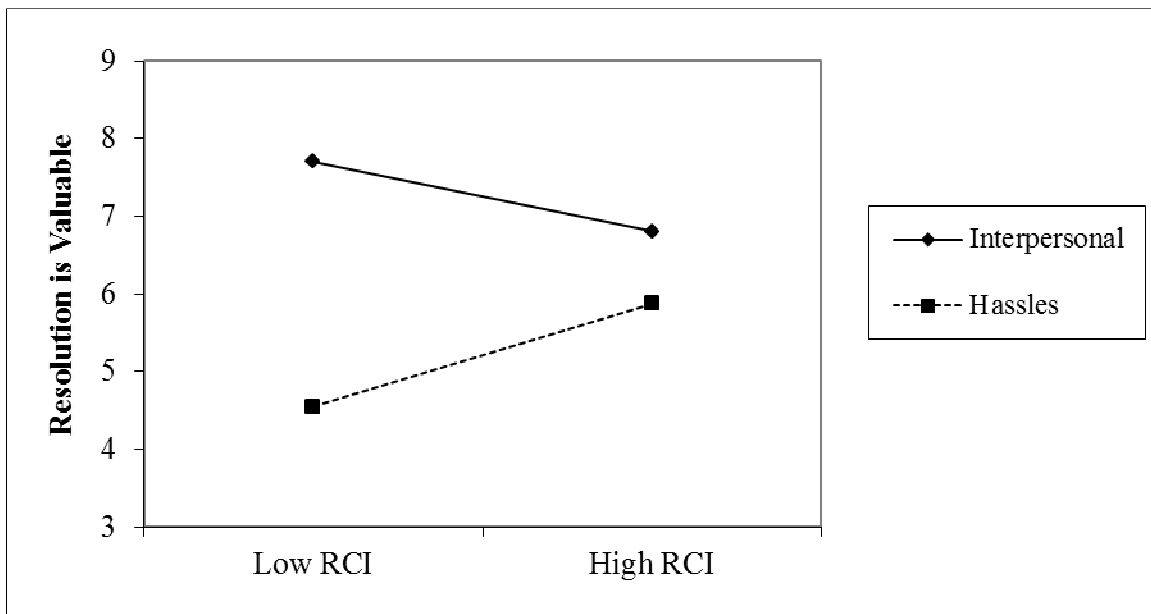
Figure 13. Moderating role of religious commitment on relation between daily hassles stressor and appraisal of stressor as valuable to resolve.

Spiritual transcendence moderated the relation between type of stressor and appraisal of stressor as valuable to resolve, $\beta = .32$, $p = .003$, such that spiritual transcendence only predicted appraisal of a stressor as valuable to resolve for those who identified a daily hassles stressor, $\beta = .23$, $p = .009$, but not for those who identified an interpersonal stressor, $\beta = -.19$, $p < .05$. Thus, spiritual transcendence only amplified the relationship between type of stressor and value appraisal when an individual experienced a daily hassles stressor (see Figure 14).
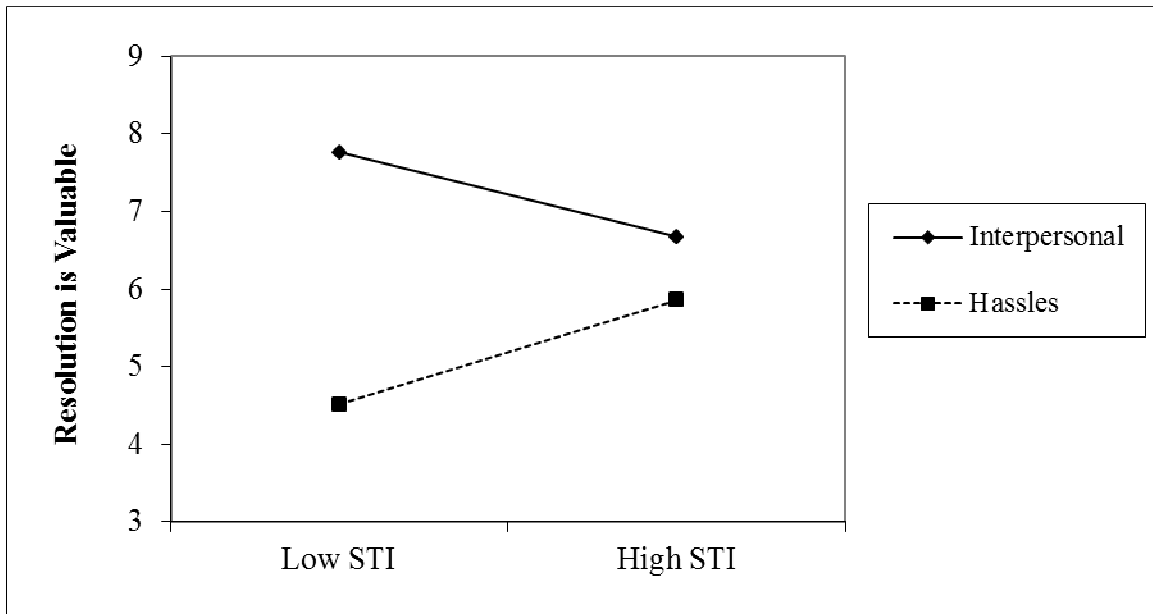
Figure 14. Moderating role of spiritual transcendence on relation between daily hassles stressor and appraisal of stressor as valuable to resolve.

Moderators of the relationship between stressor and appraisal of stressor as worth time to resolve. Empathy moderated the relation between type of stressor and appraisal of stressor as worth time to resolve, $\beta = .278$, $p = .04$, such that empathy predicted appraisal of stressor as worth time to resolve for those who identified a daily hassles stressor, $\beta = .21$, $p = .011$, but not for those who identified an interpersonal stressor, $\beta = -.12$, $p > .05$. Thus, empathy only amplified the relationship between type of stressor and worth-time appraisal when an individual experienced a daily hassles stressor (see Figure 15).
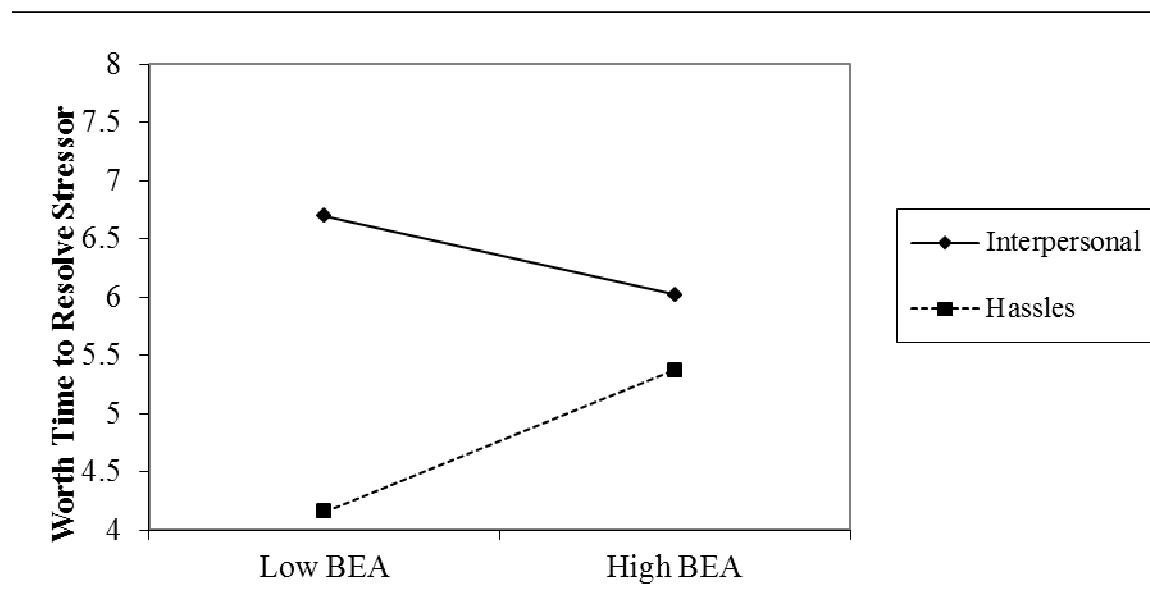
Figure 15. Moderating role of empathy on relation between daily hassles stressor and appraisal of stressor as worth time to resolve.

Agreeableness moderated the relation between type of stressor and appraisal of stressor as worth time to resolve, $\beta = .282$, $p = .025$, such that agreeableness only predicted appraisal of a stressor as worth time to resolve for those who identified a daily hassles stressor, $\beta = .21$, $p = .015$, but not for those who identified an interpersonal stressor, $\beta = -.14$, $p > .05$. Thus, agreeableness only amplified the relationship between type of stressor and worth-time appraisal when an individual experienced a daily hassles stressor (see Figure 16).
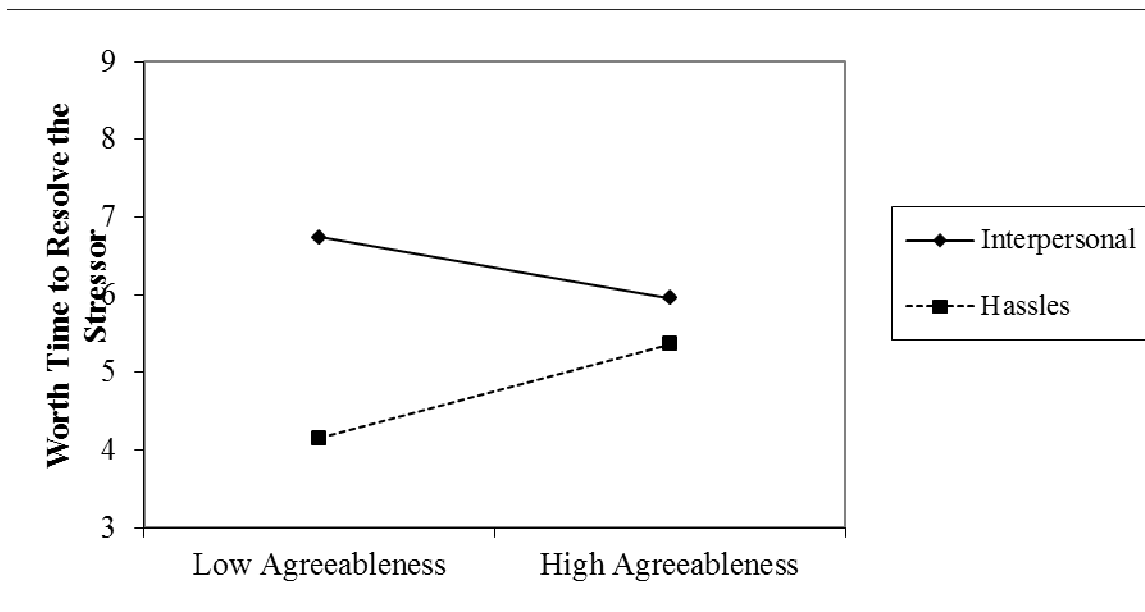
Figure 16. Moderating role of agreeableness on relation between daily hassles stressor and appraisal of stressor as worth time to resolve.

Finally, religious commitment moderated the relation between type of stressor and appraisal of stressor as worth time to resolve, $\beta = .231$, $p = .035$. Religious commitment only predicted appraisal of a stressor as worth time to resolve for those who identified a daily hassles stressor, $\beta = .21$, $p = .023$, but not for those who identified an interpersonal stressor, $\beta = -.09$, $p > .05$. Thus, religious commitment only amplified the relationship between type of stressor and worth-time appraisal when an individual experienced a daily hassles stressor (see Figure 17).
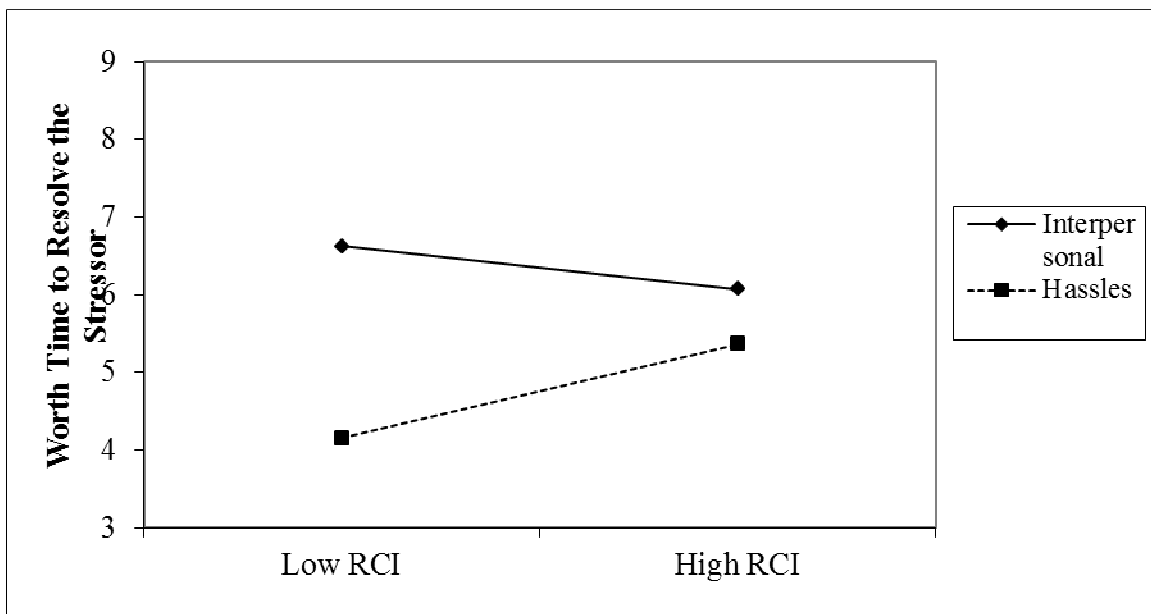
Figure 17. Moderating role of religious commitment on relation between daily hassles stressor and appraisal of stressor as worth time to resolve.

Moderators of the relationship between stressor and appraisal of stressor as an

investment. Extraversion moderated the relation between type of stressor and appraisal of

stressor as an investment, $\beta = -.258$, p = .04, such that extraversion only predicted appraisal of

stressor as an investment for those who identified a daily hassles stressor, $\beta = .27$, *p* =.03, but not

for those who identified an interpersonal stressor, $\beta = -.04$, *p* > .05. Thus, extraversion amplified

the relationship between type of stressor and investment appraisal only when an individual

experienced a daily hassles stressor (see Figure 18).
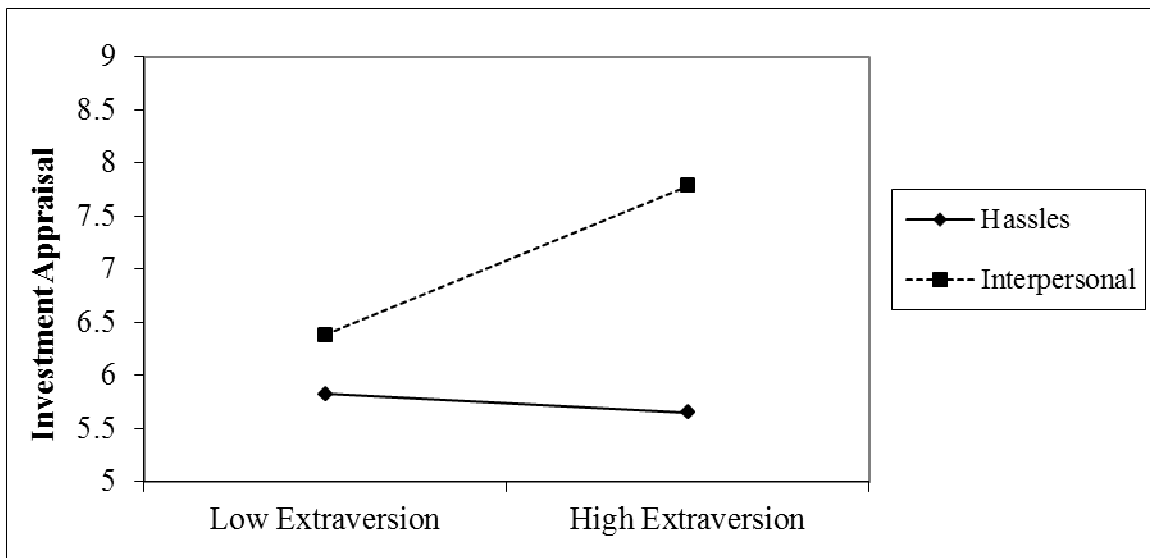
Figure 18. Moderating role of extraversion on relation between daily hassles stressor and

appraisal of stressor as an investment.

Similarly, closeness to self in 40 years moderated the relation between type of stressor and investment appraisal, $\beta = -.274$, $p = .045$, such that closeness to self in 40 years marginally predicted appraisal of a stressor as an investment for those who identified a daily hassles stressor, $\beta = -.138$, $p = .09$, but not for interpersonal stressors, $\beta = .18$, $p > .05$. Thus, closeness to self in 40 years blunted the relationship (marginally) between type of stressor and investment appraisal only when an individual experienced a daily hassles stressor (see Figure 19).
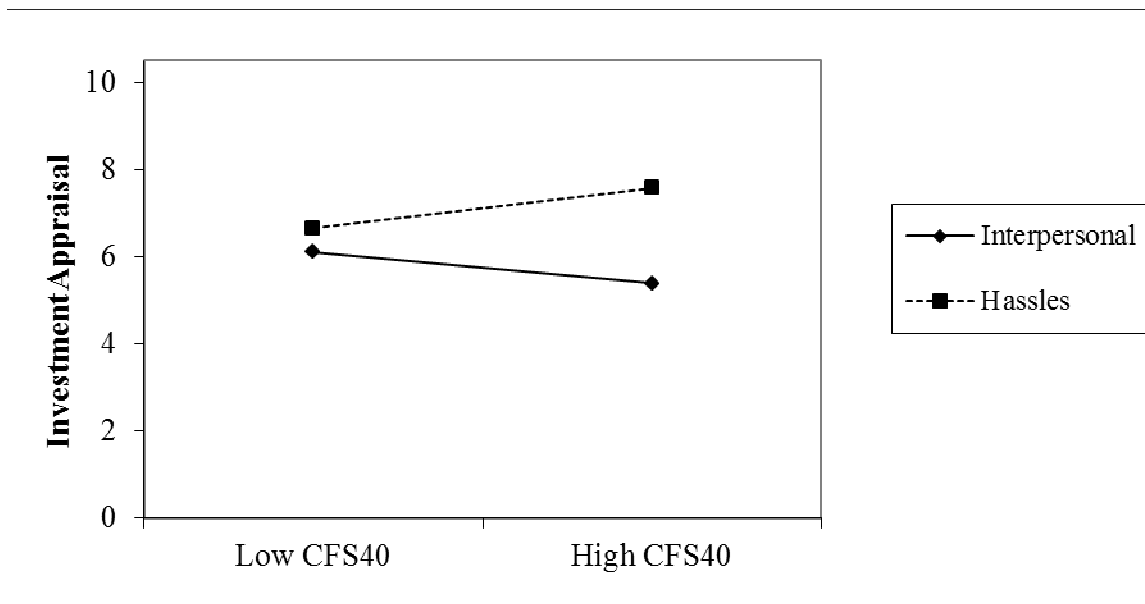
Figure 19. Moderating role of closeness to self in 40 years on relation between daily hassles stressor and appraisal of stressor as an investment.

Relationship between appraisal variables and stress response. I hypothesized that appraisal variables would predict perceived stress related to the identified stressor. Multiple linear regression analysis with all appraisal types determined that overall, appraisal variables predicted stress response, $F(6, 183) = 5.02$, $R^2 = .14$, p < .001. The only appraisal variable that significantly predicted stress response was risk appraisal, $\beta = -.29$, $p < .001$, such that individuals who appraised their identified stressor as more risky tended to endorse higher values of perceived stress related to that event (see Figures 20).
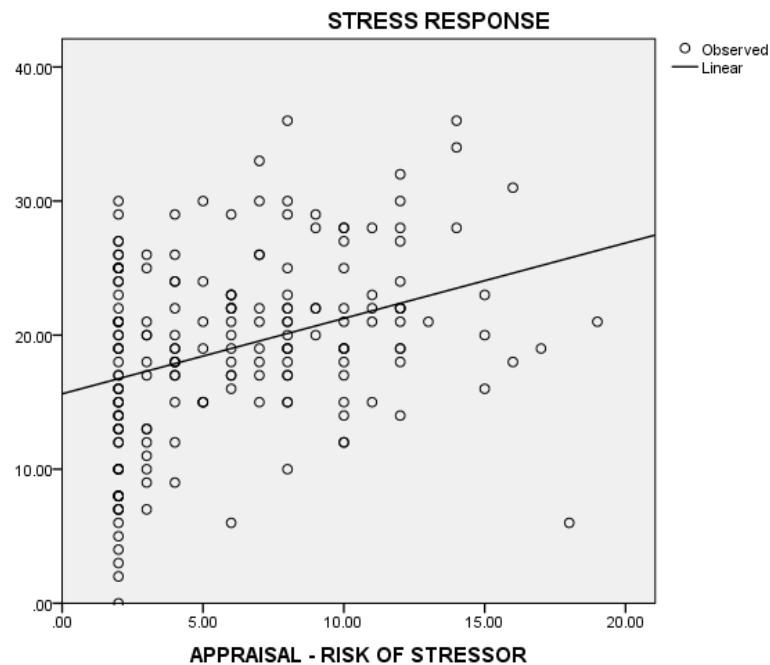
Figure 20. Predictive role of risk appraisal on perceived stress.

Moderators of the relationship between appraisal variables and stress response. I

hypothesized that mindfulness and emotion regulation would moderate the relationship between

appraisal variables and perceived stress response related to the stressor described by the

participant. Emotion regulation predicted perceived stress response for those who were familiar

with the stressor, $\beta = -.22$, $p = .003$, but not for those who were unfamiliar with the stressor, $\beta = .22$, $p = .27$. Thus, emotion regulation only had an exacerbating impact on perceived stress when

an individual was unfamiliar with the identified stressor (see Figure 21).
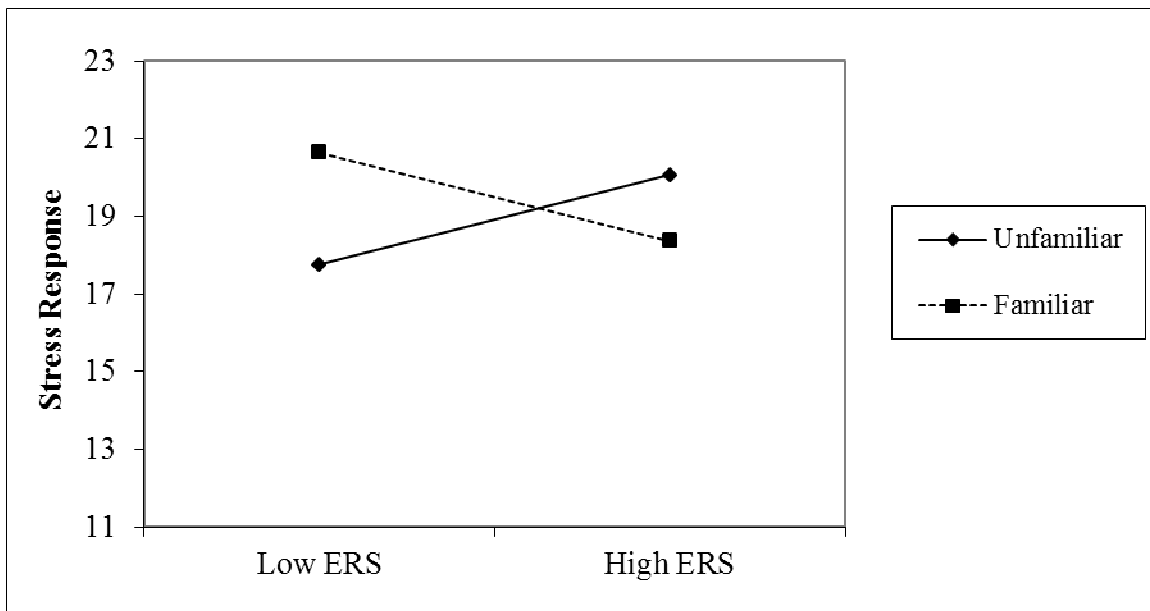
Figure 21. Moderating role of emotion regulation on relation between familiarity of stressor and

perceived stress.

Relationship between stress response and patience measures. I hypothesized that stress response would predict patience, both trait and related to the identified stressor. Ordinary least squares regression analysis determined that perceived stress predicted trait patience as measured by the PS-10, $F(1, 188) = 16.04$, p $< .001$, $R^2 = .08$, $\beta = -.28$, $p < .001$, trait patience as measured by the FPQ, $F(1, 188) = 16.18$, p $< .001$, $R^2 = .08$, $\beta = -.28$, $p < .001$, and state patience, $F(1, 188) = 75.00$, p $< .001$, $R^2 = .29$, $\beta = -.53$, $p < .001$, such that individuals who identified less perceived stress reported higher trait and state patience (see Figures 22-24).
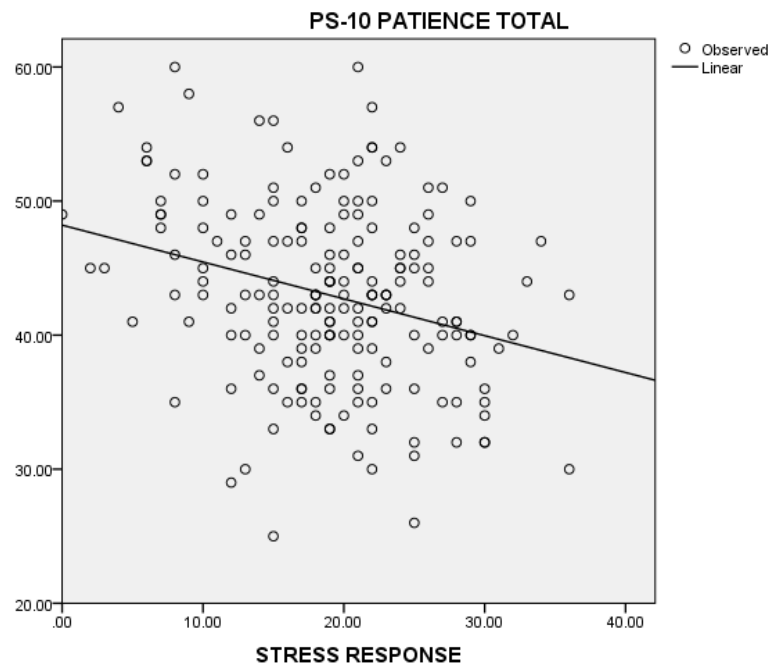
Figure 22. Predictive role of perceived stress on trait patience (PS-10).
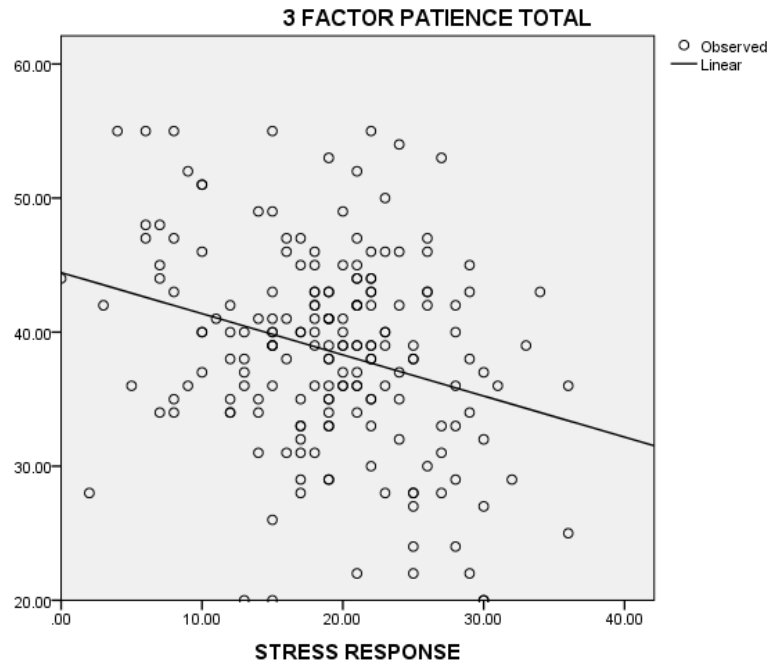
Figure 23. Predictive role of perceived stress on trait patience (FPQ).
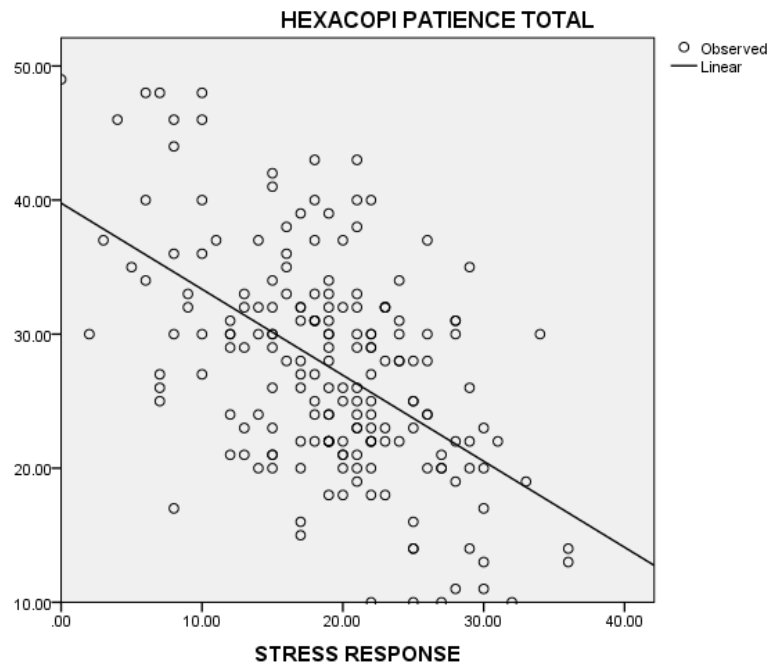
Figure 24. Predictive role of perceived stress on state patience.

Moderators of the relationship between stress response and patience measures. In the final step of the antecedents portion of the proposed model, I hypothesized that emotion regulation and mindfulness would also moderate the relationship between perceived stress response and measures of trait and state patience. Emotion regulation and mindfulness did not moderate the relationship between perceived stress and any measure of patience.

Summary of regression and moderation analyses. Thus far, our hypothesized stress-and-coping framework for predictors of patience has been partially supported. Type of stressor (interpersonal or daily hassles) predicted three appraisal variables, such that those who identified an interpersonal stressor reported higher appraisal of stressor as valuable to resolve, worth time to resolve, and as an investment in the future, relative to those who identified a daily hassles stressor (see Figure 25).
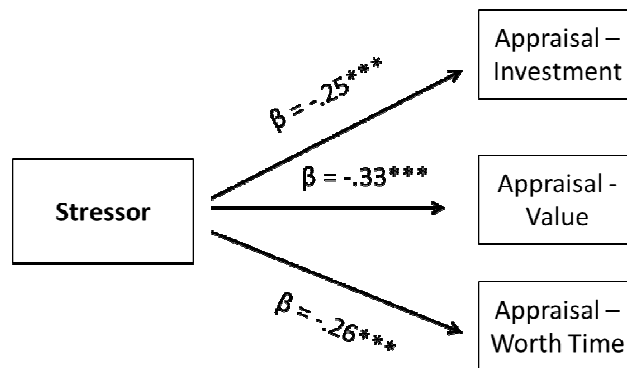
Figure 25. Predictive role of type of stressor on appraisal variables.

