HOLDING GRUDGES:
DEVELOPING THEORY AND MEASUREMENT

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Abstract

The aim of this dissertation was to develop a theory of holding grudges and a questionnaire to measure their occurrence. In Part 1 I used semi-structured interviews to identify six underlying components of holding a grudge: victims' need for validation, feelings of moral superiority, lack of control over the grudge, its diminishing psychological impact, severing ties with transgressors, and altered expectations of the future. Together these six aspects form a cycle whereby a transgression or trigger creates feelings of invalidation that makes it difficult for victims to let go of what happened. Over time and with introspection they are able to move on to the point where the grudge becomes latent, however it can easily be triggered to near the strength of the initial transgression. In Part 2 I used three studies to winnow 171 items generated from Part 1 into 18 items reflecting three aspects of holding a grudge: disdain, referring to feelings of dislike and intolerance for the transgressor; emotional persistence, including sustained negative affect such as anger and hurt; and perceived longevity, reflecting participants' feeling as though they would never be able to let go. As expected, these aspects of holding a grudge were linked to less forgiveness and greater general unforgiveness, as well as revenge, avoidance, and rumination. Personality traits did not play a large role in how likely individuals were to hold a grudge for a specific transgression; however interpersonal power, attachment anxiety, and neuroticism were associated with emotional persistence.

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Introduction

Conflict is an interpersonal reality. It is an unavoidable consequence of developing and investing in relationships with others. One specific form of conflict is when one person commits a transgression against another person. This can include intentional or incidental harm, such as rejection, infidelity, and betraying trust. In these situations, the interplay between how the offending party and the aggrieved party respond has a definitive impact on both parties individually, and their collective relationship. The purpose of this dissertation was to gain insight into one specific response: holding a grudge. Currently there is no research examining the lived reality of what it means to hold a grudge, greatly limiting our understanding of one of the most common outcomes of interpersonal conflict.

Grudge theory and research

There is no doubt that grudges are common occurrences. A quick online search returns numerous lists of infamous historical and celebrity grudges. For instance, one of the most famous historical grudges is between the Hatfields and McCoys. This family feud has been covered extensively, even dramatized in television and film. Although its origins are not completely clear, some attribute the beginnings to animosity stemming from the American Civil War, and others blame a dispute over theft of a hog. The origins are less important than the outcome, which was years of spilt blood. This example highlights one extreme instance of the long-standing interpersonal consequences holding a grudge can have.

In terms of what a grudge actually is, one common conceptualization is feelings of ill-will or resentment toward a transgressor. Synonyms include animosity, antipathy, and bitterness. Although succinct, this conceptualization oversimplifies and trivializes the construct by reducing it to a form of negative affect. Equally important are the thoughts that inform, and behaviours

that result from, harbouring grudges. This problem of definition is one that has hampered much of the already scant research on holding grudges. Before any conclusions can be drawn about the consequences of holding a grudge, we first have to know what doing so actually entails.

One past psychoanalyst theorized that holding a grudge is primarily an affective state of ill-will (Wixen, 1971). He maintained that the relationship between the person holding the grudge and the target of the grudge is often close and positive before the grudge has formed, and sometimes even afterward (Wixen, 1971). The grudge-holder is often defensive about holding the grudge in light of the fact that others tend to see it as disproportionate to the wrongdoing (Wixen, 1971). Grudge-holders experience paranoid thoughts, have trouble maintaining self-esteem, and avoid any interaction or contact with the target of the grudge (Wixen, 1971). Finally, many grudges form in adolescence (Wixen, 1971). Although these conclusions are interesting, the psychoanalytic lens through which they were reached, stressing ego defences and libidinal energy, limits their widespread applicability and ultimate utility.

Another broader, yet speculative, conceptualization has posited that holding grudges occurs when individuals remain in the role of the victim and commit to staying angry (Baumeister, Exline, & Sommer, 1998). Doing so has negative intrapersonal consequences, but can also induce feelings of being in control and having something to lay claim to (Baumeister et al., 1998). Again, this theorizing is interesting and intuitive, but lacks supporting evidence.

Not knowing what it means to hold a grudge necessarily hampers our ability to cogently interpret the research that has been done on the subject. For instance, holding a grudge over long periods of time has been linked to greater risk of heart disease, chronic pain, and stomach ulcers (Messias, Saini, Sinato, & Welch, 2010; vanOyen Witvliet, Ludwig, & Vander Lann, 2001). However, holding grudges was evaluated by having participants say whether it was true or false

that they have held grudges against people for years. This is problematic because the link between holding grudges and poor health is hard to interpret. When participants are responding true or false, they are each relying on their own definition of holding a grudge, of which there is likely considerable diversity.

Current limitations and concerns

I believe that the above approaches to understanding grudges highlight two key issues with the current state of grudge research and theorizing: (1) there is little consensus and knowledge of the underlying aspects of a grudge that are not personal, anecdotal, or speculative, and (2) we are lacking an adequate tool that can measure holding a grudge explicitly and uniformly. The second problem stems, in part, from the first. Therefore, the solution is to develop a consensus and knowledge base that legitimately conceptualizes holding a grudge and, from that, create a reliable and valid scale to measure the construct.

Issue 1: Lack of theory or knowledge about holding grudges

One potential explanation for why it has been so overlooked is that holding a grudge is typically seen as the opposite of forgiving, thus current research on forgiveness already addresses grudges. In order to account for this possibility, it is crucial to compare and contrast holding a grudge to forgiving. A similar crisis of content and definition occurred within the forgiveness literature when research on the construct began to burgeon. Researchers had their own ideas of what it meant to forgive, which is problematic when attempting to study forgiveness as a cohesive construct. As a result of this lack of consensus, studies were undertaken to properly delineate forgiving.

Defining forgiveness. The most common understanding of forgiveness in empirical social psychology is that it is a process in which negativity related to an interpersonal offence

decreases in favour of positivity toward the offender (Lawler-Row, Scott, Raines, Edls-Matityahou, & Moore, 2007; McCullough et al., 1998; Worthington, 2005). Many studies define forgiveness this way, however a priori assumption of a construct's definition limits the likelihood of mutual understanding between experts and laypersons. This is an issue when measuring forgiveness directly. For instance, when participants are asked questions such as "Have you forgiven?", they may respond affirmatively and feel as though they have, when, in reality, their conceptualization of forgiveness strays from the researcher's definition. In these instances, researchers cannot make interpretable claims about forgiveness because there is no common understanding.

One way these discrepancies were addressed was by determining how the general public defines forgiveness. One study found that individuals tend to agree with the idea that forgiveness is pardoning an offence, which requires compassion and reconciliation after the offender exhibits repentance and remorse (Macaskill, 2005; Rye, Paragament, Ali, Beck, Dorff, & Hallisey, 2000). There are certain preconditions that increase the likelihood of forgiving, such as understanding why the incident occurred and a willingness to compromise, although the capacity for forgiveness is subject to individual differences (Macaskill, 2005). These individuals also felt that reconciliation was required, but could include either physical reconciliation with the offender or psychological reconciliation of the situation (Macaskill, 2005). There is also a difference between forgiving and being forgiven (Macaskill, 2005). Being forgiven is interpersonal in which both the offender and victim are aware that an offence has been committed and forgiven. In contrast, forgiving can occur solely intrapersonally, without any communication between the victim and offender. In such cases, the offender has unknowingly been forgiven, whether for a known or unknown offence. Nevertheless, according to the general population, there are some

offences that are unforgivable, including murder of children, rape, and other forms of sexual abuse (Macaskill, 2005; Younger et al., 2004).

Other studies of laypersons' understanding of forgiveness found that key components were acceptance, dealing with the event, and deciding to let go of the negativity and move on (Freedman & Chang, 2010; Younger, Piferi, Jobe & Lawler, 2004). Not holding a grudge or blaming the offender, forgetting, reconciling, and appreciating that the offender is human were also identified as important factors (Freedman & Chang, 2010; Younger et al., 2004). Reasons for forgiving were based on how important the relationship was, maintaining personal health and happiness, and compassion and empathy (Younger et al., 2004). Other motivations were rooted in religious background and whether the offender apologized or not (Younger et al., 2004). Interestingly, some participants reported that they harboured a grudge, while simultaneously forgiving (Younger et al., 2004), which contests the notion that forgiving and holding a grudge are opposite ends of the same continuum. Reasons cited for not forgiving centered on offenders' behaviour, including not apologizing, not asking for forgiveness, and not feeling remorse. Additional reasons were that the offender was seen as not worthy of being forgiven or was thought of as a bad person, and that the offence was unforgivable or its impact was still ongoing (Younger et al., 2004).

Overall, laypeople view the dimensions of forgiveness as cognitive, such as understanding and prioritizing the relationship; affective, including kindness, compassion, and tolerance; and behavioural, such as communication and accepting an apology (Kearns & Fincham, 2004). This view both overlaps and strays from expert definitions of forgiveness (Kearns & Fincham, 2004), which supports the need to reconcile the two.

Because forgiveness is such a well-studied construct, this problem has been addressed

numerous times. Researchers have made an effort to understand the nuances of forgiveness, and have created instruments that can effectively measure them. In comparison, holding grudges has received very little theoretical or empirical attention, and that which does exist is reductive. Many studies claiming to measure holding grudges do so directly, thereby running into the problem of conceptual alignment between researchers and participants.

Defining grudges.

Holding a grudge versus forgiving. Perhaps one reason why holding a grudge has been largely ignored is because researchers feel as though its definition is obvious. Many individuals think that holding a grudge is simply the opposite of forgiving. If we conceptualize it this way, there are two potential interpretations. Relying on the definition of forgiveness as a process in which negativity decreases in favour of positivity toward the offender, the inverse would be a process in which offence-related negativity increases and positivity decreases. However, it could also be said that the opposite is a static state of continual negativity, not necessarily increasing, but also not dissipating.

Even presuming that holding a grudge is the opposite of forgiving still leaves it fairly open to interpretation. In this sense, regardless of whether or not individuals feel as though they can adequately define holding a grudge, there is still much work to be done to understand what it actually means to do so.

What about unforgiveness? Another possibility is that holding a grudge is not dissimilar to unforgiveness. Unforgiveness refers to negative emotions toward a transgressor resulting from angrily ruminating about what happened (Worthington & Scherer, 2004). These negative emotions include resentment, bitterness, hostility, hatred, anger, and fear. There is also a cognitive component that involves evaluations and reappraisal of transgressors (Stackhouse,

Ross, & Boon, 2018). Although this concept incorporates many components one might think of when imagining holding grudges, asking participants to recount instances in which they have not forgiven is not the same as asking them to recall instances in which they are holding a grudge. When using such language, individuals may interpret prompts that ask them to recall times they have not forgiven in quite different ways. In order to probe the intricacies of holding grudges, it is crucial to do so explicitly. This study will help to answer the question of whether holding a grudge is distinct from unforgiveness.

Or revenge? People often conflate desiring vengeance and holding a grudge, however there is no research that has directly compared the two constructs. It seems more likely that revenge, defined as aggression intended to restore equity between offender and avenger (Stillwell, Baumeister, & Del Priore, 2008), is the result of sustained resentment and ill-will. If we return to the example of the Hatfields and McCoys, the grudges they were holding against one another manifested into cyclical revenge that was constantly escalating (Stillwell et al., 2008). If anything, revenge is more likely a behavioural manifestation of an extreme grudge.

It is clear that despite common notions of holding a grudge, there is considerable obscurity about the subtleties of the construct and where it fits into the literature on how individuals respond to transgressions. The first part of my dissertation will attempt to clarify what it means to hold a grudge through the use of bottom-up, qualitative research.

Issue 2: Lack of valid and reliable measures of holding grudges

The second issue with how current research approaches studying grudges, namely the lack of appropriate measurement tools, stems largely from this first issue of conceptual ambiguity. As previously mentioned, although it is acceptable to ask individuals whether they are holding a grudge or not, it is unacceptable to then ascribe one's own understanding of the

term to those same individuals and draw any legitimate conclusions. In light of this, it is essential to develop a valid scale to measure holding grudges that is rooted in appropriate theory.

The need for valid scales to measure psychological constructs is not a new one (Flake, Pek, & Hehman, 2017). A scale that is valid is one that measures what it intends to measure. This necessarily means that the phenomenon of interest directly causes individuals to respond to certain items in specific ways (Borsboom, Mellenbergh, & van Heerden, 2004). Over time, the process of proving that a measure is valid has shifted to one in which test scores are correlated with other, related or unrelated, constructs in order to show evidence that they relate to one another in the ways one would expect. Instead of proving validity, this approach merely indicates that there is a relationship between one construct and another, not that the measure is measuring what one says it is (Borsboom et al., 2004).

In order to develop a valid scale, one must focus on both the ontological, whether something exists; and the epistemological, whether that thing can be measured (Borsboom et al., 2004). This means that using purely empirical methods is insufficient for developing valid measures. It is crucial to have a theory of how an attribute will cause differences in test scores. In terms of creating valid measures, the construct must drive the creation of the scale (Borsboom et al., 2004). This is the approach I took when developing The Grudge Aspect Measure. The scale itself was rooted in theoretical understanding based on qualitative inquiry. Following this, I used empirical methods to examine how the scale relates to other variables.

Current research

In the current program of research, I intended to resolve both the issues of conceptual understanding and valid measurement using a mixed-methods approach. Taking this type of approach when designing programs of research is beneficial because relying on both qualitative

and quantitative data can yield more comprehensive results than implementing only one research method (Giddings & Grant, 2006). The approach I took was a sequential mixed-methods design, with the qualitative portion preceding the quantitative.

Part 1 utilized a qualitative approach to answer the question “what does it mean to hold a grudge?” I employed semi-structured interviews which were then transcribed and subjected to a thematic analysis. In Part 2, I took this understanding and used it to develop a valid scale. I did this by generating a pool of items from the interviews, distributing these items to participants, and then conducting exploratory and confirmatory factor analyses to decide on the final items to be included in the scale. Finally, I examined how this measure of holding grudges related to other constructs of interest, such as forgiving and desiring vengeance.

Part 1 – Understanding Grudges via Semi-Structured Interviews and Thematic Analysis

When very little is explicitly known about a topic, it is best to begin the research process at the bottom and work your way up, generating theory from data (Haig, 2013). Despite this fact, much of modern psychology has taken the opposite approach, working from the top down in the sense of generating and testing hypotheses derived from unsubstantiated theories (Haig, 2013). In light of this, I decided to take an inductive approach to understanding what it means to hold a grudge, rather than attempt to fit the data into a theoretical framework. Because there has been no prior research of this type on holding grudges, my research question was quite broad. Specifically, I set out to answer the question: "What does it mean to hold a grudge?" through semi-structured interviews and subsequent thematic analysis.

Methodology

Semi-structured interviews. Semi-structured interviews are a valuable research tool because of their versatility (Kallio, Pietila, Johnson, & Kangasniemi, 2016). There is a give-and-take between researchers and participants that allows for improvisation or adjustment when desired (Kallio et al., 2016). A researcher generates questions beforehand based on previous knowledge, and creates an interview guide. This guide provides a structure for the interviews but does not need to be strictly followed. In fact, during the interviews, researchers are encouraged to explore ideas that may not have been explicitly outlined in the interview guide (Kallio et al., 2016).

Using semi-structured interviews has five phases: identifying the prerequisites for using semi-structured interviews, using prior knowledge, developing the interview guide, pilot testing the guide, and finalizing the guide (Kallio et al., 2016). With regard to the first phase, using semi-structured interviews to develop an understanding of holding grudges is appropriate

because they are especially useful when studying complex and emotionally sensitive issues (Kallio et al., 2016). When developing the interview guide, it is important to draw from previous knowledge on the topic. However, when very little is known about a topic, consulting with experts is an option (Kallio et al., 2016). In developing my research guide, I relied on the expert knowledge of my supervisor and colleagues, as well as information gleaned from my past research endeavours.

When drafting an interview guide, it is also important to ensure that the format of the questions is appropriate. In this sense, questions should be focused on the participant, not leading, clearly worded, single-faceted, and open-ended (Kallio et al., 2016). The goal is to elicit rich information that is spontaneous and a reflection of participants' actual experience (Kallio et al., 2016). After it has been developed, the interview guide needs to be evaluated (Kallio et al., 2016). To do this I used both internal testing, consulting with my supervisor and colleagues to get their feedback on how the questions were phrased and whether they seemed appropriate and comprehensive enough. I also received an assessment from an expert in qualitative research, who provided invaluable advice on how best to approach the interviews. After completing these four steps, I finalized the interview guide.

Thematic Analysis. Thematic analysis is about recognizing and reporting patterns in data. It is flexible because it is not tied to any theoretical framework, and can thus be applied in a variety of research contexts (Braun & Clark, 2006). Generally speaking, thematic analysis consists of generating codes and themes based on patterns perceived in qualitative data (Clarke & Braun, 2017). Codes refer to data units that are deemed both interesting and relevant to the research question. Themes are larger patterns of meaning generated from codes that have shared meaning. Themes help yield an overarching analytic structure. This analysis is based on

identification, description, and interpretation of key aspects of the data.

Process. Braun and Clark (2006) outlined the best practices for conducting a thematic analysis. They identified six stages: becoming familiar with the data, generating initial codes, looking for themes, reviewing themes, defining themes, and reporting. The first stage, becoming familiar with the data, includes transcribing, reading, and re-reading the data while noting initial ideas that jump out. The second stage, basic level coding, occurs when one systematically codes across the entire dataset, selecting data that relates to each code. Next, one searches for themes within the codes, then reviews the themes to see how they relate to earlier stages of the analysis. The penultimate stage occurs when the researcher refines the specific aspects of the themes, clearly defining each one. Finally, the researcher reports the analysis, selecting key aspects of the data to include in the write-up. Generally speaking, as one progresses through the stages, the analysis becomes less descriptive and more abstract (Attride-Sterling, 2001).

Network analysis. Thematic network analysis is a tool for organizing and creating a hierarchy of themes (Attride-Sterling, 2001). It is a web-like visualization of how themes are constructed and how they interrelate. One starts with basic themes, taken from the text, then moves up to organizing themes, which cluster groups of basic themes into more abstract and synthesized groups. Organizing themes are then grouped into global themes, which together summarize the most important aspects of the research question, telling a story about how the researcher cohesively interpreted the data. It is possible for one thematic analysis to have more than one thematic network (Attride-Sterling, 2001). I will report the details of how I implemented these processes when I outline the specific analytic techniques used in this study.

Reflexivity. When conducting qualitative research, it is important to situate oneself in relation to the research question being asked. Reflexivity refers to critical self-evaluation of a

researcher's positions, as well as acknowledging that these positions may affect how they do research (Berger, 2015). Position can affect access to participants; it can influence interactions between the researcher and the participants and subsequent information they choose to divulge (Berger, 2015). Finally, a researcher's position contains his or her worldview and background, which impacts how he or she constructs the world. These personal beliefs factor into the kinds of research questions one asks and the lens through which data is analyzed and interpreted, potentially impacting the findings (Berger, 2015).

Personal background. Researchers can be classified as either studying something they are familiar with or something they are unfamiliar with. In the case of this study on holding grudges, I am in a position of familiarity on two fronts. As a, primarily quantitative, researcher of interpersonal conflict, I have come to develop a certain idea of what it means to hold a grudge. Academically, my preconceptions about holding grudges have been partly informed by my past research and the theorizing of my supervisor and collaborators. As an individual who has experienced interpersonal conflict I am also personally aware of having held grudges to a certain degree. However, I feel as though I am not currently harbouring any grudges, which I think of as active emotional and cognitive states.

Based on these factors, my personal definition prior to conducting this research was that a grudge is an active state of negative affect involving unfavourable feelings toward the person perceived as having committed the offence resulting from cognitive focus on the offence, including habitual rumination about what happened, why, and its effect. Throughout the process of conducting and analyzing the interviews I attempted to set this personal bias aside and approach the topic as agnostically as possible.

Method

Participants

I recruited participants from York University's Undergraduate Research Participant Pool. I decided beforehand to limit recruitment to those currently holding a grudge. This was so they would be able to identify a grudge and speak about it informatively. In order to ensure this was the case, I restricted enrolment in the study to students who responded affirmatively to the question "Are you currently holding a grudge against someone?" This question was part of a larger intake questionnaire students complete at the beginning of the school year. I did not specify how many participants I wanted to recruit beforehand, instead relying on monitoring and theoretical saturation. Guidelines suggest that theoretical saturation is reached at approximately 12 participants and that 15 is an acceptable best practice (Guest, Bunce, & Johnson, 2006). My own experience aligned with this assessment. After conducting 15 interviews I noticed there were not many new themes emerging. I decided to conduct several more in order to ensure that this was the case. My final sample was 20 participants, 5 men and 15 women, ranging in age from 18 to 41. The majority of participants were of South Asian descent (n = 11), and the remaining were East Asian (n = 3), Caucasian (n = 3) and African Canadian (n = 3). In exchange for participating, participants received course credit.