These relationships were not moderated by the proposed environmental variable (cultural self-construal), but were moderated by some proposed person-variables. Religious commitment and spiritual transcendence moderated the relationship between type of stressor and appraisal of stressor as valuable to resolve for those who identified a daily hassles stressor (see Figure 26).
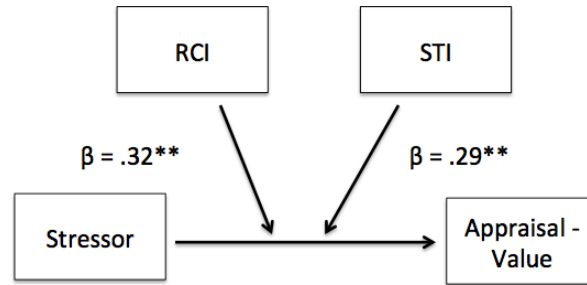
Figure 26. Moderating role of religious commitment and spiritual transcendence on the relation between type of stressor and appraisal of stressor as valuable to resolve.

Empathy, agreeableness, and religious commitment all moderated the relationship between type of stressor and appraisal of the stressor as worth the time to resolve for those who identified a daily hassles stressor (see Figure 27).
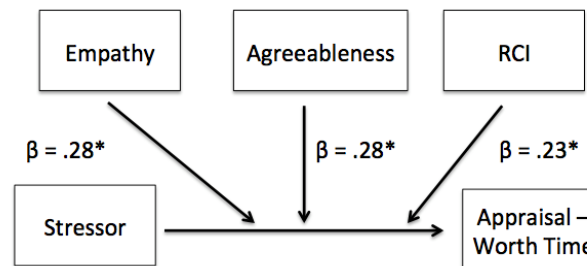
Figure 27. Moderating role of empathy, agreeableness, and religious commitment on the relation between type of stressor and appraisal of stressor as worth time to resolve.

Extraversion and closeness to self in 40 years moderated the relationship between type of stressor and appraisal of the stressor as an investment, such that extraversion and closeness to self in 40 years predicted investment for those who identified a daily hassles stressor and (see Figure 28).
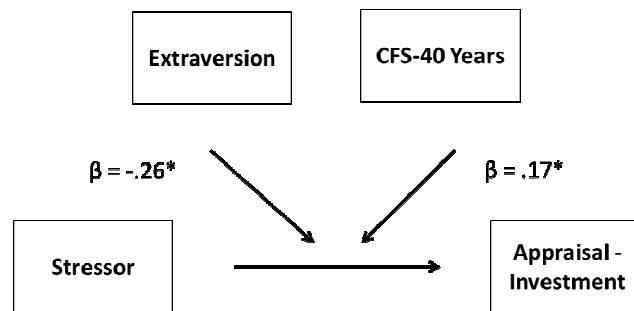
Figure 28. Moderating role of extraversion and closeness to self in 40 years on the relation between type of stressor and appraisal of stressor as an investment.

The only appraisal variable that predicted perceived stress was risk appraisal, such that higher appraised risk yielded higher perceived stress. Emotion regulation and mindfulness did less moderating in the relationship between appraisal variables and perceived stress than hypothesized. Emotion regulation only moderated the relationship between familiarity with stressor and perceived stress for those who appraised the identified stressor as unfamiliar; mindfulness did not serve as a moderator for any of the appraisal variables and perceived stress (see Figure 29).
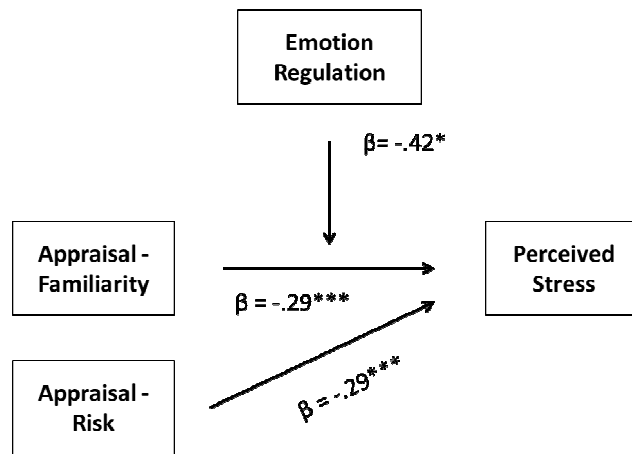
Figure 29. Appraisal variables with predictive value for perceived stress and the moderating role of emotion regulation on the relation between appraisal of stressor as familiar and perceived stress.

Consistent with my hypothesis, perceived stress predicted both trait and state patience, such that lower perceived stress predicted higher patience scores. However, neither mindfulness nor emotion regulation moderated the relationship between perceived stress and patience measures as hypothesized (see Figure 30).
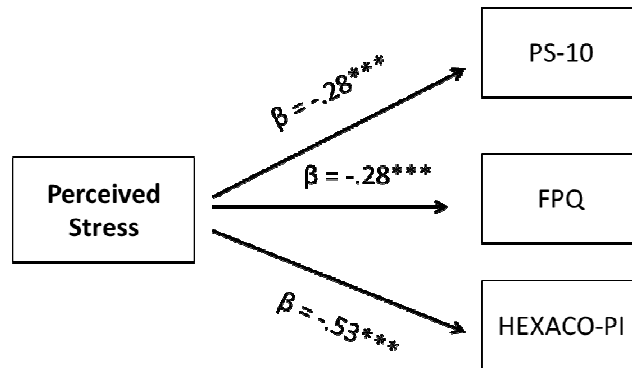
Figure 30. Predictive role of perceived stress on trait and state patience.

Assessing overall model fit. Significant predictors and interaction terms of this stress-and-coping framework of patience were entered into MPlus Software for analysis using path analysis to determine overall model fit. Models were estimated using Maximum Likelihood. STDYX interpretation was used because most of the variables were continuous. Paths were drawn between variables as indicated by the above regression and moderation analyses. The drawn model poorly fit the data on virtually every criterion of a well-fitting confirmatory factor analysis, $\chi^2(171) = 1674.95$, $p < .001$, RMSEA = .215, CFI = .00 (see Figure 31).
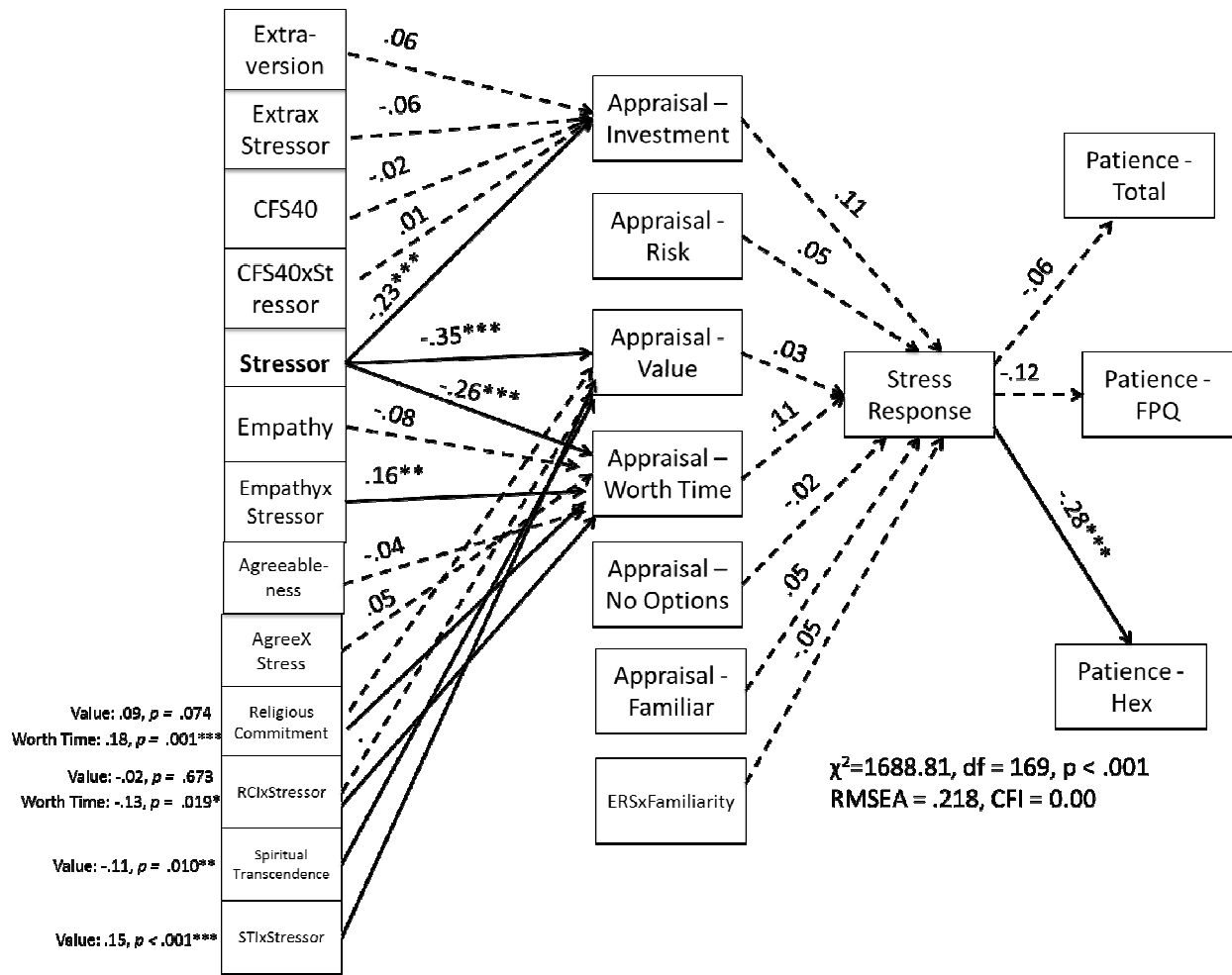
Figure 31. Hypothesized stress and coping model of patience.

**p* < .01; ***p < .001

In this model, type of stressor predicted investment appraisal, β = -.23, *p* < .001, value

appraisal, β = -.35, *p* < .001, and appraisal of stressor as worth time, β = -.26, *p* < .001. The only

person variables that predicted appraisal variables were religious commitment, on appraisal of

stressor as worth time, β = .18, *p* = .001, and spiritual transcendence, on appraisal of stressor as

valuable, β = -.11, *p* = .010. Empathy and religious commitment, each when interacting with type

of stressor, predicted appraisal of stressor as worth time as well, β = .16, *p* = .004, and β = -.13, *p*

= .019, respectively, and spiritual transcendence, when interacting with type of stressor,

predicted value appraisal, β = -.15, p < .001. However, these effects did not connect to patience via any of the hypothesized mechanisms. The only significant path drawn directly or indirectly to patience was perceived stress on state patience, β = -.28, p < .001.

Analyses of direct and indirect effects on patience following tests of model fit yielded predictive power of one appraisal variable on patience: familiarity with stressor. Indirect effects of familiarity on state patience via perceived stress were insignificant, as shown in Figure 30. However, direct effects of familiarity on state patience were significant, β = -.27, p < .001.

In the interest of improving power, redundancy, and overall model fit, independent person variables were removed from the model, leaving their hypothesized interaction terms. Paths were again drawn between variables as indicated by the above regression and moderation analyses, this time with direct paths drawn between familiarity and state patience and ERSxFamiliarity and state patience. This drawn model was a better fit for the data than the previous model, χ^2(88) = 170.00, p < .001, RMSEA = .06, CFI = .86 (see Figure 32).
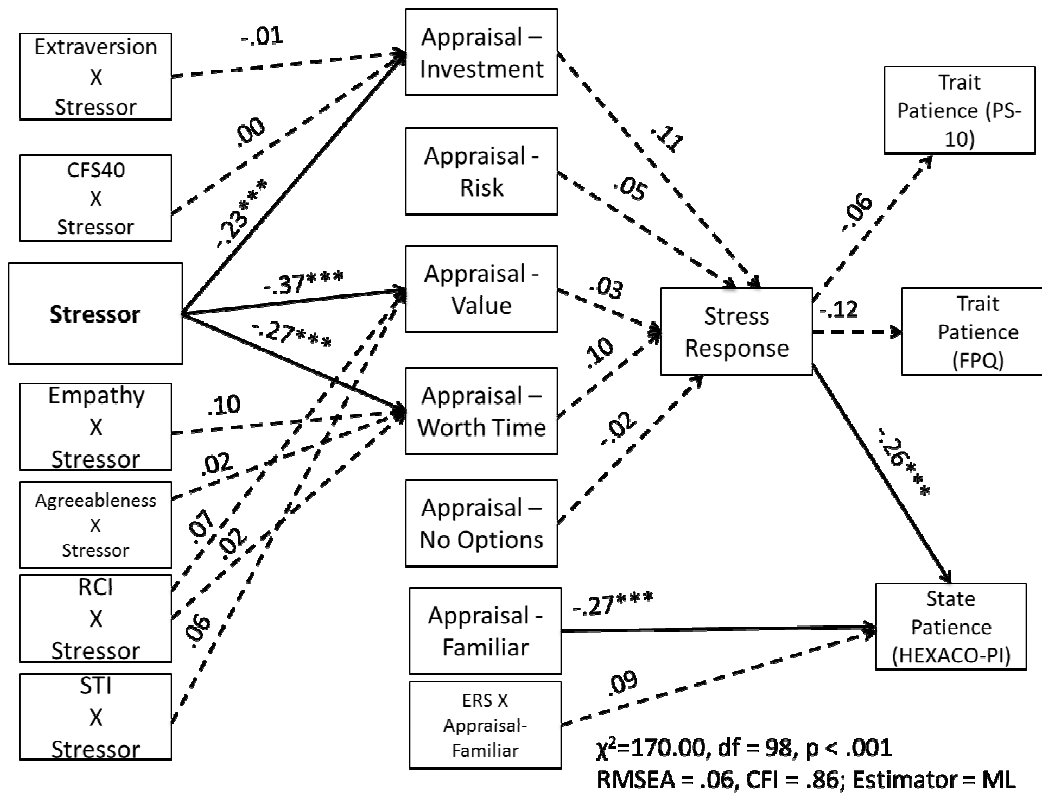
Figure 32. Hypothesized stress-and-coping model of patience without independent variables.

Despite moderate model fit and low redundancy, few paths were again significant, perhaps as a result of the number of interaction terms and therefore, low power. Type of stressor continued to significantly predict appraisal of the stressor as valuable to resolve, β = -.37, *p* < .001, appraisal of the stressor as worth time to resolve, β = -.27, *p* < .001, and appraisal of the stressor as an investment in the future, β = -.23, *p* < .01. No person variables interacted with type of stressor to predict appraisal, and no appraisal variables predicted perceived stress. Perceived stress continued to significantly predict state patience, β = -.26, *p* < .001, as well as familiarity appraisal, β = -.27, *p* < .001. Additional trimming did not improve model fit.

Post hoc modeling. Given that appraisal variables seemed to disjoint the model between patience and potential person and environment predictors, post hoc models examining more direct effects of person variables on patience were tested based on results from initial correlation

analyses. The best fitting model that included perceived stress as the sole mechanism between

predictors and patience included type of stressor and interaction variables between stressor and

empathy, agreeableness, conscientiousness, neuroticism, compassionate love, forgivingness, self-

control, perseverance, and mindfulness, $\chi^2(47) = 332.39$, $p < .001$, RMSEA = .18, CFI = .75 (see

Figure 33).
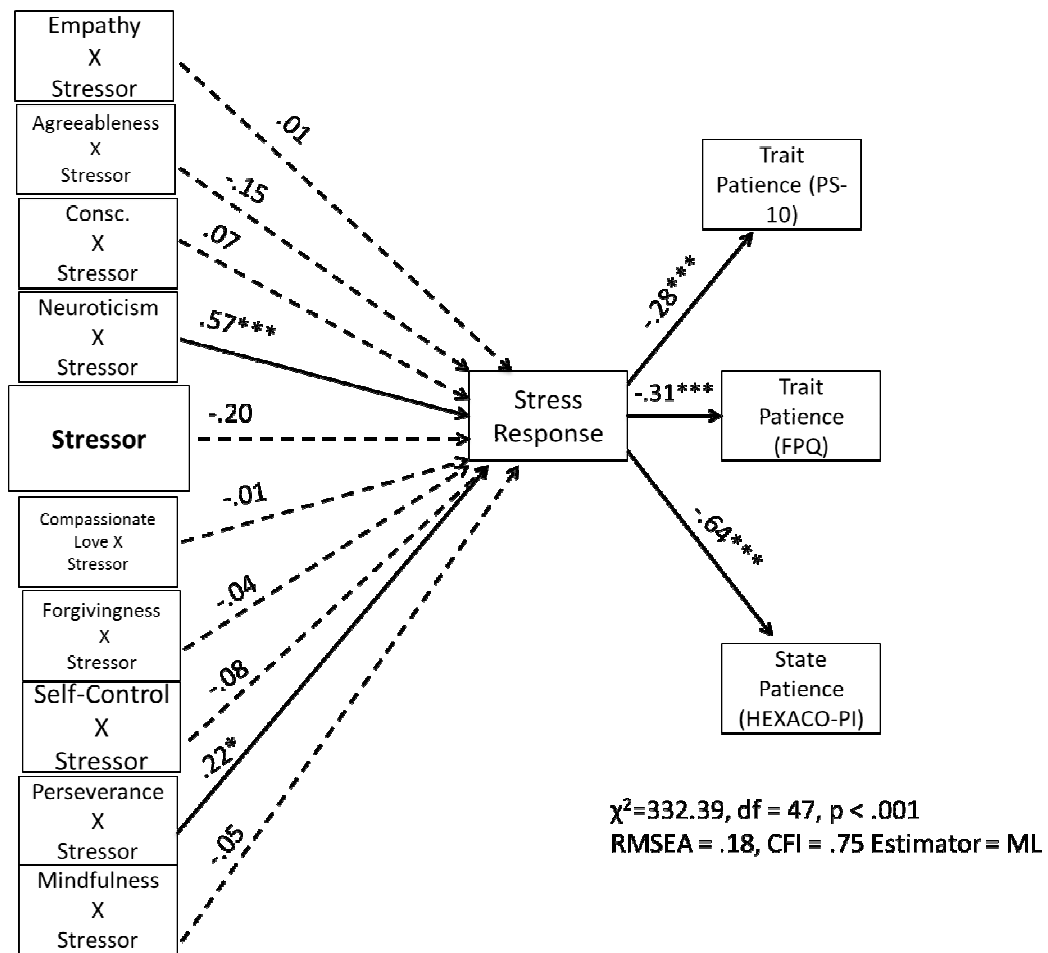
Figure 33. Post hoc model including significant correlates of patience as predictors and stress

response as a mechanism.

*p < .05; ** p < .01; ***p < .001

Fit statistics demonstrate redundancy and overall weak fit of the model to the data, and further trimming did not improve model fit. The only variables to significantly predict perceived stress response were the interaction between type of stressor and neuroticism, $\beta = .57$, $p < .001$, and the interaction between type of stressor and perseverance, $\beta = .22$, $p = .044$. Perceived stress significantly predicted all three measures of patience, PS-10 $\beta = -.28$, $p < .001$, FPQ $\beta = -.31$, $p < .001$, and HEXACO-PI $\beta = -.64$, $p < .001$. Further trimming of predictor variables did not improve model fit.

A final post hoc model was attempted that removed type of stressor as a predictor and examined the direct effects of all significantly correlated person and environment variables, as well as perceived stress, on patience, $\chi^2(11) = 176.53$, $p < .001$, RMSEA $= .28$, CFI $= .86$ (see Figure 34).
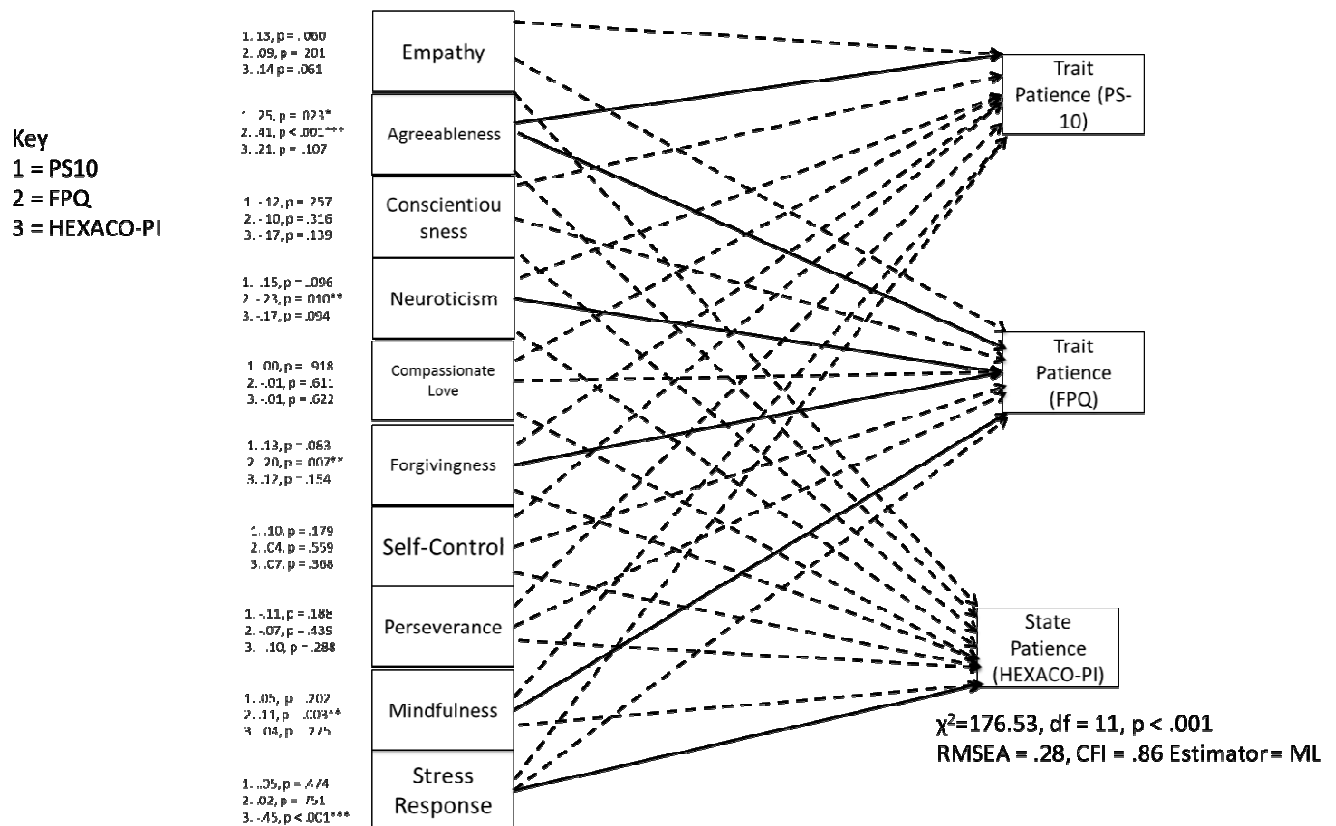
Figure 34. Post hoc model including significant correlates of patience, including perceived

stress, as predictors of patience.

*p < .05; **p < .01; ***p < .001

Fit statistics demonstrate redundancy and improved model fit relative to the previous post

hoc model. Still, overall model fit was not ideal, and further trimming did not improve model fit.

In this model, variables that significantly predicted patience were agreeableness on trait patience

(PS10), β = .25, p = .023, and trait patience (FPQ), β = .41, p < .001, neuroticism on trait

patience (FPQ), β = -.23, p = .01, forgivingness on trait patience (FPQ), β = .20, p = .007,

mindfulness on trait patience (FPQ), β = .11, p = .003, and perceived stress on state patience, β =

.47, p < .001.

Discussion – Study 2A

The stress-and-coping model of patience was not supported. The present study

proposed a stress-and-coping framework for predicting and conceptualizing patience. Themes

from the patience literature were organized and tested in line with Lazarus' (1999) model in

which person variables and environment variables interact and lead to an appraisal process and a

corresponding stress response. This stress response, according to Lazarus, determines the type of

coping response. Previous research, especially in the qualitative literature, had conceptualized

patience as a coping response to some life stressor or trauma (Bernstein, 2007; de Souza Brito

Dias & Medeiros, 2010; Farsi et al., 2010; Kimhi et al., 2011; Qu et al., 2008; Wallis et al.,

2007). Thus, patience seemed like a potential fit for a stress-and–coping framework. The

hypothesized stress-and-coping model for patience was not supported.

The first step in the proposed model suggested that the type of stressor would interact

with person and environment variables to influence appraisal of the stressor. For those who

identified a daily hassles stressor, religious commitment and spiritual transcendence moderated

the relationship between type of stressor and appraising the stressor as valuable to resolve. Given

the meaning-making qualities of religious and spiritual worldviews, it stands to reason that they

would relate to appraisal of a stressor and its value (Solomon, Greenberg, & Pyszczynski, 2004).

For those who identified a daily hassles stressor, empathy, agreeableness, and religious

commitment moderated the relationship between type of stressor and appraising the stressor as

worth the time to resolve. Interestingly, these seemingly warm, interpersonal, and communal

emotions and commitments that were very strongly represented in the patience literature (e.g.,

Archer et al., 1981; Cleary et al., 2011; Glazzard & Dale) were related to a very delayed-

gratification flavor of appraisal (worth time to resolve), and only so for daily hassles stressors,

where one might have expected interpersonal stressors to have been just as much or even more

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impacted, especially by agreeableness, which has been correlated in previous research with interpersonal patience (Schnitker, 2012). Perhaps this is a reflection of the lack of attention to patience as a virtue or character trait in the literature, making the present variables in question consistent with a definition of patience often defaulted to in the literature, involving stronger themes of delayed gratification. The comparatively small quantity of research that examined patience as an interpersonal virtue or character trait (e.g., Schnitker & Emmons, 2007; Schnitker, 2012) may not have demonstrated a set of variables more appropriate for moderating interpersonal patience.

Extraversion, which does not typically involve a time-component, moderated the relationship between daily hassles stressors and appraisal of this stressor as an investment in the future. Additionally, closeness to self forty years in the future, which involves a combination of delayed gratification and intrapersonal closeness, moderated the relationship between a daily hassles stressor and the appraisal of this stressor as an investment in the future. This relationship is consistent with the investment language referenced in several studies in the literature that tended to define patience in terms of delayed gratification, such as findings from Bryan and Hershfield (2013) in which individual differences in future time perspective were related to participants' ability to delay gratification. It may be that friendliness toward and a desire to connect with others and even to one's self in the future (considered more similar to social relationship than self-interest in Bryan & Hershfield, 2013) influences one's likelihood to appraise daily hassles stressors as investments in the future.

Several person variables that were suggested in the patience literature did not significantly moderate the relationship between type of stressor and appraisal variables, such as four out of five Big 5 personality variables, dispositional virtues, perseverance, and

responsibility. Similarly, the proposed environmental variable, cultural self-construal, was not supported in the proposed model. This makes Lazarus' (1999) interaction of person and environment variables generally unsupported in the present study, as well as inconsistent with several studies reviewed in the literature (Anil et al., 2011; Fowler & Kam, 2006; Kalliny & Ghanem, 2009; Miksza et al., 2010; Schntiker & Emmons, 2007). The hypothesized person and environment variables may still have value for predicting patience, but perhaps not as moderators in the hypothesized relationships with appraisal variables (see Figures 33 and 34 for post hoc models). Emotion regulation was surprisingly minimally moderating within the hypothesized model, despite its definitional similarity to patience, and only moderated the relationship between appraisal of stressor as familiar and perceived stress. Mindfulness, which has been found to be correlated with multiple measures of patience in the past (Schnitker, 2012), was also correlated with patience measures in the present study but did not moderate any relationships in the hypothesized model.

Type of stressor ultimately did not predict patience via appraisal variables, contrary to research conducted by Anderson and Stafford (2009) in which the stakes influenced willingness to wait but consistent with my claim that delayed gratification does not fully explain, nor may it be the best way to model, patience. More surprising is that most appraisal variables did not predict the stress response when accounting for other variables in the final model as Read et al. (2013) and certainly Lazarus (1999) might have predicted, as appraisal is critical to the stress and coping process.

Post hoc potential explanation: Ego depletion theory. The only consistent predictors of patience in the present study were familiarity with stressor and perceived stress, such that having experienced the stressor before (dichotomous) predicted lower state patience, and higher

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perceived stress was predictive of lower state patience. Contrary to the hypothesized model, the appraisal variable familiarity did not seem to function through perceived stress to act on state patience, but rather acted directly on state patience. These two predictors are consistent with an ego-depletion model of predicting patience, similar to that proposed for self-regulation (Baumeister et al., 1998), a construct related to patience. Such an explanation for patience is also consistent with a host of research describing the ill-effects of impatience, including fatigue, burnout, negativity, disengagement, and frustration (Neben & Chen, 2010), as well as less time spent with important others (e.g., one's own children; Summers et al., 2004). These findings support the notion that stress may have greater predictive value for patience in a given situation than it does for likelihood of thinking, feeling, and behaving patiently in general and for an enduring period of time. It may be that a patience "budget" becomes depleted with increased stress and familiarity with the stressor (Rosenbloom and Pereg, 2012). Such an explanation for predicting patience is supported by the present study.

Thus, it may be that and ego-depletion model and one's status in a patience "budget" may be a better fit for predicting patience than a stress-and-coping model. Yet, the adoption of a stress-and-coping model marked by appraisal may still be more appropriate for a trauma, life-hardships brand of patience, likely contributing to the overall well-fitting but disconnected model with few significant hypothesized paths. Post hoc models that removed appraisal and also perceived stress as mediators did not ultimately improve model fit, but perceived stress continued to represent a significant predictor of state patience across models. This indicates that the use of patience research largely built on a definition of patience centered on delayed gratification may have been a poor fit for illuminating person-level predictors of a more virtue-congruent conceptualization of patience.

Limitations. Primary limitations of this study include the use of a convenience sample in the introductory to psychology course and the tendency toward self-report measures. However, given the preliminary nature of this investigation, a convenience sample is justified, and aside from appraisal measures, self-report measures selected have strong psychometric support. Exceptions to this include the Time Perspective Questionnaire, which was very cautiously interpreted due to unusually low internal consistency and was trimmed prior to model fitting. Additionally, appraisal variables were created for this study and were often assessed using a single item that had no previous psychometric support. This may have impacted the results of the study.

In addition to the convenience sample limitations outlined in more detail in the Limitations section of Study 1, the present sample may not have had the cultural representation necessary to detect significance for our cultural predictor of self-construal. Despite the ethnic diversity of the present sample relative to many other university convenience samples, we admit the bias inherent in data collection that took place in the United States, a Western nation typified by an independent, rather than interdependent, self-construal.

Another limitation is the cross-sectional design of the study. Despite predictive regression analyses, causality cannot be inferred from these results.

A final limitation of this study is the number of measures given and analyzed It is possible that participants fatigued during completion, and the power of analyses, especially when inclusive of hypothesized interaction terms, was compromised to accommodate for the number of variables in question.

Implications for Study 3. In looking to Study 3, it seems that a stress-and-coping model of patience was only partially consistent with claims made by Lazarus (1999). Thus, informed by

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the results of Study 2A, a stress-and-coping model will not be retested in Study 3. Replication for Study 3 will instead focus on the predictive value of familiarity of an identified stressor and perceived stress on measures of patience.