Materials

Interview guide. When constructing the interview guide (see Table 1), there were some important things that I wanted to touch on. First, I wanted to know what holding a grudge meant to participants in a general sense. In terms of a specific grudge, I wanted to find out what led to the grudge, how participants felt immediately after the offence was committed, how they currently feel, and what they think will happen in the future.

Table 1
Interview guide

- Thank participants for agreeing to be interviewed
- Reiterate that all their responses will remain anonymous, and that they can skip any questions they would prefer not to answer or withdraw from the interview at any time
- Introduce them to the topic – interested in developing a better understanding of grudge holding.
- Let them know they were selected to be interviewed because they're currently holding a grudge
- Explain that a grudge usually begins with an actual occurrence that leads to negative feelings

Start by asking what a grudge means to the interviewee.
Ask them to think of a grudge they are currently holding against someone

1. What were the circumstances and occurrences that led to the grudge?
    - What happened?
2. Who is the grudge against?
    - What is their relationship to the person?

Questions asking about what occurred immediately after the inciting incident:

1. What was going through your mind when this happened?
2. How did it make you feel?
3. How did you react – what did you do?
4. What was your relationship like with the person before this occurred?

Questions about current state of mind:

1. What is your relationship with the person like now?
    - Probe why they think their relationship is this way now
2. What are your current thoughts about what happened?
3. How do you currently feel about what happened?
    - Do they see it any differently than they did at the time it occurred?
    - How so?
    - If yes, what do they think caused this change?
4. How are you treating that person now?
5. How is the person treating you?
6. If you could go back, would you do things the same way?
    - Why/why not?
7. Do you think the person knows that you're holding a grudge?
    - If so, was there any effort made on the person's part to make amends?
    - If not, why is the person unaware of the grudge?
8. What have you *gained* from holding this grudge? What have you *lost*?
9. How much control do you have over this grudge?
10. Would you want things to go back to the way they were before this occurred?
11. What's your wish for the future of the relationship with this person?

- Finish up by asking if they have any further thoughts about what a grudge means
- Thank them for contributing to the research

Transcripts. All interviews were audio recorded and transcribed verbatim, including all disfluencies. Any portion that was indecipherable was bracketed to indicate that the incorporated text was an approximation. The average length of the interviews was 46 minutes.

Procedure

I personally conducted all the interviews in-person in my office. Before starting, participants were given a consent form to read and sign. The form assured them that their data would be kept completely anonymous and stated that they could refuse to answer any questions they did not want to answer and were free to leave at any time without being penalized.

When participants arrived for the interview, I provided them with a brief introduction, ensuring that they were aware they did not have to answer any questions that made them uncomfortable or that they simply wished to skip. I informed them of the study's goals: to develop a better understanding of what holding a grudge is, including the thoughts, feelings, and behaviours that accompany it. First, participants were asked to provide their own interpretation of what holding a grudge means. Then they were asked to recall a specific grudge they are currently holding against someone. Questions about the grudge inquired about a variety of different factors, including how they thought, felt, and behaved when the incident occurred, as well as how they currently think, feel, and behave.

I did not follow the interview guide strictly, instead allowing participants to take their responses to the questions in whatever direction they chose. Doing so allowed them to focus on factors that were most important to them. I encouraged them to elaborate on their responses and attempted to interject as little as possible. Although we often covered the discussion topics in the interview guide unprompted, I kept track of what had been covered and what had not, asking the prepared questions as necessary in order to ensure that we touched on each topic.

Thematic Analysis

I based the process of conducting this analysis on Braun and Clark's (2006) recommended step-by-step procedure. I went through each of these steps for every individual interview before taking an overarching lens to the interviews collectively.

Individual transcripts.

Becoming familiar with the data. I first became familiar with the data through the process of transcribing the interviews. In order to become even more familiar, I read through each transcript before making any notes or attempting to generate any initial codes. I then broke each transcript down into chunks of data based on separate ideas or topics that were discussed during the interview. After breaking down the transcript, I started to jot down ideas about potential codes and themes.

Basic level coding. After each interview had been divided into chunks of data, I generated basic level codes to capture what was being said by participants in each data chunk. I did this using a combination of participants' own words and keywords I developed based on a synthesis of their words. I generated a number of basic level codes for each interview.

Searching for and reviewing common themes within codes. After generating the basic level codes, I looked for common themes among them. I categorized similar themes together and classified them based on more abstract themes that captured the essence of the category. This process was iterative, such that, as more basic codes were added to each theme, the themes themselves were refined and reclassified based on the associations between basic codes and how they were linked to one another. Codes that were not informative or relevant were discarded and those that were pertinent were retained to form the final themes. As expected, the themes became more abstract as the analysis progressed (Attride-Sterling, 2011).

Refinement and definition. After categorizing and refining the basic level codes and organizing themes, I refined each of the themes into global themes and ensured that they were clearly defined and properly exemplified the codes and subthemes they represented.

Collective analysis. Next, I took the basic codes, organizing themes, and global themes from the individual transcripts and conducted an overarching analysis. Codes that were highly prominent across a number of interviews were retained, whereas those that were not prominent were discarded. I then re-categorized the retained codes based on their associations. There were also various new themes and categories identified during this phase of the analysis that were not prominent in the individual transcript analyses.

Results

All the incorporated quotes were taken directly from the transcripts. The grammar has not been corrected. Ellipses with two dots (i.e. "..") indicate a pause on the part of the participant, whereas ellipses with three dots (i.e. "…") indicate that a portion of the quote has been omitted.

Description of the data

How did participants define holding a grudge? There was considerable overlap in the ways that participants defined what a grudge was. Many mentioned negative affect, such as anger or disappointment. One participant in particular defined a grudge as "feelings of resentment and a bit of hatred towards someone to some scale. But not to a point where you would wish something bad would happen to them." Other commonly noted themes were: not wanting anything to do with the person, and thinking badly of him or her. Participants also believed that either an inability or unwillingness to move on was a key component of holding a grudge. For instance, according to one participant:

"Holding a grudge is probably like keeping a problem that happened between you

> and someone else a long-term thing. Like just not hearing both sides of the story … You just want to hate on the person forever or not even have any communication, contact with that person."

Another participant stated that:

> "To me it basically means that I constantly think in my head about how somebody has done me wrong. I can't let it go ... I either needed to in the past … or still need to in the future next time I see this person ... say something to rectify it."

Types of interpersonal offences. Participants reported a wide variety of offences that led to the grudges they were currently holding. Interestingly, the majority of reported offenders were friends of the participants (n = 13). For instance, one girl recalled how she had drifted apart from her best friend and how her friend's lack of effort and reciprocity were very hurtful:

> "We were high school best friends. I went away for university. After 4 years, I graduated and came back and so now it's like 'I'm here, let's hang out' and she's too busy … I was once a priority for her, now I'm pushed at the bottom of the list."

Another participant recalled how her friend had hacked into her Facebook account and been monitoring her private messages for years:

> "She did something behind my back that was really messed up … she didn't really even try asking for forgiveness. She kind of just denied the whole thing or thought what she did was right. And yeah I guess I've been angry with her for the past 3 years."

Four participants indicated that the grudge they were discussing was committed by former or current romantic partners. One of the participants reported that she was

holding a grudge against her current long-term boyfriend. Their relationship had started out being somewhat rocky and events transpired that she was unable to let go of:

> "the first year we were dating we were on and off for so long, and I think I still remember those things even when I'm with him now. It's like I try not to, but they made me feel a certain way … I feel like I'm holding a grudge, I just don't say that I'm holding a grudge. It's just kind of there."

Another recalled how his former girlfriend's behavior was something he couldn't seem to get over.

> "It's just complicated because it's the emotional factor and mental and even sometimes physical abuse at some points. Like her slapping in the face for so-called cheating allegations even though there wasn't anything, and the experiences of it being like, where it seems like no matter what I did it wasn't good enough and it will never be good enough"

Two participants identified family members as the transgressors. One was holding a grudge against her uncle who was passing judgement on her lifestyle choices:

> "He's very old fashioned Pakistani … and he basically came out and said like 'you guys are spoiled, you guys are out of control' because we haven't, my sister and I, haven't decided to get married yet and we're older … because I'm the eldest, I felt that that was an attack toward me. So yeah, ever since that time, I hate that person. I hate my uncle. I don't want to see him. I don't ever want to see him."

Two other participants talked about grudges they were holding against coworkers. For instance, one was holding a grudge against a former colleague who had humiliated him in front

of the entire company:

> "There was a job that I was let go for … and there was someone who … knew that I was being let go and for some reason thought that it was okay to instant message everyone in the company that I was being let go at that time. So as I'm being let go, everyone's turning around, staring at me as I'm leaving instead of just saying 'oh, he was let go, he wasn't right for the position', but she felt the need to inform the entire floor."

Final themes

Overall, the organizing themes were classified into six, more abstract, global categories. These six global themes were: (1) the need for validation of one's emotions and oneself as worthwhile, (2) a sense of moral superiority, (3) an inability to turn the thoughts and emotions off, (4) a sense of latency until triggered, (5) severing ties, (6) and effects on future expectations (see Table 2).

Need for validation. All participants expressed a need for personal validation in one way or another, whether it was of themselves as a person or their emotions after the transgression. There were three specific forms of validation participants sought: validation from the transgressor, validation from others, and validation from themselves.

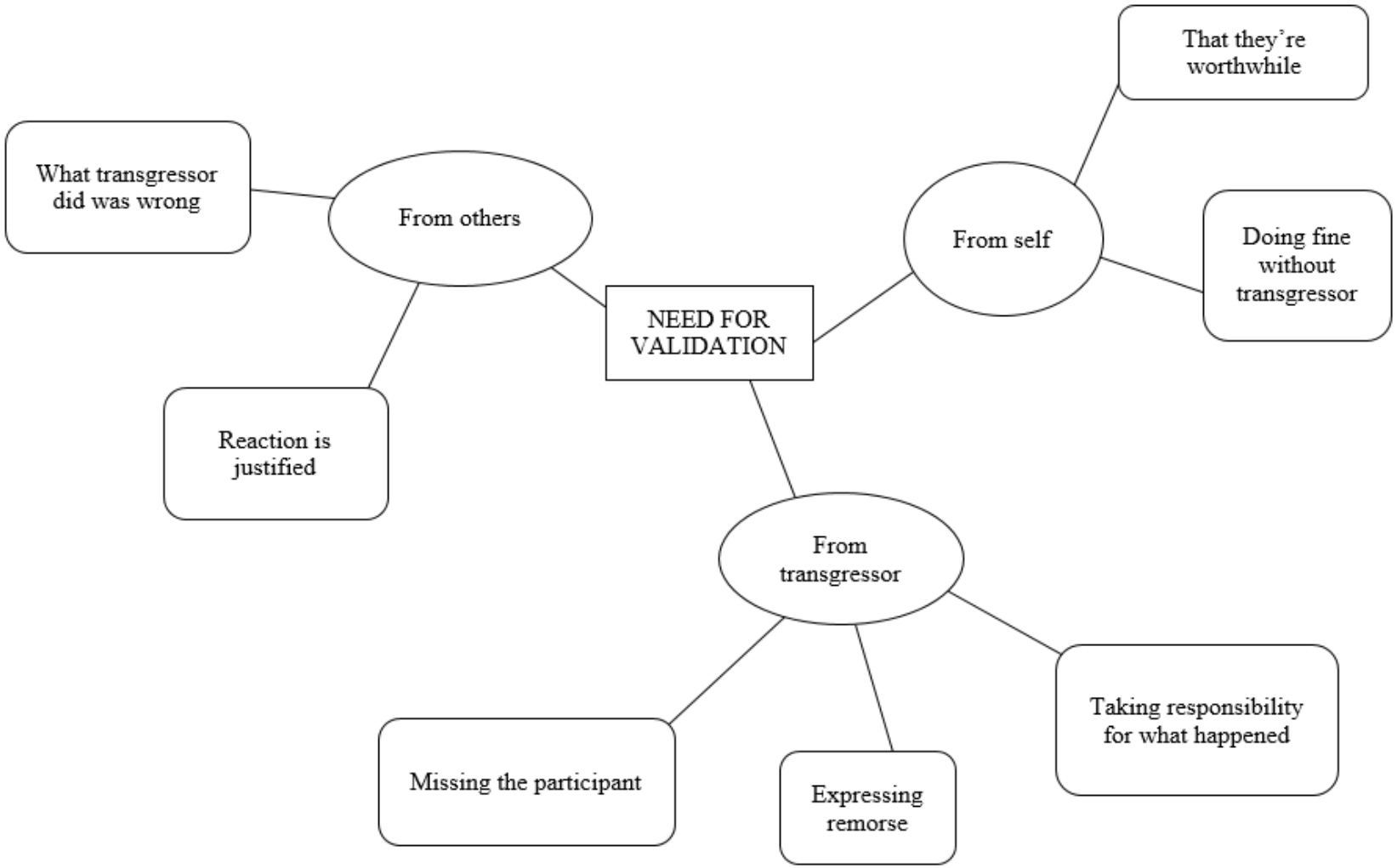
Validation from transgressor. The first form of validation participants reported needing was validation from the transgressor. This refers to their desire for the person who hurt them to take responsibility for doing so and to recognize that he or she had done something wrong. In many cases participants felt as though transgressors thought they had not done anything wrong. Transgressors' lack of personal accountability was invalidating through the implicit denial of committing a transgression and harming the participants. Participants felt that having

Table 2
Breakdown of global, organizing, and basic themes

Holding a grudge		
Global Themes	Organizing themes	Basic Themes
Need for validation	From themselves	• Worthwhile and doing fine
	From others	• Reaction justified • Transgressor was wrong
	From transgressor	• Taking responsibility • Expressing remorse • Worse off without participant
Moral superiority	Transgressor a bad person	• Not who participants thought they were • Unlikeable and irredeemable
	Righteousness	• Entitled to be angry • Transgressor's feeling unfounded
	No ill-will	• Participants aren't those kinds of people • Don't want anything bad for transgressor
	Transgression incomprehensible	• Inexcusable • Cannot understand • Would never act that way
Inability to let go	Attempts to control	• Distraction • Suppression
	Just there	• A presence • Not as intense anymore • Not going away
	Competing thoughts and emotions	• Want to let go but can't • Feel immature • Miss yet dislike transgressor
	Intrusive thoughts	• Unintentional rumination • Consuming • Uncontrollable

Latency	Time and Introspection	• Can deal with negativity • Gain perspective
	Acceptance	• Have gotten used to it • Just part of their lives • Adapted to the situation
	Triggers	• Negativity easily rekindled • Can be almost completely reinstated • Brought up by reminders
Severing ties	Cutting out	• To punish • To protect themselves • To gain upper hand
	Better off	• Happier, more peaceful • Replaced transgressor
Expectations of the future	Lost trust	• Learned lesson • More guarded • Don’t trust others • Expect the worst
	Able to overcome	• Will move on in time • Personal success helps

Figure 1
Need for Validation Network



transgressors take responsibility for their actions, and actually understand why what they did was hurtful, would make them feel somewhat better. For instance, one participant said: “Maybe if his words were to translate into actions and I were to feel like he’s actually sorry. Or he … understands how his actions affected me. Then maybe I’d be more appreciative.” They indicated that taking responsibility in this way would make them feel somewhat better, but would still not necessarily forgive the transgressor. For example, one participant stated how she might feel better but would still not want anything to do with the person:

> “I still wouldn’t talk to her. But maybe I won’t be as mad because I feel like a part of my anger is coming from her not acknowledging it. Like her not accepting what she did, that’s why I’m so mad. But I definitely wouldn’t be friends with her or anything like that. But I would be less mad.”

Another participant remarked:

> “There comes a time in your life where you have to take ownership of certain things you’ve done … at the end of the day you have to own up. So I don’t really care too much about people that … won’t take responsibility for their mistakes or their actions.”

In addition to taking responsibility, participants wanted transgressors to express remorse for what they had done and acknowledge that they had made a mistake. This was, in part, linked to the desire for transgressors to express that they missed having the participants in their lives and that they were doing poorly without them. Some participants felt good, or even smug, when the transgressors reached out and tried to re-establish contact. When recalling how she was still upset with an ex-boyfriend for betraying her with another woman, one participant said “I want him to miss me and be like ‘Oh my god, I messed up’ … I don’t really want anything with him, I

just want him to be like 'Wow, I messed up.'" Another participant, when asked what helped her stop dwelling on the transgression so much, attributed it to knowing that the person missed her:

> "It was knowing that she missed me. She wanted to know how I was doing, and I think that made me happy. That made me happy because I felt like, even though we're not friends, she still has some kind of feelings for me. It wasn't that easy for her. Because she made it seem like it was."

Validation from others. Participants also reported that they frequently sought validation from outside parties. They wanted reassurance that their reaction to what the transgressors had done was reasonable and justifiable, that they were right to feel upset and angry, and that others would have reacted in the same ways. These affirmations typically came from individuals who were close to the participants, such as friends and family. Interestingly, participants indicated that even if they felt as though they were simply being humored, receiving this validation still helped them feel better. When asked in what way talking to friends about what happened helps, one participant said:

> "Just comfort I guess. Just that other people get it, and when I explain to them they get my perspective. They'll be like 'Yeah I understand where you're coming from' and they just agree with me … I guess it's just.. reinforcement that I deserve to be this mad. Like it's okay. It's normal."

In regard to discussing the transgression with her sister and her mother, another participant said: "I just feel mirrored. I feel like my feelings are valid … I was like okay, it's okay for me to feel angry about it."

Validation from self. In addition to needing validation from the transgressor and others, participants felt the need for personal validation. This refers to the idea that they want to prove to

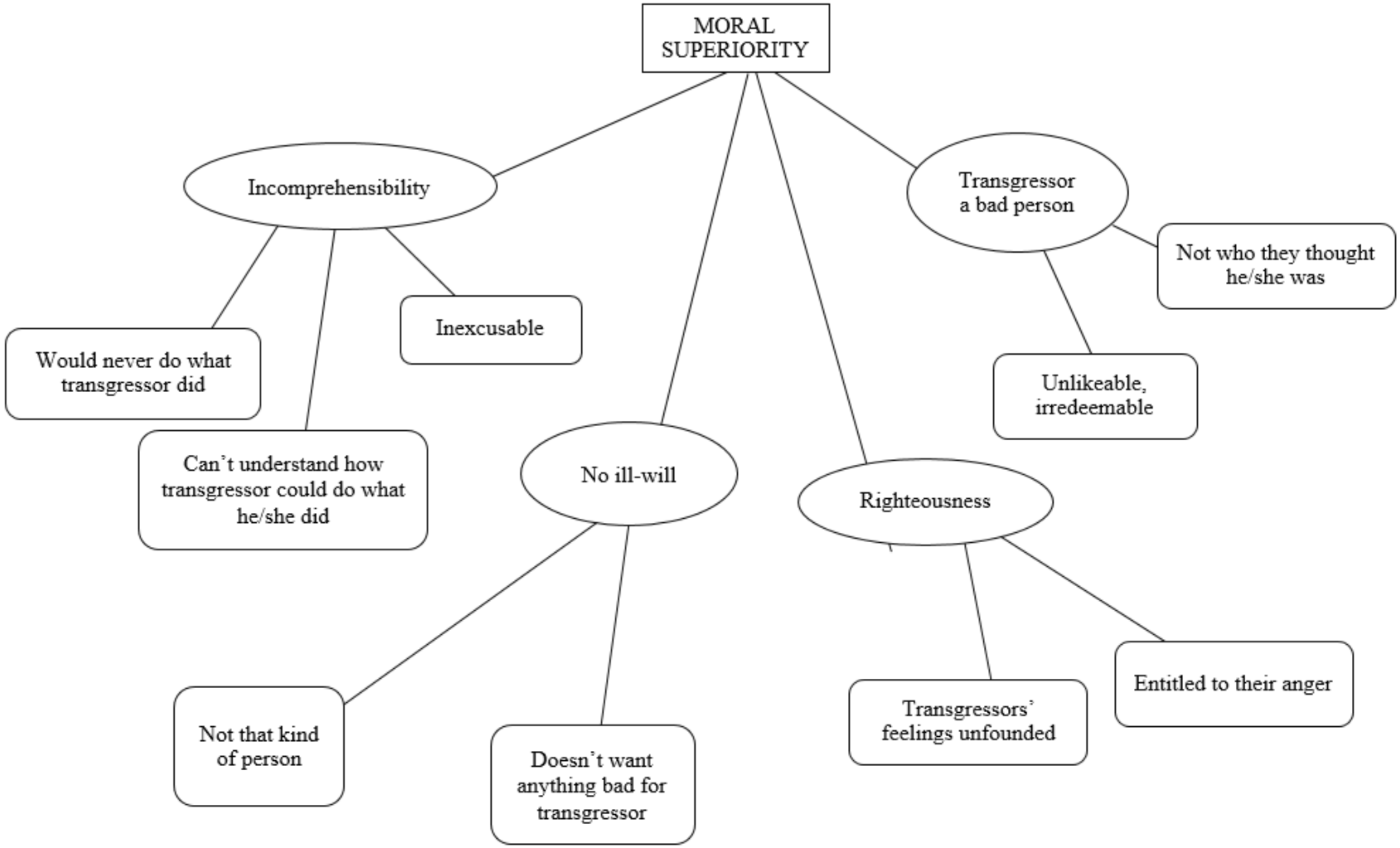
themselves that they are worthwhile people in spite of what the transgressor did to them. One participant who felt like her self-worth had been challenged by the transgression stated: “I feel like this person has put me in a place where I feel like I need to prove myself. So I constantly deal with the issue of wanting to prove myself.” This manifested in the general desire to succeed and do better in life than transgressors, whether in terms of participants’ careers or personal lives. For example, one participant said: “I want to do better than him in life and … I think I’d rather see him do worse than me.” Participants reported this desire even if they knew that the transgressor would never actually know how they were doing. They also expressed wanting to prove that they were doing fine without having the transgressor in their lives, either at all or to the same degree.

Moral superiority. Participants expressed a sense of moral superiority over the transgressor, such that they perceived themselves to be better, more moral people. One person compared how he always likes to see the good in people but cannot in the transgressor’s case because of how manipulative he can be:

> “I always try to see the better things in people … I always try to put things to the side and try to be open to people and see what they have to offer and see the good in them no matter what they did in their past. But this situation’s different because it’s someone who puts on the act while they’re manipulative and deceitful.”

Righteousness. More specifically, participants felt righteous in their anger, and believed that any negative sentiment on the part of the transgressor was invalid. For instance, one participant said: “I feel like I have more of a right to kind of be angry at them rather than them … have any negative feelings towards me because they did me wrong, it wasn’t the opposite way.” Another said: “I feel like I have the right to hold it [the grudge] … I don’t feel like anyone

Figure 2
Moral Superiority Network



could tell me that I'm in the wrong for holding this grudge because I feel like I deserve it." A third participant recalled how she sometimes feels sad when reminded of the transgressor, but it is quickly replaced with indignation:

> "Whenever I see something that reminds me of them I do get hurt and I do get sad and I just think about if it's worth it, but then I kind of have to.. just get angry all over again and realize that I have every single right to be not friends with them anymore."

Transgressor a bad person. In a similar sense, participants typically developed a new perspective on the transgressor. They felt as though he or she was a bad person and was unlikeable. There was some variation in whether participants felt as though this was a universal truth. Some conceded that there were still positive aspects of the transgressor, like he or she was a good friend to others or an overall generous person. In contrast, others were unable to see any good in the person and felt that he or she was completely irredeemable. For instance, one participant said:

> "He brings out the worst in everyone … he just turned into a demon. Honestly, that's the only way I can understand.. It's like … he just turned crazy after that … I don't know, he's just so sneaky and.. I don't know, a liar."

According to another participant:

> "I just categorize him under not a good person. There's so many examples I could give you as to why he's not a good person. Like overall, not a good person. I'm sure he's a great son, but like there's so many times where it's just like 'you're not trustworthy, and like manipulative'"

A third participant stated:

> "I've been friends with them for a long time and it's just been negative energy for that whole time and I never really noticed it. I was very oblivious to it … I just thought they were good friends but after I stopped being friends with them and realized the person I'd become I realized how toxic they were in my life."

Incomprehensibility. Another aspect of participants feeling as though they are better people than the transgressors was evident in their expression of incredulity over how the person could ever do what they had done. One person said: "Whatever his perspective was, it allowed him to do whatever he did, and to me it was wrong. So I don't think I would understand his point of view. But that's just my feeling. It's what I feel now." Participants also indicated that they would never do what the transgressor did. In the words of one person, for example: "I wouldn't do that with or to someone, so I don't understand. There's no reason for it. They tried to give me a reason but I just wouldn't buy it." Most felt that transgressors did what they did due to their own personal shortcomings. Although some participants were able to take the transgressor's perspective, they still felt that it was inexcusable, implying that he or she was an immoral person and that they, in contrast, were morally superior. For instance, one person said "I kind of understand maybe where they came from, but … I would never do the same."

No ill-will. Surprisingly, despite their righteous anger, negative evaluations of the transgressors as people, and inability to understand how the transgressors were able to do what they did, almost all participants reported that they did not have any ill-will toward them. This meant that, although participants harboured these negative evaluations of the transgressors, they did not want anything bad to happen to them and they would never intentionally seek revenge. Many cited the reason for this was because they were not that kind of person, elevating their moral character to a higher plane. For example, when asked if they had thought about trying

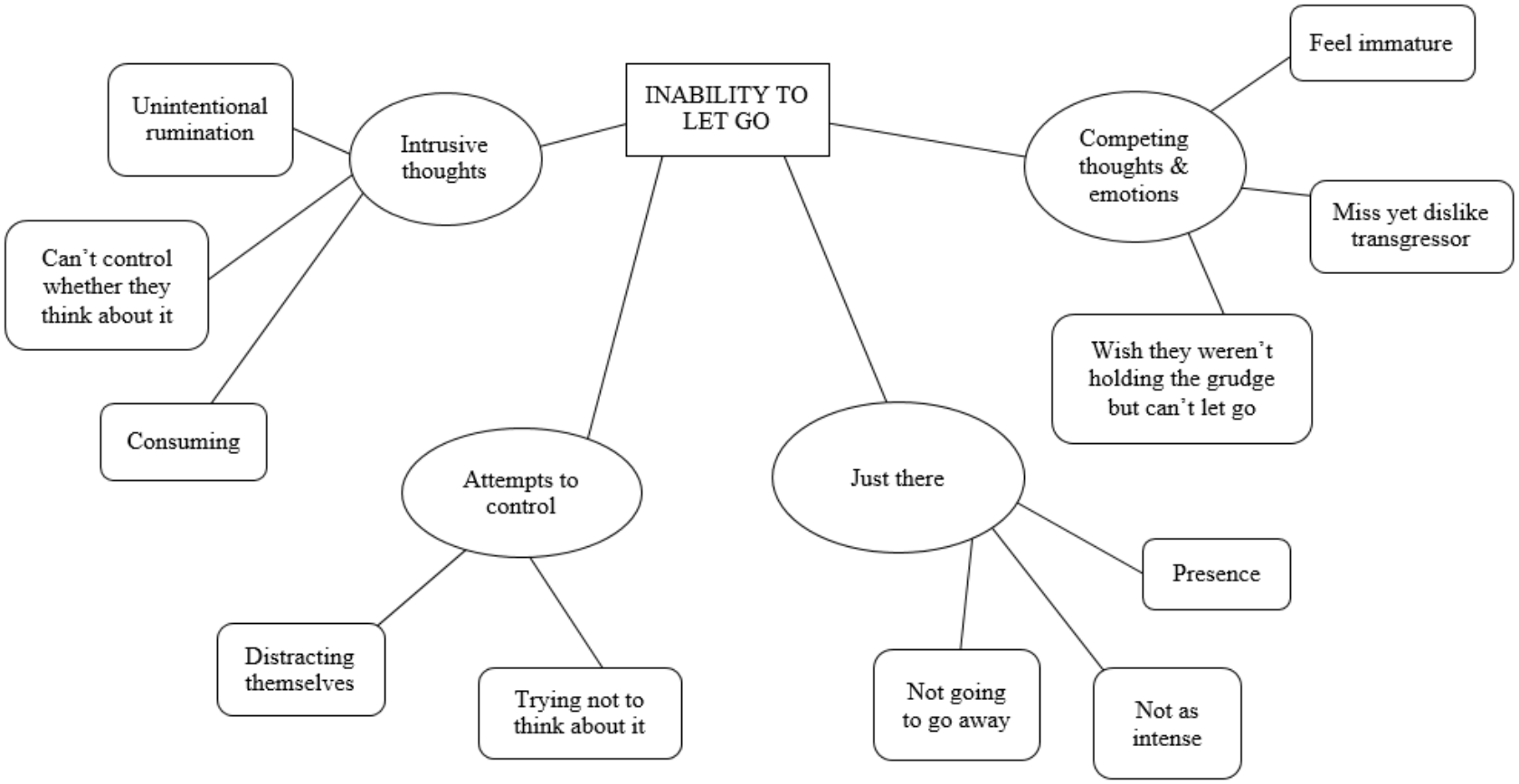
to get back at the transgressor, one participant said: “I would never do anything, I’m not that kind of person … I don’t think I would go out of my way to do anything. That’s just bad karma.” Another stated: “It’s not in me … I don’t like to hurt people. I’m not someone who would revenge on anyone … that’s just not in my characteristics.” One person emphatically denied the possibility: “No. No, never. Never … I would never, ever do that, never in any way. That’s not even.. a possibility in my mind. I would never do something like that.” Finally, one participant indicated that, as the poet George Herbert (1651) wrote, for her ‘living well is the best revenge’:

> “Oh no no, I am not that type of person … for me the best revenge is to succeed. To succeed and to get married … to graduate from university … That is basically it. To succeed, to show my picture on Facebook … basically that is my revenge.”

Inability to let go. Another common theme participants reported was their inability to “turn off” the grudge. Although some individuals never intentionally thought about the transgression or transgressor, others reported that they intentionally ruminated so they were not tempted to forgive or let go of the issue. This indicates a desire to maintain the grudge. For example, one participant spoke about how she sometimes feels tempted to forgive and thus intentionally thinks about about what happened, saying that: “in order for me to stop missing them I would have to remind myself why I’m not talking to them in the first place.”

Just there. One common sentiment participants reported was the feeling that the grudge was “just there”. They talked about it like it was just a fact that the grudge existed and was part of their lives. Although they did not feel the same intense emotion as when the transgression first happened, the grudge itself had its own presence. For example, according to one participant: “it’s just something I have to deal with. It doesn’t really affect me in my day-to-day life anymore but it’s just there. Like it’s always going to be there.” Another participant felt like she was able to

Figure 3
Inability to let go Network



control a small portion of it: “You control probably like 10% of it. The rest is just there. I can’t get rid of it. I feel like it’s always going to bother me. It’s always going to be there.” Another felt like her inability to let go and the fact that the grudge was “just there” was holding her back as a person.

> “It’s just there. It’s still there, like if they [the transgressors] were to do something it would come back, even if they’re not my friends anymore.. it would come back. The thought of that is just so annoying because I just want to let go of it and I just want to focus on myself and move forward. And holding this grudge is making me so annoyed ‘cause it’s just holding me back from developing as a person.

Similarly, another participant stated:

> “I personally don’t really think you control whether you want to hold a grudge or not. You know what I mean? It’s just like I’m not doing it out of spite, it’s just there. So I don’t think you really control holding grudges.”

Intrusive thoughts. The majority of participants also reported that they often experienced intrusive thoughts about what happened, despite attempting to suppress these thoughts. One participant recounted: “If I don’t want to think about it I’ll start thinking about something else, but the fact that it comes in my mind is annoying and sometimes I can’t control it. Sometimes it overpowers all the other thoughts.” Sometimes these thoughts could come out of nowhere and other times there were obvious triggers, such as hearing about the transgressor. One participant stated:

> “Randomly if I think about it, I just feel this negative energy. I just feel angry and sad and I don’t want those emotions … You just have negativity that you don’t want and you can’t really control because you can’t make it go away”

Other participants recounted their experiences with the invasiveness of the grudge, with one participant stating:

> "I don't like it [the grudge] at all. I don't like it one bit. I feel it's consuming me. It's taking more away from me. And yeah it gives me a sense of who I'm not, but it's at the expense of just losing my mind."

Another expressed a similar experience of feeling consumed by the grudge:

> "I don't want to think about it, but it takes over and then I start thinking ... he affected my whole life basically. So consumes me … I don't want to think about it. I wish I wasn't affected by it"

Attempts to control. When experiencing these intrusive thoughts, participants recounted how they would try to control and minimize how much they ruminated about what happened. A common technique was attempted distraction, whether by listening to music, watching television, or going for walks. According to one participant:

> "I go for a walk sometimes, I'll do little things. Go on the internet. I'll.. focus on my school. I'll just try to get my mind off of it. In some way where I can feel what I'm doing is more fulfilling than to be consumed by this."

Another participant also expressed trying to ignore her thoughts: "I started going out whenever, not thinking about it. And it would still bother me but … I just started going out with friends and trying to ignore and just let it be." Whereas, a third participant recalled trying to shift focus to other priorities: "I tried not to think about it, keep myself distracted, understand that I have bigger priorities I have to deal with right now." However, even when trying to minimize how much they were thinking about it,

participants found that they were often unable to control their thoughts or emotions. Many felt as though the grudge was like an external entity that had control over them.

Competing thoughts and emotions. Participants also experienced competing thoughts and emotions about the fact that they were holding a grudge. Many stated that they wished that they were not holding the grudge, and said that if they could snap their fingers and get rid of it that they would do so. For example, one participant stated: "I'm wasting the space in my head on something … that doesn't really deserve my attention." Nevertheless, they felt as though they were unable to just let go. In fact, many participants were able to step back and see their own role in maintaining the grudge, for instance, by ruminating or intentionally talking about it. They also felt silly and immature holding on to it. For example, according to one participant: "It's not really healthy I guess, but.. I kinda feel silly, like a high school drama … it makes me feel immature".

Although some participants reported they felt that the grudge was within their control at times, none were able to simply let it go. For instance, one participant felt as though the grudge was out of her control when she was alone and ruminating, but that she was more in control of it when discussing it with others:

> "When I'm by myself, when I'm thinking about it [the grudge], I feel like it's out of my control … when I've had a chance to talk about it, it feels like it's not out of my control … so there are times when I have a different relationship with it in terms of control."

Some participants reported bittersweet sentiment, in that they miss the transgressor and the relationship they had with him or her but also simultaneously dislike the person. One individual reported that she often felt like her expectations were unreasonable, citing her friend's

busy work schedule as a reason for their friendship being a lower priority: “I’m thinking ‘you’re [the participant] being a terrible friend, you’re being selfish’ … I feel like I should be understanding.” However, despite acknowledging this, she still was not able to set aside the hurt she was feeling. Despite acknowledging that they were playing a role in sustaining the grudge and missing the relationships they had with the transgressors, participants were unable to let go of it.

Latency. Although often unable to control their thoughts or emotions, participants reported that there was a certain latency to the grudge, in that its emotional impact would dissipate over time without going away. For instance, one participant said:

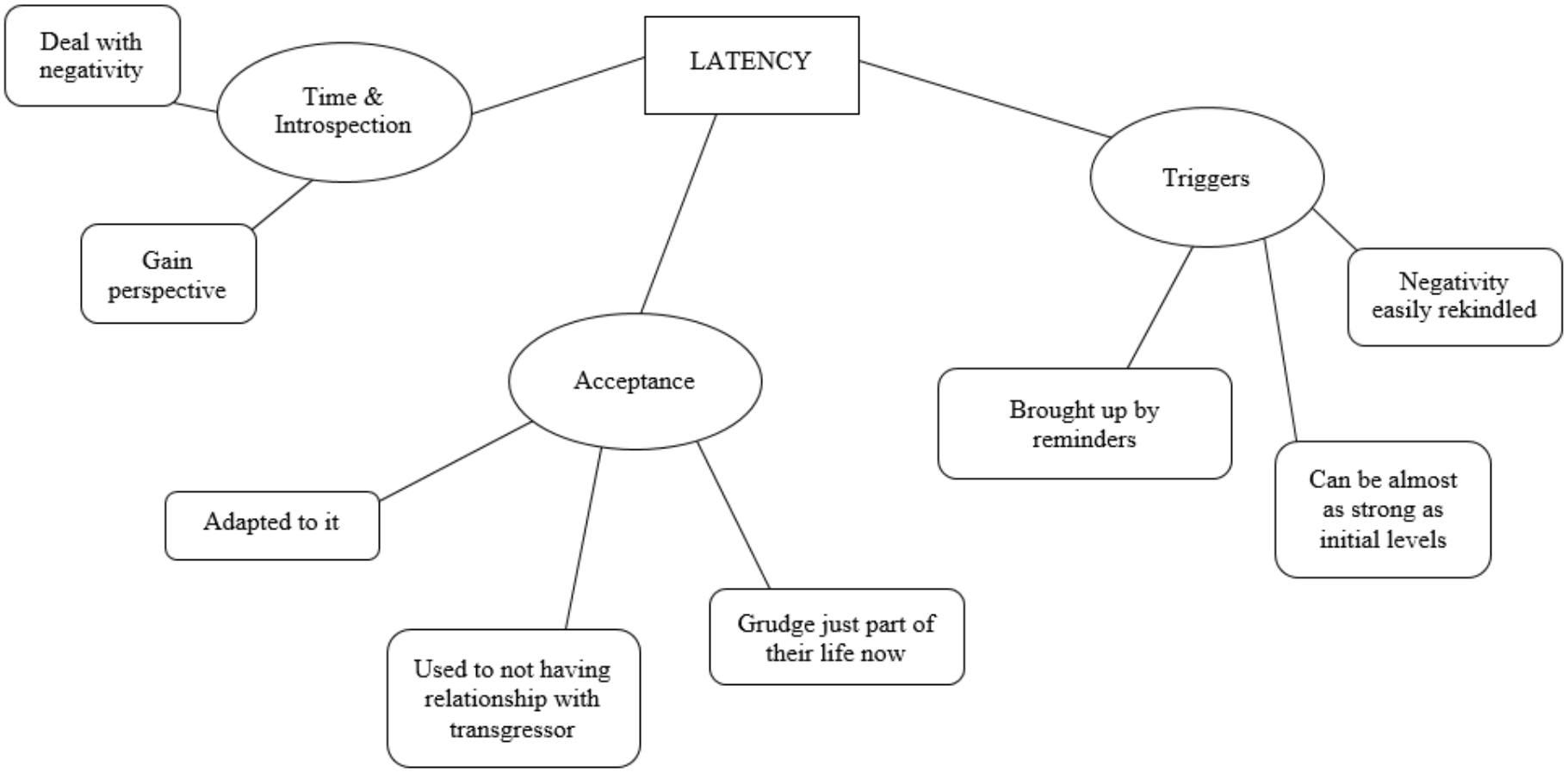
> “I can still feel the anger inside of me, but I don’t really have any reaction of it. It just stays there and that’s all, and I don’t really feel much about it anymore.. I don’t really feel it, like I can feel it, it exists there … but it’s not part of me.”

Time and introspection. Time passing and introspection helped participants handle their negative thoughts and emotions, did not eliminate them. In general, participants thought about what happened less over time. One participant stated: “It’s not as devastating as it was at the beginning. So it’s like time heals all wounds.” Similarly, another focused on how she is less affected by the event now:

> “I feel calmer about it. I don’t feel as upset or as hurt by it. I feel more acknowledging that that wasn’t a good situation and that she wasn’t being a good friend to me, but it still hurts a little but it’s not something that really, really affects me that much anymore.”

Another participant recalled how time and circumstance factor into it:

Figure 4
Latency Network



> "Time plays a big aspect into it, as well as growing up and surrounding yourself with people who are way more positive ... it's like you kind of learn to prioritize things and not dwell on things … there's way more important things that you should be focusing on, I think that helps a lot"

Many participants felt as though their lives had evolved and moved on and that having different priorities had helped their negative thoughts and emotions become less salient. For instance:

> "I think with time you have other priorities … for example, these days I'm volunteering at a hospital working with the elderly people and it just shows me as I'm working with them, it's like eventually you get old and everything else doesn't matter anymore, so you just with time, you gain new perspective on things. New experiences and new perspectives that can possibly lead you to maybe hold less grudges against people."