Due to the post hoc nature of the analyses that supported some direct predictive effects of certain person variables, including agreeableness, neuroticism, forgivingness, and mindfulness, these were not examined in Study 3. Future studies may wish to examine further the predictive value of the person variables supported in post hoc analyses.

Study 2B: Outcomes of Patience

Study 2A assessed the antecedents of the hypothesized model of patience, and Study 2B assessed the outcomes of the hypothesized model of patience. This half of the model hypothesized that measures of trait and state patience would predict mental, physical, relational, and spiritual health outcomes as supported by the reviewed literature.

Method - Study 2B

Participants. Data for Study 2B were collected in the spring of 2014. A convenience sample from the psychology curriculum at a large mid-Atlantic university yielded 196 participants to accommodate for the number of outcome measures of interest. The sample ranged in age from 18-51 ($M = 20.59$, $SD = 3.44$) and was 68.40% female ($n = 134$) and 31.60% male ($n = 62$). Ethnicities of participants were 54.60% Caucasian/White, 25.50% African American/Black, 10.70% Asian-American, 3.60% Hispanic, and 5.6% Other.

Design. This study is a between-subjects design, employing correlational and cross-sectional methods.

Measures.

Demographic information. A demographics data page includes single-item questions concerning age, sex, ethnicity, country of origin, religious affiliation, and year in school.

Patience measures.

Patience Scale (PS-10; Schnitker & Emmons, 2007). The PS-10 was described in Study 1. The Cronbach's alpha for this measure was .83 in the present study.

3-Factor Patience Questionnaire (3-FPQ; Schnitker, 2012). The 3-FQ was described in Study 1.The Cronbach's alpha for this measure in the present study was .89.

Honesty/Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness Personality Inventory – Patience Subscale (HEXACO-PI, Lee & Ashton, 2004). The HEXACO-PI was described in Study 1.Cronbach's alpha for this measure was .92 in the present study.

Mental health outcome measures.

Brief Resilience Scale (Smith, Dalen, Wiggins, Tooley, Christopher, & Bernard, 2008). This six-item scale assesses resilience following a stressor. Participants rated items such as "I usually come through difficult times with little trouble" using a 6-point rating scale from 1 = *strongly disagree* to 5 = *strongly agree*. Cronbach's alphas ranged from .80–.91 and was .88 in the present study.

Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988). This twenty-one item measure assesses for symptoms of anxiety. Using a 4-point rating scale from 0 = *not at all* to 3 = *severely, it bothered me a lot*, participants endorse items such as "unable to relax." Cronbach's alpha for this measure is .92 and was .94 in the present study.

Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). This five-item measure assesses for general satisfaction with life. Items such as "The conditions of my life

are excellent" are rated on a 7-point rating scale from 1 = *strongly disagree* to 7 = *strongly agree*. Cronbach's alpha for this measure is.87 and was .87 in the present study.

Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The CES-D is a twenty-item measure of depressive symptoms for use in the general population. Items such as "I felt that I could not shake off the blues even with the help of my family or friends" are rated on a 4-point rating scale from 1 = *rarely or none of the time* to 4 = *most or all of the time.* Cronbach's alpha for this scale is over .80 and was .90 in the present study.

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS was described in Study 1; however, for the present study, it was used to reflect affect in the last two weeks (state) as opposed to in general (trait). Cronbach's alphas for this measure ranged from .88-.90 in the present study.

Physical health outcome measures.

Height and weight. Height and weight was requested in order to calculate BMI, a standardized indicator of healthy weight.

Sleep. Participants were asked two items relating to sleep: 1) number of hours they would like to sleep per night, and 2) number of hours they typically sleep per night.

Short-Form Health Status Survey (SF-36; Stewart & Ware, 1992). The SF-36 is a thirty-six item measure involving multiple types of rating scales to assess for such health-related domains as energy, role of physical health, physical activities, pain, sick days, etc. It was developed at RAND as part of the Medical Outcomes Study (Hays, 1994). Fourteen items focus on emotional and social health, whereas the others assess for physical and general health. Cronbach's alphas for this measure range from .78-.93. In order to avoid overlap with mental health measures, 22 physical and general health items and four items assessing for energy and

physical health's impact on social functioning were included in the present study. The Cronbach's alpha for these items was .84 in the present study.

Relational outcome measures.

Communicative Competence Scale (CCS; Wiemann, 1977). This thirty-six item measure is designed to assess for the Communicative Competence of another person or as a self-report measure. Items such as "I am interested in what others have to say" are rated on a rating scale from 1 = *strongly disagree* to 5 = *strongly agree*. Cronbach's alpha for this measure is .96 and was .94 in the present study.

Multidimensional Scale of Perceived Social Support (MPSSS; Zimet, Dahlem, Zimet, & Farley, 1988). This 12-item measure assesses for perceived social support from family, friends, and significant others. Items such as "There is a special person who is around when I am in need" are rated on a 7-point rating scale from 1 = *very strongly disagree* to 7 = *very strongly agree*. Cronbach's alpha for this measure is .91 and was .93 in the present study.

Spiritual outcome measures.

Spiritual Attitude and Involvement List (SAIL; de Jager Meezenbroek et al., 2012). This twenty-six scale is used to measure an individual's spiritual attitudes and engagement with those attitudes. Most items, such as "I have had experiences in which all things seem to be part of a greater whole" are scored on a 6-point rating scale from 1 = *not at all* to 6 = *a very high degree.* Three items assessing for spiritual activities, such as "I meditate or pray, or take time in other ways to find inner peace" are scored using a 6-point rating scale from 1 = *never* to 6 = *very often*. Cronbach's alphas for this measure range from .73 to .86 and was .92 in the present study.

Meaning in Life Scale (MLS; Steger, Frazier, Oishi, & Kaler, 2006). This 10-item scale assesses for presence and search for meaning in life. Items such as "I understand my life's

meaning" are rated on a 7-point rating scale from 1 = *absolutely untrue* to 7 = *absolutely true.* Cronbach's alphas for this scale are above .80 and was .77 in the present study.

Procedure. Participants signed up for the study over the course of a semester using the SONA-Systems©. A waiver of documentation of consent was requested due to the purely electronic nature of the study; completing the surveys present no more than minimal risk of harm and involved no procedures for which written consent is normally required outside the research context. In lieu of traditional consent, the participant were provided information about the content of the study and were given the option to terminate their participation at any time Once participants signed up for the study, they were immediately provided a link taking them to the Research Electronic Data Capture (REDCap) Consortium (Harris et al., 2009), where they spent about one hour completing surveys. After this assessment occasion was complete, participants were compensated with research credits.

Analysis. After checking for normality of responses, bivariate correlations were conducted among measures using a Bonferroni-corrected p-value to accommodate for the number of measures collected. Due to the far simpler design of Study 2B, involving no moderating variables, univariate regressions were not performed to prevent redundancy. Instead, correlation coefficients were used to determine paths drawn, and path analysis was used to determine model fit of data from Study 2B.

Results – Study 2B

Data were checked for normality, missing data, and outliers; no concerns were identified. Means and standard deviations for all variables are reported in Table 8. Correlations are reported in Table 9.

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Table 8.

Study 2B Means and Standard Deviations for Outcome Measures, N = 196

Variable	*M*	*SD*
Trait Patience (PS-10)	36.52	6.28
Trait Patience (FPQ)	38.83	7.27
State Patience	27.48	7.85
Resilience	19.95	4.64
Anxiety	14.88	12.07
Satisfaction with Life	22.69	6.35
Depression	36.91	10.43
Positive Affect	30.76	8.66
Negative Affect	20.15	7.78
Body Mass Index	23.74	4.63
Discrepancy between Desired and Actual Sleep	1.87 hours	1.51 hours
Physical Health	70.39	11.18
Communicative Competence	139.38	17.01
Perceived Social Support	60.24	11.31
Spiritual Attitudes and Involvement	107.31	20.44
Meaning in Life	49.24	8.58

Note. See Measures section for scale values

Table 9.

Study 2B Intercorrelations for Outcome Variables at Time 1, N =196

	PS	FPQ	HEX	BRS	BAI	SLS	CESD	POS	NEG	BMI	SLEEP	SF36	CCS	MPSSS	SAIL	MLQ
PS	-															
FPQ	.87*	-														
HEX	.45*	.50*	-													
BRS	.33*	.42*	.31*	-												
BAI	-.23	-.28*	-.29*	-.43*	-											
SLS	.29*	.33*	.25*	.48*	-.28*	-										
CES-D	-.29*	-.35*	-.39*	-.53*	.65*	-.60*	-									
POS	.40*	.42*	.34*	.50*	-.28*	.52*	-.56*	-								
NEG	-.20	-.26*	-.32*	-.40*	.69*	-.39*	.78*	-.34*	-							
BMI	-.14	-.12	-.09	.01	.03	-.08	.01	-.06	.00	-						
SLEEP	-.05	-.06	-.08	-.06	.11	-.04	.14	.01	.12	.01	-					
SF36	.36*	.39*	.23	.45*	-.50*	.48*	-.64*	.51*	-.51*	-.08	-.16	-				
CCS	.55*	.56*	.21	.39*	-.17	.41*	-.36*	.56*	-.22	-.13	.02	.50*	-			
MPSSS	.25*	.21	.06	.08	-.02	.33*	-.31*	.32*	-.19	.04	.04	.29*	.46*	-		
SAIL	.43*	.39*	.19	.31*	-.13	.38*	-.30*	.57*	-.14	-.03	-.09	.35*	.56*	.44*	-	
MLQ	.23	.20	.08	.23	-.10	.36*	-.28*	,54*	-.17	.04	.02	.35*	.53*	.46*	.64*	-

*Bonferroni corrected *p* = .001

Note. PS = Patience Scale (trait patience); FPQ = 3 Factor Patience Questionnaire (trait patience); HEX = HEXACO-PI (state patience); BRS = Brief Resilience Scale; BAI = Beck Anxiety Inventory; SLS = Satisfaction with Life Scale; CESD = Center for Epidemiological Studies Depression Scale; POS = Positive and Negative Affect Schedule (positivity); NEG = Positive and Negative Affect Schedule (negativity); BMI = Body Mass Index; SLEEP = discrepancy between desired and actual sleep; SF36 = Short Form-36 (physical health); CCS = Communicative Competence Scale; MPSSS = Multidimensional Scale of Perceived Social Support; SAIL = Spiritual Attitudes and Involvement List; MLQ = Meaning in Life Questionnaire

Assessing overall model fit. Patience measures and variables that were significantly correlated with patience were entered into MPlus Software v7.2 for analysis using path analysis to determine overall model fit. Models were estimated using Maximum Likelihood with Mean and Variance Adjusted Standard Errors (ESTIMATOR = MLMV). STDYX interpretation was used because most of the variables were continuous. Paths were drawn between variables as indicated by the above correlations; BMI and sleep discrepancy were the only outcome measures trimmed, and paths were not drawn between state patience and perceived social support and state patience and meaning in life. The drawn model fit the data, $\chi^2(2) = 155.61$, $p = .70$, RMSEA < .00, CFI = 1.00 (see Figure 35).
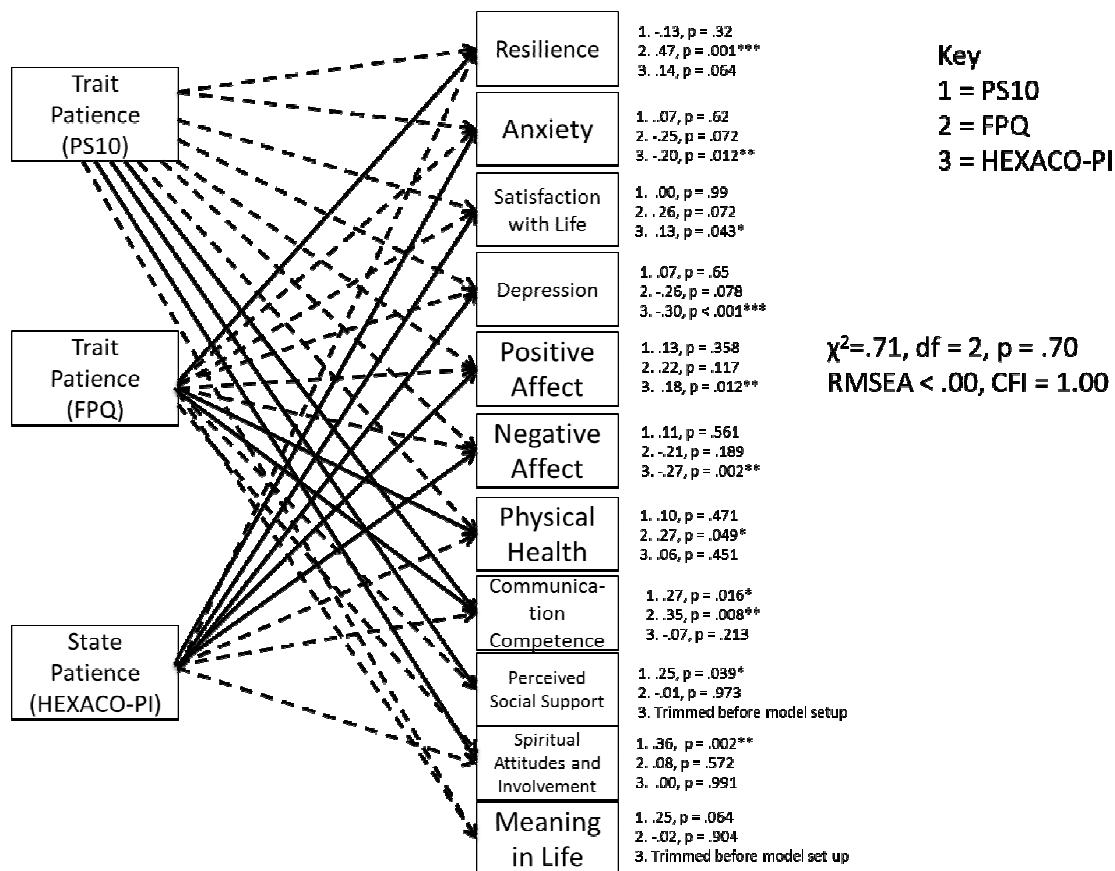
Figure 35. Hypothesized model of outcomes predicted by patience.

p < .05; **p* < .01; ***p* < .001

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Role of trait patience (PS-10 and FPQ) on outcomes.

Mental health outcomes. The only mental health outcome predicted by trait patience (FPQ) was resilience, $\beta = .46$, $p = .001$. Trait patience did not significantly predict anxiety, satisfaction with life, depression, positive affect, or negative affect.

Physical health outcomes. Trait patience (FPQ) predicted physical health scores, $\beta = .27$, $p = .049$.

Relational health outcomes. Trait patience (PS-10) predicted communicative competence, $\beta = .27$, $p = .016$, and trait patience (FPQ) yielded similar predictive value, $\beta = .35$, $p = .008$. Trait patience (PS-10) also predicted perceived social support, $\beta = .25$, $p = .039$.

Spiritual health outcomes. Trait patience (PS-10) predicted spiritual attitudes and involvement (PS-10), $\beta = .36$, $p = .002$. Trait patience did not significantly predict meaning in life scores.

Role of state patience (HEXACO-PI) on outcomes.

Mental health outcomes. State patience predicted anxiety, $\beta = -.20$, $p = .012$, satisfaction with life, $\beta = .13$, $p = .043$, depression, $\beta = -.30$, $p < .001$, positive affect, $\beta = .18$, $p = .012$, and negative affect, $\beta = -.27$, $p = .002$.

Physical health, relational health, and spiritual health outcomes. State patience did not significantly predict physical health scores, communicative competence, or spiritual attitudes and involvement. Its predictive value for perceived social support and meaning in life were trimmed prior to building the model.

Summary of results for Study 2B. With the exception of meaning in life, some form of patience predicted all mental, physical, relational, and spiritual health outcomes measured in the present study. In particularly, a reasonably clear divide arose between the predictive value of trait versus state patience, relative to the type of outcome in question. State patience seemed limited

in its predictive value to mental health outcomes (anxiety, satisfaction with life, depression, positive affect, and negative affect). Trait patience predicted only one mental health outcome, resilience, which was not predicted by state patience. Trait patience also predicted physical health outcomes (composite of SF-36 measure), relational health outcomes (communicative competence and perceived social support), and spiritual health outcomes (spiritual attitudes and activities).

Discussion - Study 2B

The outcomes model was supported. The present model hypothesized that patience would predict mental, physical, relational, and spiritual outcomes represented in the patience literature. This model was almost entirely supported, as trait or state patience predicted each outcome variable in question, with the exception of the spiritual health outcome of meaning in life. Thus, the present study was consistent with a large portion of the literature related to outcomes associated with patience.

Patience has been demonstrated as correlated with well-being and positive mental health outcomes in previous research (Hong et al., 2005; Schnitker, 2012; Schnitker & Emmons, 2007). Similar findings emerged in the present study, in which state patience in particular predicted mental health outcomes. Not only were positive mental health outcomes predicted by patience, but negative mental health outcomes were negatively predicted by patience, which was also consistent with literature surrounding a decrease in patience being related to such experiences as burnout, powerlessness, fatigue, disengagement, and frustration (Neben & Chen, 2010).

Resilience was the only mental health outcome not predicted by state patience, and it was instead predicted by trait patience. It may be that the enduring quality of a patience as a personality trait are a better fit for resilience, an outcome marked by endurance, than more

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transient state patience.

Study 2B demonstrates an interesting relationship between trait and state patience. Consistent with Schnitker (2012), those who endorsed high trait patience also tended to endorse high state patience, yet they seemed to act differently when predicting classes of outcomes. Whereas mental health outcomes tended to be predicted by state patience, physical, relational, and spiritual health outcomes were exclusively predicted by trait patience.

A number of studies demonstrated positive physical health impacts of patience, including time engaged in physical activity (Leonard, Shuval, de Oliveira, Skinner, Eckel, & Murdoch, 2013), fewer sick days (Reyes-Garcia et al., 2007), and fewer physical symptoms (Schnitker & Emmons, 2007). Each of these was represented in the overall composite physical health score, which was predicted by trait patience. It may be that these are qualities of physical health that are more impacted by habitual processes and behaviors than by transient states, whereas other health-related variables, such as healthy weight (Reyes-Garcia et al., 2007), are less impacted by the effects of patience in general.

Trait patience also predicted both perceived social support and communicative competence, which was consistent with numerous studies in the patience literature (Al-Ubaydli et al., 2013; Bright et al., 2013; Rummel-Kluge et al., 2008; Schnitker & Emmons, 2007; Stone et al., 2004). The relationship between patience and relational health outcomes is consistent with a model of patience that includes an interpersonal component (Schnitker, 2012), as opposed to conceptualizing patience solely as a means of delaying gratification.

Though results were mixed in previous literature surrounding whether patience is related to spirituality (Büssing et al., 2007; Schnitker & Emmons, 2007), the results of the present study support the predictive value of trait patience on spiritual attitudes and involvement. This is

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consistent with Schnitker & Emmons (2007), who found an association between patience and a similar spiritual outcome, spiritual transcendence. Meaning in life, whose potential correlation to patience was not directly supported in the literature, appeared unrelated to both trait and state patience.

Limitations. Primary limitations of this study include the use of a convenience sample in the introductory to psychology course and the tendency toward self-report measures. However, given the preliminary nature of this investigation, a convenience sample is justified, and self-report measures selected have strong psychometric support.

Another limitation is the cross-sectional design of the study. Despite predictive analyses, causality cannot be inferred from these results. Study 3 will provide experimental and longitudinal considerations for the findings of Study 2.

A final limitation of this study is the number of measures analyzed in this battery. It is possible that participants fatigued during completion.

Implications for Study 3. Upon delineating the appraisal process of his stress-and-coping model, Lazarus (1999) also stated that following the coping response (patience, in this case), a number of social, health, and morale outcomes result. This claim appears to be consistent with Study 2B, the diverse positive outcomes predicted by patience, and an outcome model that fits the present data well. Thus, all measures included in the proposed model of patience outcomes will be retested in Study 3 under longitudinal conditions to determine if manipulating patience affects outcomes as expected.

Study 3: Replication of the Beta Version of the Patience Intervention and Testing of Patience Theory

Study 3 sought to replicate findings from Study 1, a functional beta testing of the intervention workbook to promote patience. In the spirit of translational research, I also sought to replicate significant predictors of patience as determined by Study 2A and to examine significant outcome measures from Study 2B longitudinally and experimentally, as opposed to correlationally and cross-sectionally as in Study 2B. For this study, hypothesized: (1) familiarity with an identified stressor and perceived stress related to that stressor will again predict patience (as in Study 2A), and (2) a revised version of the workbook intervention to promote patience (from Study 1) will indeed promote patience and mental, physical, relational, and spiritual health outcomes from Study 2B, over and above that gained from a similarly structured workbook intervention to promote positivity as well as a non-action control group.

Method – Study 3

Participants. Because Study 3 could not be conducted until data from Study 2A and 2B were collected and analyzed for variables that were predictive of and predicted by patience, data for Study 3 were collected in the Fall of 2014. A convenience sample from the psychology curriculum at a large mid-Atlantic university yielded 111 participants. Participants were randomly assigned to one of three conditions, and at the end of data collection, 67 participants were available for analysis: patience ($n= 19$), positivity ($n = 19$), and a non-action control condition ($n = 29$) (see Figure 36). The sample ranged in age from 17-27 ($M = 18.91$, $SD = 1.86$) and was 79.10% female ($n = 53$) and 20.90% male ($n = 14$). Ethnicities of participants were 56.70% Caucasian/White, 19.40% African American/Black, 17.90% Asian-American, 3.00% Hispanic, 1.50% Native American, and 1.5% Other.
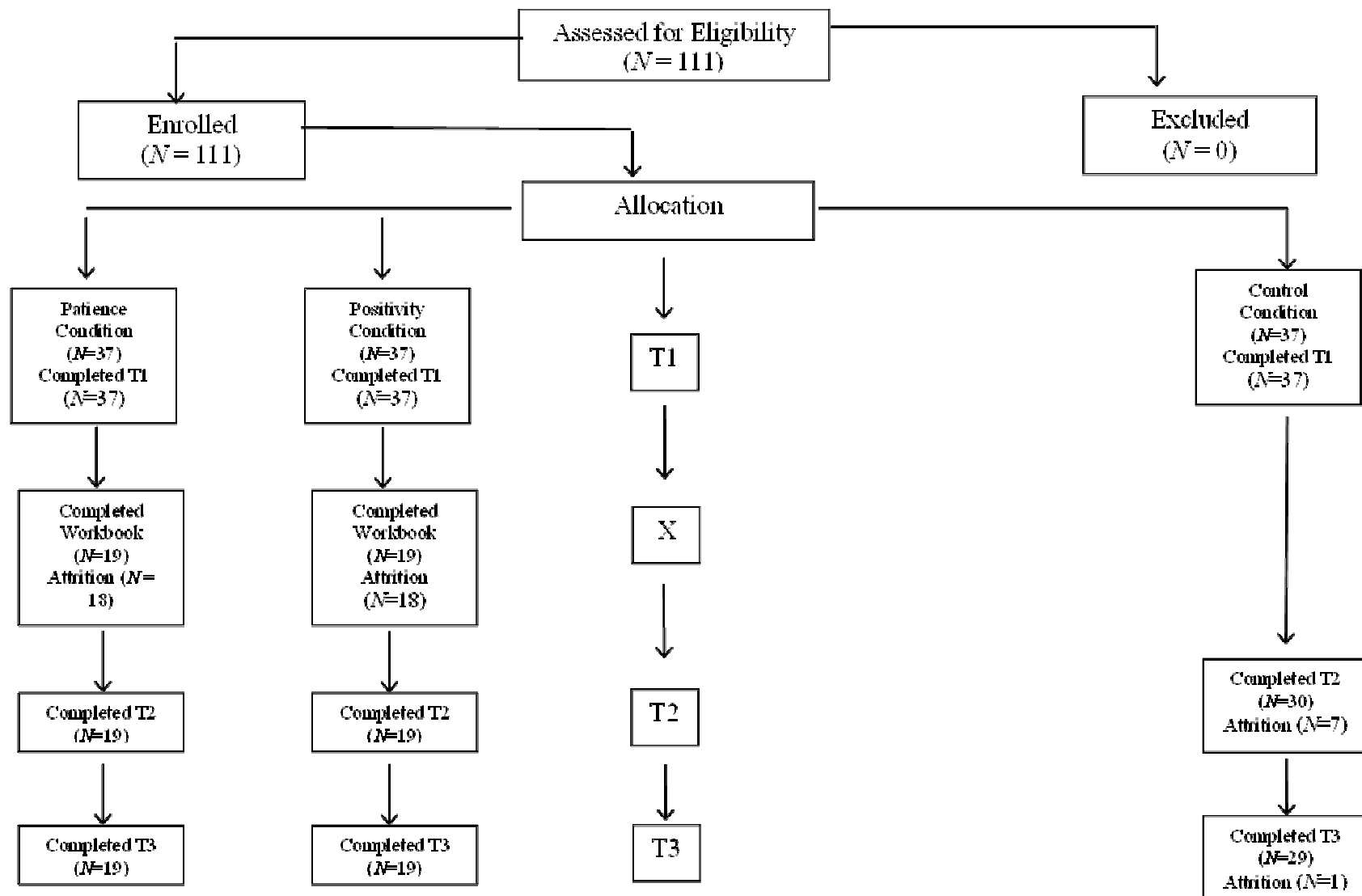
Figure 36. CONSORT Flow Chart depicting students' progression through the present study

Design. This study is a mixed between and within-subjects design, employing experimental and longitudinal methods. It is a between subjects (3 condition groups), x within subject (3 time points for measures). Graphically:

- P: OdOm   **X** Om   Om
- +:   OdOm   **X** Om   Om
- C: OdOm   Om   Om

- Od = demographic observation; Om = outcome measure observation
- P = Patience condition; + = Positivity condition; C = Non-action control condition

Measures. In order to keep participants from spending more than 8 hours on this study (a general recommendation based on most participants' need for only 8 research credits), we limited the measures in our battery to those which were supported as a part of a patience model in Study 2. Thus, the surveys in the battery for Study 3 included an identical demographics survey and the following measures from Study 2:

Patience measures.

Patience Scale (PS-10; Schnitker & Emmons, 2007). The PS-10 was described in Study 1. Cronbach's alpha for this measure was .72 in the present study.

3-Factor Patience Questionnaire (3-FPQ; Schnitker, 2012). The 3-FPQ was described in Study 1. Cronbach's alpha in the present study was .84; the five items of the Interpersonal Patience Subscale had a Cronbach's alpha of .71; the three items of the Life Hardships Patience Subscale had a Cronbach's alpha of .77; the three items of the Daily Hassles Patience Subscale had a Cronbach's alpha of .76.

Honesty/Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness Personality Inventory – Patience Subscale (HEXACO-PI, Lee & Ashton, 2004). The

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HEXACO-PI was described in Study 1. Cronbach's alpha for this measure was .90 for the present study.

The stressor. The stressor identified in the PS-10 was classified by researchers as involving interpersonal patience, life stressors patience, or daily hassles patience.

Appraisal measure from Study 2A.

Familiarity of stressor. A single-item measure asked participants "have you ever experienced this type of stressor before?" (see study 2A).

Stress response measure from Study 2A.

Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). The PSS was described in Study 2A. Cronbach's alpha for this measure was .83 in the present study.

Mental health outcome measures from Study 2B.

Brief Resilience Scale (Smith, Dalen, Wiggins, Tooley, Christopher, & Bernard, 2008). The Brief Resilience Scale was described in Study 2B. Cronbach's alpha was .80 in the present study.

Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988). The BAI was described in Study 2B. Cronbach's alpha for this measure was .92 in the present study.

Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). The SWLS was described in Study 2B. Cronbach's alpha was .87 and was .87 in the present study.

Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The CES-D was described in Study 2B. Cronbach's alpha for this was .88 in the present study.

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS was described in Study 2A. Cronbach's alphas in the present study, for the positive emotion items was .92 and was .89 for the negative emotion items.

Physical health outcome measure from Study 2B.

Short-Form Health Status Survey (SF-36; Stewart & Ware, 1992). The SF-36 was described in Study 2B. General health items showed a Cronbach's alpha of .81 in the present study; physical functioning items Cronbach's alpha was .92; productivity items had a Cronbach's alpha of .68; pain items had a Cronbach's alpha of .84; energy items had a Cronbach's alpha of .79; overall scale Cronbach's alpha was .88 in the present study.

Relational outcome measures from Study 2B.

Communicative Competence Scale (CCS; Wiemann, 1977). The CCS was described in Study 2B. Cronbach's alpha for this measure was .94 in the present study.

Multidimensional Scale of Perceived Social Support (MPSSS; Zimet, Dahlem, Zimet, & Farley, 1988). The MPSSS was described in Study 2B. Cronbach's alpha for this measure was .95 in the present study.

Spiritual outcome measures from Study 2B.

Spiritual Attitude and Involvement List (SAIL; de Jager Meezenbroek et al., 2012). The SAIL was described in Study 2B. Cronbach's alphas for this measure was .94 in the present study.

Meaning in Life Scale (MLS; Steger, Frazier, Oishi, & Kaler, 2006). The MLS was described in Study 2B. Cronbach's alphas for this scale was .79 in the present study.

Intervention workbooks. The patience and positivity workbooks from Study 1 were modified, and the revised workbooks were used as the experimental manipulations in Study 3. Feedback from participants in Study 1 indicated a common experience of the workbooks as rather lengthy, thus I edited both workbooks for redundancy and consolidated exercises as I saw fit, in addition to receiving input from experts in the field. At the suggestion if one of the experts, the "A" in the "SPACE" acronym for promoting patience was changed from "Allow Boredom"

to "Allow Inactivity." Thus, both the patience and positivity workbooks are roughly six pages shorter and have diverged from their previously identical framework, in the hope that outcome-relevant changes would be more pronounced.

Procedure. Participants signed up for the study over the course of the fall semester of 2014 using SONA-Systems©. A waiver of documentation of consent was requested due to the purely electronic nature of the study; completing the surveys and workbook on a computer presented no more than minimal risk of harm and involved no procedures for which written consent is normally required outside the research context. In lieu of traditional consent, the participant was provided with information about the content of the study and given the option to terminate their participation at any time.

Once the participants received this information and choose to proceed with the study, they were sent a link to complete the Time 1 assessment occasion using the Research Electronic Data Capture (REDCap) Consortium (Harris et al., 2009). Upon completion of this assessment, participants were randomly assigned to either complete the patience or the positivity intervention workbook and given two weeks to complete it, or assigned to a non-action control condition. Upon completion of the workbook, participants used a link provided within the workbook to upload their workbook to REDCap and to complete the Time 2 assessment occasion. Workbooks were checked for completion upon receipt. Non-action control participants were simply e-mailed a link to complete Time 2 assessments two weeks after submitting Time 1 assessments.

Two weeks after completing the Time 2 assessment, participants were sent a link to complete the Time 3 assessment occasion on REDCap. Once this measure was completed, participants earned research credits for participating. Those participants in the non-action control condition also earned research credits for participating and received a patience or positivity

workbook of their choice following the final assessment occasion. The length of this study in total required four to five weeks, depending on how punctual participants were with returning the workbooks.

Analysis. In the interest of replicating significant results from the hypothesized model in Study 2A, I hypothesized (1) that familiarity with the stressor and perceived stress would predict measures of patience. To test this hypothesis, I analyzed Time 1 data from Study 3 using multiple linear regression.