Acceptance. That being said, participants did recognize that the grudges were still in the backs of their minds. However, they were able to accept that the transgression happened and that the grudge was just a part of their lives now, as well as accept that the transgressor was not who they had thought. Overall, there was a sense of having gotten used to or adapted to holding the grudge. For example, one participant said: "You get used to it … you get used to the thoughts and feelings. You learn how to deal with them". Similarly, another expressed how she was no longer directly affected by the grudge: "Now it doesn't really affect me. I don't really care that I have this grudge because I'm not dealing with it anymore." According to these descriptions, participants were also able to set aside what had happened and how they felt about it and not let themselves be as

affected by their negative emotions. When one participant was asked how she felt about the fact that she was holding this grudge, she said:

> "I guess I feel okay about it. I don't feel mad. I think I'm okay with it. I'm okay with having this over my head. It won't ever leave … It's not something that I can forget … It's in my head, but I've kind of learned to live with it. It's an event that happened in my life."

Participants also indicated that they had adjusted to not having the same relationship with the transgressor anymore, whether at all or to the same degree. Essentially, holding the grudge was the new normal state of being for them. For instance, one participant said:

> "I got used to not talking to her anymore. I just got used to not talking to her, to no communication … before I used to talk to everyday, but now maybe that I got used to it, I have new friends now … I have other preoccupations."

Triggers. Nevertheless, even though participants felt that the grudge went into a state of inertia, it could easily be rekindled. They reported a variety of different triggers, such as hearing a certain song, hearing about the transgressor from others, and seeing something that reminds them of what happened. They indicated that, when triggered, the rekindled negative thoughts and emotions could often be almost as strong as when the transgression first occurred. For instance, according to one participant, hearing certain music that reminds her of the transgressor makes her feel sad: "There are certain songs that I remember she loved, and when I hear those songs they remind me of her. And it's a little bit sad." Another participant recounted how:

> "If something happens I just start to process all these things that I'm trying not to process, but then it's just like I go back to things. So I guess I'm still holding on to them even though I'm not vocalizing that I'm holding on to them."

According to another participant, “little things like that … remind me of memories when I had good times with her. Which just makes me upset and pissed off all over again about what happened.”

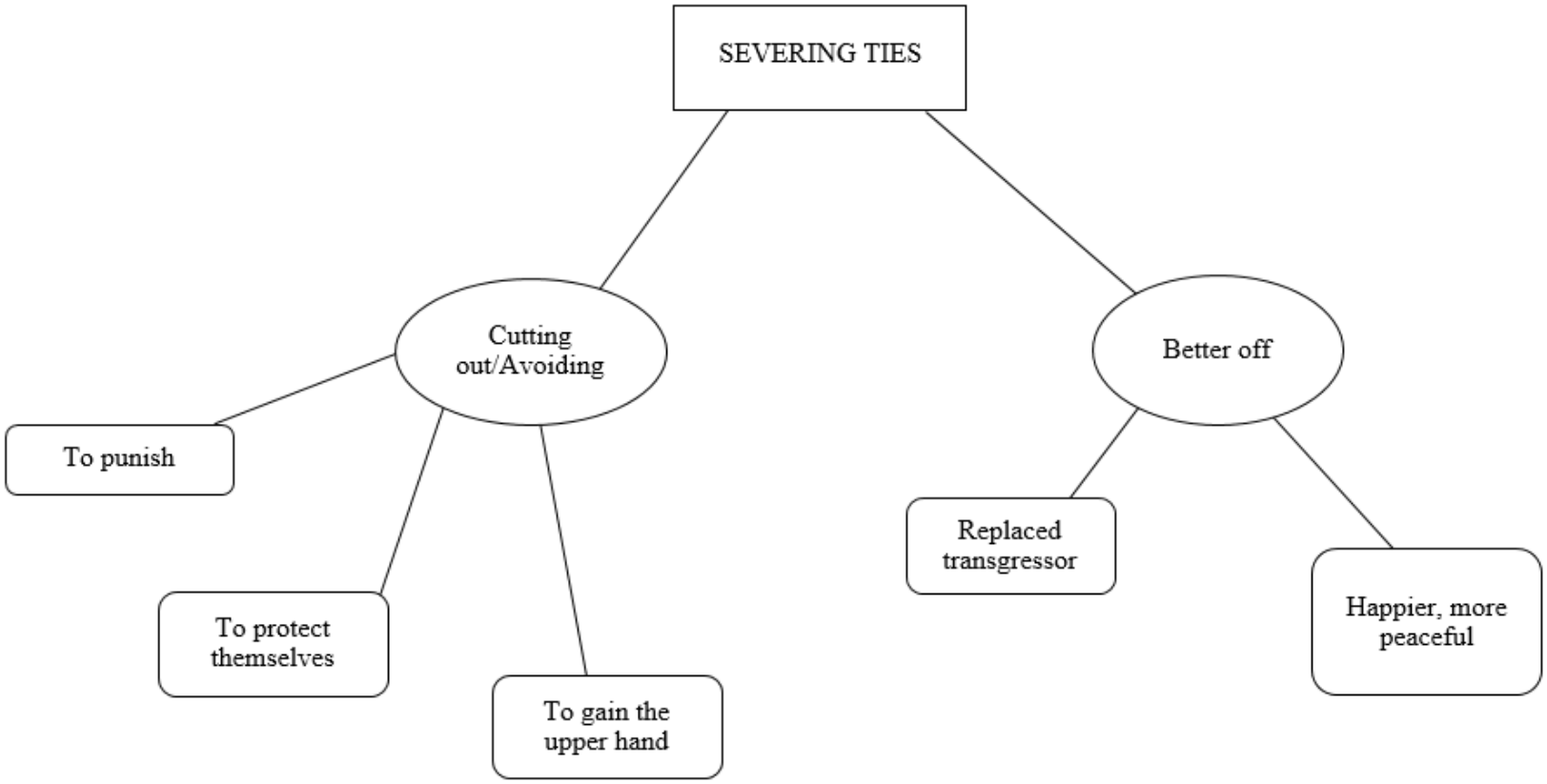
When asked about how the grudge had changed over time, one participant recalled how she felt as though she had gotten over and moved on from what happened, but the transgressor contacted her on Facebook and everything she thought she had moved past was reignited:

> “It just reminded me how much I hate her, how much pain and how much sadness she brought into my life. I don’t think it ever went away. I just thought about it less … it just reminded me that time doesn’t really heal any of this. I’m still really mad and I’m still hurt that she did that and she’s still doing it. So I guess because it came up a week ago I don’t know how to answer your question now because it’s like did time really make a difference because I’m this mad again.”

Severing ties. Aside from the one participant who was currently in a relationship with the person who she was holding the grudge against, all participants expressed that they either had cut the person out of their lives completely or wished that they could. In some instances it was unrealistic to do so, especially in the case of family members.

Cutting out or avoiding. Overall there were three primary reasons for this desire to end or minimize relationships with the transgressors. Some participants wanted to ensure that they were not vulnerable to the occurrence of similar transgressions in the future. Avoiding the person was a way to protect themselves and make it impossible for the transgressor to hurt them again. One participant recounted dreams that she had in which she made amends with the transgressor and allowed her back into her life. She said they were actually like nightmares:

Figure 5
Severing Ties Network



> "Every so often I would have a dream about her trying to get back into my life and I would panic ... that she was trying to get back into my life. So I think unconsciously I don't want her.. I could say to you I miss her, I miss the friendship … but in my dreams … it's almost nightmarish, where.. we've made amends and I'm always thinking 'What the hell am I doing? Why did I let her back in my life, now she's going to ruin it.'"

Another reason for avoiding was to punish the transgressor. Participants felt as though withdrawing their presence was a good way to punish transgressors and make them realize that what they had done would have consequences. For example, one participant felt like blocking all forms of communication from the transgressor was a good punishment, stating:

> "I feel good that I blocked him, that I was ignoring him and that he knows how it feels. It's like you have to teach someone a lesson. I don't know, I'm just so fed up with it. So I feel good, actually."

Finally, the third reason participants wanted to avoid transgressors was to gain the upper hand. They felt like choosing to do so allowed them to regain some of the control they had lost by being victimized. It was a way to assert their agency. For example, one person felt as though blocking the transgressor was a safe way to send a message, stating: "it gave me a way of expressing how I felt without actually doing anything about it or doing something I regret." Another said that she felt good about purposefully ending her relationships with the two people who transgressed against her: "I purposefully ended it. I was like 'I don't want anything to do with you, I don't want to be related to you guys anymore.'"

Better off. After choosing to cut ties with transgressors, many participants felt like they were better off. They reported having more peaceful, less stressful lives and indicated that ending their relationships removed an element of negativity from their lives. When asked what they gained from cutting the transgressors out, many participants felt relief. For instance, one stated: "It felt really liberating. It felt really good." Another reported: "God, a peaceful life. Really because there was just so many other toxic stuff with her. But yeah it was a lot more peaceful after that. I was really happy." Another said that not having the transgressor in her life helps avoid negativity: "I just don't want to talk to her anymore … I don't want any negativity in my life anymore … I don't want any fights and I know her, she is never going to change."

Some participants also felt that the transgressor's behaviour was reflective of a pattern of negativity. For instance, one said:

> "I've just realized that things are better off without him. He just causes trouble … this was like the tip of the iceberg. There were smaller things in the past, but … this guy's trouble and I don't want nothing to do with him, so like I thought it was just best to go no contact with him."

Participants also reported feeling as though they had replaced the transgressor with better things in their lives. For instance, many described how they had made new, better friends with whom they had better relationships. This is not surprising, given that the transgression caused them to see both transgressors and their relationships with them as primarily negative. According to one participant: "I think that my friends replaced her … Other people replaced her. But other people that I know from before. I think it's a feeling of replacement that I have right now." Another participant expressed a similar sentiment:

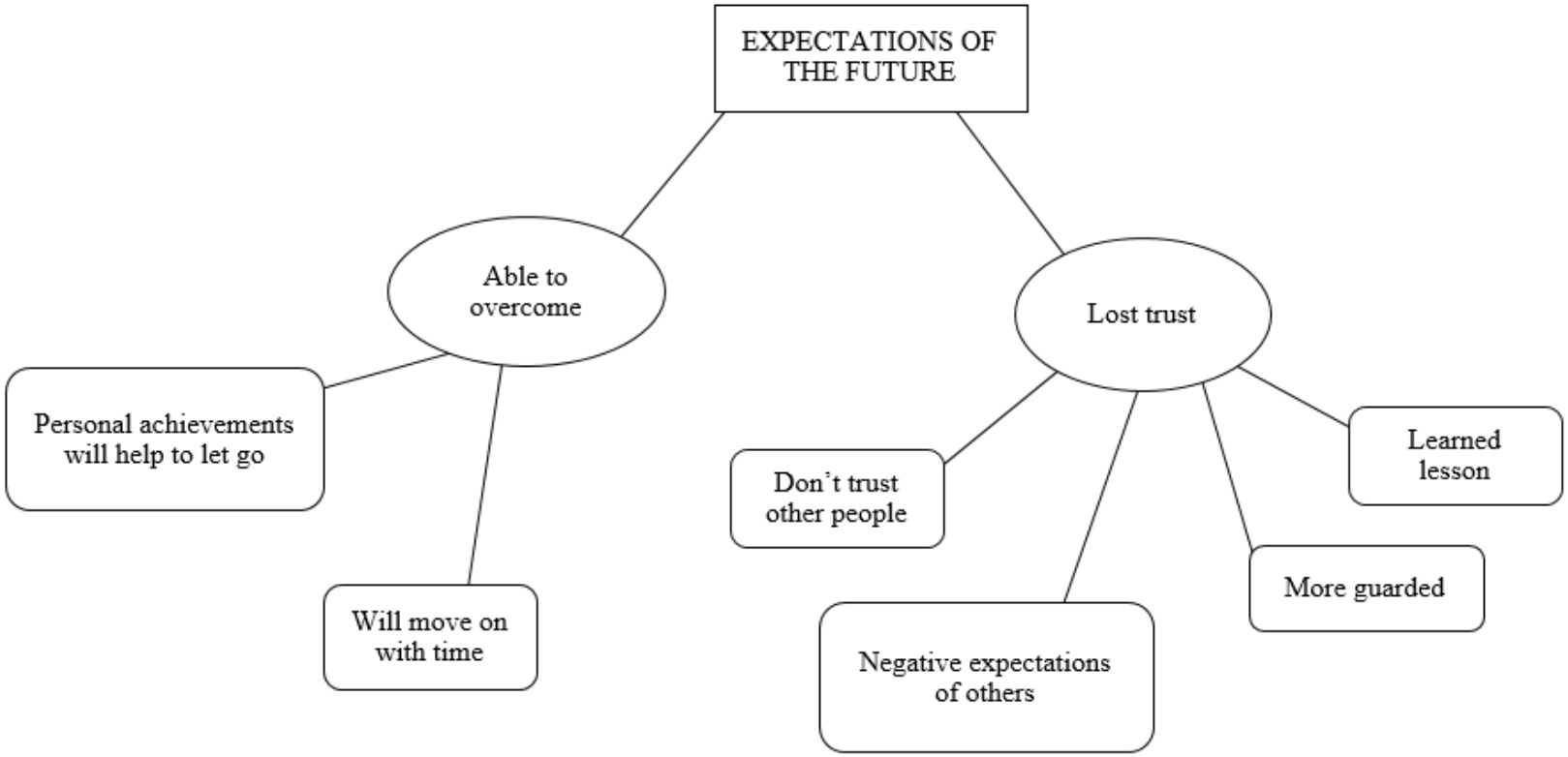
> "I just think about … who I've become and the newer friends I've made. And just how much happier I am without them … and just thinking about the happier things like where I've become and who I'm related to or like who I'm talking to now, it makes me happier because once I was surrounded by people who were fake."

Expectations of the future. Participants expressed positive expectations for the future. On the one hand, they indicated that they, overall, were much less trusting of others but felt as though it was a good thing because it made them less vulnerable. For example, one participant stated: "I just trust people less. That's not necessarily a bad thing. I don't feel like it's a bad thing to trust people a little bit less and just take a little more time to trust people." Participants also reported that they felt like they would eventually be able to overcome holding the grudge.

Lost trust. One key outcome of holding on to the grudge was that participants trusted others less. This was not specific to the transgressor, but generalized to everyone. For instance, one person recounted how she feels like she cannot trust anyone in her life: "I can't trust people now. I don't trust people, I don't let people in. Even with my friends, if they do one tiny little thing to me … I just stop talking to them." Another talked about how she was annoyed that she was unable to trust others anymore: "Before I was like an open book, like a heart on my sleeve kind of person … there's a wall now. I don't trust really easily. It's harder for me to trust people now which is really annoying."

Some participants expressed that they as a result of the transgression they had learned to be generally distrusting of others, especially when meeting new people. They indicated that they were much less friendly and open with others now for fear of experiencing the same kind of betrayal. For instance, one participant referenced a specific instance with a friend:

Figure 6
Expectations of the Future Network



> "I think I trust people less in general … I'm really close with this girl, she calls me her best friend but I don't know, I just never say it back. I know it's a little weird, but I just try to hold back because I don't want to trust someone to that point where they can hurt me that much again."

Another spoke more generally about potential friendships: "I am bit afraid to make new friends and to get hurt again … I don't want to make a new friend and to have to deal with the same thing again." A third participant highlighted how she is wary of all her friends now:

> "It's just mostly trust. I just don't tolerate stuff now. I just don't let people in fully. I'm so standoffish around people now … I don't want to let people in because I feel like everyone's going to do that to me now."

Along with distrust, participants also reported having generally negative expectations of others. One participant who spoke about a workplace transgression recounted how he was now reluctant to develop any friendships with his co-workers even though he felt like he was missing out. However, despite being less trusting of others, participants felt as though they were smarter now as a result of being more guarded, stating that it had opened their eyes and made them less vulnerable.

Able to overcome. Most participants expected that, with time, they would eventually be able to let go of the grudge. Many stated that personal achievements, such as getting a good job or getting married, would help them stop dwelling on what happened. For instance, when asked if she ever envisioned a time when the grudge would no longer be part of her life one individual said: "I feel when I have other things that are more positive and more fulfilling … when I'm focused on my work or my school or

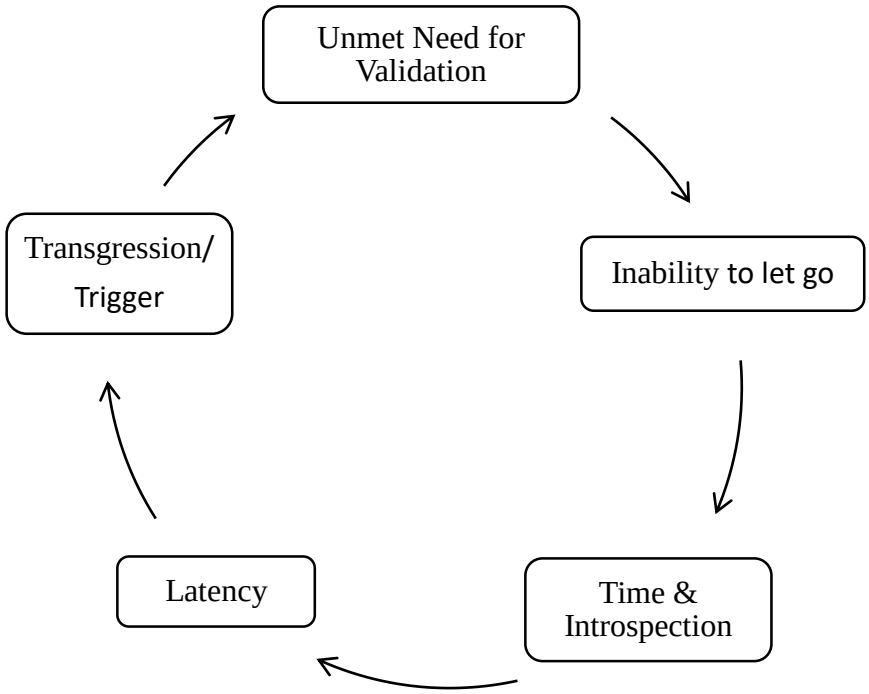
something, then it doesn't bother me. Then I'm not thinking about it." Another participant said: "I think maybe when I graduate and I get a job and a house and everything. You know those stuff, maybe I just won't [hold the grudge]." A third participant said:

> "Five years in the future I feel like.. I'll just have grown up so much as a person. I'll have new people in my life … I'll be in a better place. That [the grudge] wouldn't be a priority for me … I'll think less and less about it, especially now that they're so much farther from me."

Tying it all together

Overall, despite identifying six key themes in the data, deconstructing participants' accounts of holding grudges told a broader story of interconnection (See Figure 7). Holding a grudge is a process some individuals go through after someone commits a transgression against them. For the participants in this study, the transgression itself acted as the initial trigger that led them to sever ties or redefine their relationships with transgressors. They did this to protect themselves from future harm, to punish, and to gain the upper hand. After distancing themselves, participants rationalized their decision and thought about the ways in which they are better off without having the transgressor in their lives either at all or to the same degree. During this time, they also developed a schematic narrative in which they were the victims of unjust behaviour, evaluating themselves as being morally superior to, or better people than, the transgressors. This perspective led to the assessment that the transgressors are bad people, and fostered feelings of righteous anger and indignation. In evaluating what had happened, participants attempted to understand why the transgressors did what they did, but concluded that it was incomprehensible, inexcusable, and that they themselves would never do something like that. Nevertheless, they

Figure 7
The cycle of a grudge



simultaneously expressed that they had no ill-will for the transgressors and did not want anything bad to happen to them, thus reinforcing their sense of moral superiority.

The transgression made the participants feel invalidated. They reported that, in order for them to feel better about what happened, transgressors must take responsibility for what they had done and express that they felt badly about it. Participants also wanted to know that the transgressors were suffering by not having them in their lives, either at all or in the same ways as before. These feelings of invalidation were not resolved sufficiently, therefore participants were unable to let go. Participants also felt like they had something to prove to themselves. They wanted to show that they were doing fine after what had happened and that avoiding the transgressors was not affecting them negatively. They also wanted to prove to themselves that they are worthwhile people, despite what was done to them.

After their initial reaction, participants were plagued by their inability to let go of the negativity surrounding the transgressions. They experienced intrusive thoughts about what had happened and often felt as though the grudge was consuming them. This was accompanied by attempts to control their thinking, whether by force of will or distracting themselves with other things. Despite these attempts to control their thoughts and emotions, they were still unable to let go and expressed that the grudge was "just there." It was not going to go away anytime soon, and although it had become less intense, it was still a presence in their lives. With this they experienced competing thoughts and emotions whereby they felt immature, wished they were not holding the grudge, and recognized their role in sustaining it. Despite this, they were still unable to let it go. Some also expressed feeling bittersweet, indicating that they missed how their relationship had been in the past even though they disliked the transgressors. During this time, participants also sought validation from others that their reactions to the transgression were

normal and that what the transgressors did was wrong, in order to justify their ongoing thoughts and emotions.

Holding on to the negativity from the transgression and experiencing intrusive thoughts lessened participants' ability to trust others. They felt more guarded, not wanting to open themselves up again in order to prevent other people from betraying them too. They felt like they had learned a lesson, and many were okay with the fact that they were less trusting of others.

As more time passed and participants had opportunity to reflect on what happened, the negativity tended to fade and the grudge became somewhat latent. This was partly because the emotional resonance was lessened and partly because participants were able to gain perspective and find ways to cope with their negative thoughts and emotions. This led to a sense of acceptance that they were holding the grudge. Because it was no longer as salient, they reported not having to deal with it emotionally in the same ways. In that sense, the grudge was just a part of their lives now and they had adapted to it. They also said they had gotten used to not having a relationship with the transgressor, so his or her absence was not felt as acutely. Nevertheless, despite this latency, the negativity was never far from their minds, and it was easily triggered by things such as hearing about the transgressor, hearing certain songs on the radio, and going to certain places, among other things. When these triggers surfaced, participants reported that their thoughts and emotions could return almost as strong as when the transgression was initially committed. When the negativity was triggered, participants went through a similar process to when the transgression first occurred.

Discussion

The dual importance of maintaining valuable relationships and preserving personal psychological well-being seemingly come to a head in the case of holding grudges. On the one

hand, being hurt by someone can be devastating and it can be tempting not to forgive and instead to hold a grudge. However, when one holds a grudge, he or she is not only suffering the loss of an important relationship, whether due to dissolution or redefinition, but also enduring the psychological ramifications of holding on to a great deal of negative thoughts and emotions. Past research has suffered from lack of understanding of what it actually means to hold a grudge, relying on simple definitions that do not delve into the construct. Therefore, a targeted study designed to uncover precisely what it involves was needed. I determined that the best way to do so was to explore the topic in-depth, from an atheoretical perspective, using an inductive approach through which individuals could freely speak about their own personal experiences with holding grudges. By taking this approach, I was able to develop a thorough and nuanced understanding of what holding a grudge entails.

Components of a grudge

Overall there were six global, cyclical, themes (See Figure 7). First, the transgression occurred, which caused participants to feel betrayed and undermined. The negative thoughts and emotions generated by the transgression created a **need for validation** in participants. This validation could come by way of the transgressor, by recognizing what he or she had done; from themselves, by acknowledging that they are still worthwhile people; and/or from others, echoing participants' perspectives on the transgressor and transgression. Participants also felt a sense of **moral superiority** over the transgressor, feeling as though they were better people. This conceptualization of the transgressors as bad people, along with the desire to protect themselves from future transgressions, to punish, and to gain the upper hand contributed to participants ending their relationships with the transgressors or, if they were unable to do so, indicating a desire to **sever ties** with them.

Participants' unfulfilled need for validation contributed to their **inability to let go** of the negativity they were feeling, despite wanting to. Nevertheless, over time the negativity became **latent**, decreasing in magnitude and receding to the back of their minds, with the emotional implications and cognitive intrusions dissipating, yet not completely vanishing. The effects of holding these grudges affected participants' **expectations of the future**. On the one hand, their ability to trust others had been compromised. Although many reported feeling that this was bad for their relationships, they also stated that being less naïve and more cautious about others' intentions was not necessarily a bad thing. On the other hand, participants expected that they would eventually be able to let go of the grudge, possibly after enough time had passed that the transgression no longer seemed relevant to their current lives.

Despite the salience of the grudge decreasing with time, it was not far from participants' minds and could be easily triggered. When this happened, they experienced similar thoughts and emotions as when the initial transgression occurred, sometimes even to a similar degree. This suggests that, although latent, the grudge did not actually decrease, it just became less prominent. When it was brought back to the forefront of participants' minds, it was still highly resonant. When triggered, the process began again, such that participants would experience a need for validation that went unmet, followed by inability to let go, in which the grudge became an emotional and cognitive focal point. Then, it would eventually return to the latent state it was in before being triggered.

Need for validation. Interpersonal invalidation refers to circumstances in which an individual's emotions and thoughts are met with overreactions, rejection, criticism, and neglect (Herr, Jones, Cohn, & Weber, 2015). According to participants, transgressions can be invalidating in two ways. First, the transgression itself neglects the importance of the victim's

emotions and thoughts, indicating that his or her well-being is unimportant. Second, a transgressor can respond to a victim's expressed distress by overreacting; criticizing the victim's reaction and rejecting the victim's right to be upset; and neglecting to acknowledge the victim's perspective at all. In this study, participants felt invalidated in both ways, expressing the need to be validated by themselves, transgressors, and others. Not receiving this validation can lead to problems regulating one's emotions. This aligns with participants' experiences of holding grudges, in that they felt considerable negative emotions they were unable to control. It also corresponds to past research demonstrating that individuals are more likely to grant forgiveness when a transgressor accepts responsibility in a non-defensive way, expresses shame, and sincerely apologizes (Woldarsky Meneses & Greenberg, 2015). Each of these behaviours represent a form of external validation victims receive from transgressors. Apologies are more effective when they are not immediate, allowing time for victims to feel as though they have been heard and understood (Frantz & Bennigson, 2005). However, individuals feel more favourably about apologies when they are anticipating them than after they have actually received them (De Cremer, Pullutia, & Reinders Folmer, 2011). Therefore, it is possible that receiving an apology would not actually provide the validation participants expect it would.

Moral superiority. Studies have linked forgiveness to moral superiority, inferring that forgiving allows individuals to maintain their status as victims yet elevate themselves morally by pardoning the transgressor (Zechmeister & Romero, 2002). This study, however, shows that forgiving or pardoning is not necessary for victims to feel that they are more moral than transgressors. Instead of deriving their personal sense of morality from forgiving, participants situated themselves morally based on who they feel they are as people and their capacity for hurting others in the same way the transgressor did.

Individuals generally tend to evaluate themselves as being more moral than others (Tappin & McKay, 2017). When combined with ascribing transgressions to personal faults of transgressors rather than external circumstances, this implies that individuals who are holding a grudge do not necessarily evaluate themselves as being more moral than they would have before the transgression occurred, since they already saw themselves as being moral. Instead, they view the transgressor as being morally bankrupt.

Inability to let go. Much like forgiveness, there appears to be both a decisional and emotional aspect to holding a grudge. Emotional forgiveness is seen as genuine forgiveness derived from one's emotions (Worthington & Scherer, 2004). In contrast, decisional forgiveness refers to the explicit intention to forgive, which may or may not be accompanied by correspondent emotions (Worthington & Scherer, 2004). In this study, some participants reported that they had actively made a decision to hold a grudge. However, the majority indicated that if they could snap their fingers and rid themselves of the grudge, they would do so. This suggests that it is not as simple as deciding not to hold a grudge. In that sense, it seems important to distinguish between individuals who actively choose to hold grudges and those who are holding grudges despite their desire to let go.

Rumination is a determining factor in how easily individuals can move on from a transgression. There are different types of rumination, such as brooding, reflection, automatic, and deliberate (Garcia, Duque, & Cova, 2017). Brooding refers to passively comparing one's current situation to desirable alternatives, and has been shown to be maladaptive (Garcia et al., 2017). Reflective rumination, which is more adaptive than brooding, occurs when one purposefully thinks about a situation in an attempt to problem solve and minimize negative emotions (Garcia et al., 2017). There is also automatic rumination, which is intrusive, repetitive,

and negative; whereas deliberate rumination, while also repetitive, focuses on an individual's specific struggle with something (Garcia et al., 2017). In this study, participants recounted brooding and automatic rumination, both of which are maladaptive because they focus on negative aspects of events and feelings (Garcia et al., 2017). They also predict experiencing depression and post-traumatic stress (Garcia et al., 2017; Shors, Millon, Chang, Olson, & Alderman, 2017). Although some individuals said that they intentionally thought about the transgression, suggesting deliberate rumination, their cognitive focus was not on understanding their own struggles with what had happened. Instead, they were ruminating about the negative aspects of what the transgressor had done to them and how it had affected them. Thus, despite intentionally doing so, these thought processes cannot be classified as intentional rumination as it is defined here. These factors indicate that, in this study, participants' ruminating is maladaptive, given their reported distress at experiencing intrusive thoughts and their desire to be rid of them, coupled with attempts to stop ruminating by distracting themselves. Although pre-existing psychopathology can contribute to whether one experiences intrusive event-specific memories or not, general appraisal style, data-driven processing, and post-event negative appraisals, along with less conceptual processing of the event are also important factors (Marks, Franklin, & Zoellner, 2018). This suggests that, appraisals and processing are important components that might help reduce the occurrence of intrusive memories of specific negative events such as transgressions.

Severing ties. The desire to avoid someone who has committed a transgression against you is fairly common. The primary catalyst for doing so is anger, which can create a desire to get back at the person or protect oneself from future threat (Barnes, Brown, & Osterman, 2009). These findings support two of the reasons participants reported wanting to end their relationship

with transgressors: the desire to punish and the desire to protect themselves. Even though participants said they were largely uninterested in seeking revenge, the desire to punish by withdrawing one's presence could be seen as a subtle form of vengeance. Punishment itself is primarily a way of avenging oneself (Bone & Raihani, 2015), and subsequently allows victims to restore equity to a relationship that has become unbalanced by a transgression (Marcayk, 2017).

Participants indicated that when they did seek revenge, they did it to gain the upper hand over the transgressor. This may be a form of secondary control, which occurs when individuals are unable to influence certain outcomes. In order to deal with this, they shift focus to alternate outcomes they actually can control (Skinner, 2007). Responding to a transgression, which one was unable to stop from occurring and over which one has little control, by deciding to end the relationship with the transgressor can restore a sense of control in individuals.

Latency. Even though participants were holding a grudge, their emotions were not as intense and they did not spend as much time thinking about what had happened at the time of the study versus right after the transgression occurred. The expression "time heals all wounds" is ubiquitous, but not universally applicable. For participants in this study, time helped diminish their negative emotions and stop regularly thinking about what happened, but it did not remedy the grudge. Although they were able to deal with their thoughts and emotions better the farther removed they were from the transgression, rather than let go of the grudge, participants accepted and adapted to the fact that they were holding on to it. Acceptance itself is a form of emotion-focused coping, which addresses the thoughts and emotions behind a stressor (Litman, 2006). Acceptance is a functional way to deal with situations in which a stressor cannot be changed (Carver Scheier, & Weintraub, 1989), such as being the victim of a transgression or accepting the fact the one is holding a grudge. After accepting the situation, it did not affect participants' day-

to-day lives the same way it once had, but it was always in the backs of their minds, ready to be triggered and brought into the emotional-cognitive foreground.

Expectations of the future. When discussing expectations of their future, participants felt that their ability to trust others had been permanently compromised. When one is the victim of a transgression committed by someone he or she has a relationship with, he or she experiences a specific loss of trust in the transgressor (Chan, 2009). Similarly, when one is the victim of a transgression committed by a stranger, he or she becomes less trusting of other strangers (Lee & Selart, 2015). In these cases, diminished trust is relegated to the relationship, or type of relationship, that the person had with the transgressor. However, participants in this study reported experiencing diminished trust with regard to all future social interactions and relationships. They described a general reluctance to open up to others based on the expectation that others will betray them in similar ways as the transgressor. This aligns with research on betrayal trauma, showing that when individuals are betrayed by someone they trust, they generalize their lack of trust in the person who betrayed them to others (Gobin & Freyd, 2014). Nevertheless, participants felt that it was a good thing that they were less trusting, or "naïve." They felt like they had learned a lesson and that, by trusting others less, they were protecting themselves from experiencing the same kind of transgression being committed against them in the future.

Counter to their expectation that there was a high likelihood of others committing transgressions against them, participants were hopeful they would eventually be able to let go of what happened. This expectation may be the result of temporal thinking. Individuals are motivated to see their future selves as being improvements on their past selves (O'Brien, 2015). When people think about who they were in the past, they see their past selves as more emotional

and less rational. Conversely, they see their future selves as more rational and less emotional (O'Brien, 2015). This might explain why participants expect that they will be able to let go in the future, despite their inability to do so in the present.

Participants often spoke about letting go as if it were something they would achieve much farther into the future. Feeling as though they will be able to let go when they have moved on with their lives and achieved personal or professional success indicates temporal distancing between their current self and future self. Adopting a future perspective when thinking about a transgression is associated with less blame, more insight, and forgiveness (Huynh, Yang, & Grossman, 2016). This indicates that, at the time of the study, participants were likely viewing the transgressions in terms of their current selves. If this is the case, and they are experiencing an inability to let go, the transgression will stay with them. Perhaps if they are able to relegate it to the past and see it as part of their past selves, they will be able to actualize their expectation of moving on and be able to put the transgression behind them.

Synthesis

Overall, holding a grudge is a complex interplay between individuals' emotions and cognitions. It is characterized by persistent negative affect and intrusive thoughts that interfere with one's quality of life. Over time the intensity of these thoughts and emotions abates, leaving individuals in a state of passive acceptance, in which the negativity is lurking in the back of their minds. Participants' own basic definitions of holding a grudge align with this conceptualization, however theirs were missing the considerable nuance inherent within their experiences of negative affect and cognition.

Broad implications for definition and conceptualization. When returning to the definition of forgiveness as process in which an individual undergoes a decrease in negative and

an increase in positive transgression-related sentiment, it does not appear as though holding a grudge is its direct inverse. Holding a grudge is also characterized by a decrease in negativity over time, although to a much lesser degree. The temporal nature of this decrease is largely independent of individuals actually trying to let go of the negativity, which they have great difficulty doing. In contrast, when one forgives, one tries and is often able to let go. If considering the opposite of forgiving as actually being a static state of continual negativity, this is more aligned with participants' experiences of holding grudges, however it does not account for the fact that a grudge is a fluid cognitive and emotional state.

Holding a grudge is more akin to unforgiveness, which is defined as negative emotions toward a transgressor resulting from angry rumination. One study that used qualitative interviews and subsequent factor analyses found three primary components of unforgiveness: cognitive-evaluation, emotional-rumination, and offender reconstrual (Stackhouse, Jones, Ross, & Boon, 2018). Cognitive-evaluative unforgiveness refers to how individuals make judgements about the transgression and why they are not forgiving (Stackhouse et al., 2018). Emotional-ruminative unforgiveness involves negative emotions and rumination about what happened (Stackhouse et al., 2018). Finally, offender reconstrual occurs when individuals begin to see transgressors differently, in part due to attempts to understand what happened and why (Stackhouse et al., 2018).

These three components map on to some of the themes identified in this study. For instance, I also found that participants saw the transgressor differently as a result of the transgression, identifying him or her as a bad person. Stackhouse and colleagues' (2018) description of emotional-ruminative unforgiveness resembles participants' inability to let go and persistent experience of negative emotions and intrusive thoughts. However, their cognitive-

evaluative component centres on individuals' beliefs that what the transgressor did was unforgivable, accompanied by a lack of desire to forgive (Stackhouse et al., 2018). In contrast, this study found that participants wanted to let go of the grudge for their own sake. This difference has certain implications for both conceptualizations. For one, unwillingness to forgive implies a conscious decision to withhold forgiveness. However, in this study, participants did not feel as though they were deliberately holding the grudge, instead expressing desire to let it go. Participants' focus was also different. Decisions not to forgive are based on the transgressor and how one evaluates his or her actions, whereas participants' desire to let go of their grudges is based on themselves and derived from concern for their own sanity. In sum, despite many similarities, there are differences between unforgiveness and holding a grudge. The key distinction may simply be in the reasoning or impetus behind each response. Holding a grudge is seemingly more incidental and unwanted, whereas unforgiveness may be more of a conscious choice. One issue that does arise with regard to studies of unforgiveness is their lack of precision. Not forgiving can incorporate many different responses, therefore asking participants to recall why they have or have not forgiven may be too broad.

Holding a grudge also revealed itself to be quite different from seeking revenge or even desiring vengeance. Not only did participants report that they did not want anything bad to happen to the transgressors, they also reported that they would be unlikely to seek revenge, in part because of what it would say about them as people. Even though it seems strange that individuals who are harbouring negative thoughts and emotions would report not desiring vengeance, revenge is actually not that common (Schumann & Ross, 2010). Although anger and resentment contribute to both desire for vengeance and holding a grudge (Schumann & Ross,2010), the cognitive underpinnings are quite distinct. Similar to unforgiveness, the desire

for vengeance is more focused on the transgressor rather than on oneself. In any case, seeking and desiring vengeance are not the same as holding a grudge.

In sum, it is not simply enough to use current definitions of other more well-studied post-transgression responses to define what holding a grudge is or is not. There are many nuances and dimensions that are not captured by other constructs. With this study, I was able to uncover some of the intricacies of holding grudges, including thoughts, emotions, behaviours, and consequences.

Limitations and future directions

Although this study provided valuable insight into an understudied post-transgression response, it is not without its limitations. Due to the nature of the study and its instructions, the grudges participants chose to discuss were based on what they felt to be pretty severe transgressions. Focusing only on severe cases, while allowing for a full picture of a grudge at its worst, is potentially less informative about grudges derived from more moderate transgressions. Conversely, it could be argued that in order to generate the necessary thoughts and emotions, a grudge can only result from a severe transgression, and that any resultant negativity from more moderate transgressions is something else, perhaps unforgiveness. In the future, studies should attempt to distinguish severe from moderate, and even mild, grudges to determine whether these results are applicable regardless of severity.

Another limitation is the inability to infer whether holding grudges is more strongly influenced by transgressions themselves or individuals' personalities. As with any variable, there is definitely a trait component that makes certain individuals more or less likely to hold a grudge. Although participants were asked whether they have a tendency to hold grudges, responses were mixed. This could potentially indicate that both forces contribute equally to whether an

individual will hold a grudge or not, but it is not sufficient to answer whether grudges are more trait or state based. The results of this study raise many questions that will be important to address.

A third limitation is the population from which this sample was derived. Undergraduate students are not representative of the general population, therefore further research should determine whether these patterns and themes are also apparent in a more representative sample. Similarly, despite there being ethnic diversity within the sample, it was still drawn from individuals living in North America, therefore it is unclear how culture and ethnicity might impact holding a grudge in individuals residing in other countries.

Conclusion

The lack of research on holding grudges and the assumptions that have been made about the construct have limited our knowledge of what it actually means. This study established that there are intertwining emotional, cognitive, and behavioural aspects of holding a grudge. It also determined that there is an important temporal component. With this newfound insight, I have taken the first steps toward resolving the problem of obfuscation and supposition that has plagued our understanding of holding grudges. With that in mind, based on the results of this study, the best way to succinctly define holding a grudge is as sustained feelings of hurt and anger that dim over time without disappearing, and are easily resurrected by triggers.

Part 2 – Developing a Measure of Holding Grudges

In addition to developing a theory of holding grudges, I wanted to create a tool that could appropriately measure grudge-holding in future research. Researchers use many different types of measurements tools, but, arguably, the vast majority of social-psychological constructs are evaluated using self-report questionnaires (Maul, 2017). Now that we have more information about holding grudges, it may seem like simply asking participants outright if they are holding a grudge would be the best way to measure it. Although correct in theory, such an approach requires participants to be aware that they are holding a grudge. It also runs the risk of oversimplification. As Part 1 suggested, holding a grudge is quite complex with many different facets. Therefore, while it is important to measure whether individuals are explicitly holding grudges, it is equally, if not more, important to determine which aspects of holding a grudge they are experiencing. In this sense, creating a comprehensive measure of the different aspects of holding a grudge is essential.

Mixed-methods approaches in psychology

Knowledge about the particulars of holding a grudge is extremely important, and there is a lot to be said for incorporating mixed-methods into research programs. Despite ostensibly representing different methods of answering research questions, qualitative and quantitative research paradigms have become entangled with ideology (Todd, Nerlich, McKeown, & Clarke, 2004). To quantitative researchers, psychology is a science, akin to the natural sciences. In contrast, qualitative researchers focus on psychology as one of the humanities and emphasize individuals rather than hard numbers (Todd et al., 2004). Essentially, the debate can be seen as measurement versus meaning, impersonal experiment versus lived experience, and aggregates versus individuals (Todd et al., 2004). Because of this ideological divide, proponents of each

type of research are often committed to their approach and unlikely to adopt the other. This is unfortunate, because integration of both approaches helps diversify and bolster research findings. In particular, qualitative and quantitative research can answer different types of questions. For instance, qualitative approaches are necessary when little is known about a topic, however they cannot answer questions of causality, which require rigorous experimental techniques.