In the interest of replicating significant efficacy results from Study 1 and to extend the findings of Study 2B, I hypothesized (2) that a workbook intervention to promote patience would again promote patience, as well as the mental, physical, relational, and spiritual health outcomes supported in Study 2B, more so than a positivity workbook or no workbook at all. I tested this hypothesis using three mixed (between and within) MANOVAs for mental, relational, and spiritual health outcomes and one mixed (between and within) ANOVA for physical health outcomes. Multivariate condition by time(S) interaction effects were followed by univariate condition x time Fs and simple main effects analyses, comparing scores for each condition over time (Time 1 to Time 2 and Time 2 to Time 3). In the case of significant univariate interaction effects, mixed linear modeling was used to determine differences in slopes between conditions.

Results – Study 3

Preliminary analyses on Hypothesis 1. Data were checked for normality and outliers; no concerns were identified. Means and standard deviations for variables in question for Hypothesis 1 are reported in Table 10. Correlations among variables examined in Hypothesis 1 are reported in Table 11.

Table 10.

Study 3 Means and Standard Deviations for Hypothesis 1 Variables at Time 1, N = 111

Variable	*M*	*SD*
Trait Patience (PS-10)	34.35	5.78
Trait Patience (FPQ)	36.70	6.82
State Patience	25.91	7.30
Perceived Stress	22.02	6.65

Note. See Measures section for scale values

Table 11.

Study 3 Intercorrelations for Hypothesis 1 Variables at Time 1, N = 111

	PS	FPQ	HEX	PSS	Familiarity
PS-10	-				
FPQ	.85*	-			
HEX	.37*	.44*	-		
PSS	-.33*	-.35*	-.44*	-	
Familiarity	-.09	-.13	-.22	-.18	-

*Bonferroni adjusted p-value = .004

Hypothesis 1: Familiarity with stressor and perceived stress will predict patience.

Multiple linear regression determined that familiarity with stressor and perceived stress predicted trait patience (PS-10) together, $F(2,108) = 6.40$, $p = .002$, $R^2 = .11$. Examination of coefficients revealed that familiarity with stressor did not provide significant predictive value, $\beta = .02$, $p = .835$, but perceived stress was a negative predictor of trait patience, $\beta = -.33$, $p = .001$. Similarly, familiarity with stressor and perceived stress predicted trait patience (FPQ) together, $F(2,108) = 7.72$, $p = .001$, $R^2 = .13$. Examination of coefficients revealed that familiarity with stressor did not provide significant predictive value, $\beta = -.07$, $p = .433$, but perceived stress was a negative predictor of trait patience, $\beta = -.34$, $p < .001$.

Again, familiarity with stressor and perceived stress state patience together, $F(2,108) =$

15.38, $p < .001$, $R^2 = .22$. Unlike for trait patience, examination of coefficients revealed that familiarity with stressor did provide significant predictive value, $\beta = -.17$, $p = .05$; those who had experienced the stressor before ($n = 97$) experienced lower patience ($M = 25.36$, $SD = 6.86$) than those who had not experienced the stressor before ($n = 14$) ($M = 29.71$, $SD = 9.21$). Perceived stress was also a negative predictor of trait patience, $\beta = -.43$, $p < .001$ (see Figure 37).
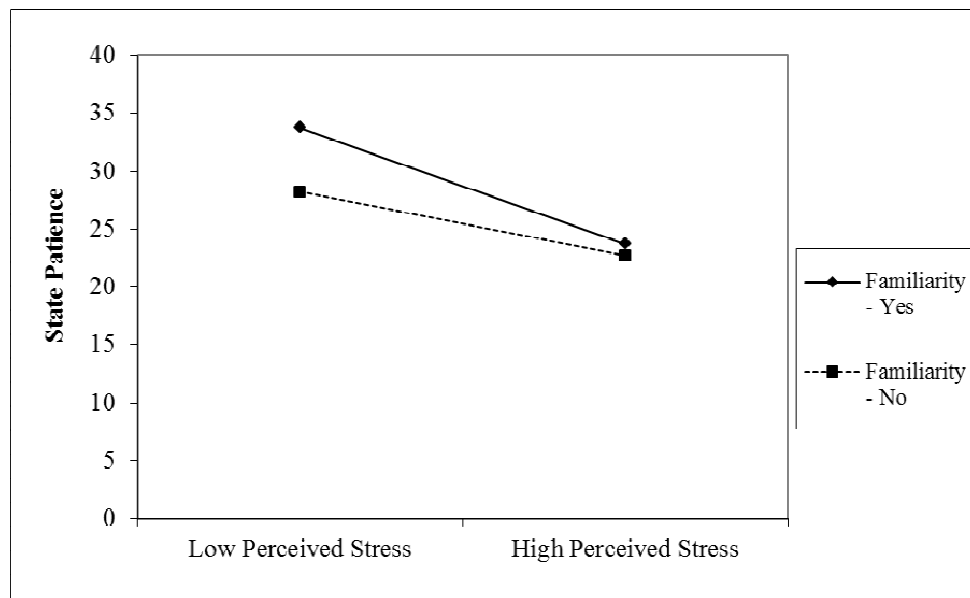
Figure 37. Effects of perceived stress and familiarity of stressor on state patience (Study 3).

Preliminary analyses on Hypotheses 2. A one-way multivariate analysis of variance (MANOVA), for completing participants ($n = 67$) versus the participants who dropped out ($n = 44$), was conducted to compare the initial values of outcome variables at Time 1. There was no significant multivariate effect, multivariate $F(24, 86) = 1.29$, $p = .194$. Thus, those participants who completed measures at only Time 1 ($n = 18$ from the patience workbook condition; $n = 18$ from the positivity workbook condition, $n = 2$ from the control condition) were omitted from further analyses.

The remaining data ($N = 67$; patience workbook condition , $n = 19$, positivity workbook

condition $n = 19$, and control condition $n = 29$) were then checked for normality, missing data, and outliers; no concerns were identified. A one-way MANOVA was conducted to compare initial values of outcome variables at Time 1 across conditions. There was no significant multivariate effect, multivariate $F(28, 104) = 1.06$, $p = .400$, and no univariate effects were significant; thus, outcome values did not differ significantly across conditions at Time 1.

Means and standard deviations are reported in Table 12. Correlations are reported in Table 13. Additionally, I computed correlations between patience measures and outcome measures at Time 1, Time 2, and Time 3 and presented them alongside correlations from Study 2B (see Table 14). Though the correlation coefficients themselves are not statistically comparable across studies due to differences in samples size and methodology (e.g., Study 3 participants represent a population willing to complete an intervention study), there appear to be a greater number of statistically significant correlations in the higher-powered Study 2B.

Table 12.

Study 3 Means and Standard Deviations for Outcome Measures, N = 67

Condition	Patience			Positivity			Control		
	T1	T2	T3	T1	T2	T3	T1	T2	T3
PS M	34.10	39.42	39.63	33.58	38.00	38.26	35.55	35.66	35.66
(SD)	(3.97)	(3.70)	(3.11)	(5.11)	(4.69)	(4.69)	(5.87)	(5.94)	(6.98)
FPQ M	36.26	41.16	41.00	35.84	41.10	42.00	37.45	37.86	38.79
(SD)	(5.37)	(5.77)	(4.03)	(7.32)	(6.39)	(5.69)	(6.70)	(6.63)	(7.56)
HEX M	24.68	30.68	31.16	22.42	30.00	31.68	26.69	27.86	30.34
(SD)	(6.10)	(8.10)	(8.09)	(7.46)	(9.16)	(9.01)	(6.50)	(7.08)	(6.88)
BRS M	19.89	20.58	20.89	19.74	21.16	20.94	20.79	20.41	19.83
(SD)	(4.77)	(4.27)	(4.46)	(3.87)	(3.99)	(4.30)	(20.24)	(3.73)	(4.58)
BAI M	17.53	11.79	11.32	17.37	11.26	10.21	20.76	15.34	13.66
(SD)	(11.19)	(8.89)	(13.86)	(10.99)	(10.88)	(11.87)	(12.86)	(10.92)	(12.01)
SLS M	24.05	24.53	25.63	23.21	27.26	26.53	21.14	22.83	21.03
(SD)	(5.70)	(6.34)	(7.54)	(5.55)	(4.92)	(5.31)	(6.21)	(5.30)	(6.76)
CESD M	38.84	33.47	32.37	36.37	30.63	31.84	38.00	37.24	37.62
(SD)	(12.79)	(9.34)	(12.94)	(9.67)	(9.71)	(12.10)	(9.60)	(9.13)	(9.17)
Pos M	29.89	30.68	30.21	34.26	36.00	34.53	33.90	31.79	30.14
(SD)	(9.45)	(10.77)	(9.61)	(6.82)	(7.85)	(6.76)	(7.91)	(8.46)	(7.60)
Neg M	22.79	20.42	18.21	21.47	16.89	17.57	22.14	20.79	21.34
(SD)	(8.09)	(6.55)	(7.42)	(8.11)	(5.65)	(6.99)	(7.58)	(8.20)	(7.20)
SF36 M	68.68	66.89	68.32	67.26	71.89	70.74	69.66	67.34	67.34
(SD)	(12.04)	(10.76)	(9.43)	(12.35)	(8.67)	(12.01)	(10.28)	(9.70)	(11.12)
CCS M	137.74	141.53	145.47	135.58	142.68	143.32	140.55	139.00	135.41
(SD)	(10.92)	(16.19)	(16.48)	(10.60)	(14.79)	(14.36)	(17.24)	(19.38)	(18.54)
MSPSS M	59.21	59.79	61.84	58.11	66.47	64.37	58.45	55.17	55.03
(SD)	(11.72)	(11.87)	(12.24)	(14.38)	(7.83)	(7.85)	(9.88)	(10.89)	(9.15)
SAIL M	110.84	114.95	114.37	106.74	115.58	118.53	108.31	105.34	104.48
(SD)	(16.22)	(21.63)	(23.04)	(15.89)	(19.38)	(21.73)	(18.37)	(20.05)	(18.27)
MLQ M	50.74	53.84	51.26	50.11	55.16	55.00	48.17	50.07	46.24
(SD)	(8.89)	(9.74)	(10.91)	(6.87)	(9.67)	(9.16)	(8.70)	(8.92)	(7.33)

Note: PS = Patience Scale (trait patience); FPQ = 3 Factor Patience Questionnaire (trait patience); HEX = HEXACO-PI (state patience); BRS = Brief Resilience Scale; BAI = Beck Anxiety Inventory; SLS = Satisfaction with Life Scale; CESD = Center for Epidemiological Studies Depression Scale; POS = Positive and Negative Affect Schedule (positivity); NEG = Positive and Negative Affect Schedule (negativity); SF36 = Short Form-36 (physical health); CCS = Communicative Competence Scale; MPSSS = Multidimensional Scale of Perceived Social Support; SAIL = Spiritual Attitudes and Involvement List; MLQ = Meaning in Life Questionnaire

Table 13.

Study 3 Intercorrelations for Outcome Variables at Time 1, N =110

	PS	FPQ	HEX	BRS	BAI	SLS	CESD	POS	NEG	SF36	CCS	MPSSS	SAIL	MLQ
PS	-													
FPQ	.85*	-												
HEX	.37*	.44*	-											
BRS	.13	.14	.08	-										
BAI	-.15	-.13	-.23	-.32*	-									
SLS	.14	-13	.05	.22	-.30	-								
CES-D	-.10	-.12	-.17	-.45*	.57*	-.44*	-							
POS	.16	.14	.05	.38*	-.19	.34*	-.48*	-						
NEG	-.21	-.19	-.23	-.34*	.61*	-.31*	.63*	-.10	-					
SF36	.25	.23	.12	.44*	-.50*	.35*	-.56*	.49*	-.42*	-				
CCS	.34*	.33*	-.02	.33*	-.18	.38*	-.33*	.45*	-.29	.43*	-			
MPSSS	.12	.16	-.04	.22	-.27	.45*	-.30*	.52*	-.13	.45*	.48*	-		
SAIL	.24	.16	-.18	.09	.04	.37*	-.08	.33*	-.09	.19	.64*	.41*	-	
MLQ	.23	.17	-.13	.08	.01	.49*	-.13	.37*	-.10	.18	.42*	.36*	.66*	-

*Bonferroni corrected *p* = .001

Note: PS = Patience Scale (trait patience); FPQ = 3 Factor Patience Questionnaire (trait patience); HEX = HEXACO-PI (state patience); BRS = Brief Resilience Scale; BAI = Beck Anxiety Inventory; SLS = Satisfaction with Life Scale; CESD = Center for Epidemiological Studies Depression Scale; POS = Positive and Negative Affect Schedule (positivity); NEG = Positive and Negative Affect Schedule (negativity); SF36 = Short Form-36 (physical health); CCS = Communicative Competence Scale; MPSSS = Multidimensional Scale of Perceived Social Support; SAIL = Spiritual Attitudes and Involvement List; MLQ = Meaning in Life Questionnaire

Table 14.

Correlations on Outcome Measures in Study 2B and Study 3

	Study 2B Correlations (N = 196)			Study 3 T1 Correlations (N = 111)			Study 3 T2 Correlations (n = 67)			Study 3 T3 Correlations (n = 67)		
	PS	FPQ	HEX	PS	FPQ	HEX	PS	FPQ	HEX	PS	FPQ	HEX
PS	-			-			-			-		
FPQ	.87*	-		.85*	-		.81*	-		.88*	-	
HEX	.45*	.50*	-	.37*	.44*	-	.36	.51	-	.39*	.50*	-
BRS	.33*	.42*	.31*	.13	.14	.08	.28	.45*	.31	.43*	.54*	.36
BAI	-.23	-.28*	-.29*	-.15	-.13	-.23	-.11	-.24	-.21	-.07	-.14	-.06
SLS	.29*	.33*	.25*	.14	-13	.05	.35	.46*	.24	.49*	.50*	.19
CES-D	-.29*	-.35*	-.39*	-.10	-.12	-.17	-.28	-.34	-.25	-.34	-.35	-.12
POS	.40*	.42*	.34*	.16	.14	.05	.25	.33	.28	.40*	.41*	.35
NEG	-.20	-.26*	-.32*	-.21	-.19	-.23	-.19	-.29	-.30	-.28	-.35	-.11
SF36	.36*	.39*	.23	.25	.23	.12	.29	.37	.38*	.35	.39*	.32
CCS	.55*	.56*	.21	.34*	.33*	-.02	.32	.46*	.32	.50*	.51*	.26
MPSSS	.25*	.21	.06	.12	.16	-.04	.19	.31	.02	.26	.24	.05
SAIL	.43*	.39*	.19	.24	.16	-.18	.31	.38*	.24	.41*	.38*	.16
MLQ	.23	.20	.08	.23	.17	-.13	.25	.23	.06	.32	.27	.02

* $p = .001$.

Manipulation check on treatment fidelity. Since participants completed workbook interventions on their own time and without direct researcher supervision, data were collected to examine the fidelity and engagement with which the workbooks were completed. After determining one high outlier (one in the positivity workbook condition), a one-way analysis of variance (ANOVA) was conducted to determine differences in self-reported completion time among conditions. The overall average workbook completion time across conditions was $M =$ 7.59 hours, ($SD = 2.94$), about an hour less than the alpha versions tested in Study 1. No significant difference occurred between workbooks in completion time, $F(1, 36) = 2.95$, $p = .094$ (see Table 15).

Next, I looked to total word count, word count per prompt, and percentage of prompts completed in the patience and positivity workbooks (note: two patience workbooks were not available for analysis). The overall average word count of participant responses was 4499.95 words ($SD = 2109.09$). Total average words per response to a prompt was 22.81 ($SD = 8.96$). Total percentage of prompts responded to was 95.31% ($SD = 6.85$). Univariate ANOVAs were conducted to determine differences among conditions. Neither workbook yielded greater word count than the other, $F(1, 36) = 2.78$, $p = .104$; neither workbook yielded greater word count per prompt than the other, $F(1, 36) = .82$, $p = .373$; neither workbook yielded greater percentage of prompts completed than the other, $F(1, 36) = .324$, $p = .573$ (see Table 15).

We also chose to examine the content of the words written by participants by running searches throughout the workbooks for roots of words related to patience or positivity, respectively. "Patien" were searched for in all workbooks and appeared significantly more in participant responses in the patience condition than in the positivity condition $F(1, 36) = 85.09$, p < .001. Roots related to positivity, including "happ" ("happen" was excluded from these results), "positiv," "warm," and "love" were also searched for in the workbooks and appeared

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significantly more in the positivity condition than in the patience condition $F(1, 36) = 116.41$, p

< .001. Finally, we searched for words related to negativity, since this was also a prevalent

concept in the positivity workbook, including "sad" "depress" "anxi "afraid" "fear" "anger"

"angry" "upset" "mad" "hate" "veng," and "digust." Negativity word count did not differ

significantly among conditions, $F(1, 36) = .942$, $p = .339$, indicating that those in the patience

workbook were equally likely to discuss negative emotions as those in the positivity workbook

(see Table 15).

Table 15.

Study 3 Manipulation Check on Workbook Completion by Condition

	Patience	Positivity
Average hours to completion (SD)*	6.79 (2.44)	8.39 (3.23)
Average total word count*	3942.47 (2076.74)	5057.42 (2043.23)
Average words per prompt**	24.24 (9.07)	21.53 (8.90)
Average percentage of prompts completed**	96.00% (6.35%)	94.68% (7.39%)
Average words related to patience in participant responses**	79.00 (35.78)	3.16 (2.75)
Average words related to positivity in participant responses**	18.24 (6.26)	103.47 (31.98)
Average words related to negativity in participant responses**	16.47 (10.34)	20.37 (13.36)

*Note: patience ($n = 19$), positivity ($n = 19$)
**Note: patience ($n = 17$), positivity ($n = 19$).

These results indicate that each workbook was an appropriate manipulation for achieving the participant's discussion of concepts related to patience or positivity, respectively. We conclude that participants, on average, devoted sufficient time and writing relevant to the topics of each workbook.

Manipulation check on patience and mood outcomes. I sought to determine whether the workbooks were achieving their desired purposes and were fit for further analysis. Paired-samples t-tests were conducted on each condition individually from Time 1 to Time 2 and from Time 2 to Time 3 prior to further multivariate analysis. The patience condition ($n = 19$) increased significantly in trait patience scores between Time 1 and Time 2, PS-10 $t(18) = 5.77$, $p < .001$; FPQ $t(18) = 3.39$, $p = .003$. Trait patience scores did not change significantly between Time 2 and Time 3. The patience condition also increased significantly in state patience scores between Time 1 and Time 2, HEXACO-PI $t(18) = 3.53$, $p = .002$. State patience scores did not change significantly between Time 2 and Time 3.

The positivity condition ($n = 19$) significantly decreased in negativity between Time 1 and Time 2, $t(18) = -2.36$, p = .03; no additional change took place between Time 2 and Time 3, No significant changes occurred in positivity between any time points in the positivity condition.

Paired-samples t-tests were also computed on measures of trait and state patience, positivity, and negativity for the control condition ($n = 29$). The only significant change in the control condition occurred within state patience between Times 2 and 3, HEXACO-PI $t(28) = 2.87$, $p = .008$. Effect sizes are reported in Table 16. These preliminary analyses suggest that all conditions served as appropriate manipulations for their targets and are fit for further analysis.

Table 16.

Study 3 Effect sizes for workbooks on their respective targets versus control condition, N =88

Cohen's *d*	Patience Workbook on Trait Patience (PS-10)	Patience Workbook on Trait Patience (FPQ)	Patience Workbook on State Patience (HEX)	Positivity Workbook on Positivity (PANAS)	Positivity Workbook on Negativity (PANAS)
Time 2	.76	.53	.37	.52	.55
Time 3	.73	.36	.11	.61	.53

Note. PS-10 = Patience Scale; FPQ = 3-Factor Patience Questionnaire; HEX = HEXACO-PI; PANAS = Positive and Negative Affect Schedule

Hypothesis 2: The patience workbook condition will show greater gains in patience and outcomes supported in Study 2B relative to positivity and control conditions. In addition to examining the efficacy of the patience workbook, I chose to include outcome measures supported by Study 2B and compare them among conditions. Multivariate and univariate effects of the workbook interventions on all mental, physical, relational, and spiritual health outcomes against the positivity workbook and control conditions were analyzed by category using 3 x 3 (condition x time) MANOVA and ANOVA. Univariate condition x time *F*s were followed by simple main effects analyses comparing scores for each condition over time (Time 1 to Time 2 and Time 2 to Time 3). Mixed linear modeling was used to determine differences in slopes between conditions on outcomes in which univariate interactions were significant.

Differences in patience outcomes across conditions. A mixed MANOVA was conducted on the three patience outcome measures. Overall, there was a significant multivariate interaction effect of condition and time on patience outcome measures, multivariate $F(12, 120) = 2.00$, $p = .029$. Univariate effects were examined to determine the loci of the multivariate effect.

Trait patience. A significant univariate condition x time interaction effect occurred on

both measures of trait patience, the PS-10 and the FPQ; thus, improvement in trait patience scores differed significantly across conditions for the PS-10, $F(3.096, 98.21) = 5.86$, $p = .001$, and marginally significantly in the FPQ, $F(3.13, 100.01) = 2.54$, $p = .058$.

Trait patience values as measured by the PS-10 increased significantly over time within the patience workbook condition, $F(1, 64) = 21.30$, $p < .001$, and in the positivity-workbook condition, $F(1, 64) = 14.73$, $p < .001$ between Time 1 and Time 2. No condition changed between Time 2 and Time 3, and no significant changes occurred in trait patience as measured by the PS-10 over time in the control condition. Change in the patience and positivity workbook conditions significantly differed from the control condition between Time 1 and Time 2, $t(64) = 3.52$, $p = .001$, $t(64) = 2.91$, $p = .005$, but not from each other, $t(64) = -.55$, $p = .585$, between Time 1 and Time 2 (see Figure 38).
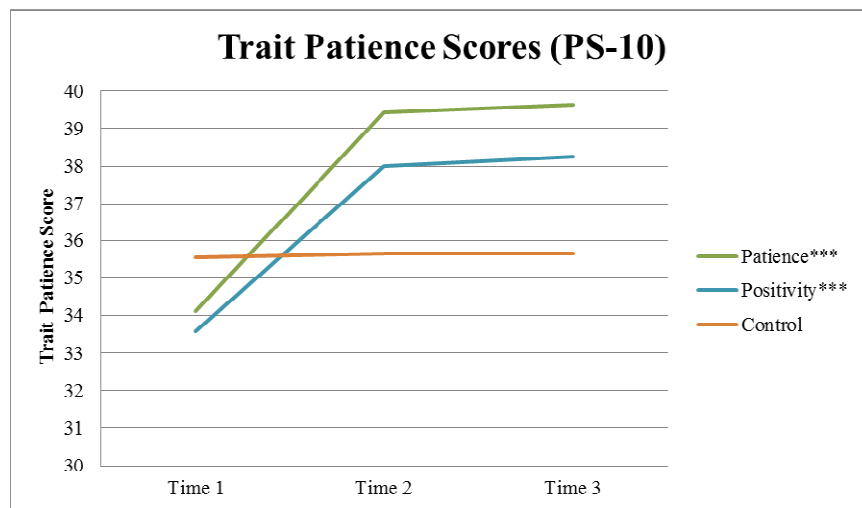
Figure 38. Trait patience scores over time (PS-10) (Study 3).
*Note: *p < .05, **p < .01, *** p < .001 between Time 1 and Time 2*

Trait patience values as measured by the FPQ increased significantly over time within the patience workbook condition, $F(1, 64) = 7.98$, $p = .006$, and in the positivity-workbook condition, $F(1, 64) = 9.22$, $p = .003$ between Time 1 and Time 2. No condition changed between Time 2 and Time 3, and no significant changes occurred in trait patience as measured by the FPQ over time in the control condition. Change in the patience and positivity workbook conditions significantly differed from the control condition between Time 1 and Time 2, $t(64) = 2.01$, $p = .049$, $t(64) = 2.17$, $p = .033$, but not from each other, $t(64) = -.15$, $p = .881$, between Time 1 and Time 2 (see Figure 39).
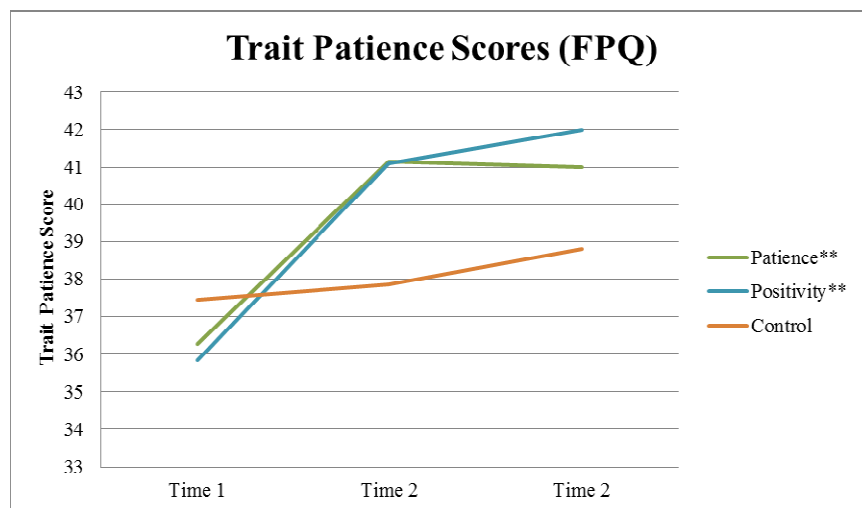
Figure 39. Trait patience scores over time (FPQ) (Study 3).
*Note: *p* < .05, **p* < .01, *** *p* < .001 between Time 1 and Time 2*

State patience. A significant univariate time by condition interaction effect occurred on state patience; thus, improvement in state patience scores differed significantly across conditions, $F(4, 128) = 3.08$, $p = .019$. State patience increased over time within the patience workbook condition, $F(1, 64) = 12.30$, $p = .001$, and in the positivity-workbook condition, $F(1, 64) = 19.63$, $p < .001$ between Time 1 and Time 2. The control condition alone changed between Time 2 and Time 3, $F(1, 64) = 4.57$, $p = .036$. Change in the patience and positivity workbook conditions significantly differed from the control condition, $t(64) = -2.19$, $p = .032$, $t(64) = -2.91$, $p = .005$, but not from each other, $t(64) = -.65$, $p = .516$, between Time 1 and Time 2 (see Figure 40).

Figure 40. State patience scores over time (Study 3).
*Note: *$p < .05$, **$p < .01$, *** $p < .001$ between Time 1 and Time 2

Differences in mental health outcomes across conditions. A mixed MANOVA was conducted on mental health outcome measures, including resilience, anxiety, satisfaction with life, positive affect, and negative affect. There was no significant multivariate condition x time interaction effect on mental health measures, multivariate $F(24, 108) = .82$, $p = .709$. In the interest of being thorough, univariate effects were also examined.

Resilience. No significant univariate condition by time interaction effect occurred on resilience; thus, improvement in resilience scores did not differ significantly across conditions, $F(4, 128) = 1.43$, $p = .227$. Resilience values did not change significantly in any condition over time (see Figure 41).
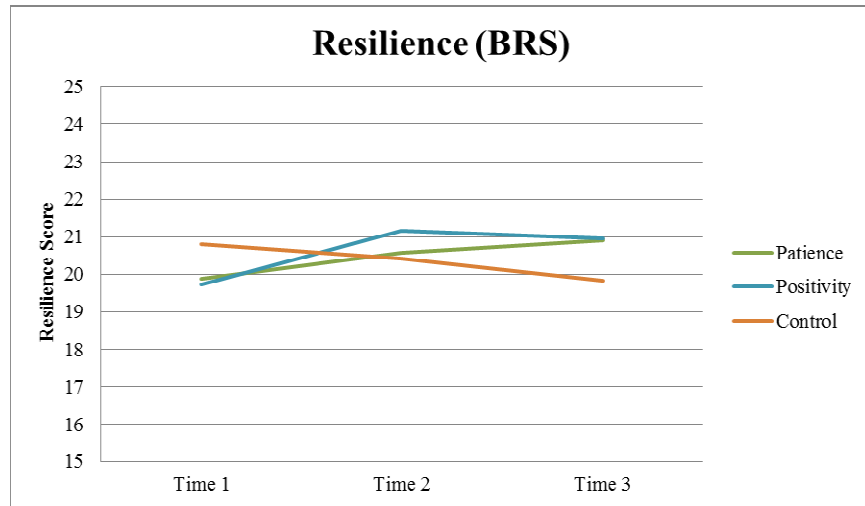
Figure 41. Resilience scores over time (Study 3).
Note: *$p < .05$, **$p < .01$, *** $p < .001$ between Time 1 and Time 3

Anxiety. No significant univariate condition x time interaction effect occurred on anxiety, $F(4, 128) = 06$, $p = .994$; thus, improvement in anxiety scores did not differ significantly across conditions. The patience workbook condition, $F(1, 64) = 6.17$, $p = .016$, the positivity workbook condition, $F(1, 64) = 6.99$, $p = .010$, and the control condition, $F(1, 64) = 8.39$, $p = .005$, all decreased in anxiety scores between Time 1 and Time 2. No conditions changed in anxiety between Time 2 and Time 3 (see Figure 42).
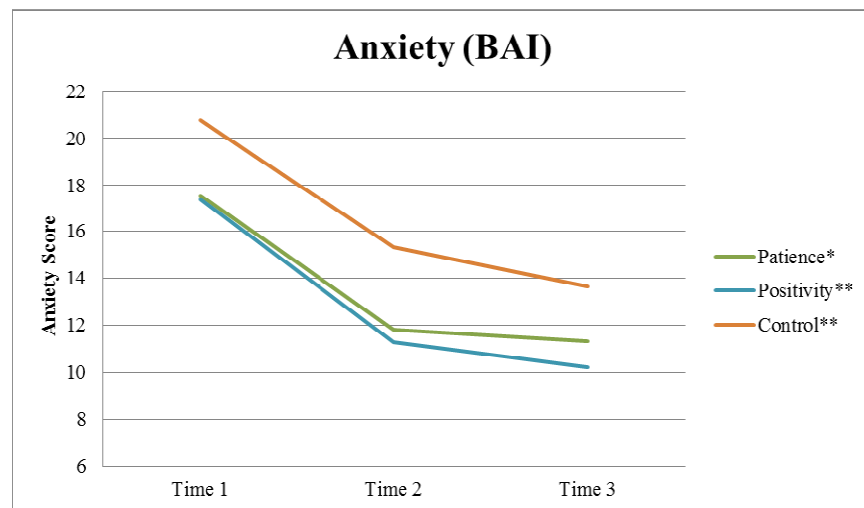
Figure 42. Anxiety scores over time (Study 3).
*Note: *$p < .05$, **$p < .01$, *** $p < .001$ between Time 1 and Time 2

Satisfaction with life. No significant univariate condition x time interaction effect occurred on satisfaction with life, $F(4, 128) = 1.82$, $p = .130$; thus, improvement in satisfaction with life did not differ significantly across conditions. Satisfaction with life improved only in the positivity condition, $F(2, 128) = 5.37$, $p = .006$. No condition changed between Time 2 and Time 3, and no changes in satisfaction with life scores occurred over time in the patience workbook or control conditions (see Figure 43).