Combining approaches when creating a scale is especially important (Rowan & Wulff, 2007). Qualitative data helps drive item development and enriches the quality of the research. A scale is more valid when it is rooted in observations from conversations or interviews (Rowan & Wulff, 2007). In fact, when creating a scale is not rooted in qualitative understanding of a phenomena, the instrument is hampered by concerns about its validity that are erroneously addressed by empirical analysis.

Concerns in scale development

When it comes to constructing a scale, two of the most important factors are its reliability and validity (Hubley & Zumbo, 1996). A reliable scale consistently measures a construct, whereas a valid scale accurately measures what it intends to (Borsboom, Cramer, Kievit, Scholten, & Franic, 2009; Buntins, Buntins, & Eggert, 2017).

Reliability. A psychological test is not inherently reliable or unreliable. Instead, reliability is applicable to test scores (Bruce, 2003). It refers to whether a person's test scores will be the same when assessed at different times and in different circumstances (de Vet, Mokkink, Mosmuller, & Terwee, 2017). A psychological test score cannot be completely reliable, because there are always random fluctuations, however the more valid a scale is, the more reliable it is (Bruce, 2003).

Validity. Reliability is necessary in order for a scale to be valid, but it is not sufficient

(Bruce, 2003). Once thought of as having a variety of different types, validity is now seen as a unified concept (Newton & Shaw, 2013), and, unlike reliability, an attribute of a psychological test itself, not the test scores (Borsboom et al., 2009). Rather than determine a test's validity based on whether there is evidence for how researchers have interpreted test scores, validity is a function of how a test works (Borsboom et al., 2009). A valid test appropriately approximates a theoretical construct, such that changes in the construct cause direct changes in how individuals respond to the test (Borsboom et al., 2009). The key component to a valid test is knowing what one intends to measure, requiring the construct be well-defined and understood (Buntins et al., 2017). In psychology, this is difficult because scientific and everyday understandings of constructs can clash (Buntins et al., 2017). Tests are often developed based on how a construct is discussed in everyday terms rather than how it is defined by scientific theory. The problem with using common sense definitions to create scales is that the constructs lack precise definition (Buntins et al., 2017). Wittgenstein's philosophy of measurement addresses psychology's failures to realize that validity is based on a concept's meaning, not derived from empirical investigation, and that it is impossible to properly measure a construct that does not have a precise definition.

Wittgenstein's philosophy of measurement. Wittgenstein's philosophy of measurement has direct implications for psychology. It claims that measurement is normative and guided by a concept's meaning, but not a matter of empirical discovery; that logical measurement conforms to the rules for empirical calculations, claims, and discoveries; and that measurement claims should be based on how well measurement procedures align with the concept's measurement rules (Maraun, 1998). This is counter to measurement in psychology, which has emphasized the importance of empirical investigation when establishing validity. Psychologists tend to think in

terms of construct validity, which is established based on statistical inquiry. Doing so conflates conceptual and empirical issues. In reality, measurement cannot be justified solely by empirical approaches. If individuals know what they want to measure, empirical results are irrelevant. The only necessity is conceptual clarity and logical application of appropriate techniques to measure the construct (Maraun, 1998).

What makes this approach to measurement difficult in psychology is that the majority of concepts are common rather than technical. Technical concepts are specifically defined by a community of experts, whereas common concepts are colloquial with highly varied definitions (Maraun, 1998). Common concepts are hard to measure because they have complicated meanings that are not easily defined. For instance, it is universally known what it means to measure someone's height, but there is no common understanding of what it means to measure someone's level of dominance (Maraun, 1998). Height is a technical concept, whereas dominance is a common concept.

Implications for measuring grudges. Based on these understandings, the best way to properly measure psychological constructs is by attempting to define them precisely and make them more technical than common. The first step to accomplishing this is to understand the phenomenon one wants to measure. In the case of holding grudges, I was able to develop an understanding via in-depth interviews and analysis. This has provided me with sufficient knowledge to provide a technical definition that can be used as a starting point for constructing an appropriate measure of holding grudges, rather than relying solely on common meanings. Although not precisely technical in the sense of a construct such as height, as long as the technical definition of a grudge is made explicit and is well-represented by the measure, many of the issues surrounding the notion of common versus technical constructs should be minimized.

Explication promotes universal, discipline-wide understanding of what is denoted by “grudges”. With that in mind, statistical analyses can help determine the best representations of certain concepts, provided one is not operating from an atheoretical position.

Scale characteristics

Scale development is not limited to theoretical concerns. There are also numerous practical decisions that must be made. Rowan and Wulff (2007) outlined a number of steps that should be taken when developing a scale based on qualitative data: item design rooted in qualitative data, determining scale length, scaling the items, developing a scoring formula, and writing instructions for participants. Although some of these decisions may seem straightforward, they can actually be very influential. In particular, determining the number of response options, how they are labelled, and what order they are presented in can affect the utility of a scale.

Number of response options. There is ongoing debate as to how many response options a scale should include (Wakita, Ueshima, & Noguchi, 2012). Most rating scales in psychology have either five or seven, however the optimal number is said to range from seven to nine or 10 based on test-retest reliability, internal consistency, and discrimination (Preston & Colman, 2000). Participants themselves prefer fewer response options (Preston & Colman, 2000), therefore scales with only seven are optimal.

One prime consideration when deciding on the number of response options is whether to provide an odd or even number. For instance, in the case of measuring agreement, a common rating scale is: 1 – S*trongly disagree,* 2 - *Disagree*, 3 – *Neither agree nor disagree,* 4 – *Agree,* 5 – *Strongly agree*. When using an odd number, the mid-point of the scale represents a neutral position, for instance “Neither agree nor disagree” (Likert, 1932). In contrast, using an even

number of response options requires individuals to make a judgement one way or another, for instance, agreeing or disagreeing, even if they may not feel more inclined one way than the other. Participants themselves prefer a mid-point (Preston & Colman, 2000).

I prefer not to force participants to agree or disagree with a statement in which they do not feel strongly, because doing so can lead to potentially incorrect or overstated conclusions drawn on the basis of misrepresented responses. As a result, I have decided to create this scale with a neutral mid-point.

Response labels. After deciding on the number of response options, one must determine how they will be labelled. A Likert-type scale assumes that the distance between response options is equal (Wakita et al., 2012). For instance, the distance between "Strongly disagree" and "Disagree" is the same as the distance between "Somewhat agree" and "Agree". One study found that this is not actually the case, and, as the number of response options increases from four to seven, psychological distance between the options is no longer equidistant (Wakita et al., 2012). Although this suggests that it is preferable not to provide more than four or five response options, the response labels that were evaluated in this specific study are potentially at fault for this finding. Specifically, the authors labelled the responses as "Strongly disagree", "Almost disagree", "Do not really disagree", "Neither agree nor disagree", "Do not really agree", "Slightly agree", and "Strongly agree". Not only do the labels "Almost disagree" and "Slightly agree" represent potentially different things, using qualifiers such as "do not really" can be confusing. In contrast, the author's five-point scale provided the labels: "Disagree", "Slightly disagree", "Neither agree nor disagree", "Slightly agree", and "Agree". These labels correspond, such that the qualifiers are the same for both agreement and disagreement, and they are unambiguous. It seems intuitive that if one were to use the standard labels for a seven-point

agreement scale (i.e. Strongly disagree, Disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Agree, Strongly agree) that the likelihood of observing equal distance between the options would increase because labels on each end of the mid-point are counterbalanced. In light of this, and based on previous research indicating the seven response options is better than five, I opted to include seven.

Another controversy is whether to actually label each response option versus just labelling the endpoints (Hamby & Peterson, 2016). Labelling provides a verbal description of what each response means, helping participants to differentiate between the responses and respond more consistently (Hamby & Peterson, 2016). A meta-analysis demonstrated that providing more response options and labelling each one tends to increase reliability (Hamby & Peterson, 2016; Lozano, Garcia-Cueto, & Muniz, 2008), therefore I opted to create this measure of holding grudges with individually labelled response options.

Order of items. Over the years there have been mixed results on whether the order in which questionnaire items are presented impacts how participants respond to subsequent items (Kelley, Clark, Brown, Sitzia, 2003). Participants can exhibit assimilation effects, in which their responses to upcoming items become more or less similar to their previous item responses (Dillman, Smyth, & Christian, 2008). For instance, priming can occur when items activate certain beliefs that become accessible and then impact responses to subsequent items. Conversely, contrast effects occur when item responses become more different (Dillman et al., 2008). For example, participants may take certain factors into account when responding to early items, but may not do the same for later items.

Some studies have found that item order does not have an effect (Schell & Oswald, 2013), whereas others have demonstrated more favourable responses to items appearing near the

beginning and the end, rather than in the middle, of a questionnaire (Schurr & Henriksen, 1983). Additionally, some researchers maintain that it is important to present items in the same order as they were when the scale was initially developed and validated (Franke, 1997). However, based on the understanding of scale validity as congruence between a theoretical construct and the scale used to measure it, logically there should be no order-effects. More specifically, if individual items are appropriate representations of a construct, they should be equally appropriate whether they come at the beginning or end of a questionnaire. Nevertheless, it makes sense to err on the side of caution and try to pre-emptively eliminate any potential effects the order of items might have. This can be accomplished by randomizing the items (Schurr & Henriksen, 1983), such that they are presented in a different order for every participant. Fortunately, survey software has advanced to the point where randomizing items is seamless.

Overall, based on past findings and personal preferences I decided to develop this measure of holding grudges by providing participants with seven response options, each individually labelled, and randomizing the order in which the items were presented.

Critique of self-report measures

Despite their prominence in psychology, using self-report measures has received a lot of criticism, with behavioural and biological measures seen as being more valid (Haeffell & Howard, 2010). One reason for this is that, in order for self-reports to be accurate, individuals must have enough insight into their own psychologies to respond properly (Haeffell & Howard, 2010). Although often not self-aware when it comes to cognitive processes, individuals actually do have good awareness of cognitive content, that is, attentional focus, sensations, emotions, evaluations, and plans. Self-awareness is even higher when it comes to answering questions about specific events rather than general beliefs (Haeffell & Howard, 2010). For this

questionnaire, individuals responded to items inquiring about a specific event that happened in their lives and how they think and feel about it, therefore there is no reason to believe they cannot provide accurate responses.

Demand characteristics are another consideration that might pose an issue for self-report measures (Haeffell & Howard, 2010). This refers to the notion that the responses individuals provide are affected by characteristics of the questionnaire itself rather than the construct (Fiske & Bourne, 1977), and that participants may even be able to infer how researchers want them to respond. This can be especially problematic when the target construct is obvious to participants, that is, the questionnaire is transparent (Haeffell & Howard, 2010). However, research has found that responses to self-report questionnaires actually change very little, even when demand characteristics are altered (Haeffell & Howard, 2010). Overall, despite some concerns about self-reports, they is the most appropriate method to evaluate holding grudges.

Factor analysis

After a questionnaire has been distributed to participants, there are more theoretical and statistical decisions that need to be made. The best way to do this is by conducting factor analyses and using discretion. Factor analysis refers to a set of statistical procedures that determine how variables are related to one another (Norris & Lecavalier, 2010). According to the common factor model, variables that can be directly measured, for instance, individual items on a questionnaire, should be correlated with one another because they are all influenced by an unobservable, latent construct (Fabrigar & Wegener, 2011). The latent constructs are common because they influence more than one measured variable. In this case, holding a grudge would be the common latent variable influencing how one responds to individual items. In contrast, unique factors only influence a single item, therefore they cannot explain inter-item correlations. Unique

factors can be specific, exerting systematic influence on an item in a way that is not related to the common factor, for instance, biased wording (Fabrigar & Wegener, 2011). Unique factors can also be due to measurement error, which refers to random influences on a single item, for instance, ambiguous wording (Fabrigar & Wegener, 2011). Being more strongly influenced by a unique factor than a common factor indicates that an item may not be a good representation of the common factor. The purpose of conducting factor analyses is to determine the most parsimonious underlying structure of correlations between items when one is not yet at the point of testing hypotheses about how they are related to one another (Fabrigar & Wegener, 2011). That is, determining the fewest number of common factors that can adequately describe the inter-relation between items. This can be done using exploratory or confirmatory factor analyses.

Exploratory factor analysis (EFA) is conducted when researchers do not have predictions about the number of common factors that will account for the items or how the items will inter-relate (Fabrigar & Wegener, 2011). Conversely, confirmatory factor analysis (CFA) is conducted when researchers have a theory that specifies a certain number of common factors and which items correspond to which factors (Fabrigar & Wegener, 2011). Despite developing a theory of holding grudges with six overarching themes, I was unsure how this would translate to the practicalities of measuring holding a grudge. As such, I decided to start with an EFA and then conduct a CFA. I will provide more details about the specific decisions associated with each method when I describe the results of each study.

When it comes to developing measurement scales, factor analysis is valuable in two general ways (Fabrigar & Wegener, 2011). First, it enables testing for multiple factors represented by items and determining which items belong to which factors. Second, it provides information about the psychometric properties of items. For instance, if items are strongly

influenced by a common factor, they are likely appropriate representations of that factor.

Is factor analysis appropriate? Data must have certain characteristics in order for it to be appropriate to conduct a factor analysis. The validity of the results depends on whether the items properly represent the construct of interest. Additionally, if inappropriate items are included, results may be distorted. Before deciding which items to include in a factor analysis, researchers must determine whether they are conceptually appropriate representations of the construct of interest. Another consideration is how many items to include. Factor analysis performs better when there are a large number of representative items, therefore it is better to include more rather than less items. Factor analysis is also more accurate when items have high communality, that is, they are more strongly influenced by common rather than unique factors. Based on the fact that the items included in these factor analyses were generated from comprehensive theory, I am confident they are an appropriate representation of holding a grudge and, therefore, that factor analyses are the best way to determine latent variable structure.

Current studies

Overall, in light of these considerations, I decided that the best way to develop a reliable and valid scale to measure holding grudges was to convert my interview data into individual items that could be distributed to unique samples of participants. The main purpose of the scale is to evaluate individuals' experience of holding a grudge, including the most relevant thoughts, emotions, and behaviours. Participants responded to each of these items in random order on a seven-point scale, with each response option individually labelled. Following this, I conducted first exploratory, then confirmatory factor analyses. I also included a variety of other variables I expected to relate to holding a grudge.

Study 1

The purpose of my first study was to determine which items best capture holding a grudge. In order to test this I generated items, distributed them to participants, and ran an EFA.

Method

Participants

I used three methods of recruitment for this study. First was through the university's Undergraduate Research Participant Pool. Second, I approached students in an upper-level psychology course and offered them course credit for participating. I also asked them to distribute the study materials to two nonstudents, aged 18 or older, whose names would be entered into two $100 draws in exchange for their participation. Using these methods, the sample was 632. However, I removed a sizeable portion of the sample (n = 251) due to inattention. In particular, I included three items in the questionnaire that asked participants to select a specific response option. If participants did not respond correctly to all three items, they were dropped. I also removed eight participants who said that they did not respond conscientiously.

When determining adequate sample size for factor analyses, guidelines have been varied and based largely on intuition (Fabrigar & Wegener, 2011). In actuality, sample size depends on the characteristics of the data. If items have high communality and are overdetermined, researchers can achieve accurate results even with smaller sample sizes (Fabrigar & Wegener, 2011). In less optimal conditions, larger samples of up to 400 will be required to arrive at accurate results (Fabrigar & Wegener, 2011). The final sample in this study was 373 participants, which is 27 respondents under the recommended minimum threshold for conducting a factor analysis with poor data. Because this data was good, I am confident that the sample was still sufficiently large after removing unsatisfactory participants. Especially because there were so

many items included in the questionnaire.

In order to be eligible to participate, individuals had to be able to recall a specific transgression that was currently unresolved. The average age of participants was 28 (*SD* = 13.23), with 134 men and 234 women, 3 identified as "other", and 1 preferred not to disclose gender. In terms of ethnicity, 30% were South Asian, followed by Caucasian (27%), Middle Eastern (14%), East Asian (11%), African Canadian (7%), Other (5%), Latin American (3%), and of mixed ethnicity (2%). Participants reported that the transgression they recalled had occurred, on average, 1-2 years ago. They also reported a variety of relationships to the person who committed the transgression: 43.25% against a friend, 17.69% against a family member, 14.48% against a romantic partner, 5.36% against an acquaintance, 5.09% against a co-worker or boss, and 4.58% against a stranger; 10.72% did not report relationship.

Materials

Transgression. Participants were asked to recall and write about a transgression someone had committed against them that was currently unresolved, meaning that the person had not apologized or they had not forgiven him or her. The event must have had a moderate to severe impact on them. Participants were also asked how long ago the transgression occurred, as well as what their relationship was to the transgressor.

Grudge items. I designed a representative set of items by going through all basic codes identified during the course of the thematic analysis and converting them into corresponding sentences. For instance, the code "full of empty words" was adapted into the statement "this person is full of empty words"; and "grudge stressful" was adapted into "holding this grudge is stressful". This process generated 503 individual items, not accounting for item overlap. After generating these items, I went through and removed and/or combined items that were highly

similar to one another. I also sorted them into organizing and global themes to determine which categories were overrepresented. With the help of my colleagues and supervisor who are knowledgeable experts in the social motivation processes that occur following transgressions, I was able to reduce this total number of items even further by only retaining those that were deemed the most pertinent to the category at hand, and those that were the most straightforward. The final number of items was 171. In terms of the themes, I removed items representing "lost trust", because they reflected the consequences of holding a grudge more so than being a part of the grudge itself.

Overall, participants were asked to rate from 1 *(Strongly disagree)* to 7 *(Strongly agree)* how much they agreed with each of the 171 statements (the full range of response options was: 1 (*Strongly disagree),* 2 *(Disagree),* 3 *(Somewhat disagree),* 4 *(Neither agree nor disagree),* 5 *(Somewhat agree),* 6 (*Agree),* 7 *(Strongly agree)*). The items pertained to their thoughts, feelings, and behaviours in the time since the transgression they recalled had passed. Sample items included: "This person doesn't deserve to be forgiven", "I try to avoid thinking or talking about it", "I will eventually forget about what happened", and "This person isn't worth my time or energy" (see Appendix A for full list of items).

Procedure

Participants completed the study online. They first provided demographic information, then were given the transgression recall prompt and the subsequent items.

Results and Discussion

Parallel analysis

In an EFA, despite not having a predetermined number of factors one thinks should be retained, one must still specify a model with a certain number of factors. Parallel analysis is the

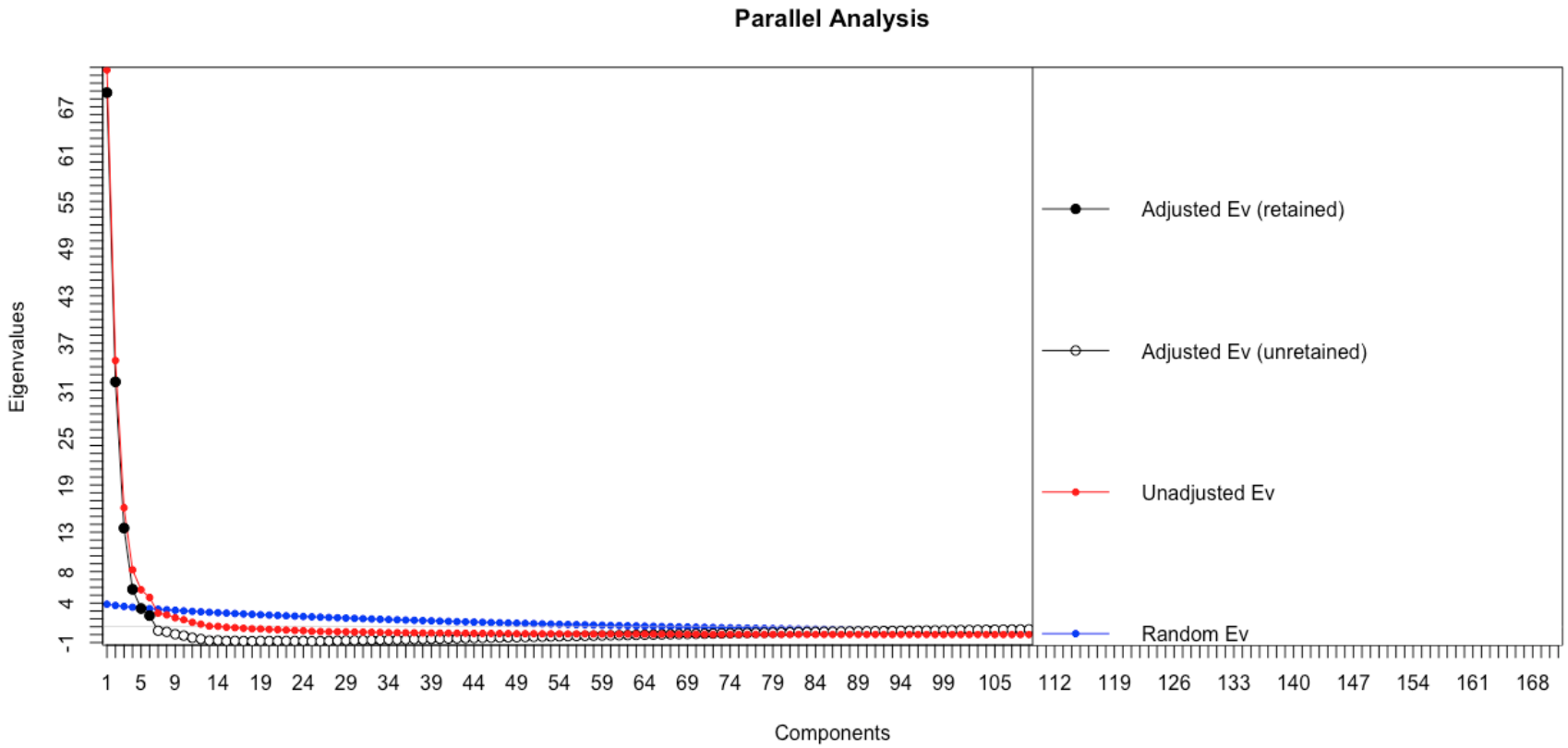
best method of identifying a reasonable number of factors to specify without overidentifying (Dinno, 2009; Schmitt, 2011). The analysis itself relies on Monte Carlo simulations on randomly generated data matching (i.e., paralleling) the sample size and number of items. These simulations generate a 95th percentile line, and, on a scree plot, factors that are above the line are not due to chance and should therefore be retained (Wood, Akloubou Gnonhosou, & Bowling, 2015). In part because of the large number of simulations, parallel analysis is fairly robust to nonnormality (Dinno, 2009; Schmitt, 2011). Before running the EFA, I conducted a parallel analysis which recommended that six factors be retained (see Figure 8). The eigenvalues ranged from 71.66 for the first factor, and 4.72 for the sixth factor. As a result, I began model specification with six factors. However, from the figure itself, only four of the factors are actually above the blue line of random eigenvalues, suggesting that a four-factor model may actually be the best approximation of this data.

EFA

The goal of a factor analysis is to determine the fewest number of factors that can account for the data. In this sense, the model must do a good job accounting for the data, removing or adding additional factors must not make the model fit considerably better or worse, and all factors must make theoretical sense (Fabrigar & Wegener, 2011). For this dataset, ordinary least squares (OLS) factoring and oblimin rotation were performed on all 171 questionnaire items. I used OLS because it does not assume that the data are multivariate normal, and is better at detecting weak factors than maximum likelihood extraction (Briggs & MacCallum, 2003).

I chose to use oblique rotation because I expected the factors to be correlated with one another. Despite each item having categorical response options, I proceeded with Pearson rather than polychoric correlations because the scale included seven response options, and it is

Figure 8
Parallel analysis



acceptable to do so if there are more than five and corrections for nonnormality are implemented (Flora & Flake, 2017). I estimated three models with six, four, and three factors. All residual correlations for the following models were normally distributed.

When evaluating model fit in EFA, one telling statistic is the root mean square residual (SRMR), which refers to the square root of the average residual correlation. A model that fits the data well will have low residual correlations, because they represent unexplained variance. Unlike maximum likelihood factoring, OLS does not lend itself toward calculating additional fit statistics, however model fit can also be evaluated by how high the factor loadings are. A strong loading means that the factor has a strong impact on individual items when controlling for additional common factors (Fabrigar & Wegener, 2012).

I initially ran six and four factor models. The six-factor model was not a considerably better fit than the four-factor model in terms of SRMR (.05 versus .06), therefore I opted to proceed with four factors because it was more parsimonious. In order to test whether the model could be simplified even further, I also ran a three-factor model. The fit of this model was not considerably worse (SRMR = .07), but it was not as interpretable as the four-factor model. Therefore, I decided to proceed retaining four factors. This led to dropping items that did not load higher than .30 on any of the four factors (n = 19), and dropping any items that cross-loaded higher than .30 on more than one factor (*n* = 20).

Four-factor model

I labelled the four factors: disdain, persistence, desire to let go, and need for validation (see Table 3). Disdain captured the negative feelings participants had toward the transgressor and how they did not want to have anything to do with him or her anymore. For instance, the highest loading item was “I want nothing to do with this person”, followed by “I’ll never like this person

Table 3
Descriptive statistics for final scale

	Mean	SD	alpha	Number of items
Disdain	4.17	1.17	.97	53
Persistence	3.75	0.94	.94	39
Negative Impact	3.88	0.95	.87	19
Validation	4.73	0.87	.87	21

again". Persistence captured participants' lingering negative emotions about the transgression and the perception that they would feel this way for a long time. The highest loading items were "I'm still hurt by what happened", and "I feel like this will always be with me". The third factor, desire to let go, identified participants' thoughts about holding the grudge, primarily the fact that they wished they were not holding on to it and they felt that it was destructive. For instance, "Holding on to this is holding me back", and "I feel immature holding on to this". The final factor, need for validation, represented participants' need for their perspective about what happened to be validated. This reflected validation from others and the transgressor. The highest loading items were "Confiding in others helps me cope with what happened", and "I just want this person to learn from what he or she did".

Overall, the four factors corresponded to some of the themes identified in my thematic analysis. The need for validation subscale incorporates the global category of need for validation from the transgressor and others. The disdain subscale incorporates parts of the moral superiority and severing ties themes, with participants expressing dislike for the transgressor and wanting to minimize their relationships and interactions with them. The negative impact subscale maps on to participants' mixed thoughts and emotions, in which they felt that holding on to the grudge was negative and that it reflected poorly on them. Finally, the persistence factor captured participants' inability to let go of the grudge, highlighting their continued negative emotions and the perception that the grudge will be enduring.

The disdain and persistence subscales captured the most intrinsic, universal aspects of holding a grudge, in particular the corresponding emotions, thoughts, and behaviours. I decided not to incorporate the negative impact and need for validation subscales into the next study because they are more reflective of metacognition (i.e., thinking about how one is holding a

grudge) than emotional or cognitive components of a grudge. Specifically, perceiving that holding the grudge is negative and unflattering is due to personal evaluation of the effect it is having on oneself. It requires reflection and self-awareness. Similarly, the need for validation also represents an evaluation of the grudge. Participants want their thoughts and emotions to be normalized by the transgressors and others. In contrast, disdain felt for a transgressor and persistent negative affect are direct components of holding a grudge, therefore they are more integral to its measurement. Deciding not to include these two subscales reduced the item-pool from 132 to 92 items. However, in the future these subscales could be refined into scales in their own right. One could measure individuals' perceptions of holding a grudge, and another could assess individuals' perceived need for an apology.

In order to reduce the item-pool even further, I decided to drop items that were reverse-worded. There are several reasons why incorporating reverse-worded items is not the best approach psychometrically. Participants responding carelessly to reverse-worded items can lead to overidentifying theoretical or methodological factors when factor analyzing (Woods, 2006). Doing so can also reduce scale reliability (Barnetter, 2000), increase error variance, and distort factor identification (Schriesheim & Eisenbach, 1995). This led me to drop nine items from the disdain subscale, and eight items from the persistence subscale, for a total of 75 remaining items. I also decided to drop items that were not universal. For instance, there were items asking participants who had cut the transgressor out of their lives how they currently felt about that decision. Because not all participants were willing or able to end their relationship with the transgressor, these items were not applicable to everyone. Removing them made the scale applicable to all respondents, regardless of the transgressor's current role in their lives. In total, this eliminated another 14 items, with 61 remaining. Finally, I dropped the items "I have a right

to be angry", and "I'm holding on to this to protect myself" from the persistence factor because, along with not being theoretically relevant to the other items, they had low factor loadings (.31 and .38, respectively). They also tap into a potential motive for holding a grudge, which is not the purpose of this scale. The final item count was 32 for disdain and 27 for persistence.

Study 2

In Study 2, my goal was to refine the measure of holding grudges and further reduce the number of items. To do this I ran another EFA on the 59 items retained from Study 1 (see Appendix B), followed by a CFA on a smaller subset of items. I also wanted to compare how the finalized grudge scale would be associated with other variables of interest, such as forgiveness and personality traits. Specifically, I measured additional post-transgression responses, including forgiving, seeking revenge, and avoiding. I expected holding a grudge to be negatively associated with forgiving. Additionally, despite the fact that in Part 1, the majority of participants stated that they did not want revenge, and that revenge itself is not a very common occurrence (Schumann & Ross, 2010), I anticipate that those who do desire vengeance will also likely be holding a grudge. In addition to these post-transgression responses, I wanted to determine how holding a grudge relates to how much individuals ruminate about transgressions. Part 1 found that ruminating about what had happened was an important component of holding a grudge, and that being unable to control one's thoughts plagued many participants. In light of this, I expected holding a grudge to be positively linked to rumination.

I was also curious whether personality traits would predict holding grudges. For instance, perhaps less agreeable or more neurotic individuals are more inclined to hold grudges. Neuroticism has been linked to less forgiveness (McCullough & Hoyt, 2002; Walker & Gorsuch, 2002) and more vengefulness, which has in turn been negatively associated with agreeableness

(McCullough, Bellah, Kilpatrick, & Johnson, 2001; McCullough & Hoyt, 2002; Rey & Extremera, 2014). These links between vengefulness, neuroticism, and agreeableness have also been demonstrated cross-culturally (Sindermann, Luo, Zhao, Li, Li, Kendrick, Panksepp, & Montag, 2018). No other consistent associations between the Big Five and post-transgression responses have been found. This suggests that these two traits are the most closely linked to post-transgression responding, therefore should also be the most strongly related to holding grudges.

Past research from our lab has consistently linked holding a grudge, measured with rudimentary items, to feelings of powerlessness (Guilfoyle, Struthers, van Monsjou, Khoury, & Shoikhedbrod, Revise and resubmit 2018) and high levels of attachment anxiety (van Monsjou, Struthers, Khoury, Guilfoyle, Young, & Muller, 2015). Because of this I felt it was important to include these variables to determine whether the current scale would show similar associations.

Given the uncertainty of the final subscales, I did not make any specific predictions about how those subscales would relate to these other variables.

Method

Participants

985 participants, recruited using the same methods as Study 1, took part in this study. As in Study 1, I removed a large proportion of the sample based on evidence of inattention or not following instructions. 298 were dropped for responding incorrectly to the attention check items, and 223 were removed for having more than 3 missing data points (1 participant had 6 missing points, another had 16, and 221 had 138), again potentially indicating inattention. Seven were dropped because they said they did not respond conscientiously, and 28 were dropped because they completed the study on a mobile device despite explicit instructions not to do so. Finally, 22 participants were removed for participating more than once. This left a total of 406 participants.

There were 95 men and 307 women, two who identified their gender as "other", and two who preferred not to disclose their gender. Their average age was 20 years old (*SD* = 5.70). 26% of the sample were Caucasian, 25% were South Asian, 12% were Middle Eastern, 11% East Asian, 10% African American, 6% other, 5% Latin American, 2% mixed ethnicity, and 1% Aboriginal.

Of the transgression recalled, 219 (55%) reported that the transgressor was a friend, 64 participants (16%) reported that the transgressor was a family member, 63 a romantic partner (16%), 14 reported a co-worker or boss (5%), 15 an acquaintance (4%), and 22 a stranger (5%). Most participants (n = 223; 55%) said that the transgression had taken place within the past year.

Materials

All items were rated using this same 7-point scale (1- *Strongly disagree* – 7 - *Strongly agree*) unless otherwise specified. See Table 8 for internal consistency of all scales.

Post-transgression responses. The following scales were used to measure various responses individuals had to the transgressions they recalled. The same transgression stimuli as Study 1 was used, in which participants were asked to recall and write about a moderate-to-severe unresolved transgression. Participants were also asked how long ago the transgression occurred, as well as what their relationship was to the transgressor.

Grudge items. With respect to the recalled transgression, participants were asked how much they agreed with the 59 items retained from Study 1.

Rumination. Participants were asked how much they ruminate about the offence with the Rumination about an Interpersonal Offence Scale (Wade, Vogel, Liso, & Goldman, 2008). This scale consists of six items, for instance, "I can't stop thinking about how I was wronged by this person", and "I find myself replaying the events over and over in my mind." This sale has acceptable internal consistency (all alpha coefficients > .90) (Wade et al., 2008).

Revenge and avoidance. The degree to which participants sought revenge or avoided the transgressor were measured using the Transgression Related Interpersonal Motivation Scale (TRIM) (McCullough, Rachal, Sandage, Worthington, Brown, & Hight, 1998). The TRIM has two subscales: one measuring revenge and the other measuring avoidance. The revenge subscale has five items, such as "I'll make him or her pay", and "I wish that something bad would happen to him or her" (original $\alpha = .90$). The avoidance subscale has seven items, such as "I avoid him or her", and "I live as if he or she doesn't exist or isn't around" (original $\alpha = .86$).

Forgiveness. Forgiveness was measured using the benevolence subscale of the TRIM (McCullough, & Hoyt, 2002; α's > .85). This subscale has seven items that measure goodwill toward the transgressor. For instance, "I have given up my hurt and resentment", and "I want us to bury the hatchet and move forward with our relationship".

Trait post-transgression responses. In addition to determining how participants responded to the specific transgression they recalled, I was also interested in examining participants' trait tendencies to forgive, seek revenge, or apologize. To do this, I included one item inquiring about each one. The items were "When people do things that upset me, I tend to let go of it easily", "When people do things that upset me, I often try to get back at them", and "When I do things that upset others, I tend to apologize".

Personality traits.

Big Five. I measured personality traits using a short form of the Big Five Inventory (BFI-S; Lang, Ludtke, Schupp, & Wagner, 2011). This scale has 15 items, three for each personality trait. Participants responded to statements regarding how they see themselves. For instance, for neuroticism, a sample item is "I see myself as someone who worries a lot." ($\alpha = .60$; Lang et al., 2011); extraversion: "I see myself as someone who is talkative" ($\alpha = .66$; Lang et al., 2011);

agreeableness: “I see myself as someone who has a forgiving nature” (α = .50; Lang et al., 2011); openness: “I see myself as someone who is original, comes up with new ideas” (α = .63; Lang et al., 2011); conscientiousness: “I see myself as someone who does things efficiently” (α = .60; Lang et al., 2011).

Power. I measured interpersonal power with the Generalized Sense of Power Scale (Anderson & Galinsky, 2006; α’s > .78). This scale consists of eight items that assess how much power individuals feel they have in their relationships with others. Sample items include “In my relationships with others, I can get them to do what I want”, and “In my relationships with others, I think I have a great deal of power”.

Attachment anxiety. To measure attachment anxiety, I included the anxiety subscale of the Attachment Styles Questionnaire (ASQ; Feeney, Noller, & Hanrahan, 1994). The anxiety subscale has 15 items (α = .87), rated from 1 *(Strongly disagree)* to 6 *(Strongly agree)*. A sample item is “I wonder why other people would want to be involved with me”.

Social desirability. I also included the Marlowe-Crowne Social Desirability Scale (short form) (Crowne & Marlowe, 1960; Strahan & Gerbasi, 1972) to measure how likely participants were to respond to questions in socially desirable ways. This scale has 10 items, for instance, “I always try to practice what I preach”, and “I never resent being asked to return a favour”.

Results and Discussion

Splitting the dataset

For this study, I decided to split the dataset into a training and test set. This enabled me to conduct both an EFA and a CFA on the same dataset. I wanted to run another EFA because the item pool was still quite large and to determine whether the factor structure from Study 1 would replicate. I split the sample equally so that 203 participants were included in the training set and

the remaining 203 were included in the test set. Despite the small sample size, after cleaning the data were good and the number of items was large, indicating that these samples are sufficient.

Training set

Parallel analysis. A parallel analysis recommended retaining three factors (see Figure 9). However, from the figure, only two of the three factors are actually above the blue line of random eigenvalues, suggesting that a two-factor model is the best approximation of this data.

EFA. As in Study 1, I used OLS factoring and oblimin rotation when analyzing all 59 items. According to the parallel analysis, I estimated models with four, three, two, and one factors. All residual correlations for the following models were normally distributed. I started with the four-factor model. Although it had a sufficiently low SRMR (.04), the factors did not make theoretical sense (see Figure 10). I found the same results for the three-factor model (SRMR = .05) (see Figure 11). The two-factor model was a good fit according to SRMR value (.06), and it also made sense theoretically and was more parsimonious, with items loading cleanly on to the two factors (see Figure 12). I also tested a one-factor model to determine whether it would be able to explain the data sufficiently with the fewest possible number of factors. The model fit was poor (SRMR = .13). As a result, I decided to proceed with the two-factor model. In order to reduce the number of items, I first eliminated three that loaded on both factors. I also decided to remove 30 items that had communalities lower than .5. Having low communalities indicates that an item is not well-explained by any factors in the model and it is likely not related to the other items (Fabrigar & Wegener, 2012). The remaining 26 items had high factor loadings and communalities. The internal consistency was .96 for the disdain factor, and .93 for the persistence factor.