Figure 43. Satisfaction with life scores over time (Study 3).
Note: *p < .05, **p < .01, *** p < .001 between Time 1 and Time 2

Depression. No significant univariate condition x time interaction effect occurred on depression, $F(4, 128) = 1.53$, $p = .197$; thus, improvement in depression scores did not differ significantly across conditions. Between Time 1 and Time 2, depression scores improved in the patience workbook condition, $F(1, 64) = 5.55$, $p = .022$, and in the positivity workbook condition, $F(1, 64) = 6.33$, $p = .014$. No changes in depression scores occurred in any condition between Time 2 and Time 3, and no changes occurred in the control condition over time (see Figure 44).
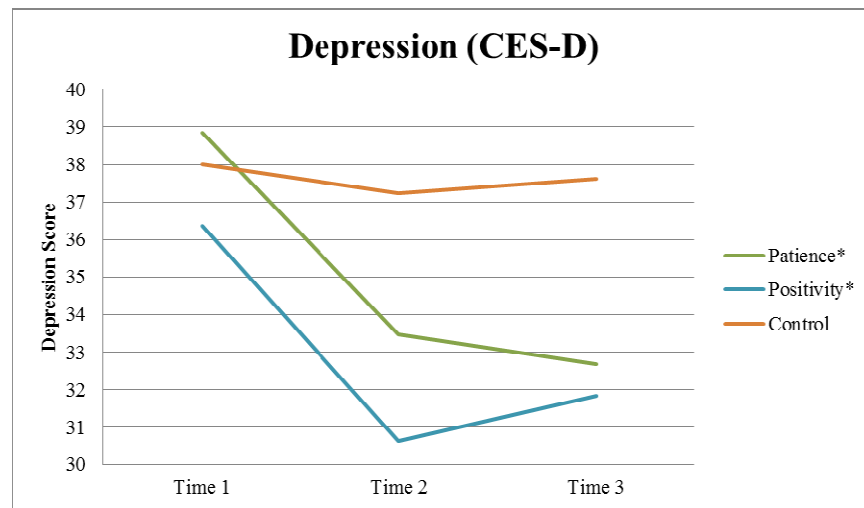
Figure 44. Depression scores over time (Study 3).
Note: *p < .05, **p < .01, *** p < .001 between Time 1 and Time 2

Positivity. No significant univariate time by condition interaction effect occurred on positivity, $F(4, 128) = 1.39$, $p = .242$; thus, improvement in positivity scores did not differ significantly across conditions. Positivity values did not change significantly in any condition over time (see Figure 45).
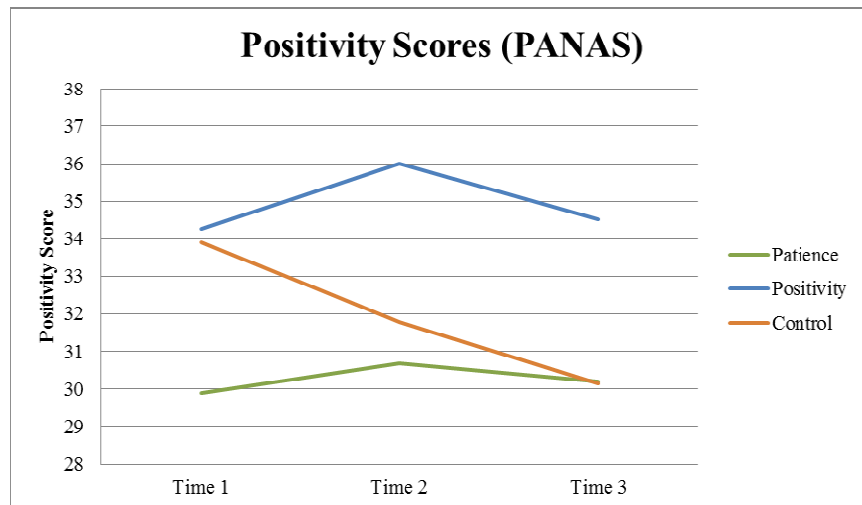
Figure 45. Positivity scores over time (Study 3).
*Note: *$*p < .05$, $**p < .01$, $*** p < .001$ between Time 1 and Time 2

Negativity. No significant univariate time by condition interaction effect occurred on negativity, $F(3.41, 109.08) = 1.58$, $p = .192$; thus, improvement in negativity scores did not differ significantly across conditions. Still, negativity decreased in the positivity workbook condition between Time 1 and Time 2, $F(1, 64) = 7.84$, $p = .007$, and decreases approached significance in the patience workbook condition between Time 2 and Time 3, $F(1, 64) = 3.47$, $p = .067$. No changes in negativity occurred in the control condition (see Figure 46).

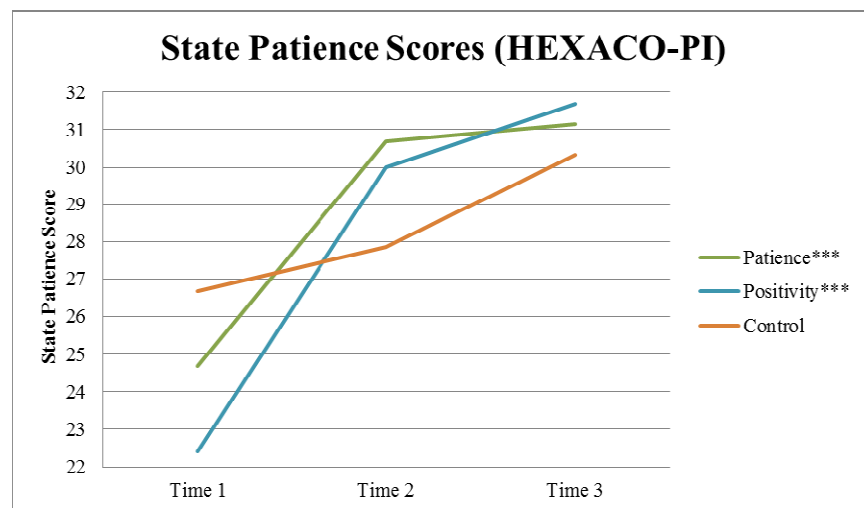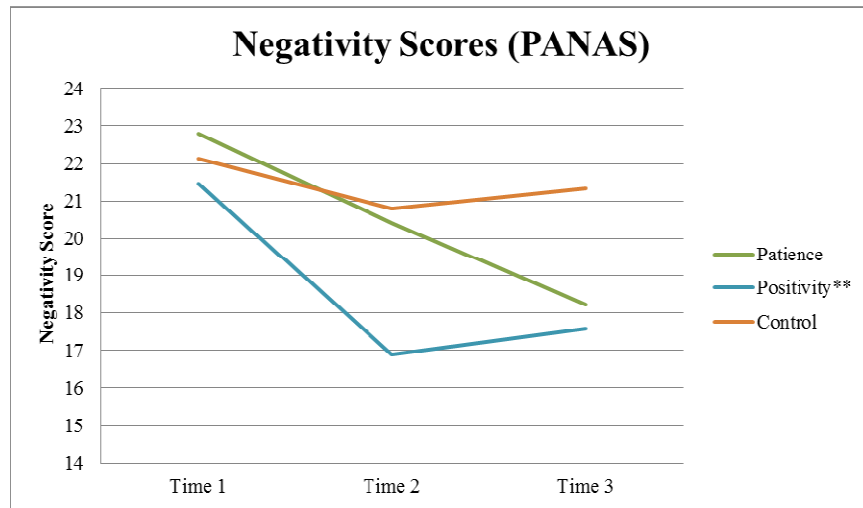*Figure 46.* Negativity scores over time (Study 3).
Note: *$p < .05$, **$p < .01$, *** $p < .001$ between Time 1 and Time 2

Differences in physical health outcomes across conditions. A univariate ANOVA was

conducted to determine differences among conditions on the outcome measure for physical

health. A significant univariate time by condition interaction effect occurred on physical health;

thus, improvement in physical health scores differed significantly across conditions, $F(4, 128) =$

3.66, $p = .007$. Between Time 1 and Time 2, physical health values changed over time only in

the positivity workbook condition, $F(1, 64) = 9.29$, $p = .003$. No changes occurred in physical

health among conditions between Time 2 and Time 3, and no changes in physical health scores

occurred over time in the patience workbook or control conditions. Change in the positivity

workbook condition significantly differed from the patience workbook condition, $t(64) = -2.99$, p

$= 004$, and the control condition, $t(64) = -3.55$, $p = .001$ between Time 1 and Time 2 (see Figure

47).
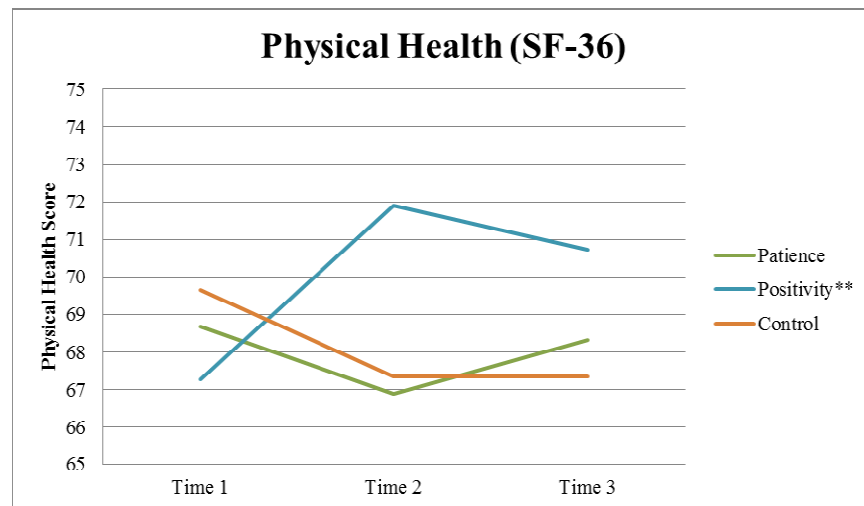
Figure 47. Physical health scores over time (Study 3).
*Note: *$p < .05$, ***$p < .01$, *** $p < .001$ between Time 1 and Time 2

Differences in relational health outcomes across conditions. A mixed MANOVA was

conducted on the relational health measures of communicative competence and perceived social

support. A significant multivariate time by condition interaction effect occurred on relational

health measures; thus, improvement in relational health scores differed significantly across

conditions, multivariate $F(8, 124) = 3.62$, $p = .001$. Univariate effects were examined to determine the loci of the multivariate effect.

Communicative competence. A significant univariate time by condition interaction effect occurred on communicative competence, $F(4, 128) = 5.01$, $p = .001$; thus, improvement in communicative competence scores differed significantly across conditions. Communicative competence scores improved between Time 1 and Time 2 in the positivity workbook condition, $F(1, 64) = 7.67$, $p = .007$. No condition changed in communicative competence between Time 2 and Time 3, and no change in communicative competence scores occurred over time in the patience workbook or control conditions. Change in the positivity workbook condition significantly differed from the control condition, $t(64) = -2.62$, $p = .011$, but did not differ from the patience workbook condition, $t(64) = -.91$, $p = .364$ between Time 1 and Time 2 (see Figure 48).
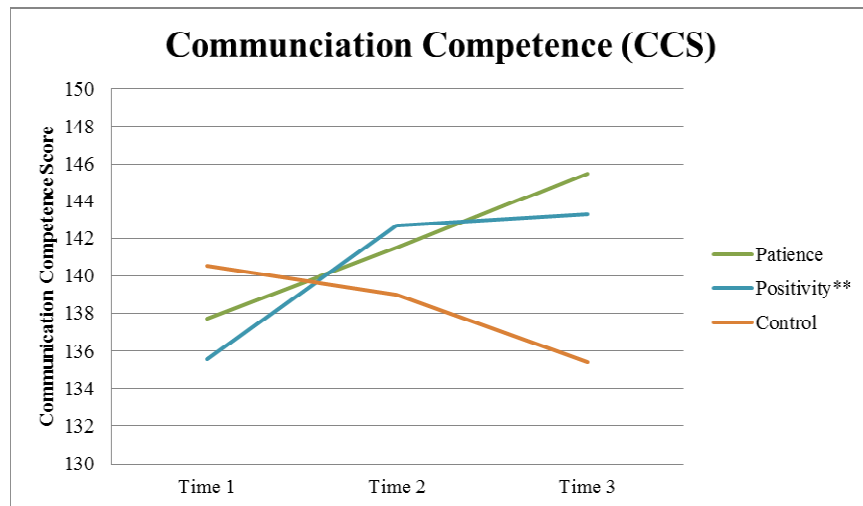
Figure 48. Communicative competence scores over time (Study 3).
*Note: *$p < .05$, **$p < .01$, *** $p < .001$ between Time 1 and Time 2

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Social support. A significant univariate time by condition interaction effect occurred on social support, $F(3.21, 102.85) = 5.87 \, p = .005$; thus, improvement in social support scores differed significantly across conditions. Social support scores increased significantly between Time 1 and Time 2 in the positivity condition, $F(1, 64) = 12.80, p = .001$. No condition changed in social support scores between Time 2 and Time 3, and no change occurred over time in the patience workbook condition or the control condition. Change in the positivity workbook condition significantly differed from the patience workbook condition, $t(64) = -2.35, p = .022$, and the control condition, $t(64) = -3.87, p < .001$, between Time 1 and Time 2 (see Figure 49).
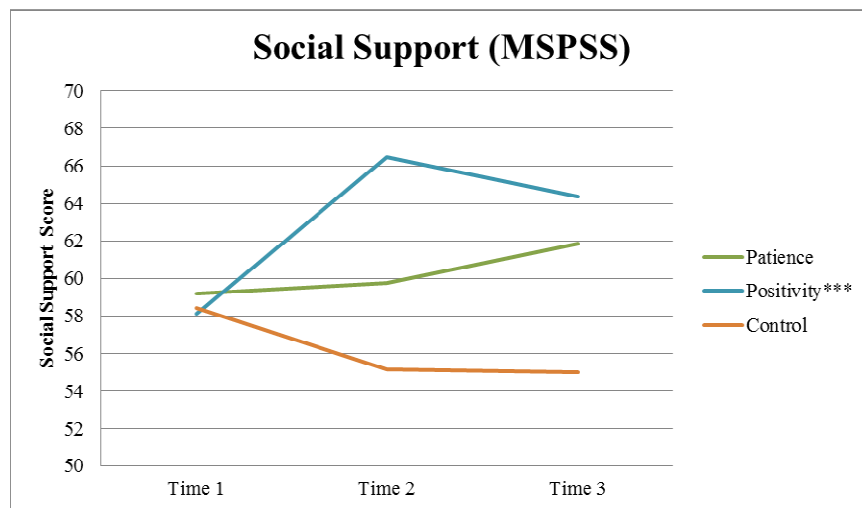
Figure 49. Perceived social support scores over time (Study 3).
Note: $*p < .05, **p < .01, *** p < .001$ between Time 1 and Time 2

Differences in spiritual health outcomes across conditions. A mixed MANOVA was conducted on the spiritual health measures of spiritual activities and involvement and meaning in life. A significant multivariate time by condition interaction effect occurred on spiritual health measures; thus, improvement in spiritual health scores differed significantly across conditions, multivariate $F(8, 122) = 2.02, p = .049$. Univariate effects were examined to determine the loci of the multivariate effect.

Spiritual activities and involvement. A significant univariate time by condition interaction effect occurred on spiritual activities and involvement, $F(4, 128) = 3.25$, $p = .014$; thus, improvement in spiritual activities and involvement scores differed significantly across conditions. Spiritual activities scores and involvement increased in the positivity workbook condition between Time 1 and Time 2, $F(1, 64) = 5.58$, $p = .021$. No condition changed in spiritual activities scores between Time 2 and Time 3, and no change occurred over time in the patience workbook condition or the control conditions. Change in the positivity workbook condition significantly differed from the control condition, $t(64) = -2.45$, $p = .017$, but did not differ from the patience workbook condition, $t(64) = -.90$, $p = .374$, between Time 1 and Time 2 (see Figure 50).
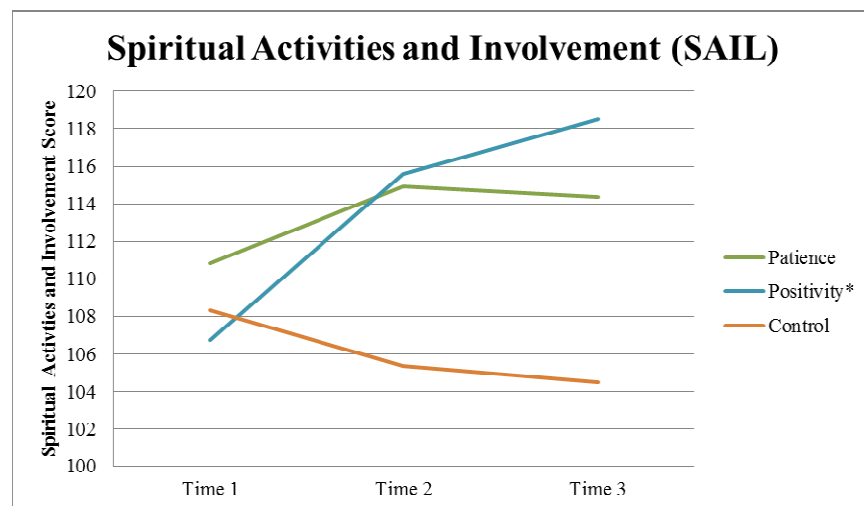
Figure 50. Spiritual activities and involvement over time (Study 3).
*Note: *$p < .05$, **$p < .01$, *** $p < .001$ between Time 1 and Time 2

Meaning in life. A univariate time by condition interaction effect approached significance for meaning in life, $F(4, 128) = 2.30$, $p = .062$; thus, improvement in spiritual activities scores differed across conditions at a rate which approached significance. Meaning in life scores increased between Time 1 and Time 2 in the positivity workbook condition, $F(1, 64) = 6.87$, $p = .011$. No change in meaning in life scores occurred over time in the patience workbook condition, and the control condition decreased significantly between Time 2 and Time 3, $F(1, 64) = 8.78$, $p = .004$. No condition changed more than another between Time 1 and Time 2 (see Figure 51).
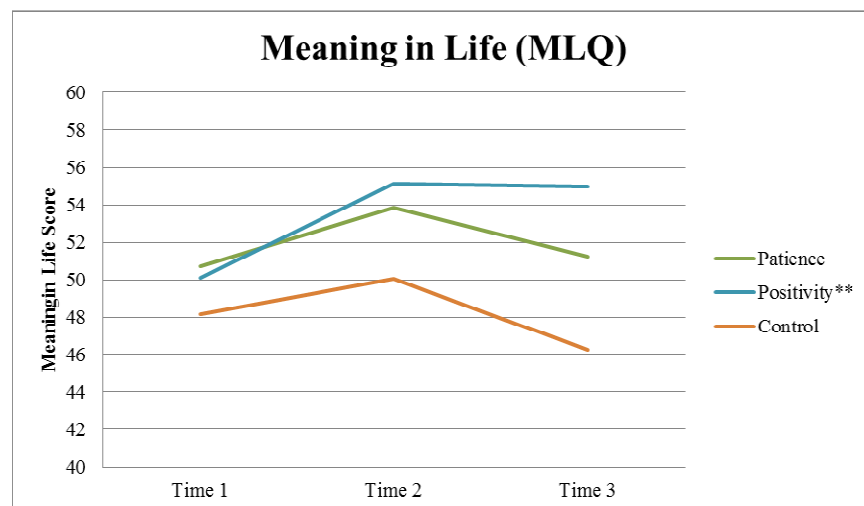
Figure 51. Meaning in life scores over time (Study 3).
*Note: *$p < .05$, **$p < .01$, *** $p < .001$ between Time 1 and Time 2

Discussion: Study 3

Hypothesis 1. Study 3 sought to replicate results from Study 1 and extend results from Study 2. I initially hypothesized that, as in Study 2A, perceived stress and familiarity related to an identified patience stressor would predict patience scores. This hypothesis was supported, as Time 1 data from Study 3 demonstrated that perceived stress predicted scores on trait and state patience, and perceived stress and familiarity with stressor together predicted state patience

scores. This is consistent with findings from Study 2A, as well as potentially an ego-depletion model of patience in which high stress and familiarity with stressor depletes one's ability to feel and respond patiently (Baumeister et al., 1998).

Hypothesis 2. Hypothesis 2 served as a beta test for the patience workbook while also anticipating that the patience workbook would yield similar mental, physical, relational, and spiritual outcomes supported by Study 2B. This hypothesis was partially supported. Primarily, the patience workbook did increase trait and state levels of patience, with higher effect sizes at follow-up than the alpha version at follow up; thus, similar to Study 1 and to Schnitker's (2012) patience intervention, patience was targeted and improved. However, in Study 3 the positivity workbook condition also increased patience, and the control condition saw gains in state patience scores between Time 2 and Time 3. This is similar to Study 1, in that the alpha positivity workbook did not significantly increase patience, but change in patience over time was not significantly different from that of the alpha patience workbook. Also similar to Study 1, both workbooks decreased negative mood, with the beta positivity workbook yielding higher effect sizes at follow-up than the alpha version at follow-up. Thus in Study 3, both workbooks showed efficacy at increasing patience and decreasing negative mood, making them appear to be very similar manipulations, despite significant differences in prompts as well as in participant content (see Table 14). This is dissimilar from what Schnitker (2012) found when testing her patience intervention, which increased positive affect but did not change negative affect. It may be that as the beta versions of each workbook became more effective at promoting the target construct, the more capable participants became with generalizing gains in the target to related constructs. In this way, it is possible that promoting patience effectively reduces negativity, and reducing negativity effectively helps to increase patience.

Despite the similarity in patience and mood outcomes across workbook conditions,

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patience and positivity workbooks seemed to differentially affect the mental, physical, relational, and spiritual outcomes hypothesized from Study 2B (see Table 16). While both workbooks yielded improvements in anxiety and communicative competence scores, the patience workbook uniquely improved scores in depression, consistent with previous patience intervention research (Schnitker, 2012), and the positivity workbook uniquely improved scores in satisfaction with life, physical health, perceived social support, spiritual activities, and meaning in life. Inconsistent with Hypothesis 2, the patience workbook was never significantly better at improving any outcome than the positivity workbook, and positivity workbook more efficaciously produced outcomes in physical health and communicative competence. Thus, contrary to Hypothesis 2, the positivity workbook seemed to impact a broader spectrum of mental, physical, relational, and spiritual health outcomes, relative to the patience workbook, which improved mental health outcomes alone, and even so, not statistically better than the positivity workbook (see Table 17).

Table 17.

Summary of Study 3, Hypothesis 2 Results

Condition	Simple Main Effects	Significantly Different from Patience Condition	Significantly Different from Control Condition
Patience Condition	Trait patience (PS-10 and FPQ), state patience, trait negativity, anxiety, and depression	-	Trait patience (PS-10 and FPQ), and state patience
Positivity Condition	Trait patience (PS-10 and FPQ), state patience, trait negativity, anxiety, satisfaction with life, physical health, communicative competence, perceived social support, spiritual activities and involvement, and meaning in life	Physical health and perceived social support	Trait patience (PS-10 and FPQ), state patience, physical health, communicative competence, perceived social support, and spiritual activities and involvement
Control Condition	State patience and anxiety	-	-

When considering the patience workbook condition alone, results from Study 3 are inconsistent with the results from Study 2B and ultimately with the patience literature, as improving patience did not improve physical health (Grunnesjo et al., 2011; Harmon et al., 2008; Leonard et al., 2013; Reyes Garcia et al., 2007; Schnitker & Emmons, 2007) or spiritual health outcomes (Schnitker & Emmons, 2007) and produced only some mental health outcomes (anxiety as in Hong et al., 2005; depression as in Schnitker, 2012; negative affect, unlike positive affect in Schnitker, 2012). However, the positivity workbook, which also produced increases in patience in Study 3, saw improvements across outcome classifications. In fact, the only outcome variable that was not improved by either workbook was resilience, despite both conditions' improvement in trait patience, which predicted resilience in Study 2B and in McCann et al. (2012). These differential effects based on condition illustrate that patience and positivity, appear distinct yet related, as are their workbook interventions.

Given that both workbooks significantly increased trait and state patience, it cannot be concluded that the model in Study 2B is invalid. It may be that state patience, which tended to predict mental health outcomes in Study 2B, was more directly accessed by the patience workbook, whereas trait patience, which tended to predict physical, relational, and spiritual health outcomes in Study 2B, was able to be accessed via the positivity intervention workbook via decreases in negative affect.

Still, it is possible that a workbook designed promote patience may not be as efficacious at promoting mental, physical, relational, and spiritual health outcomes as one designed to promote positive mood. For example, improving positivity may more directly affect mechanisms associated with physical health outcomes than patience. Thus, mood may serve as a mechanism between patience and such outcomes, consistent with a theory of virtue in which positive mood is a byproduct of virtue (Seligman, 2000). Mood may also precede patience in a broaden-and-build manner (Fredrickson, 2001), interacting perhaps most sensibly with perceived stress, impacting the likelihood of responding with patience within an ego-depletion framework (Baumeister, 1998). Certainly, mood seems related to patience given the results of the present studies, as well as Schnitker's 2012 patience intervention study which yielded improvements in positive affect. Thus, the nuanced relationship between patience and mood as indicated in Study 1 remains in consideration.

Limitations. Limitations for Study 3 are similar to those described in Study 1 and Study 2. The attrition rate in particular was higher than expected during the present study, making analyses less powerful for detecting smaller effects than anticipated, especially for Hypothesis 2. Still, the multiple regression analysis examining Hypothesis 1 was sufficiently powered to detect effect sizes as small as .009, and the MANOVAs examining Hypothesis 2 were sufficiently powered to detect effect sizes as small as .305.

One limitation from Study 1 that was remedied in Study 3 was the inclusion of an immediate post-tests assessment occasion, which allowed for examination of immediate effects of the workbook and how they related to those at two-week follow-up. Cross-sectional limitations of Study 2 were minimized by manipulating patience and tracking changes in patience and related outcomes over time, though unanticipated similarities patience gains across patience and positivity workbook made outcomes of patience less clear.

A unique limitation to Study 3 that was not present in Study 1 is methodological in nature, in that participants for Study 3 were recruited specifically to join a study promoting patience or positivity, as opposed to virtue, as advertised in Study 1, which was a part of a larger study with additional virtue hypotheses. The potential self-selecting interest of Study 3 participants in patience and positivity may account for why patience and positivity workbooks promoted both patience and positivity.

Discussion

*"Time goes, you say? Ah, no! Alas, Time stays, **we** go." –Austin Dobson, The Paradox of Time*

The aim of the present studies has been to examine the promotion of patience as a virtue and psychological construct and to unite patience research into a unified theory of antecedents, mechanisms, and outcomes. Study 1 alpha-tested an intervention workbook designed to promote patience against a similarly structured workbook designed to promote positivity and a non-action control condition. Though the patience workbook condition did indeed see gains in trait patience and additional mood and virtue outcome measures, none of these changes were significantly different from those yielded in the positivity intervention condition. Furthermore, neither religious commitment nor spiritual transcendence predicted the effect of the patience workbook, contributing to the "nay" side of a divided area of literature on the relationship between patience and religious and spiritual variables (Büssing et al., 2007; Fowler & Kam, 2006; Schnitker &

Emmons, 2007).

In Study 2, I hypothesized two models informed by patience literature; one proposing antecedents of patience, and the other proposing outcomes related to patience. The antecedents model (Study 2A), which had been structured in a stress-and-coping format (Lazarus, 1999), garnered little support from the data; instead, familiarity with stressor and perceived stress alone predicted patience, which seemed to better fit an ego-depletion model of patience. Baumeister et al. (1998) write, "One important part of the self is a limited resource that is used for all acts of volition, such as controlled (as opposed to automatic) processing, active (as opposed to passive) choice, initiating behavior, and overriding responses" (p. 1253). Results from Study 2A indicate that patience may be among these controlled, active, initiating, and overriding responses. This is consistent with Fowers' (2005) definition of virtues at large as "the character strengths that make it possible for individuals *to pursue their goals and ideals* and to flourish as human beings" (p. 4), and Schnitker's (2012) determination of the relationship between patience and goal-directed behavior. In other words, it may be that the extraordinary strength of virtuous thoughts, feelings, and behaviors, including patience, may require heightened executive control over other impulses and desires.

The outcomes of patience model (Study 2B) proposed that patience would predict mental, physical, relational, and spiritual health measures. Consistent with a large portion of the patience literature, the data fit this model very well, and a pattern of prediction emerged, such that state patience tended to predict physical, relational, and spiritual health outcomes, whereas trait patience tended to predict mental health outcomes. This is consistent with the differentiation of trait and state values of patience (Schnitker, 2012). The results of Study 2 in general indicate that an ego-depletion model predicts patience, and once a patient response is engaged, a number of positive outcomes are possible across several domains.

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Study 3's first hypothesis sought to replicate results from Study 2A, regarding predictors of patience. Results were consistent with Study 2A, such that perceived stress related to a patience stressor predicted trait, and both familiarity with stressor and perceived stress predicted state patience as well. This provided further support for an ego-depletion (Baumeister et al., 1998) model of patience, such that those who had experienced this stressor before *and* experienced greater stress relative to the stressor tended to report less patience.

Finally, the second hypothesis of Study 3 examined the efficacy and differential effects on health outcomes of a beta version of the patience intervention workbook, tested against a beta version of the positivity workbook and a non-action control condition. The patience workbook condition again yielded gains in trait and state patience with even higher effect sizes than in Study 1, but despite revisions to each workbook aimed at more targeted interventions, the positivity workbook condition also improved in trait and state patience. Both workbooks also yielded decreases in negative mood, and together, the workbooks yielded improvement in each hypothesized outcome except resilience, with the positivity workbook achieving a greater number of improvements in outcomes. Thus, a workbook directly promoting patience affected certain mental health outcomes, and a workbook indirectly promoting patience affected mental, physical, relational, and spiritual health outcomes. This represents both consistency and inconsistency with the results from Study 2B and with the patience literature at large, as the patience workbook itself did not yield all outcomes, yet all workbook participants improved in patience and no outcome besides resilience was left unaffected.

Together, Study 1 and Study 3 support Kazdin and Rabbitt's (2013) call for novel methods of intervention, in this case for the promotion of virtue and the associated outcomes using self-directed workbooks. These studies are also consistent with Schnitker's (2012) intervention study of patience, such that patience can indeed be promoted and yield positive

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mental health outcomes. Yet, Study 1 and Study 3 also demonstrate a relationship between virtue and mood that appears somewhat entangled, and it remains unclear whether virtue produces changes in mood (Seligman, 2002) or changes in mood produce virtue (Fredrickson, 2001), or both. Namely, promoting patience directly seemed to influence patience and one set of outcomes, including other virtues as in Study 1, and promoting improved mood seemed to indirectly influence patience and yield a different set of outcomes, especially physical, relational, and spiritual health variables, with some overlap occurring in positive mental health outcomes. These studies suggest that mood may play a role in the relationship between patience and the outcomes assessed in Study 2B and Study 3. It is also possible that mood interacts with perceived stress and predicts a patience response, rather than merely results from it.

Modified Proposed Model of Patience

Based on the results of the three present studies, a modified model can be presented. Familiarity with stressor and perceived stress are hypothesized to predict state patience, which then predicts mental health outcomes. Perceived stress is also hypothesized to predict trait patience, which interacts with mood to predict mental, physical, relational, and spiritual outcomes. Though mood's exact location in such a model was not assessed directly in the present studies, its role seems apparent either as a mechanism between trait patience and health outcomes or as interacting with perceived stress as an ego-depletion mechanism. In essence, the ability for one to peacefully endure (Schnitker, 2012) seems to implicate low or controlled stress and negativity (Study 2A), and the promotion of patience, directly or even indirectly through mood, in turn appears to lead to improvements in mental, physical, relational, and spiritual health (Study 2B and Study 3), in addition to opening the door to a number of other virtue experiences (Study 1) (see Figure 52).

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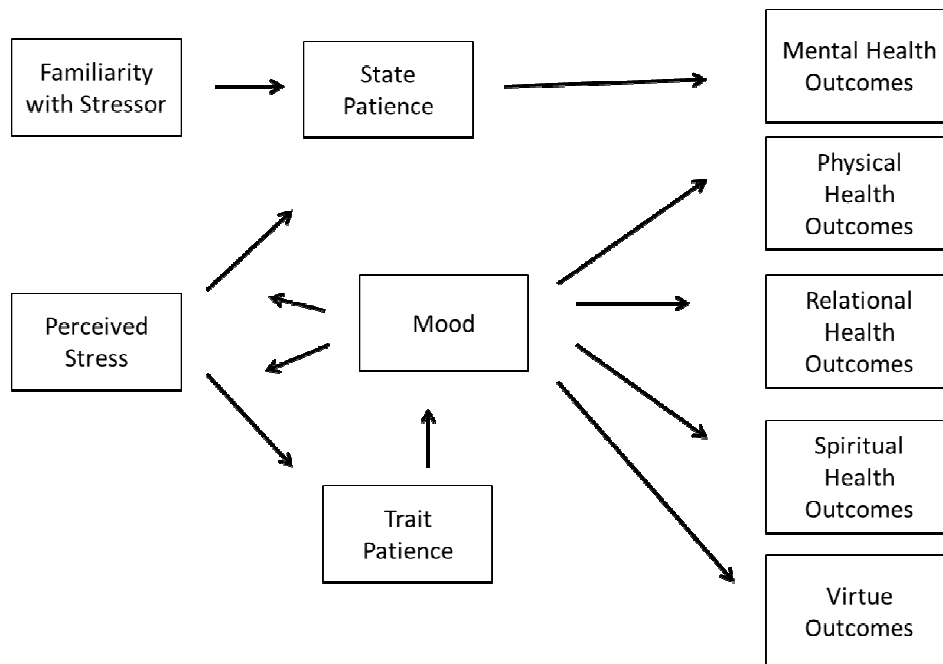
Figure 52. Newly hypothesized model of antecedents, mechanisms, and outcomes related to patience.

In essence, this model suggests that patience may have some ego-depleting qualities, such that high stress and experiencing this particular stressor more than once may make it difficult to be patient, as in an ego-depletion model (Baumeister et al., 1998). However, this relationship may be not be as linear as it is with self-regulation. For example, results from Dai & Fishbach (2013) implicate that *starting* to be patient seems to be the hard part, but once a person engages with patience and can see that it is possible and valuable, it becomes easier and more beneficial, and easier still when patience becomes more habitual and less effortful with practice. Thus, once a patient response is enacted, it seems to have some "broaden and build" qualities (Fredrickson, 2001) – perhaps not so strongly or directly as positive mood given that positive mood is not typically hindered by ego-depletion, but yielding additional positive outcomes nonetheless.

Future Research

Patience theory. Future patience research may wish to consider informing hypotheses

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about patience theory with narrowed background literature to a specified virtuous conceptualization of patience, as opposed to a broad or otherwise defined version of patience that more greatly resembles delayed gratification, emotion regulation, or perseverance. More research should be conducted examining an ego-depleting explanation of patience, in the tradition of Baumeister et al. (1998), especially studies examining stress and involving physiological predictors and the effects of glucose on patience. Additionally, amount of time already spent responding patiently should be used to determine whether ego-depletion linearly relates to patience, or if indeed being amid a patient response slows or halts depletion caused by stress and begins to broaden and build to positive outcomes.

Should a stress-and-coping framework of patience continue to be explored, investigators may wish to limit the sample or at least have a high representation of life hardship stressors on which to base the model. This classification of stressor may be a better fit with a stress-and-coping framework, as studies of life hardships such as leukemia and stem-cell transplantation (Farsi et al., 2010), burn victims (Wallis et al., 2007), or other life circumstance or mental health-related hardships (Bernstein, 2007; Kimhi et al., 2011).

More research is also needed on relation between patience and person variables, especially Big 5 variables such as agreeableness and neuroticism. It may be that many of the potential antecedents referenced in the patience literature do predict patience, but do not necessarily fit a stress-and-coping model or the post hoc models assessed in Study 2A. Furthermore, patience may really only fit the classification of a coping strategy in the case of life hardships-classified stressors, which were not represented in Study 2A.

Further analysis is merited of differential outcomes as they relate to interpersonal, life hardship, and daily hassles patience. Objective measures, especially for physical health, other-report measures, and longitudinal designs should be employed in future investigations of

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outcomes related to patience, and further research may continue to examine additional differences in the functions of trait and state patience. Future studies may also wish to further replicate the present theoretical findings in a diversity of samples and identify mechanisms for the relationships between patience and outcome measures.

The relationship between patience and mood. Mood appears to play some type of interactive role with patience and the outcome measures assessed in the present studies; thus, future research may wish to target mood as a major mechanism in outcomes associated with patience. One novel way this may be done is to examine the effects of receiving patience, not just experiencing patience. For example, a qualitative study by Shieh et al. (2011) found that participants reported positive feelings about learning to use computers when instructors demonstrated patience. This seems to fit with a broaden-and-build (Fredrickson, 2001) conceptualization of patience, in that receiving patience allows for the experience of other positive emotions and the associated positive outcomes. Similar processes may be at play with the impact of patience on physical health; for example, another qualitative study by Marx et al. (2011) determined that when doctors are patient when prescribing medication, the subjective experience of this patience may impact a patient's willingness to adhere to a medication regimen, thereby impacting physical health outcomes. In general, more quantitative research should examine the nature of the relationship between patience and mood using manipulations clearly representative of each construct.

Patience intervention. In the present studies, the outcomes of the patience workbook could not be fully differentiated from a positivity workbook. Certainly, the fact that the workbooks promote at least two targets effectively is not entirely a bad thing. Still, future research should continue to develop and test these workbooks with more specific patience and mood outcome measures to determine the locus of effects, understand what predicts patience

workbook success given an ego-depletion framework, and parse out differential effects.

Once factor that may impact efficacy of patience interventions is how removed the participant typically is from their impatience when completing the intervention, which may cause higher yet less valid ratings of patience (Albrecht et al., 2011). For this reason, real-time manipulations of patience and stressors, behavioral measures, and intervention in those moments when patience is put to the test will be illuminating for patience research.

Intervention studies are essential for determining the theoretical considerations outlined above, and researching patience interventions in other age groups and populations will be helpful for growing the patience program of research. For example, given that patience may be associated with executive functioning, it may be that patience and goal striving (Schnitker, 2012) are less prominent in those whose prefrontal cortex is still developing, impacting the potential efficacy of intervention in certain age groups (Aharon et al., 2011). It also seems particularly important to test patience interventions in populations involved in helping relations, as indicated by a large subset of the literature, as this may produce benefits for those receiving the intervention, as well as those who receive their patience as result.

Conclusion

The present findings support a conceptualization of patience as an extraordinary strength, potentially requiring heightened and easily depleting executive control in order to actively yet peacefully endure. Thus, rather than simply a coping response to stress, patience seems to be a positive and active way to accept deviations from one's plan or agenda, involving self-regulation and emotion regulation that leads to continued open engagement with others and with unexpected situations. Once achieved, patience demonstrates itself to have qualities that generalize to a myriad of positive outcomes. These findings add to the new, but growing research of virtues in psychology and the seldom studied construct of patience in particular. The

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explorations of patience herein add another layer to the foundation of patience theory and intervention and inform the construct for future investigation. Perhaps most importantly, the first empirically tested workbook intervention to promote patience has been beta-tested, assessed as efficacious for promoting trait and state patience, and is one step closer to public dissemination.

The present studies continue to validate the philosophy behind positive psychology, as we move toward a psychology that incorporates flourishing and enhancement of values and strengths to contribute to a better, happier, and more purposeful society. Perhaps individuals can learn to be more patient with themselves and with others to mitigate the stressful pace of industrialized life so they can flourish in their own goals and engage with others. My own long-term vision is to teach the value of patience as it stands in the timeless quotation below to a new generation.

"In all probability, (patience) will shorten my affliction, because it hath obtained its effect and end, and the message it brings is duly answered. But howsoever it will make it infinitely more easy, the less I struggle under it. And, which is the best of all, it gives me the possession of my own Soul, internal peace and tranquility of mind, a kind and comfortable serenity of Spirit: I remain Master of my passions, of my intellectuals, of my self, and am not transported into another thing, than what becomes a reasonable man: though there be storms and tempests and rolling Seas without me, yet all is calm and quiet within" (Hale, 1675, p. 196).

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List of References
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Appendix A

Summary of Empirical Studies of Patience

	Citation	Total # of Studies	Participants	Method	Measures	Interventions	Patience Relevant Conclusion	Future Directions
1.	Bright, M. A., Franchi-Ray, C, Anderson, V., Northam, E., Cochrane, A., Menahem, S., & Jordan, B. (2013). Infant cardiac surgery and the father-infant relationship: Feelings of strength, strain, and caution. *Early Human Development, 89*(8), 593-599.	1	63 Australian fathers (0 female) whose infants had heart surgery < 3 months of age (age *M* = 34.33, *SD* = 5.55. 30% completed college.	Correlational; cross-sectional (part of a larger longitudinal study)	*Interview about relationship with baby *Paternal Postnatal Attachment Scale (PPAS) *Medical information *Time at home prior to surgery *Time at home prior to assessment	None	Fathers with infants who had less time at home prior to surgery reported relationship strain, involving lower pleasure in interaction, affection and pride, patience and tolerance, and overall attachment quality. Patience and tolerance were significantly correlated with pleasure in interactions and affection and pride. This may be due to the hospital setting as a difficult environment for developing strong attachment, and fathers may have greater patience for more fragile infants. Strong relationships between fathers and children were indicated by positive feelings and positive behaviors.	Future interventions may wish to encourage fathers to increase the amount of time they spend with their children in the hospital setting. Results on the PPAS should be cross-validated with behavioral observations of fathers and children. Sample size should be increased in the future, and longitudinal designs should be employed.
2.	Bryan, C. J. & Hershfield, H. E. (2013). You owe it to yourself: Boosting retirement saving with a responsibility-based appeal. *Decision, 1*(S), 2-7.	1	193 Stanford staff members (151 women) (age *M* = 41.32, *SD* = 11.14)	Experimental; longitudinal	*Pre-experiment savings rates *2-item measure of closeness to future self *Persuasiveness of message *Intent to change retirement rate *Post-experiment savings rates	Self-interest condition: message encouraging savings with emphasis on self-interest Social responsibility condition: message encouraging	Consumers may treat their future selves as more like another person than the present self, making it difficult to be patient by saving money for the future. Both messages in the current study were considered equally persuasive. People closer to their future selves are better motivated by social responsibility than by self-interest. People who are not as close to their future selves are not	Interventions should incorporate these findings by accessing closeness to future self.

#	Citation		Participants	Design	Measures	Time conditions	Results	Implications
						savings with emphasis on future self	motivated by either self-interest or social responsibility. Emphasizing this continuity and connectedness with the future self may help with building intertemporal patience.	
3.	Dai, X. & Fishbach, A. (2013). When waiting to choose increases patience. *Organizational Behavior and Human Decision Processes, 121*(2), 256-266.	5	Study 1: 84 undergraduates from a large Midwestern university Study 2a: 144 undergraduates from a large Midwestern university Study 2b: 145 undergraduates from a large university in Hong Kong Study 3: 239 undergraduates (111 women) from a large Midwestern university Study 4: 234 undergraduates (147 women) from a large university in Hong Kong	Study 1: Experimental, cross-sectional Study 2a: Experimental, cross-sectional Study 2b: Experimental, cross-sectional Study 3: Experimental, cross-sectional Study 4: Experimental, cross-sectional	Study 1: *Decision on which lottery to enter Study 2a: *Decision between two products *Value of product category *Importance of decision task *Difference between options' values Study 2b:*Decision between two amounts of the same product *Value of the chocolate category *Perceived cost of waiting *Subjective length of wait Study 3: *Decision between amounts and time *Familiarity with brand *Liking of brand *Time since last consumption of this product Study 4: *Decision between product and time *Survey about product *Time since last use of this type of product	Study 1: Near future, distant future, and waiting conditions Study 2a: Near future, distant future, and waiting conditions Study 2b: Near future, distant future, and waiting conditions Study 3: Long perceived wait vs. short perceived wait conditions; 1 reward vs. 2 reward conditions Study 4: Long perceived wait vs. short perceived wait conditions; hedonic vs. utilitarian conditions	Study 1: Those who wait to choose are more patient than before they waited and more patient than others who choose sooner. Studies 2a and 2b: The waiting/patience relationship is mediated by increased valuation, rather than decreased cost of waiting. Study 3: Though waiting increases "larger-later" over "smaller sooner" rewards, participants are more willing to pay for expedited delivery while waiting. Study 4: Waiting's effect is stronger on hedonic than utilitarian products. In general, waiting to choose increases patience because after waiting, people value the choice options more. One's perception of the amount of waiting time appears to have important implications for patience.	Implications of perception of time and value on patience should continue to be tested in real world situations.
4.	Al-Ubaydli, O., Jones, G., & Weel, J. (2013). Patience, cognitive skill, and coordination in the repeated stag hunt. *Journal of Neuroscience, Psychology, and Economics, 6*(2), 71-96.	1	167 participants	Correlational; cross-sectional	*50-item Big 5 personality inventory *Demographic survey *Hey-Orme Risk Preferences Test *Multiple price list *Standard Progressive Matrices Plus (SPM+) *Individual's decision to play "stag" in a given period *Stag-stag play success	None	Patience of participants had no effect on game outcomes when playing alone. Partners in this study who were more patient were more likely to coordinate well (more likely to coordinate) and earn higher payoffs. Patience was positively correlated with cognitive ability, but not enough to be statistically significant (in keeping with findings of most personality traits with cognitive	Patience should be emphasized in group dynamics, expanding groups to include more people high in patience to facilitate group coordination.

				in a given period *Individual's total earnings across 10 games *Pair's total earnings across 10 games		ability).	
5.	Tucker, S. & Turner, N. (2013). Waiting for safety: Responses by young Canadian workers to unsafe work. *Journal of Safety Research, 45*, 103-110.	1	39 Canadian teenage employees (19 female), age 15-18 (*M* = 16.56 years, *SD* = 1.33)	Qualitative; cross-sectional	*Focus group interviews regarding types of and responses to hazards in the workplace	None	Fear of being fired, status as newcomers, supervisor indifference, and feeling powerless all contributed to employees' preference to wait and see whether work conditions will change, rather than being straightforward with supervisors about making a change. These workers seem to feel that it is safer to remain silent.	Barriers to expressing the need for safety should be further explored, as well as implementation of interventions to promote voicing safety concerns in the workplace.
6.	Leonard, T., Shuval, K., de Oliveira, A., Skinner, C. S., Eckel, C., & Murdoch, J. C. (2013). Health behavior and behavioral economics: Economics preferences and physical activity stages of change in a low-income African-American community. *American Journal of Health Promotion, 27*(4), 211-221.	1	169 African-American or Hispanic adults (106 female) from a low-income community (age *M* = 43.2, *SD* = 13)	Correlational; cross-sectional (part of a larger longitudinal study)	*Physical Activity Stages of Change Instrument *Body Mass Index (BMI) *Waist circumference *Economic time and risk preferences	None	Those who are more patient and more tolerant of financial risks are more likely to be more advanced in a stage model of intentions of physical activity. Thus, a more patient person may be more likely to engage in physical activity.	These findings should continue to be replicated in more diverse and representative samples. Longitudinal research is also needed. Appropriate systemic "nudges" may be helpful for low-patience and low financially risk-tolerant individuals.
7.	Read, D., Frederick, S., & Scholten, M. (2013). DRIFT: An analysis of outcome framing in intertemporal choice. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 39*(2),	4	Study 1: 373 participants (239 female) from an online survey recruitment website (age *M* = 36, *SD* = 12.6). 52% had a bachelors degree or greater. Study 2: 630 participants (378 female) from the	Study 1: Experimental; cross-sectional Study 2: Experimental; cross-sectional Study 3: Experimental; cross-sectional Study 4: Experimental; cross-sectional	Study 1: 12 investment opportunity questions involving the decision to take the money now or invest it Study 2: A measure similar to that of Study 1 Study 3: 18 investment opportunity questions involving the decision to take the money now or invest it	Study 1: 4 frame conditions: Interest-rate frame, Amount combined frame, Amount incremental frame, and Amount incremental + "interest" conditions Study 2: 5 frame	This article presents DRIFT, a model of intertemporal choices, focusing on difference (between outcomes), ratio (proportional difference between outcomes), interest rates, finance (whether the participant will be framed as investing or consuming, and time. Referring to the delay prior to receiving the product. Investment language increases patience. Introducing interest increases patience for small rewards but	More research surrounding alternatives to decision making based on time, difference, language, and other aspects of the DRIFT model should be examined.

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#	Citation		Sample	Design	Measures	Conditions	Results	Implications
	573-588.		same source (age $M = 35$, $SD = 11.6$. 61% had a bachelors degree or greater. Study 3: 219 participants (120 female) from the same source (age $M = 37$, $SD = 12.75$). 63% had a bachelors degree or greater. Study 4: 265 participants (146 female) from the same source (age $M = 34$, $SD = 12$). 57% had a bachelors degree or greater.		Study 4: A measure similar to that of Study 3	conditions: Interest Rate/Invest, Amount/No Invest, Interest-Total/No Invest, Amount/Invest, and Interest-Total/Invest Study 3: 3 frame conditions: Amount, Interest-Rate, and Composite Study 4: 3 frame conditions: Interest-rate, Interest-total, and Composite.	decreases patience for large rewards. Finally, the interest-rate frame increases the likelihood of greater discounting for longer time periods. Framing delays in different ways can influence patience.	
8.	Koskenniemi, J., Leino-Kilpi, H., & Suhonen, R. (2013). Respect in the care of older patients in acute hospitals. *Nursing Ethics, 20*(1), 5-17.	1	Ten hip fracture patients (7 female) at a university hospital in Southern Finland; all were over age 75 (*M* =84). Ten next of kin to these patients who visited the hospital frequently	Qualitative; cross-sectional	Semi-structured interviews assessing for respect	None	According to participants, respect in nursing included polite behavior, patience (listening), reassurance, responding to information needs, assisting with basic needs, providing pain relief, responding to wishes, and time management. Respecting from next of kin involved support, assistance, and advocacy. Larger factors were also involved in respect, including societal appreciation of older adults, health care management, nursing culture, information dissemination, and placement of patients. Next of kin described patient nurses as open, warm, lively, honest, careful, and motivated, as opposed to nurses who did their tasks quickly and without additional comments.	A measure of respect in the care of older patients should be formed using this information.
9.	Glazzard, J. & Dale, K. (2013). Trainee teachers with dyslexia: Personal narratives of resilience. *Journal of Research in*	1	2 primary school teachers in training (2 female), aged 21 and 28 years.	Qualitative; cross-sectional	Unstructured interviews Written accounts	None	Both trainees' experiences appear to have led to an empathic approach with their own students. Teachers of their own who lacked empathy and patience had a negative impact on their self-concept. The trainees are motivated to help students	Measures should be taken to improve the self-esteem and self-concept of students struggling with learning disabilities. Teachers should be provided with more

	Special Educational Needs, 13(1), 26-37.						overcome feelings of helplessness, perhaps because of their own experiences of knowing that they needed time and patience to overcome their difficulties.	training in teaching and recognizing students with special needs.
10.	Jongudomkarn, D., Forgeron, P. A., Siripul, P., & Finley, G. A. (2012). My child you must have patience and Kreng Jai: Thai parents and child pain. *Journal of Nursing Scholarship, 44*(4), 323-331.	1	71 parents (40 female) of 45 children (14 female) being treated for acute pain at five hospitals in Northeastern Thailand	Qualitative; cross-sectional	Semi-structured interviews assessing for preference in their children's treatment	None	Parents preferred traditional cultural treatments in addition to modern medical science to treat their children. The cultural prescription for children in this role was to have patience.	Future research should continue to examine the role of parents in childrens' treatment. Culturally-sensitive treatments should be studied and implemented.
11.	Urstad, K. H., Wahl, A. K., Andersen, M. H., Øyen, O., & Fagermoen, M. S. (2012). Renal recipients' educational experiences in the early post-operative phase – A qualitative study. *Scandinavian Journal of Caring Sciences, 26*(4), 635-642.	1	16 post-operative adult kidney transplant patients (7 female) in Norway	Qualitative; cross-sectional	Semi-structured interviews assessing for patients' educational experiences after operation	None	A supportive learning environment is an important factor in the educational experience of renal recipients. This type of learning environment was described by patients in terms of patience, respect, continuity, and taking the role of an active learner.	Patient education following such operations should be considered in terms of health care costs and length of hospital stay following operations. This type of finding should be replicated in other post-operative populations. Health care employees should be trained in effectively facilitating a positive learning environment.
12.	Kesebir, P. & Kesebir, S. (2012). The cultural salience of moral character and virtue declined in twentieth century America. *Journal of Positive Psychology, 7*(6), 471-480.	2	Study 1: American books published between 1901-2000 Pilot for Study 2: 171 participants from Amazon's Mechanical Turk (89 female), (age M = 35.6, SD = 11.8). Study 2: American books published	Study 1: Descriptive; cross-sectional Study 2: Descriptive; cross-sectional	Study 1: Number of words related to morality in general as measured by Google N-Gram Viewer Study 2: Number of specific virtue words (n = 50) used as measured by Google N-Gram Viewer	None	Study 1: Usage of terms related to morality (e.g., virtue, decency, conscience) have decreased in American literature in the 20th century. Study 2:50 virtue words (including patience) significantly declined in American literature in the 20th century (by 74%). Patience in particular has declined in the literature by 48.07%. Declines were particularly prominent in those virtues held traditionally in Christian values (humility, kindness, gratitude, charity, etc.)	This declining presence of virtue in society should be examined in terms of its impact on the morality of young generations.

		between 1901-2000				Overall: Because virtuous behavior is helped by a virtuous context, this declining of virtue in our social context may make it more difficult/unlikely to act virtuously.	
13.	Klassen, A. F., Gulati, S., Granek, L., Rosenberg-Yunger, Z. R. S., Watt, L., Sung, L., Klaassen, R., Dix, D., & Shaw, N . T. (2012). Understanding the health impact of caregiving: A qualitative study of immigrant parents and single parents of children with cancer. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care, and Rehabilitation, 21*(9), 1595-1605.	2	Study 1: 25 Chinese and 25 South Asian parents (37 female) of children who had been diagnosed with cancer at least six months prior (age *M* = 41.3) Study 2: 29 Canadian single parents (24 female) of children who had been diagnosed with cancer at least six months prior (age *M* = 41.7)	Study 1: Qualitative; cross-sectional Study 2: Qualitative; cross-sectional	Study 1: Semi-structured interviews assessing for caregiving experiences Study 2: Semi-structured interviews assessing for caregiving experiences	None	In addition to expressing health concerns for themselves, parents included positive impacts of taking care of their children. Among these were greater appreciation of the child and the family, as well as developing compassion, empathy, patience, inner strength, and a new outlook on life.	These finding should be incorporated into interventions intended to support parent caregivers.
14.	Read, D. & Scholten, M. (2012). Tradeoffs between sequences: Weighing accumulated outcomes against outcome-adjusted delays. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 38*(6), 1675-1688.	4	Study 1: 132 participants (81 female) from Amazon's Mechanical Turk (age *M* = 46). 98% attended college. Study 2: 277 residents of Portugal (161 female) (age *M* = 30). 65% attended college. Study 3: 470 residents of Portugal (291 female) (age *M* = 40). 81%	Study 1: Descriptive; cross-sectional Study 2: Experimental; cross-sectional Study 3: Experimental; cross-sectional Study 4: Descriptive; cross-sectional	Study 1: 2 items assessing decisions on a one-outcome choice and a two-outcome choice Study 2: unknown Study 3: unknown Study 4: 3 items assessing decisions on token choices	Study 1: none Study 2: implicit-zero condition and explicit-zero condition Study 3: front-end amount condition and back-end amount condition Study 4: none	The tradeoff model of intertemporal choice posits that choices between sequences are determined by weighing accumulated outcomes against outcome-adjusted delays. The hidden zero effect, refers to the "zero" outcomes of each option increases patience. In the front-end amount effect, front-end amounts are added to each option, decreasing patience. In the mere token effect, an early outcome to both options increases patience. The extended tradeoff model appears sound by this research, but much remains unknown , as improvement and sequence preferences seem to depend on	Research should continue to be done on the tradeoff model of interptemporal choice, and preferences for sequences should continue to be explored.

						attended college. Study 4: 349 residents of Portugal (199 female) (age *M* = 36). 76% attended college.					context.	
15.	Rosenbloom, T. & Pereg, A. (2012). A within-subject design of comparison of waiting time of pedestrians before crossing three successive road crossings. *Transportation Research Part F: Traffic Psychology and Behavior, 15*(6), 625-634.	1	774 pedestrians (441 female) in Israel (age *M* = 43.9, *SD* = 18.07).	Observational/correlational; longitudinal	Stopwatch Frequency of use of the particular road Crossing with others or alone Crossing with baby carriages, etc. Observational grid	None	No differences in waiting time were found based on age. Females waited twice as long as men, which is consistent with the literature, perhaps due to a greater internalization of traffic laws. Greater past usage of the crosswalk was correlated with shorter waiting times, perhaps due to its more habitual nature. Waiting at a first pedestrian crossing predicts waiting at a second crossing, and the second predicts the third. Those with a stronger orientation to safety seemed to wait longer at islands. Starting a new waiting task may replenish a person's "patience budget."	Future research should examine a "patience budget." Pedestrian speed and activity of the elderly should continue to be studied.
16.	Graves, S. B. & Ringuest, J. L. (2012). Patient decision making: Exponential versus hyperbolic discounting. *Managerial and Decision Economics, 33*(7-8), 463-462.	1	None	Numerical	A multi-period research and development project-selection decision	None	An exponential function for intertemporal decision making favors the short term, whereas a hyperbolic function favors the long term.	The hyperbolic function should continue to be researched in temporal decision-making research, especially within dynamic inconsistency.
17.	McCann, T. V., Lubman, D. I., & Clark, E. (2012). Views of young people with depression about family and significant other support: Interpretative phenomenological analysis study. *International*	1	26 Australian participants (16 female) with depression, but no plans for suicide (age *M* = 18, *SD* = 1.78).	Qualitative; cross-sectional	Semi-structured interviews assessing for family and significant other support	None	Participants tended to see their families as supportive, which involved patience, tolerance, understanding, and encouragement, which then led to reported increased resilience in the participants. However, families could also be seen as unsupportive, changing, and conflicting.	Future research should explore ways in which families can learn to understand and be supportive with depressive members.

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	Journal of Mental Health Nursing, 21(5), 253-261.						
18.	Bryan, C. J. & Hershfield, H. E. (2012). You owe it to yourself: Boosting retirement saving with a responsibility-based appeal. *Journal of Experimental Psychology: General, 141*(3), 429-432.	1	193 Stanford staff members (151 women) (age *M* = 41.32, *SD* = 11.14)	Experimental; longitudinal	*Pre-experiment savings rates *2-item measure of closeness to future self *Persuasiveness of message *Intent to change retirement rate *Post-experiment savings rates	Self-interest condition: message encouraging savings with emphasis on self-interest Social responsibility condition: message encouraging savings with emphasis on future self	Addressing savings in terms of social responsibility to the future self increased savings more than a self-interest message, but only to the extent that people felt strongly connected to the future self. This informs the concept of moral responsibility and of continuity between present and future selves when promoting intertemporal patience.	Interventions should incorporate these findings by accessing closeness to future self.
19.	Schnitker, S. (2012). An examination of patience and well-being. *Journal of Positive Psychology, 7*(4), 263-280.	3	Study 1: 389 undergraduates (296 female) from a large West Coast university (age *M* = 19.8, mostly Asian American sample – 43%) Study 2: 259 undergraduates (179 female) from a large West Coast University (probably half Asian-American sample) Study 3: 71 undergraduates (61 female)	Study 1: Scale development; cross-sectional Study 2: Correlational; longitudinal Study 3: Experimental; longitudinal	Study 1: *40 items hypothesized to measure interpersonal patience, life hardship patience, and daily hassles patience *Patience Scale (PS-10) *Center for Epidemiological Studies Depression Scale (CES-D) *Rosenberg Self-Esteem Inventory *Satisfaction with Life Scale (SWLS) *Hope Scale *R-UCLA Loneliness Scale (SF) *Big Five Inventory (BFI) *Rathus Assertiveness Schedule *Mindfulness Attention Awareness Scale (MAAS) *Experiences in Close Relationships Scale (ECR) Study 2: *3-Factor Patience Scale from Study 1 *Self-reported list of ten	Study 1: None Study 2: None Study 3:Training sessions in patience over the course of two weeks vs. control condition	A new 3-factor survey of patience was created in order to capture interpersonal, life hardship, and daily hassles patience. Patience and well-being were positively correlated, especially when people are facing difficulties. Those with higher patience pursued personal projects with more patience. Patience facilitated goal pursuit, which mediates the relationship between patience and life satisfaction. Difficulty of goals moderated the relationship between patience and goal satisfaction. Because patience was orthogonal with assertiveness and correlated with goal pursuit, it does not seem that too much trait patience is a bad thing. A patience training intervention was successful at promoting and maintaining increased trait patience. This intervention also increased well-being (lower depression, higher positive affect at Time 2, but not at Time 3.	Future research should consider more objective measures of goal achievement. Multi-level modeling could be useful in understanding the state/trait patience relationship. What other situational circumstances moderate patience relationships?

					personal projects *Project ratings of time, patience required, and variables hypothesized to be related to patience *CES-D *SWLS *Positive and Negative Affect Schedule (PANAS) *BFI Study 3: *3-Factor Patience Scale from Study 1 *SWLS *CES-D *PANAS *Subjective Happiness Scale (SHS) *Gratitude Questionnaire (GQ-6) *Emotion Regulation Questionnaire *MAAS			
20.	Daire, A. P., Harris, S. M., Carlson, R. G., Munyon, M. D., Rappleyea, D. L., Beverly, M. G., & Hiett, J. (2012). Fruits of improved communication: The experiences of Hispanic couples in a relationship education program. *Journal of Couple and Relationship Therapy, 11*(2), 112-129.	1	37 low-income Hispanic participants (23 female) from a federally subsidized Healthy Marriage Development Program in the Southwestern United States	Quasi-experimental; cross-sectional	*Focus group interviews separated by gender; 5 questions assessing differences in their relationships following the intervention	*20 hours of PREP's Within My Reach and Within Our Reach marriage and relationship education curricula	Participants reported improved communication skills following the MRE curriculum, along with greater ''peace and calm'' in their homes and increased patience, respect, love, empathy, time together, and understanding of their partners. Many participants talked about heir intervention experience with others in their family. Overall relationship quality was improved, and participants were more able to see previously maladaptive behaviors in their relationship.	Future research should examine the effects of marriage and relationship enrichment programs on the children and other family members of participants. More ethnic groups should be considered in a cross-cultural analysis, and cultural variables should continue to be explored with marriage and relationship enrichment.
21.	Goldsmith, D. J., Bute, J. J., & Lindholm, K. A. (2012). Patient and partner strategies for talking about lifestyle change following a	1	25 cardiac patients (4 female) (age *M* = 64.78, *SD* = 10.99); 15 partners (15 female). 72.7% had attended	Qualitative; cross-sectional	*60-90 minute semi-structured interviews with patients and partners (separately) assessing for changes since cardiac event.	None	The meaning behind the conversations held by the patients and their partners was reportedly interpreted by legitimacy, patience, emphasizing the positive, moderation, benefits for both parties, and perceived compliance. A model is presented in which	This model should be subjected to future research and hopefully inform future research on communication.

						strategies for talking about lifestyle changes involve a combination of communication (talking less, saying it nicely, framing it cooperatively), interpretation, and environment (household patterns, making lifestyle changes attractive, familiarity with lifestyle changes prior to cardiac event, ordinary talk, shared activities, social network beyond couple), which in turn impact the meaning of discussing life changes is presented.	
	cardiac event. *Journal of Applied Communication Research, 40*(1), 65-86.		college.				
22.	Cleary, M., Horsfall, J., Mannix, J., O'Hara-Aarons, M., & Jackson, D. (2011). Valuing teamwork: Insights from newly-registered nurses working in specialist mental health services. *International Journal of Mental Health Nursing, 20*(6), 254-259.	1	13 registered nurses (13 female) with 3-24 months of post-registration experience	*Qualitative; cross-sectional	*Semi-structured interviews involving 8 questions asking about their educational and career experiences		Teamwork was especially important to RNs, as well as experiential learning, self-development, confidence, listening, rapport, keen observation, patience, empathy, learning from colleagues, and staying positive with patients. Patience was identified more as a personal skill, along with confidence and positive thinking, than a communication skill.	Future research should capitalize on the importance of teamwork in early employment in the mental health field.
23.	Marx, G., Witte, N., Himmel, W., Kuhnel, S., Simmenroth-Nayda, A., & Koschack, J. (2011). Accepting the unacceptable: Medication adherence and different types of action patterns among patients with high blood pressure. *Patient Education and Counseling, 85*(3), 468-474.	1	43 medication-treated adult hypertension patients (20 female)	Qualitative; cross-sectional	*2-hour group interviews with participants about medication adherence	None	Participants tended to experience fear, ignorance, reluctance to discuss their concerns with their doctors, and the impact of their hypertension. This subjective experience led participants to either act assertively, avoid unconsciously, or act inconsistently. Doctors need to be patient when prescribing medication, because the subjective experience of the patient will likely affect their willingness to adhere to a medication regimen.	More research should be done to explore these action patterns, as well as the patient-doctor relationship and medication adherence.
24.	Grunnesjo, M. I.,	1	160 adult patients	Experimental; longitudinal	*Gothenberg Quality of	Group 1: Ten	Health-related quality of life	Findings should be

	Bogefeldt, J. P., Blomberg, S. I. E., Strender, L. E., & Svardsudd, K. F. (2011). A randomized controlled trial of the effects of muscle stretching, manual therapy and steroid injections in addition to "stay active" care on health-related quality of life in acute or subacute low back pain. *Clinical Rehabilitation, 25*(11), 999-1010.		(70 women) in Sweden with acute or subacute low back pain (age *M* = 41, *SD* = 8.5)		Life Instrument: Well-Being and Complaint subscales	weeks of "active stay" care only Group 2: "Stay active" plus muscle stretching Group 3: "Stay active," muscle stretching, plus manual therapy Group 4: "Stay active," muscle stretching, manual therapy, plus steroid injections	increased with a greater number of interventions. Components of well-being, including patience, energy, mood, and family situation also increased with greater number of interventions.	replicated in further samples.
25.	Anil, B., Jordan, J. L., & Zahirovic-Herbert, V. (2011). Housing uncertainty and childhood impatience. *Urban Education, 46*(5), 1169-1187.	1	309 parents of eighth-grade students *866 eighth grade students (444 female) in a Georgia school district	Qualitative/correlational; cross-sectional	*41-item telephone survey with parents assessing housing situation and other factors that may affect a child's patience *20 economic decisions made by students, assessing discount rates	None	Housing uncertainties were related to learning impatient behavior in children, which puts them at risk for poor intertemporal decision-making. Experiencing an eviction and larger family size increased impatience in children; living in a single-family home with both parents decreased impatience.	Do those with an instable home environment drop out more often? Do those who are more impatient drop out more often? Results should be replicated with more parents participating.
26.	Choi, N. G. & Landeros, C. (2011). Wisdom from life's challenges: Qualitative interviews with low- and moderate-income older adults who were nominated as being wise. *Journal of Gerontological Social Work, 54*(6), 592-614.	1	18 low-moderate income older adults (15 female) chosen as wise by service providers in Central Texas. Participants were chosen for displaying kindness, compassion, and a belief in justice for all.(age *M* = 76.5, *SD* = 8.6), 14 had some college.	Qualitative/correlational; cross-sectional	*Structured 30-45 minute interview assessing for demographic variables *World Health Organization Quality of Life (WHOQOL) *Adult Self-Transcendence Inventory (ADTI) *Self ratings of physical and mental health *Frequency of religious service attendance *Importance of religion *Semi-structured 60-75 minute interview assessing for childhood experiences, difficult	None	66.7% of participants were in "good, very good, or excellent" physical health. 94.4% of participants were in "good, very god, or excellent" mental health. 83.3% rated religion as "very important," and 66.7% attended a religious service at least once a week. Common themes of life lessons described included acceptance, patience with others, focusing on the present, having a positive attitude, giving and receiving social support, gratitude, lessening importance of material things, and perseverance. Participants reported qualities of wisdom as compassion and consideration of others, interconnectedness, humility,	Gerontology research should focus on the growth, not just the decline, of older adults. More research is needed to explore developing self-knowledge, detachment, and self-transcendence. In-depth qualitative studies and quantitative studies are needed in this area.

#	Citation		Sample	Design	Method		Results	Future Directions
					life experiences, coping methods, life lessons, self-reported qualities of wisdom, and their practice of wisdom			seeking advice, good decision-making, and self-improvement efforts.
27.	Buchanan, C., Kemppainen, J., Smith, S., MacKain, S., & Cox, C. W. (2011). Awareness of posttraumatic stress disorder in veterans: A female spouse/intimate partner perspective. *Military Medicine, 176*(7), 743-751.	1	34 spouses/intimate partners (34 female) of veterans deployed to Iraq or Afghanistan in southeastern North Carolina (age *M* = 35.7, *SD* = 7.63)	Qualitative; cross-sectional	Critical incident interviews	None	Participants reported that treatment resistance for PTSD can be met with emphasizing the need for treatment, making an ultimatum, taking action, or offering patience and support without taking action. The latter option was described by participants in terms of offering support, understanding, and empathy.	Future studies should include the veterans themselves in similar examinations. Male nonmilitary spouses should also be included. More quantitative measures for military families are needed for future research. Findings should be included in early intervention research for veterans.
28.	Ahrens, K. R., DuBois, D. J., Garrison, M., Spencer, R., Richardson, L. P., & Lozano, P. (2011). Qualitative exploration of relationships with important non-parental adults in the lives of youth in foster care. *Children and Youth Services Review, 33*(6), 1012-1023.	1	23 former foster youth (14 female) in Seattle, WA (age *M* = 19.9, *SD* = 2.2)	Qualitative; cross-sectional	60 minute semi-structured interviews assessing for roles of important adults in their lives and details about their relationship formation and experiences together	None	Participants identified factors that inhibited and facilitated relationships with non-parental adults. Being pushed to bond too quickly was a barrier to relationship formation; patience and persistence were more facilitative. The adults' sharing of experiences, emotional support, going above and beyond prescribed relationship, respect, shared characteristics, and youth experiencing need were facilitators of the relationship. A mentoring model suggests that relationship facilitation factors lead to mutual trust/empathy, then to supports provided by the adult, child development, and positive emotional, concrete, relationship-based, and executive outcomes.	Patience and emotional security should be a part of training adults to work with foster children. Relational styles between adults and children should also be examined in this context. More generalizable populations and methods should be employed in future research. Alternatives to a one-time, retrospective analysis should be considered. Exploratory research surrounding interventions and assessment in this area should be conducted, and further outcomes of interest should be assessed.
29.	Kimhi, S., Mindel, K. & Oget, R. (2011). On the edge of the abyss:	1	12 Israeli submarine crew members	Qualitative; cross-sectional	Interviews assessing coping with life on the submarine	None	Five coping themes were uncovered: 1) positive thinking, humor, and optimism, 2) moral, team spirit, and importance of	These coping mechanisms should be examined for their effectiveness in

	Testimonies of an Israeli submarine crew on the challenges and features of life as a submariner. *Megamot, 47*(3-4), 545-567.						their work, 3) conflict avoidance in social relationships, high social cohesion, self-restraint, patience, and tolerance, 4) minimizing danger by placing trust in the submarine and in the crew, and 5) denial of fear and avoidance of discussing fears with others	multiple populations.
30.	Shieh, R. S., Chang, S., & Liu, E. Z. (2011). A case study of low-status women's attitudes toward computers. *Educational Studies, 37*(2), 233-243.	1	A group of low-status women in a computer training program	Quasi-experimental; longitudinal	*Pre and posttest quantitative measures and interviews assessing attitudes toward computers (computer anxiety, confidence, liking of computers, and usefulness)	Computer training program	Anxiety decreased significantly between pre and post-test. Positive feelings toward learning to use computers were facilitated by instructors who were patient, willing to demonstrate multiple times, presenting detailed notes with screen shots, and having tutors available in a friendly learning environment.	Findings should be replicated in a more generalizable sample.
31.	Slate, J. R., LaPrairie, K. N., Schulte, D. P., & Onwuegbuzie, A. J. (2011). Views of effective college faculty: A mixed analysis. *Assessment and Evaluation in Higher Education, 36*(3), 331-346.	1	615 graduate and undergraduate students (489 female), predominantly Hispanic, enrolled at two southwest universities (age $M = 29.97, SD = 9.17$)	Qualitative; correlational; cross-sectional	*Survey from Shulte, Slate, & Onwuegbuzie, 2009 *1 item assessing characteristics of effective teachers	None	Patience was ranked 9th of 29 important identified characteristics of effective teaching. It appeared slightly more important to females, undergraduates, Hispanic students, and first-generation college students.	Future research should help administrators and instructors in more meaningful interpretation of course evaluations.
32.	Albrecht, K., Volz, K. G., Sutter, M., Laibson, D. I., & von Cramon, D. Y. (2011). What is for me is not for you: Brain correlates of intertemporal choice for self and other. *Social Cognitive and Affective Neuroscience, 6*(2), 218-225.	1	28 participants (14 female)	*Experimental; cross-sectional	*Responses to sooner-smaller and larger-later rewards for self and for other *Hemodynamics imaging technology	*"Today trials" – Self; immediate vs. delayed reward for self *"Today trials" – other; immediate vs. delayed reward for others *Delayed trials" – Self; 2 delayed reward options for self *"Delayed trial" – other; 2 delayed reward options for others	Participants show less affective engagement when they are making choices for themselves that only involve options in the future or when they are making choices for someone else. This appears to be due to different parts of the brain becoming activated when faced with immediate vs. delayed options. Behavioral choices reflect more patience when choosing for someone else.	Future research should examine differences if a participant is told that the other person is participating on the same day. Is decision-making driven by one processing system or by multiple processing systems in the brain?
33.	Karlawish, J.,	1	Four 30-person	Qualitative; cross-sectional	*Free-listing semi-	None	All groups described a person	Cultural differences

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	Barg, F. K., Augsburger, D., Beaver, J., Ferguson, A., & Nunez, J. (2011). What latino Puerto Ricans and non-latinos say when they talk about Alzheimer's disease. *Alzheimer's & Dementia, 7*(2), 161-170.		groups of non-Latino whites and Latino Puerto Ricans (75 female) who were caregivers or non-caregivers to Alzheimer's patients (age *M* = 59.98, *SD* = 12.1)		structured interviews assessing for: words that come to mind when they think of Alzheimer's, (2) symptoms of Alzheimer's, (3) causes of Alzheimer's, and (4) in response to a description of a spousal couple (the Joneses for non-Latino Whites and the Riveras for Latino Puerto Ricans) in which the husband has Alzheimer's		who lives with and cares for a person as ''loving,'' Latino Puerto Ricans identified good spouses of these patients as those with who exercises intelligence, patience, and attention; they did not use the term ''caregiver.'' Non-Latino Whites usually used the term ''caregiver.''	should continue to be considered in Alzheimer's and caregiving research. Do Latino Puerto Ricans tend to be altruistic, or do they recognize research as a means to fulfill altruistic goal? Research needs to be conducted with more men and with a more generalizable sample (more Latinos than just Puerto Ricans, for example). Free-listing techniques should be compared across similar cultures. What other methodological strategies could be employed?
34.	Takeuchi, K. (2011). Non-parametric test of time consistency: Present bias and future bias. *Games and Economic Behavior, 71*(2), 456-478.	1	56 participants at the University of Michigan	Correlational; cross-sectional	*Measure of time-preference *Measure of risk-preference	None	The author's new non-parametric test elicits time preference in human subjects without invoking the linearity assumption on the utility function. Subjects exhibited future bias, indicating an inverse S-curve time discount function. The immediate future may represent an extended present for participants.	Risk and time preference should be examined more thoroughly and also neurologically. The boundary between the present and the future should also be examined.
35.	Yamada, Y., Vass, M., Hvas, L., Igarashi, A., Hendriksen, C., & Avlund, K. (2011). Collaborative relationship in preventative home visits to older people. *International Journal of Older People Nursing, 6*(1), 33-40.	1	37 records of collaborative relationships in non-disabled home-dwelling older people in Japan. These were drawn from 190 participants (120 female) (age *M* = 79)	Qualitative; retrospective	Review of records	None	Three important aspects of collaborative relationships were identified: 1) communication (including patience and coping with frustration), 2) professionalism, and 3) practical actions. From these, positive changes were obtained in the population (more physical activity, better nutrition, less smoking and alcohol consumption, fewer falls, better social function, more self-efficacy, accepting necessary help, and better coping with physical and mental health issues. Patience was	Education of at-home visitors should be further examined for helpfulness to the patient. Finding should be generalized to other cultures in future studies of greater sample size and diversity. Collaborative relationships should be explored as potentially necessary for successful home-visits for older adults.

						described as waiting for the patient to get motivated to change.	
36.	Tucker, S. & Turner, N. (2011). Young worker safety behaviors: Development and validation of measures. *Accident Analysis and Prevention, 43*(1), 165-175.	4	Study 1: Eight focus groups of 39 employed or recently employed participants (19 female) from Canada (age *M* = 16.56, *SD* = .94) Study 2: 93 teenage participants (46 female) from Canada (age *M* = 17.12, *SD* = 1.06) Study 3 : 309 high school and college students (151 female) in Canada, 86% of whom had been employed in the last year (age *M* = 19.04, *SD* = 1.86) Study 4: 315 currently employed young adult participants (176 female) in Canada (age *M* = 17.61, *SD* = 1.31)	Study 1: Scale development; cross-sectional Study 2: Scale development; cross-sectional Study 3: Scale development; cross-sectional Study 4: Scale development; cross-sectional	Study 1: 2 hour focus group interview, assessing for number of times they fit the definition of exit, voice, patience, and neglect Study 2: Online survey assessing descriptiveness of each scale item Study 3: Online survey assessing how often participants engaged in item behaviors at work *Four-item measure of safety voice (Hofman et al., 2003) Study 4: EVPN scales as developed from Studies 1-3 *5-item measure of affective organizational commitment (Meyer et al., 2002) *Measure of felt responsibility for change (Morrison & Phelps, 1999) *4-item measure of supervisor openness (Mullen, 2005) *3-item scale of futility (Burris et al., 2008) *2-item measure of	None	The EVPN (exit, voice, patience, and neglect) scale was ecologically valid in this series of studies. Loyalty in the case of the unsafe workplace can be conceptualized as patience that things will change. The patience subscale had the lowest reliability in these studies (Cronbach's alpha = .59-69). Patience, neglect, compliance , and financial motivation were not related. Patience items may better describe adaptive or self-protective behaviors. Because patience tends to be a stable behavioral pattern and not particular acts, it may be difficult to measure.	This measure should be used to evaluate interventions to increase employee knowledge of workplace safety. Further validation of this scale is necessary, especially among older samples.

					financial need to work *Co-worker measures included EVPN and five-item measure of knowledge of the participant's work behaviors			
37.	White, A. H., Wilson, J. F., Burns, A., Blum-Kemelor, D., Singh, A., Race, P. O., Soto, V., & Lockett, A. F. (2011). Use of qualitative research to inform development of nutrition messages for low-income mothers of preschool children. *Journal of Nutrition Educaiton and Behavior, 43*(1), 19-27.	1	6 formative groups and 6 evaluative groups of 95 low-income mothers 2-5 year old children from across the United States	Qualitative; cross-sectional	*Semi-structured interviews assessing for preference for and understanding of nutrition messages	None	Patience emerged as importance for introducing new foods to the family. "Patience often works better than pressure" when introducing new foods, and participants reported better eating of some foods after many iterations. Mothers also reported that children enjoyed foods more when they were introduced with patience and feeling like it was their own choice.	The seven themes that emerged from this study should be incorporated into nutrition interventions for healthy eating in families. Results should be replicated in a quantitative study with a more generalizable method. Race and ethnicity should be more carefully considered in future studies. More research on how to help mothers give their children the choice of how much/how often/what to eat is needed.
38.	Barros-Oliviera, J. H. (2010). Patience: An ignored topic of positive psychology. *Psicologia Educacão Cultura, 14*(2), 459-472.	1	427 children, adults and elders	Qualitative; cross-sectional		None	Women, the elderly, and religious people tended to be more patient.	Patience research should continue with intervention development.
39.	Farsi, Z., Nayeri, N. D., & Negarandeh, R. (2010). Coping strategies of adults with leukemia undergoing hematopoietic stem cell transplantation in Iran: A qualitative	1	10 Muslim Irani adults with leukemia undergoing hematopoietic stem cell transplantation (age *M* = 29.3). Five had college degrees.	Qualitative; longitudinal	Three 40-120 minute semi-structured interviews over time	Bone marrow transplant	Eight coping themes emerged from the interviews: attribution, denial and avoidance, connection with divine purpose, organizing treatment, seeking social support, modifying, reflection, and patience and resignation. These coping strategies lead to greater patient empowerment. Patience tended to be employed only when other coping strategies were not helpful	Future research should examine the effectiveness of such coping strategies. Coping strategies across cultures and religions in dealing with leukemia should be explored.

	study. *Nursing and Health Sciences, 12*(4) 485-492.						and seemed to represent a "giving up."	
40.	O'Malley, K., Davies, A., & Cline, T. W. (2010). Do psychological cues alter our discount function? *North American Journal of Psychology, 12*(3), 469-480.	1	132 single heterosexual young adult males (0 female)	Experimental; cross-sectional	Participant decisions between options presented in the assigned condition	*Short horizon-nonsexual cue *Short horizon-sexual cue *Long horizon-nonsexual cue *Long horizon-sexual cue	When subjective discounting was tested using sexual stimuli, near future rewards were met with a greater discount rate, but the same reward in the distant future earned a lesser discount rate. This long-term reward response was conceptualized by authors as patience. This conflicts with the usual assumption of invariant exponential discount rates.	The effect of visceral cues on discount rates should be examined across further demographic variables.
41.	McAlvanah, P. (2010). Subadditivity, patience, and utility: The effects of dividing time intervals. *Journal of Economic Behavior and Organization, 76*(2), 325-337.	2	Study 1: 55 undergraduate students from Washington University Study 2: 41 undergraduate students from Washington University	Study 1: Correlational; cross-sectional Study 2: Correlational; cross-sectional	Study 1: Participant decisions between options, assessing for subadditivity effects Study 2: Participant decisions between options, assessing for wish to speed up and delay time	None	Subadditivity, or dividing time into smaller intervals, was stronger when delaying an early gain than for hastening a later gain. The reverse was true for losses; discounting was more subadditive when hastening a later loss than for delaying an earlier loss.	Subadditivity should be examined within the context of risk preference.
42.	Romer, D., Duckworth, A. L., Sznitman, S., & Park, S. (2010). Can adolescents learn self-control? Delay of gratification in the development of control over risk-taking. *Prevention Science, 11*(3), 319-330.	1	900 participants from the National Annenberg Survey of Youth, age (*M* = 17.75)	Correlational; cross-sectional	*Monetary choice reward measure from Green et al., 2004 *Time Perspective Questionnaire *Brief Sensation Seeking Scale (BSSS) *Cigarette smoking *Marijuana use *Binge drinking	None	Delay of gratification and use of drugs (marijuana, tobacco, and alcohol) in young people were inversely related across gender, age, and levels of sensation-seeking. Those who are high in sensation-seeking and low in delayed gratification in youth may be more likely to exhibit patience when they are older. Individual differences in future time perspective were related to ability to delay gratification. Delayed gratification increased gradually with age, future time perspective increased linearly with age, and sensation seeking rose until roughly age 18 and then declined.	Activities should be researched that can help youth who are high in sensation seeking to have greater impulse control. A greater diversity of risky behaviors should be explored in future research, as well as included in longitudinal inquiries. High sensation seekers exhibiting patience should also be studied. Does drug use mediate this relationship? What might mediate increases in patience in high sensation seekers?
43.	Schulte, D. P., Slate, J. R., &	1	615 graduate and undergraduate	Qualitative; correlational; cross-sectional	*Survey from Minor, Onwuegbuzie, Witcher,	None	Patience ranked 13th out of 29 qualities that emerged in this study	What kind of leader is best in this region

	Onwuegbuzie, A. J. (2010). Characteristics of effective school principals: A mixed-research study. *Alberta Journal of Educational Research, 56*(2), 172-195.		students (489 female), predominantly Hispanic, enrolled at two southwest universities (age *M* = 29.97, *SD* = 9.17)		& James, 2002 *One item in which participants listed qualities of effective principles		as qualities of effective school principles. Patience fell in to the factor "responsible and supportive leader," along with caring, leader, responsible, and understanding. Females, Hispanic students, undergraduates, and first-generation college students endorsed patience as important slightly more than males, non-Hispanic students, graduate students, and non-first generation students.	of the country? Should leaders be compliant or transformative in this context? What specific communication and caring behaviors are present, necessary, and most effective? What dimensions of communication are important in this environment?
44.	Mishima, S. M., Pereira, F. H., Matumoto, S., Fortuna, C. M., Bistafa Pereira, M. J., Campos, A. C., de Paula, V. G., Nogueira Domingos, M. M. L. (2010). Assistance in family health from the perspective of users. *Revsita Latino-Americana de Enfermagem, 18*(3), 436-443.	1	40 older adult care consumers (37 female) at a family health unit in Ribeirão Preto, Brazil. 5% had completed university education.	Qualitative; cross-sectional	Semi-structured interviews assessing for information about and quality of the services they receive	None	Subjects were pleased with the patience and friendliness of their caregivers, together described as "caring attention." Attention, patience, trust, correct prediction of feelings and happiness contributed to consumer satisfaction.	Attention to clients should continue to be examined in this setting. Evaluation in the health care environment should continue to be researched as a way to give voice to consumers.
45.	Schout, G., de Jong, G., & Zeelan, J. (2010). Establishing contact and gaining trust: An exploratory study of care avoidance. *Journal of Advanced Nursing, 66*2), 324-333.	3	Part 1: 7 caretakers (2 female) in a public mental health care facility in the Netherlands (age *M* = 38.71) Part 2: 20 caretakers Part 3: 11 adult clients (4 female) with a history of avoiding care facilities and with poor interpersonal relationships with	Part 1: Observational; cross-sectional Part 2: Qualitative; cross-sectional Part 3: Qualitative; cross-sectional	Part 1: *Direct observations of caretaker interactions for six months Part 2: *Interviews, questionnaires, and panel discussions with care providers Part 3: *Interviews with clients	None	Non-judgmental appreciation emerged as a major theme of those nurses who earned the trust of the patients. The process of acceptance, connecting with the client's world, and identifying and praising client qualities is conceptualized as empathy. Impatience was associated with detachment, patience was associated with compassion. Other identified qualities include compassion, loyalty, involvement, tenacity, a critical attitude to the mainstream, flexibility, optimism, diplomacy, creativity, a some type of immunity to stress, and altruism. Recognition, acceptance, and patience seemed	How can these qualities be applied in the hospital setting? Under what conditions is it more likely to see these skills utilized?

			caregivers(age *M* = 46.73)				to function within reciprocity, which facilitated trust.	
46.	Anczewska, M., Raduj, J., Indulska, A., Palyska, M., & Prot, K. (2010). Patients' opinions on services provided in psychiatric and neurological wards – a comparison. *Psychiatria Polska, 44*(2), 255-265.	1	642 psychiatric ward patient and 478 neurological patients	Correlational; longitudinal	*In-Patient's Opinion Questionnaire	None	Both psychiatric and neurological patients reported staff politeness, kindness, patience and friendliness as the most positive aspect of being in the hospital. Emotional support was more present in the staff of the psychiatric ward than in the neurological ward. Changes in medical service did not affect changes reflected over time.	Researchers should examine the structure of the medical system to best implement positive aspects of hospitalization.
47.	Cheung, M. & Boutte-Queen, N. M. (2010). Assessing the relative importance of the child sexual abuse interview protocol items to assist child victims in abuse disclosure. *Journal of Family Violence, 25*(1), 11-22.	1	36 adults(25 female) in helping professions who work with child victims of sexual abuse in Houston, TX	Scale development; cross-sectional	*Child Sexual Abuse Interview Protocol (CSAIP)	None	Participants unanimously felt the importance of two specific items: "showing the interviewer is listening to the child" and "showing patience with the child." The CSAIP demonstrated a Cronbach's alpha of .92.	Child victims and former victims of sexual abuse should be given the opportunity to evaluate this measure. Larger and more generalizable samples should be used in validating this scale. Cross-setting research should also be conducted.
48.	de Souza Brito Dias, C. M. & Medeiros, C. R. (2010). The couple facing the expectation of a liver transplant. *PSICO, 41*(4), 447-454.	1	12 adult participants (6 couples) (6 female) in which one of the partners is on a waitlist for a liver transplant	Qualitative; longitudinal	Interviews	Liver transplant	Resources during time on the waitlist were identified as patience, understanding, confidence, love, and religious faith. The transplant outcomes seemed to affect whether couples became closer or more distant; thoughts of the future appeared dependent on transplant outcomes.	Quality of life for couples in this and other life-threatening situations should be examined.
49.	Gago, A. R. & Correia, I. (2010). Reactions to injustice at work: Impact of the belief in a just world, of procedural justice, and distributive justice. *Análise*	1	84 teachers of various levels of education	Correlational; cross-sectional	*A questionnaire asking participants to imagine themselves in a situation of procedural and distributive injustice.	None	Participants with high belief in a just world (BJW) reacted more positively (with more patience) when prompted with procedural injustice than those with low BJW.	None available

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	Psicológica, 28(1), 59-70.						
50.	Miksza, P., Roeder, M., & Biggs, D. (2010). Surveying Colorado band directors' opinions of skills and characteristics important to successful music teaching. *Journal of Research in Music Education, 57*(4), 364-381.	1	235 middle and high school band directors	Correlational; cross-sectional	*Survey from Teachout (1997) assessing for personal and teaching skills and characteristics *3-item ranking of personal, teaching, and music skills in general *2 open-ended items assessing for recommendations to first-year teachers and rewards/struggles in their work	None	Band directors indicated that personal and teaching characteristics were more important than actual music skills. The items "maintain high musical standards," "be able to motivate students," and "enthusiastic, energetic" were the highest ranked among these skills or characteristics. Perseverance, patience, and long-term vision were the most commonly endorsed forms of advice to 1st-year teachers. Perseverance entailed learning from mistakes; being patient, and long-term program development.	Findings should be replicated in similar samples (elementary music, orchestra music, etc.). Future research should consider employing electronic means of data collection for convenience.
51.	Neben, J. & Chen, C. (2010). Impact of aggressive behaviour on burnout and quality of support. *Journal on Developmental Disabilities, 16*(1), 94-102.	1	9 residential employees (8 female) at a community living organization for patients with developmental disabilities	Qualitative; cross-sectional	15-item semi-structured interview assessing personal experiences of participants related to burnout	None	Aggressive behavior may lead to burnout by reducing patience and engaging other negative feelings (e.g., powerlessness). These negative emotions associated with burnout can lead to fatigue, disengagement and less available care for those in need. Patience was referred to as a nurturing capacity, and lack of patience could lead to frustration with patients.	Future research should employ a larger and more generalizable sample. More research is needed to better understand how to best support individuals with aggressive behaviors and reduce the negative impacts on workers. Research should continue to explore burnout and burnout reduction.
52.	Sivis, R. & McCrae, C. S. (2010). Mental health professionals in gerontology: An insight into their perceptions, experiences, and needs. *Clinical Gerontologist: The Journal of Aging and Mental*	1	20 mental health professionals in Florida (age *M* = 43.2)	Qualitative; cross-sectional	60 minute semi-structured interviews assessing for aspects of working with the elderly	None	Of personality characteristics described as needed for this work, patience was the most often cited (70%).Ability to listen, empathy, flexibility, respect, non-judgmental attitudes, and caring and sensitivity were also indicated as important. Most participants viewed their work as positive and rewarding	A larger and more diverse sample should be employed in future research. A greater variety of professional groups and geographic representation should be included.

	Health, 33(1), 16-20.						
53.	Jimura, K., Myerson, J., Hilgard, J., Braver, T. S., & Green, L. (2009). Are people really more patient than other animals? Evidence from human discounting of real liquid rewards. *Psychonomic Bulletin and Review, 16*(6), 1071-1075.	3	Study 1: 15 undergraduates Study 2:16 undergraduates Study 3: 16 undergraduates	Study 1: Experimental; cross-sectional Study 2: Experimental; cross-sectional Study 3: Experimental; cross-sectional	Study 1: Choice for LL or SS rewards; three trials Study 2: Choice for LL or SS rewards; three trials Study 3: Choice for LL or SS rewards; five trials	Study 1: 4 delay conditions (5, 15, 30, or 60 seconds) – trial duration varied Study 2: 4 delay conditions (5, 15, 30, or 60 seconds) – trial duration constant Study 3: 3 delay conditions (10, 25, or 50 seconds) – trial duration constant	Humans and animals appear to discount rewards at a more similar rate than had been previously thought when using hypothetical rather than behavioral methods. Similar decision-making processes may be employed. Still, humans tend to discount larger delayed rewards less steeply than smaller rewards.	Procedural differences should be further examined in studying differences between human and animal discount rates.
54.	Kalliny, M. & Ghanem, S. (2009). The role of the advertising agency in the cultural message content of advertisements: A comparison of the Middle East and the United States. *Journal of Global Marketing, 22*(4), 313-328.	1	*61 advertising agencies in various Arab countries *12 advertising agencies in the United States	Correlational; cross-sectional	*29-item online survey assessing agency approach in designing advertisements in their culture	None	Advertising tends to appeal to the cultural values of the intended audience. In the Middle East, advertising is more aimed at obedience, customs and traditions, in-group loyalty, honor, and patience. Women were also portrayed more modestly.	Study findings should be replicated within a larger sample with greater American representation. Future studies should examine advertisements themselves for cultural value content.
55.	Kyoungmi, K. & Ito, Y. (2009). A cross-cultural psychological study on children's self-inhibition in Japan and Korea. *Japanese Journal of Counseling Science, 42*(3), 229-236.	1	*364 Japanese elementary school students *347 Korean elementary school students	Correlational; cross-sectional	*Self-Inhibition Scale (includes subscales: apprehension, acceptance, endurance, observation, and patience of emotion)	None	Japanese students scored higher than Korean students on apprehension and patience of emotion. Korean students scored higher than Japanese students on endurance, and the student groups did not differ on acceptance or observation.	None available
56.	Paul, N. A. & Sanders, G. F. (2009). Strategies used by communication	1	9 adult communication partners of patients with aphasia	Qualitative; cross-sectional	Semi-structured interviews assessing experiences with and strategies for communicating with	None	The aphasic patient's partner important for establishing effective communication as the aphasic patient. Helpful techniques were active listening, patience,	Further qualitative research with larger and more diverse samples should be conducted in this

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	partners of aphasic speakers. *Activities, Adaptation, & Aging, 33*(3), 161-178.				aphasic patients		perseverance, and an authentic desire to perceive the message of their aphasic communication partner. Participants indicated that patience could be very difficult, and it was easy to instead become frustrated. Patience tended to manifest by slowing the rate of communicative interaction.	area. Quantitative measures would be helpful for examining which strategies are most effective when communicating with aphasic patients. Quality of life, life satisfaction, activity participation, and decrease of negative emotions should be examined in this population as outcome measures in studies of communication strategies.
57.	Anderson, L. R. & Stafford, S. L. (2009). Individual decision-making experiments with risk and intertemporal choice. *Journal of Risk and Uncertainty, 38*(1), 51-72.	1	183 undergraduate students at William and Mary	Experimental; cross-sectional	*Choice between two payment options in 25 scenarios, varying in risk	*14, 28, and 56 day temporal extension conditions; 14 and 28 day groups were split into two and received different versions of the questionnaire with differing dollar amount rewards	Participants did not tend to be consistently risk-loving or risk-averse. Risk and patience showed an inverse relationship; yet, the risk did not depend on the length of the delay. When small amounts are at stake, subjects were more willing to wait than when large amounts are at stake	Further experiments of this nature should be conducted in the laboratory setting so that more can be understood about risk and patience.
58.	Blum, C. A. & Gordon, S. C. (2009). Caring behaviors of nurse preceptors: BSN student perceptions. *International Journal for Human Caring, 13*(3), 29-35.	1	6 entry-level junior nursing students (4 female)	Qualitative; cross-sectional	Semi-structured interviews assessing for their experience of caring nurses	None	The following themes emerged as caring behaviors of nurse preceptors: welcoming presence, empathy, encouraging growth, patience and time as compassionate care, building relationships, and communicating therapeutically. Patience was "evidenced through spending extra time with patients and by encouraging students to perform tasks at their own speed." Taking time to listen, kindness, and compassion were described by students about patience. Patience and taking time were described as related, but distinct.	Future research should continue to examine caring in the student-student relationship and in the student-preceptor relationship; this will contribute to programs implementing empathic and caring nursing. Results should be replicated in a larger and more diverse population, especially across varying preceptor models. Future

								research should evaluate preceptor orientation programs and relevant teaching strategies, and anticipated outcomes should be examined.
59.	Celdran, M., Triado, C., & Villar, F. (2009). Learning from the disease: Lessons drawn from adolescents having a grandparent suffering dementia. *The International Journal of Aging and Human Development, 68*(3), 243-259.	1	138 adolescents (87 female) in Barcelona, Spain with a grandparent suffering from dementia (age *M* = 17.77, *SD* = 2.35)	Qualitative; cross-sectional	Semi-structured interview assessing for lessons learned from grandparents and advice they would give to others like them	None	Adolescents learned the value of life, the complexity of the life-span, and changes in their own personal experiences, such as increased patience, responsibility, and compassion due to their experience with the grandparent. Behavioral coping strategies and accepting the grandparent/situation were offered as advice to others in their situation. These experiences with their grandparents seemed to give adolescents a chance to reflect on themselves and their life philosophies.	How much time after dementia diagnosis is needed for grandchildren to come to these conclusions? Longitudinal research could answer this question. Future research is needed in a larger and more diverse sample. An instrument could potentially be developed to assess for positive outcomes from experiences with loved ones with dementia.
60.	Hooda, D., Sharma, N. R., & Yadava, A. (2009). Social intelligence as a predictor of positive psychological health. *Journal of the Indian Academy of Applied Psychology, 35*(1), 143-150.	1	300 working adults (130 female)	Correlational; cross-sectional	*29-Oxford Happiness Scale *SWLS *Life Orientation Test-Revised *Social Intelligence Scale (subscales: patience, cooperativeness, confidence, sensitivity, recognition of social environment, tactfulness, sense of humor, and memory)	None	Satisfaction with life and happiness were positively correlated to cooperativeness, confidence, sensitivity, tactfulness sense of humor, and memory. Optimism was positively correlated with patience, cooperativeness, confidence and tactfulness; optimism was negatively correlated with memory.	None available.
61.	Hanafi, S., Bahora, M., Demir, B. N., & Compton, M. T. (2008). Incorporating crisis intervention team (CIT) knowledge and skills into the daily work of police	1	25 (four focus groups) law enforcement officers who had completed crisis intervention training in Atlanta, GA in the previous two years	Qualitative; cross-sectional	1-2 hour focus group interviews assessing for experiences, attitudes, and opinions about how CIT training affected their interaction with people with mental illnesses	None	Officers reported increased knowledge of mental illnesses in the following ways: improvements in recognizing and responding to mental illness, reduced stereotyping/stigmatization, more patience, and fewer arrests/more redirection toward treatment. Practical application s of these skills	Demographic differences among officers as they relate to CIT and individuals with mental health problems should be examined (race, ethnicity, education, etc.). Quantitative

	officers: A focus group study. *Community Mental Health Journal, 44*(6), 427-432.						included putting individuals with mental illnesses at ease, reducing unpredictability in crisis situations, and reducing risk of injury. CIT training appeared to aid in increasing patience in crisis situations.	studies in this area are needed. Future studies should examine circumstances surrounding decisions for arrest, hospital evaluation, and resolution on the street. Relationships between CIT officers and non-CIT officers should be examined. How do individuals in crisis view these officers after the fact? Should CIT training change? Should it be required?
62.	Condon, J. T., Corkindale, C. J., & Boyce, P. (2008). Assessment of postnatal paternal-infant attachment: Development of a questionnaire instrument. *Journal of Reproductive and Infant Psychology, 26*(3), 195-210).	1	206 first-time Australian fathers (0 female) (age *M* = 29.7, *SD* = 5)	Scale development; longitudinal	*Paternal Postnatal Attachment Questionnaire (PPAQ) *Mental Health Index (MHI) *Edinburgh Postnatal Depression Questionnaire (EPDS) *PANAS *The Intimate Bond Measure (IBM) *Dyadic Adjustment Scale (DAS) *Infant Temperament Scale	None	45% of the variance of the PPAQ was accounted for by 3 interpretable factors: 'patience and tolerance', 'pleasure in interaction' and 'affection and pride.' Cronbach's alphas ranged from .7-.8, and construct validity is supported. Patience/tolerance accounted for 27% of variance at 6 months and represented an absence of irritability and other negative emotions (e.g. boredom) towards the infant. It also included a lack of resentment about the effects of fatherhood and presence of patience and tolerance with the infant. Patience/tolerance accounted for twice as much variance at 6 months than at 12 months. Degree of planning of pregnancy was positively correlated with scores on global attachment and patience/tolerance.	Scales should continue to be developed that assesses for adults' attachment to their children, especially as children get older than 12 months. Results should be replicated in a non-Australian sample. Criterion validity needs to be evidenced for this scale.
63.	Einfeld, A. & Collins, D. (2008). The relationships between service-learning, social justice, multicultural	1	9 members (6 female) of a medium-sized Midwest university-sponsored AmeriCorps	Qualitative; cross-sectional	Semi-structured interviews assessing for perceptions of the effects of their service	None	Multicultural skills developed by participants while working with clients included empathy, patience, attachment, reciprocity, trust, and respect. Participants became more aware of inequality from their experience, some continued to	Findings from this study should be replicated within a larger sample size. Other-report methods could reduce bias in responses. How are

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	competence, and civic engagement. *Journal of College Student Development, 49*(2), 95-109.		service-learning program who had completed at least 300 hours of community service						pursue social justice, and all wished to continue civic engagement.	service-learning participants affected by one setting over another? Do personal characteristics play a role in that relationship? Long-term service (longer than one semester) should be examined for effect on its participants.
64.	Harmon, J. L., Barroso, J., Pence, B. W., Leserman, J., & Salahuddin, N. (2008). Demographic and illness-related variables associated with HIV-related fatigue. *Journal of the Association of Nurses in AIDS Care, 19*(2), 90-97.	1	128 adults (44 female) with HIV	Correlational; cross-sectional	*HIV-Related Fatigue Scale	None	Fatigue was associated with difficulty thinking quickly, doing household chores, exercising, working, participating in recreational activities, walking, planning activities, and thinking clearly. Consequences of fatigue included lowered motivation, difficulty concentrating, increased drowsiness, losing patience, and interference with work, family, and social life. Fatigue was predicted by employment status, monthly income, current antidepressant use, and number of years with HIV.	Finding should be replicated without selection bias and with measurement strategies above simply self-report. Longitudinal research designs should be employed.
65.	Rummel-Kluge, C., Stiegler-Kotzor, M., Schwarz, C., Hansen, W. P., & Kissling, W. (2008). Peer-counseling in schizophrenia: Patients consult patients. *Patient Education and Counseling, 70*(3), 357-362.	1	88 patients (31 female) with schizophrenia or schizaffective disorders who had been hospitalized for five weeks (age *M* = 37, *SD* = 13)	Quasi-experimental; cross-sectional	* Evaluation form for a single session of general and differential single psychotherapy for patients (STEPP Questionnaire – completed by participants) *Structured protocol (by counselor) *Supervision (by physician)	Weekly hour-long interaction with peer counselor, who had been living with schizoaffective disorder for over 20 years	The peer counselor appeared positive and effective; 96% of patients recommended him as helpful to talk to (knowledgeable and emotionally supportive). Having patience and giving emotional support was the counselor's second most-frequent suggestion, second only to pharmacological considerations.	Measurement instrumentation should be more formalized in future studies.
66.	Curry, O. S., Price, M. E., & Price, J. G. (2008). Patience is a virtue: Cooperative people have lower	1	96 undergraduates (40 female) at the University of Indiana-Bloomington	Experimental; cross-sectional	*Contributions in a public-good game *Discount rate test (Kirby & Marakovic, 1996)	Free-rider game manipulation	Patient people were more cooperative.	Further research should examine variation in the 'currency' in which the discount rates are measured ; this will help to

	discount rates. *Personality and Individual Differences, 44*(3), 780-785.						determine the mechanism between patience and cooperation.
67.	Malterud, K. & Thesen, J. (2008). When the helper humiliates the patient: A qualitative study about unintended intimidations. *Scandinavian Journal of Public Health, 36*(1), 92-98.	1	37 health and social professionals (33 female) (6 groups) in Norway	Qualitative; cross-sectional	*Memory stories written in approximately five minutes, assessing for descriptions of intimidating experiences. These were collected at a 3-hour workshop on oppression and empowerment.	None	Participants recalled two types of events in which they likely intimidated clients: events where they neglected various basic needs, such as bodily functions, information, regard, time, and patience; events where the professional minimized the client by pursuing his or her own agenda, ridiculing, or only partially acknowledging, the client. These instances are likely due to these professionals' own lack of time and resources, but they still need to be mindful of their moral and ethical obligations to clients.	None provided.
68.	Naiff, L. A. M., Soares, A. B., Azamor, C. R., & Almeida, S. A. (2008). Elementary and middle school education: Psycho-social aspects of professional performance of teachers. *Arquivos Brasileiros de Psicologia, 60*(3), 64-76.	1	150 elementary and middle school teachers in Rio de Janeiro	Qualitative; cross-sectional	Semi-structured interviews?	None	Good teachers were defined by their order of the classroom, but also by their attention to and care of students. Knowledge, patience, interaction, and creativity were also themes of good teachers.	None available
69.	Qu, W., Zhong, Y, Yan, L., Yang, S. (2008). A research on the stress and coping stle of the migrant laborers' children in city junior middle schools. *Chinese Journal of Clinical Psychology, 16*(6), 589-590.	1	*80 rural migrant laborers' children in grade 1-3 in Changsha, China *70 urban children in grade 1-3 in Changsha, China	Correlational; cross-sectional	*Stressor Scale for Middle School Students *Coping Style Scale for Middle School Students	None	Stressors differed for urban versus rural children, as did coping skills. Particular coping skills that differed included problem-solving, seeking support, reasonable explanation, patience, emotional display, and fantasy and denial. The children of immigrant migrant labors appear to have more stress and fewer ways to cope with it positively.	None available

70.	Büssing, A., Ostermann, T., & Matthiessen, P. F. (2007). Distinct expressions of vital spirituality: The ASP Questionnaire as an explorative research tool. *Journal of Religion and Health, 46*(2), 267-286.	1	488 adult participants (307 female) in Europe, recruited from healthcare settings and various religious and atheist communities (age *M* = 49.2, *SD* = 13.0)	Scale development; cross-sectional	*40-item Expressions of Spirituality Scale (ASP)	None	Cronbach's alpha for the ASP was .942, and seven factors emerged: "prayer, trust in God and shelter; insight, awareness and wisdom; transcendence conviction; compassion, generosity and patience (9% of the variance); conscious interactions, gratitude, reverence and respect, and equanimity." Compassion, generosity and patience was positively correlated with conscious interactions and insight, awareness and wisdom. Compassion, generosity, and patience were not affected by gender, age, spiritual or religious attitudes, religious affiliation, or any combination thereof.	This measure should be researched in the context of high-severity physical and mental illness. Validity should be examined, and it should be correlated with other psychosocial and coping measures. Differences between religious groups should continue to be examined in larger samples, as well as in nonreligious and nonspiritual groups. Multidisciplinary studies are required to further the study of spirituality.
71.	Xu, S. H., Gao, L., & Ou, J. (2007). Service performance analysis and improvement for a ticket queue with balking customers. *Management Science, 53*(6), 971-990.	1	None	Numerical	None	None	The balking (abandoning a wait) behavior differs between ticket and physical queues when customer patience is low and the system traffic is heavy. Ticket queues can be improved by providing customers with expected waiting time as estimated by his observed number difference, which is shown to raise the performance of the ticket queue to that of the physical queue. Thus, ticket queues represent a sensible solution to high-traffic waits.	Ticket queues should continue to be studied in their modeling and in their performance. Further research in customer service and customer psychology, especially as they relate to physical and ticket queues, is warranted. Empirical research is needed.
72.	Bernstein, K. S. (2007). Mental health issues among urban Korean American immigrants. *Journal of Transcultural Nursing, 18*(2), 175-180.	1	34 Korean American immigrant adults(28 female) in New York City who had been living in the U.S. for at least ten years. 58% had a college education.	Correlational; cross-sectional	*18-item measure of Korean American immigrants' perceptions of mental illness, help-seeking, and coping (adapted from Shin, 2001)	4 monthly "Are you happy with your life in America?" seminars for Korean American immigrant issues	Most participants discussed the need for mental health services but chose instead to cope with life stressors related to immigrant life with endurance, patience, and religion.	Findings should be replicated in a more diverse sample, involving more men, fewer who had so much education, less self-selection, less financially stable, and less used to the U.S. Cultural stigma of seeking mental health services should continue to be assessed. Future

							research should examine Korean women's mental health issues, (depression, family dynamics, acculturation, etc.)
73.	Carlos, A. I, Pires, A., Cabrita, T., Alves, H., Araujo, C., & Bentes, M. H. (2007). Parental behavior of adolescent mothers. *Análise Psicológica, 25*(2), 183-194.	1	21 mothers (21 female) who had been between the ages of 14-18 when they became mothers	Qualitative; cross-sectional	Semi-structured interviews assessing for parental behaviors of adolescent mothers toward their children	None	Those adolescent mothers who were maternally unavailable towards their children showed a lack of patience, indifference, inadequate responses, difficulty in baby care, difficulty understanding the baby's signals, aggressive behavior and attribution of negative characteristics to the baby. Adolescent mothers who were maternally available were capable of baby care, concerned with the child, patient, understood the baby's signals, and played with their children. Social support was a protective factor in being maternally available.	None available.,(full article not available in English)
74.	Clancy, C., Oyefeso, A., & Ghodse, H. (2007). Role development and career stages in addiction nursing: An exploratory study. *Journal of Advanced Nursing, 57*(2), 161-171.	1	26 addiction nurses (9 female) (4 groups) in England (age *M* = 38.5, *SD* = 9.2)	Qualitative; cross-sectional	90 minute focus group semi-structured interviews assessing for motivation to work in addiction, necessary personal attributes, and role stages	None	Participants agreed that addiction nurses needed to be non-judgmental and have hardiness, patience, and tolerance. Five role development stages of addiction nursing emerged: encounter, engagement, stabilization, competency and mastery.	Role orientation programs need to be developed and researched. Further exploration of the effect of clinical setting is warranted.
75.	Matsumoto, H. (2007). Peak learning experiences and language learning: A study of American learners of Japanese. *Language, Culture, and Curriculum, 20*(3), 195-208.	1	128 American students learning intermediate Japanese from five universities	Qualitative; cross-sectional	*1 item assessing for the most helpful experience in learning Japanese *1 item assessing for the most difficult experience that had prevented them from learning Japanese well	None	Peak learning experiences included being understood by native Japanese speakers, patience and enthusiasm from their teachers, immersion in Japanese materials, and authentic learning materials. Negative learning experiences included failing to see progress.	The teaching of the Japanese language should continue to be studied.
76.	Reyes-Garcia, V., Godoy, R., Huanca, T.,	1	151 adults (70 female) over age 16 from 48	Correlational; longitudinal	*8 SS vs. LL decisions where the reward was money (Time 1)	None	Impatience was correlated with greater folk knowledge, fewer years of schooling, lower	Why do people in early stages of market exposure allow

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	Leonard, W. R., McDade, T., Tanner, S., &Vadez, V. (2007). The origins of monetary income inequality: Patience, human capital, and division of labor. *Evolution and Human Behavior, 28*(1), 37-47.		households in 2 villages with different levels of market exposure in Bolivia		*7 SS vs. LL decisions where the reward was food (Time 1) *Measures of patience, income, and human capital (Time 1) *Measures of well-being, including nutritional status, wealth, mid-arm muscle area, weight, perceived physical-health (Time 2)		likelihood of working in wage labor, and greater likelihood of working in rural subsistence occupations. Participants who had been patient at Time 1 had greater wage earnings, better credit, more mid-arm muscle area, more favorable weight, and fewer days ill at a five-year follow-up. The authors posit a causal link between patience, accumulating capital, occupational choice, and income inequality.	monetary income inequality to rise from presumably equal parties?
77.	Schnitker, S. A. & Emmons, R. A. (2007). Patience as a virtue: Religious and psychological perspectives. *Research in the Social Scientific Study of Religion, 18*, 177-207.	1	324 undergraduates at a large West coast university	Scale development; cross-sectional	*Patience Scale (PS-10) *Values in Action Inventory of Strengths (VIA-IS) *GQ-6 *Gratitude, Resentment, and Appreciation Test (GRAT) *Items assessing religiousness *Spiritual Transcendence Scale *Self-Control Scale (SCS) *Zimbardo Time Perspective Intentory (ZTPI) *Maximization Scale *Interpersonal Reactivity Index *Experiences in Close Relationships Inventory (ECR) *R-UCLA Loneliness Scale (Short Form) *Balanced Inventory of Desired Responding *BFI *SWLS *PANAS *CESD *36 items assessing health problems *Lifestyle questionnaire assessing for health behaviors	None	2 factors emerged within the PS-10: importance of patience and self-evaluation of patience. The 24 strengths of the VIA-IS were each correlated to patience in varying degrees, but patience remained independent as a construct. Patience was negatively correlated with neuroticism, negative affect, avoidant attachment, and some physical health symptoms and positively correlated with openness, extraversion, future, present hedonistic, and past-positive time orientations, self-control, mindfulness, Patience was significantly related to spiritual transcendence and religious behaviors.	The PS-10 scale requires further validation, and current findings need to be replicated, particularly within patience and spirituality. Future study is warranted regarding antecedents and consequences of patience, as well as patience interventions.

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78.	Wallis, H., Renneberg, B., Neumann, M., Ripper, S., & Bastine, R. (2007). Resources and psycho-social impairment after severe burn injuries – A qualitative study two years after the accident. *Verhaltenstherapie & Verhaltensmedizin, 28*(2), 173-187.	1	21 patients with severe burn injuries, two years following the accident	Qualitative; cross-sectional	Semi-structured interviews assessing for impairment and personal resources	None	Social support was identified not only as a resource, but also as a positive outcome of the accidents. Psychological coping skills included patience, acceptance of the situation, and downward social comparison.	None available (full article not available in English)
79.	Fowler, J. H. & Kam, C. D. (2006). Patience as a political virtue: Delayed gratification and turnout. *Political Behavior, 28*(2), 113-128.	1	235 undergraduates (roughly 117 female) who were eligible to vote in the most recent election at the time of the study	Correlational; cross-sectional	*Socioeconomic and political attitudes questions *Single item assessing whether they voted in the most recent election *A series of SS vs. LL choices	None	Patience did not correlate with demographic variables but was positively correlated with political interest, voter turnout, and church attendance. Patience significantly increased voter turnout.	Intelligence should be considered as a mechanism in the patience/politics relationship. Findings should be replicated in a more representative sample and in more highly-publicized election years. A number of research suggestions are provided within the context of patient individuals and potential for political activity.
80.	Boggatz, T. & Dassen, T. (2006). Learning the meaning of care: A case study in a geriatric home in upper Egypt. *Journal of Transcultural Nursing, 17*(2), 155-163.	1	10 staff members (10 female) from a geriatric home in upper Egypt; 7 were under age 25	Qualitative; cross-sectional	Structured interviews assessing for how caregivers perceive their work and what they think the meaning is behind it	None	Participants indicated that care was "a laborious repetition." Care was perceived as responding to demands (performing tasks, being attentive), kind patience (an inner attitude involving strategy and personal restraint) and a family-like relationship (identification with and acceptance of). Participants indicated that this relationship was necessary for patience to occur and in fact required patience. Patience and harmony appeared to be congruent with the Christian and the female	Findings should be replicated within larger and more diverse populations, particularly with participants who come from more urban backgrounds. Vocational training in geriatric homes in Egypt should continue to be explored.

							value system.	
81.	Matsuoka, M. (2006). Ideal self across the lifespan: Roles and regulation process. *Japanese Journal of Educational Psychology, 54*(1), 45-54.	1	865 Japanese participants between 15 and 86 years of age	Correlational; cross-sectional	None available	None	Self-esteem was related to the decreasing gap between actual and ideal self with age. Participants began to give up on their ideal self between ages 45-54. Gender differences were present from high school to age 64 in patience, positive reinterpretation, and willingness to give up easily (as they relate to reducing the discrepancy between the real and idealized self); afterwards, these gender differences were nonsignificant.	None available, article not available in English
82.	Vodounon, M. A. (2006). Exploring the relationship between modularization ability and performance in the C++ programming language: The case of novice programmers and expert programmers. *Journal of Computers in Mathematics and Science Teaching, 25*(2), 197-207.	1	23 undergraduates	Correlational; longitudinal	*Calculus test *10-item programming test assessing for C++ skills *Survey assessing for modularity required for C++, understandings, motivations, and experiences of problem-solving activities	Integration of C++ training into a computer techniques course that participants were already enrolled in	Low-performing students improved their abilities to divide problems but devoted less time to programming, experiencing frustration and giving up more often. High-performing students had strong achievement in the ability to think logically and divide a problem into subproblems. Therefore, they were more patient, confident, and persistent in building programs. High-performing students endorsed sense of humor, patience, persistence as qualities of a successful programmer. Patience, persistence, and ability to divide to subproblems were significantly correlated, and patience was a predictor of improved modulation.	Modularization for learning C++ should continue to be researched and applied to larger problems
83.	de Carvalho, M. V. B. & Merighi, M. A. B. (2005). The act of taking care in the dying process from the perspective of women with cancer: A phenomenological attitude. *Revista Latino-Americana de Enfermagem, 13*(6), 951-959.	1	Women with terminal cancer	Qualitative; cross-sectional	Semi-structured interviews assessing how they would like to be taken care of	None	Participants wanted to be cared for in more than technical ways; they emphasized empathy, listening, patience, zeal, pain control and autonomy.	None available

84.	Hong, C., Deng-Feng, W., & Han-Ying, L. (2005). Pre-operative anxiety of patients receiving intervention therapy. *Chinese Mental Health Journal, 19*(10), 688-690.	1	98 patients with cardio-vascular disease, cerebral-vascular disease, and cancer	Experimental; longitudinal	*Self-Report Anxiety Scale (SAS) *Social Support Scale (SSRS) *Chinese Personality Scale (QZPS)	"Intervention therapy"	Patience, optimism, generosity, and gregariousness predicted anxiety. Overall, years of education and these personality characteristics could influence levels of anxiety.	None available
85.	Koch, L., Egbert, N., Coeling, H., & Ayers, D. (2005). Returning to work after the onset of illness: Experiences of right hemisphere stroke survivors. *Rehabilitation Counseling Bulletin, 48*(4), 209-218.	1	12 right-hemisphere stroke survivors (2 female) and 13 of their caregivers (2 female) in the Midwest. 9 of the survivors had at least some college education (age *M* = 61).	Qualitative; cross-sectional	60-90 minute semi-structured interviews, assessing stroke-related challenges, compensatory strategies, resources, and advice to stroke survivors	None	Successfully re-entering employment was associated with the following internal resources: patience, motivation, determination, positive attitude, and a sense of humor. External resources included emotional support from others; emotional and instrumental support from healthcare professionals, and employer accommodation.	Finding should be replicated in a larger and more diverse sample with experimental and longitudinal methods.
86.	Onodera, A. (2005). Marital changes during the transition to parenthood. *Japanese Journal of Developmental Psychology, 16*(1), 15-25.	1	68 heterosexual couples	Correlational; longitudinal	Measures of closeness, stubbornness, patience, and calmness	Birth of child	Closeness dropped initially but stabilized between two and three years postpartum. Wives became more stubborn after birth, and husbands' patience scores were consistently higher than their wives' scores, perhaps due to husbands' attunement to their wives' moods and attempts to be patient even when they were having unpleasant feelings. Husbands attributed the decline in closeness to the level of wives' irritation and men's working hours. Wives attributed the decline in closeness to their husbands' insufficient participation in child care and women's recognition of children's difficult temperament.	None available, (full article not available in English)
87.	Mietzner, S. & Lin, L. W. (2005). Would you do it again? Relationship skills gained in a long distance	1	37 undergraduates at a large Midwestern university who had been in a long distance	Correlational; cross-sectional	*10-item questionnaire assessing the individual's experiences of current and past long-distance relationship	None	Participants reported the following relationship skills: trust, patience, and better communication. Those in long distance relationships who would do it again reported gaining skills in time management, independence, and non-physical	Future research in long distance relationships should include examination of coping mechanisms and personality traits.

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	relationship. *College Student Journal, 39*(1), 192-200.		relationship for > 6 months (age *M* = 21.8)				intimacy.	Longitudinal research should examine cost-benefit ratio, participatory reasons, and positive and negative attitudes and experiences throughout the long-distance relationship
88.	Stone, J., Townend, E., Kwan, J., Haga, K., Dennis, M. S., & Sharpe, M. (2004). Personality change after stroke: Some preliminary observations. *Journal of Neurology, Neurosurgery & Psychiatry, 75*(12), 1708-1713.	1	Caregivers of 35 patients 9 months after stroke	Correlational; cross-sectional	Caregiver Measures *Measure incorporating items from studies of other-ratings of personality change after head injury; 20 items were taken from those used by Tyerman and Humphrey (1984), with additional items used by Brooks and McKinlay (1983) *30 item measure assessing for adjectives used to describe patients before and after stroke. *Hospital Anxiety and Depression Scale (HAD) Patient Measures *National Institute of Health Stroke Score *Oxford Community Stroke Project Classification (OCSP) *Computed tomography of the head (CT) *Barthel Index *Activities of Daily Living Scale – Nottingham extended (EADL) *Structured clinical interview for the DSM-IV (SCID) *HAD *Antidepressant drug use	None	Personality changes reported after stroke included: frustration, dissatisfaction, unhappiness, worrying, patience, being in control, energetic, confident, and easygoing. Caregivers tend to notice personality change in stroke patients, which is associated with self-rated emotional distress in the caregiver.	What is the role of emotional disorder in the relationship between disability and personality change? Further longitudinal research with a larger and more diverse sample should be conducted. The measure of personality change used in this study should continue to be validated/improved.
89.	Summers, J. A., Boller, K., & Raikes, H. (2004).	1	575 fathers (0 female) of low-income twenty-	Qualitative; cross-sectional (part of a longitudinal study)	Semi-structured interviews assessing for barriers to fathering,	None	The main barrier, if any was identified, was the difficulty balancing work and other demands	Future research should include a cross-coding

	Preferences and perceptions about getting support expressed by low-income fathers. *Fathering, 2*(1), 61-82.		four month old children. 28.2% of participants had some college education.		available support, and support they wish they had		with time for fathering. Lack of patience was also described as a barrier. Fathers described support in terms of their spouse or partner, their parents, and their own internal resources (e.g., motivation, patience).	process to identify participant characteristics. Quantitative research should be conducted in this field, particularly with fathers as respondents rather than (or in addition to) mothers.
90.	Routasalo, P., Wagner, L., & Virtanen, H. (2004). Registered nurses' perceptions of geriatric rehabilitation nursing in three Scandinavian countries. *Scandinavian Journal of Caring Sciences, 18*(2), 220-228.	1	386 registered geriatric rehabilitation nurses (359 female) in Denmark, Finland, and Sweden	Correlational; cross-sectional	*88 items assessing for geriatric nursing experiences	None	Geriatric rehabilitation nursing was experienced as something that required patience and creativity, as well as knowledge, experience professional skills. Nurses motivated patients by giving them positive feedback, preventing pain, pausing to share with the patients their joy about progress, and by giving the patients the opportunity to cope with daily activities.	The measure used in this study should continue to be studied and improved.
91.	Johnson, J. S. & Hawley, J. M. (2004). Technology's impact on creative traditions: Pieceful co-existence in quilting. *Clothing & Textiles Research Journal, 22*(1-2), 69-78.	1	1192 messages posted by 52 members of an on-line quilting block-exchange group	Qualitative; cross-sectional	Online message board for messages, questions, or concerns for members	None	Quilters use technology to enhance their work without sacrificing social values (patience, connectedness, and expression).	In future studies, individual motivations of the participants should be considered. Stronger methodological safeguards should be put in place in future online group studies. The structure and quality of online groups should be examined as well.

Vita

Caroline Rose Lavelock was born on October 18, 1988, in Kansas City, Missouri and is an American citizen. Caroline is currently a fourth year doctoral candidate in the Counseling Psychology program at Virginia Commonwealth University. She graduated from Pleasant Hill High School, Pleasant Hill, Missouri in 2006. She received a Bachelor of Arts in Psychology with minors in Religious Studies and Italian from the University of Missouri in Columbia, Missouri in 2010. She received a Master of Science in Counseling Psychology from Virginia Commonwealth University in Richmond, Virginia in 2013. Caroline is looking forward to moving to Madison, Wisconsin with her husband for her internship at Counseling and Consultation Services at the University of Wisconsin-Madison.