Figure 9
Parallel analysis

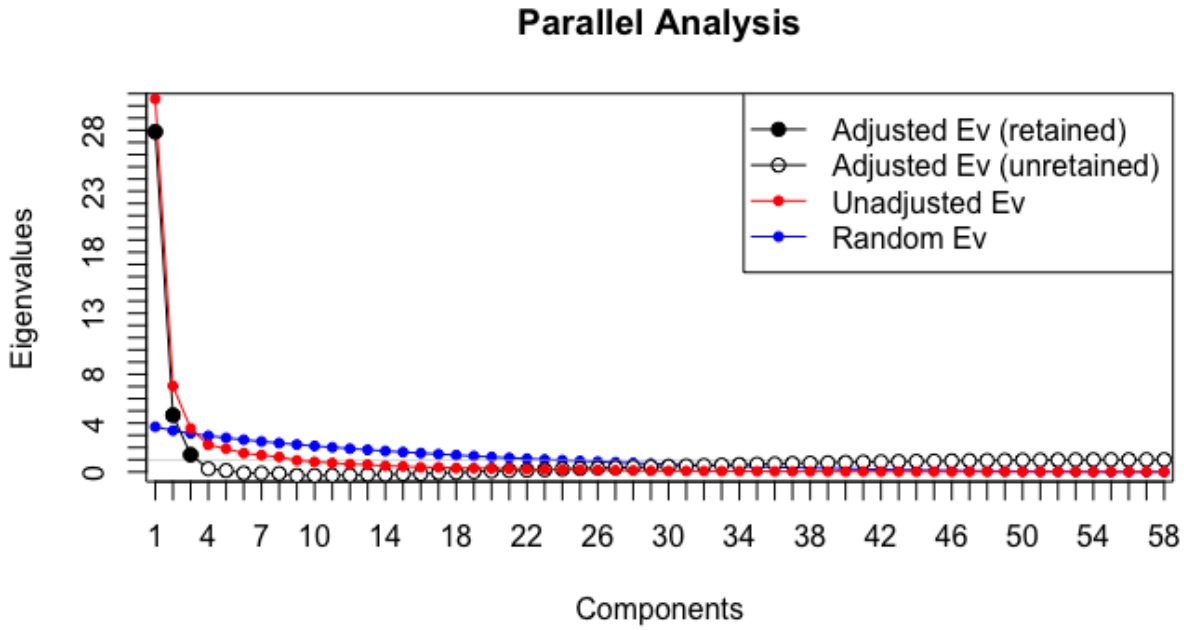


Figure 10
Four-factor model

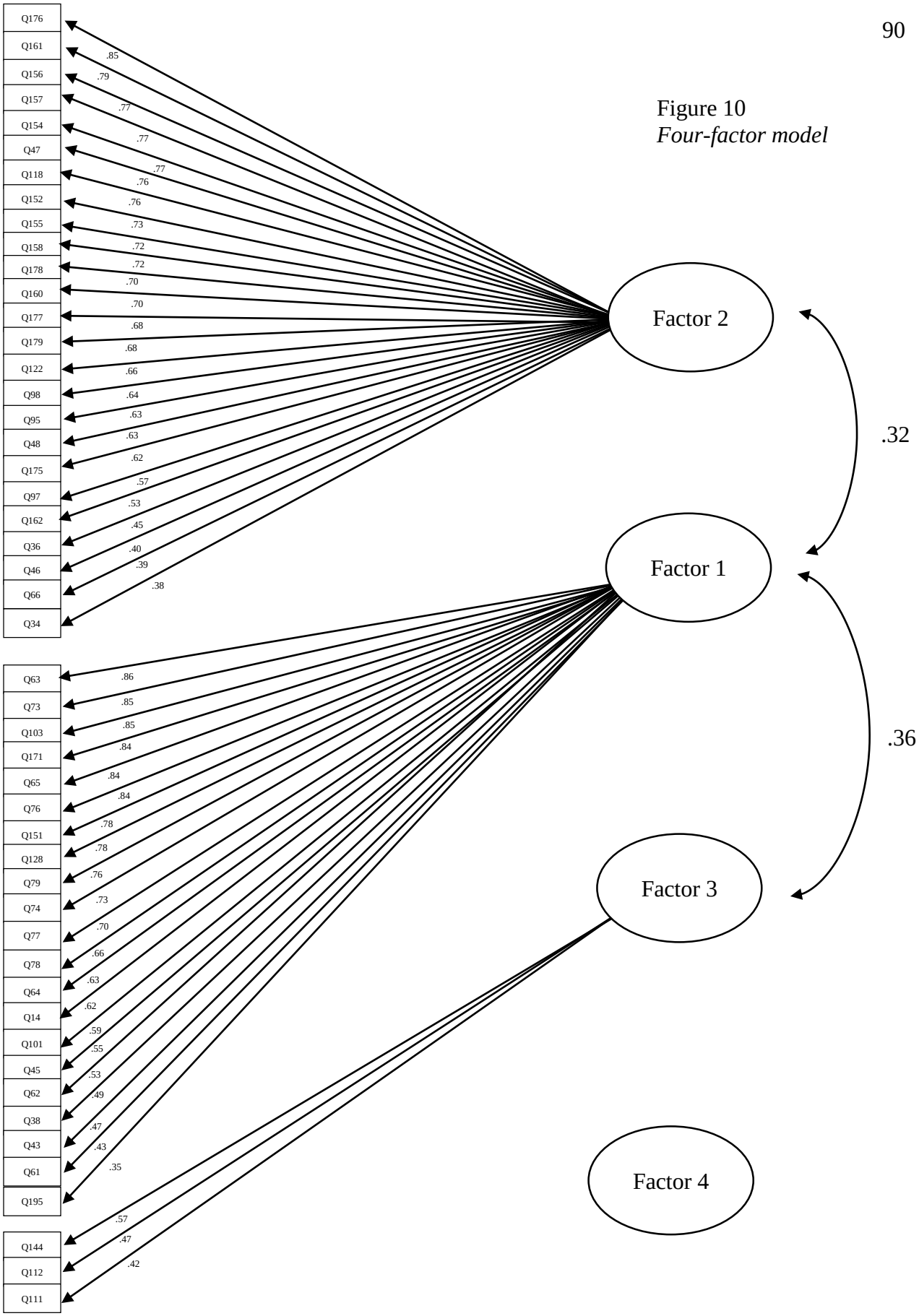


Figure 11
Three-factor model

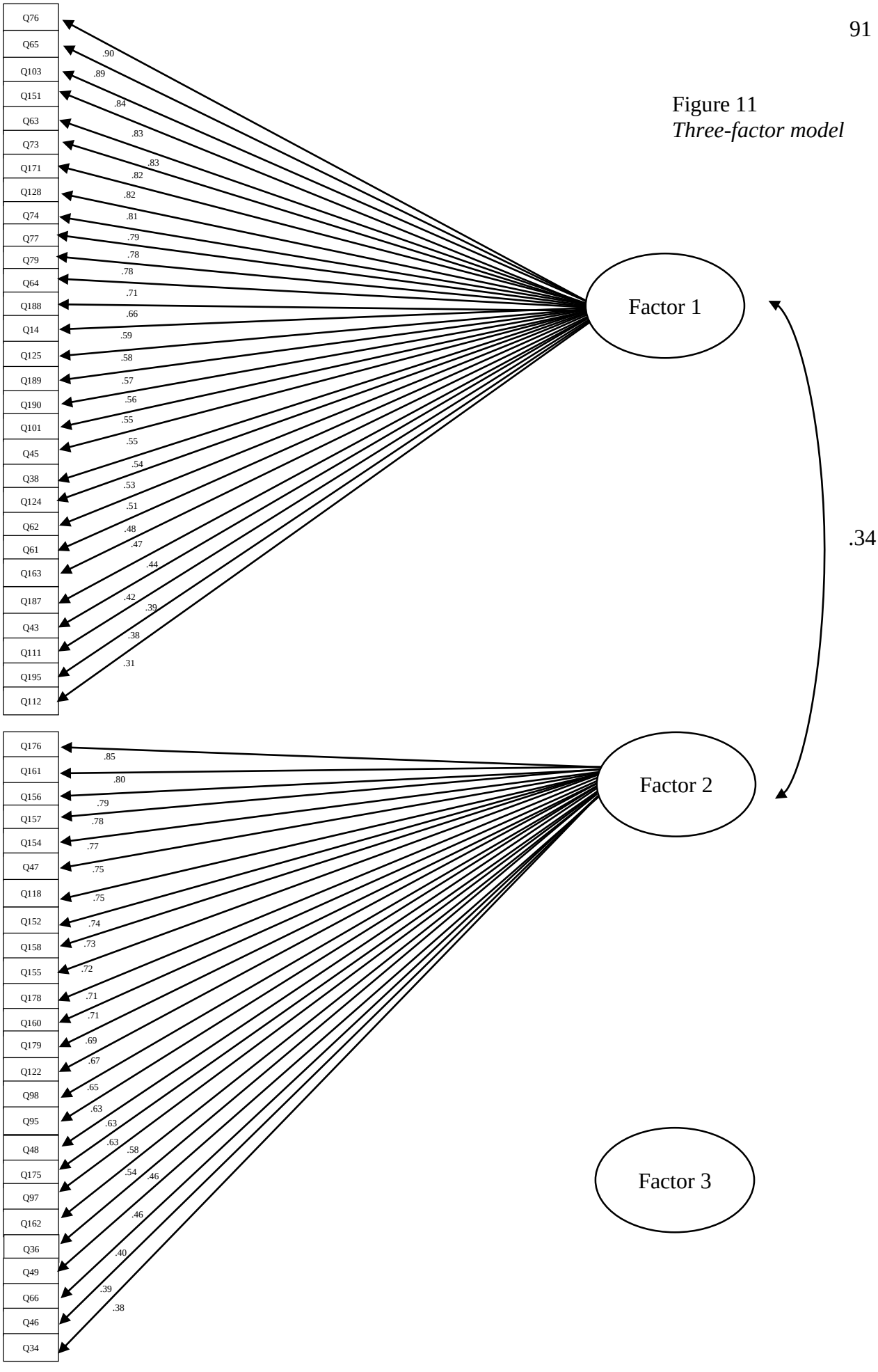


Figure 12
Two-factor model

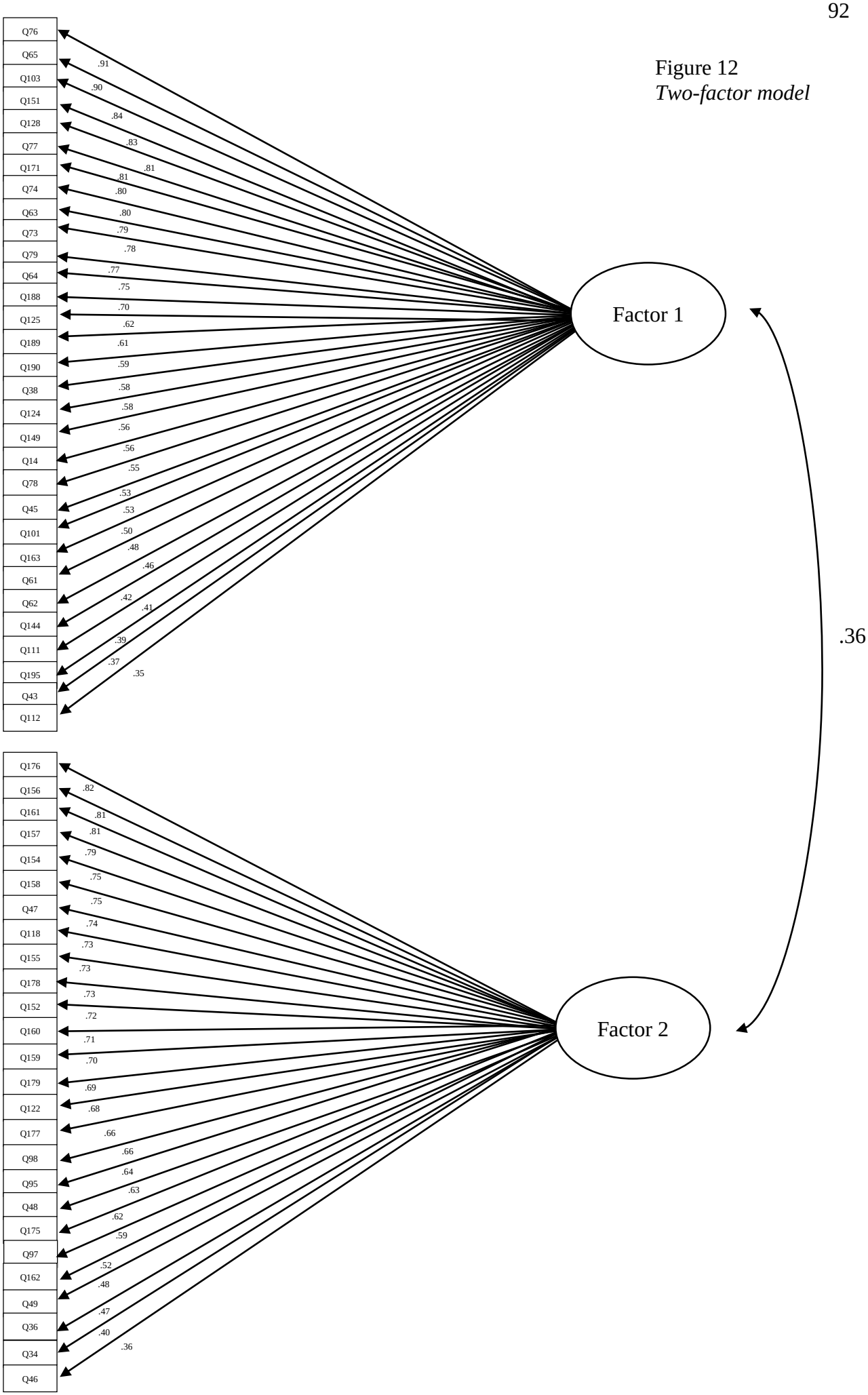


Table 4
Factor loadings for reduced two-factor model

Item	F1	F2	Communality
65. I'll never like this person again.	.91		.79
76. I want nothing to do with this person.	.91		.78
103. Having this person in my life is not a good thing	.83		.70
151. If I could cut this person out of my life, I would.	.82		.73
73. I made a decision to cut this person out of my life.	.80		.61
77. I think poorly of this person now.	.80		.68
171. I'm better off not having this person in my life anymore.	.79		.64
74. I actively avoid this person now.	.79		.62
63. I would never be able to trust this person again.	.79		.64
79. I've realized that this person is not a good person.	.78		.64
128. This person isn't worth my time or energy.	.78		.58
64. This person is not a likeable person.	.75		.55
188. I will always dislike this person, regardless of what he or she says or does.	.67		.55
38. This person doesn't deserve to be forgiven	.58		.50
161. I don't know how to get over this.		.83	.65
176. I'm still hurt by what happened.		.81	.62
157. I feel like this will always be with me.		.81	.64
156. I can't see myself letting go of this anytime soon.		.80	.64
158. I don't know if I'll be able to move on from this.		.78	.59
154. I feel hurt when I'm reminded of what happened.		.75	.55
160. What happened will always bother me.		.73	.53
155. Reminders of what happened reignite my anger.		.71	.56
152. Being reminded of what happened makes it hard to get over.		.71	.58
178. I'm still angry about what happened.		.71	.58
118. What happened still has an emotional impact on me.		.70	.49
159. I'm deciding not to let go of this.		.70	.57

CFA on test set

After reducing the total number of items from 59 to 26, I conducted a CFA on the test half of my dataset to verify the two-factor structure. I predicted that the two-factor model would be a better fit than a one-factor model. Based on skew and kurtosis, the data did not show any evidence of being nonnormally distributed. I estimated these models using maximum likelihood.

There are a number of ways to determine how well a model fits the data when running a CFA. Comparative fit indices, such as the comparative fit index (CFI) and the Tucker-Lewis index (TLI), compare the model being specified against a baseline model (Harrington, 2009). Another fit index is the Root Mean Square Error of Approximation (RMSEA), which tests whether the model fits reasonably well in the population (Harrington, 2009). With RMSEA, greater model complexity means poorer fit. General recommendations are that CFI and TLI values should be greater than .90, RMSEA less than .08, and SRMR less than .10. However, there are also more conservative guidelines that one could adopt (Harrington, 2009). When a model does not fit well, it can be due to including too many or too few factors, having inappropriate items, or specifying the relation between the items and factors incorrectly. In such cases, one can revise the model to achieve a better fit (Harrington, 2009).

First, I ran a one-factor model, which, as predicted, was a poor fit (see Table 5 for fit statistics). Next, I ran a two-factor model, which I expected to fit the data well based on the previous EFA. However, it was actually *not* a great fit. As a result, I decided to specify models with additional numbers of factors to determine whether they would be a better fit. When specifying the three-factor model, I divided the persistence factor into two subfactors: emotional persistence and perceived longevity. This model fit the data better than the two-factor model, but only three of the four fit statistics were above the threshold. Based on this, I specified a four-

factor model that split the disdain factor into negative evaluation and desire to avoid. This model did not fit the data better than the three-factor model.

Because the three-factor model had acceptable fit, I decided to proceed with it. To improve the fit, my next step was to look at the item content and remove those that seemed less pertinent to the respective subscales. Specifically, for Factor 1 the lowest loading item was "This person doesn't deserve to be forgiven". This did not correspond well to the other items that made up the disdain subscale, therefore I decided to drop it. I also dropped two items that were explicitly about participants ending their relationship with the transgressor (items 73 and 74). Because this is not necessarily a universal desire, and it may be unfeasible, for instance if the person does not have a pre-existing relationship with a transgressor, I felt like including item 151, "If I could cut this person out of my life, I would", was a better way to capture this sentiment. I also opted to drop items 171, 64, and 188 based on content redundancy with higher loading items. This left eight items in the disdain subscale. From the perceived longevity factor, I dropped item 59, because it had the lowest factor loading and did not fit as well with the other five items. From the emotional persistence factor, I dropped item 118 because it was redundant.

This 3-factor, 18-item model fit the data well. In order to ensure that this was the best model to proceed with, I also tested a two-factor model for the 18 items, in which I combined the emotional persistence and longevity factors, similar to the original 2-factor model I specified. This did not fit the data as well, therefore I felt confident moving forward with the 3-factor model. See Table 5 for fit statistics and Table 6 for final 18-item scale.

The remaining 18 items all had high factor loadings (see Table 6) and acceptable internal consistency (see Table 7). The factors were also correlated with one another, although emotional persistence and perceived longevity were much more strongly correlated than the other factors

Table 5
Robust Model Fit Statistics

	26 items				18 items	
	1-Factor	2-Factor	3-Factor	4-Factor	2-Factor	3-Factor
TLI	.53	.86	.89	.89	.91	.95
CFI	.58	.87	.90	.90	.92	.96
RMSEA	.17	.10	.08	.08	.09	.07
SRMR	.21	.08	.07	.08	.06	.05

Table 6
Factor loadings for three-factor model

Factor	Item	Loading
Disdain	65. I'll never like this person again.	.87
	76. I want nothing to do with this person.	.88
	103. Having this person in my life is not a good thing	.83
	151. If I could cut this person out of my life, I would.	.84
	77. I think poorly of this person now.	.81
	63. I would never be able to trust this person again.	.78
	79. I've realized that this person is not a good person.	.84
	128. This person isn't worth my time or energy.	.81
Emotional Persistence	176. I'm still hurt by what happened.	.81
	154. I feel hurt when I'm reminded of what happened.	.80
	155. Reminders of what happened reignite my anger.	.79
	152. Being reminded of what happened makes it hard to get over.	.75
	178. I'm still angry about what happened.	.78
Longevity	161. I don't know how to get over this.	.80
	157. I feel like this will always be with me.	.80
	156. I can't see myself letting go of this anytime soon.	.80
	158. I don't know if I'll be able to move on from this.	.84
	160. What happened will always bother me.	.78

Table 7
Descriptive statistics and inter-factor correlations for test set

	Disdain	Emotional persistence	Longevity	Mean	SD	Skew	Kurtosis	Coefficient Alpha
Disdain	-	.21*	.28*	4.77	1.63	-.57	-.59	.95
Emotional Persistence		-	.84*	3.20	1.54	.52	-.37	.89
Longevity			-	4.40	1.52	-.36	-.68	.87

Note. * = Statistical significance

(see Table 7). Taken together, a three-factor model best accounted for the data. These three factors were disdain, emotional persistence, and perceived longevity. Disdain, similar to Study 1, captured participants' negative evaluation of the transgressors and desire to have nothing to do with them. Emotional persistence represented the fact that the transgression was still having an emotional impact on participants, indicated by continual feelings of hurt and anger. Finally, the third factor was perceived longevity, which refers to participants' expectations that they will not be able to move on anytime soon. Disdain was weakly correlated with emotional persistence and only moderately correlated with longevity, indicating that participants do not necessarily feel disdain toward transgressors, even if they are still impacted by what happened and feel like it will affect them for a long time. Emotional persistence and longevity were highly correlated, which makes sense, given that, if one is currently still experiencing negative emotions as a result of the transgression, one would expect to continue to do so indefinitely. Even though these factors are all correlated with one another, I recommend using at least the first subscale independent of the second two, given that the associations were only weak-to-moderate. If one were to use them in combination, based on mean values, it may lead to underestimation of the extent to which an individual is holding a grudge.

Overall, the scale measures three key components of holding a grudge. Disdain accounts for feelings of contempt toward the transgressor and the desire to have nothing to do with him or her, with high scores indicating greater dislike and desire to avoid. Emotional persistence evaluates the strength of individuals' ongoing hurt and anger. Finally, perceived longevity captures the sense of permanence associated with these ongoing thoughts and emotions.

In reference to the themes generated from Part 1, I believe these factors are a good representation of participants' immediate experiences of holding a grudge. Particularly, the

disdain participants feel toward transgressors represents the negative thought patterns of individuals who are holding a grudge and their assessment that the transgressor is not a good person whom they want little to do with. Experiencing prolonged negative emotions as a result of the transgression and having them stoked by reminders of what happened is well-captured by the emotional persistence factor. Finally, participants' perceiving the grudge as a long-term phenomenon reflects inability to let go.

EFA versus CFA

In this study, there was a discrepancy between the number of factors identified by the EFA versus the CFA. One possible reason for this is because of the differences between the two types of analyses (van Prooijen & Van der Kloot, 2001). EFA is data-driven, whereby one retains the number of factors that best account for the items, regardless of theory. In contrast, CFA is theory-driven and constrains which items can load on which factors, unlike EFA in which all items can load on all factors (van Prooijen & Van der Kloot, 2001). By nature, this makes CFA a more conservative and EFA a more liberal approach. Discrepancies between EFA and CFA models can be attributed to the greater constraints placed on a CFA model (van Prooijen & Van der Kloot, 2001). This highlights the importance of researcher discretion in identifying appropriate models rather than relying on solely data-driven techniques. In this specific case, Factor 2 from the EFA represents the emotional persistence and perceived longevity factors identified in the CFA. The correlation between these two factors was high (r = .84), therefore where a more conservative approach parsed them into two, a more liberal approach may have identified them as one cohesive factor. I believe that, despite their similarities, it is better to separate them because they are, in fact, theoretically distinct. For instance, it is very possible, if unlikely, that individuals may presently be experiencing sustained negative emotions as a result

of the transgression, and simultaneously feel as though they will be able to get over what happened. The mean for emotional persistence was actually quite a bit lower than for longevity (W = 50038, $p < .01$, $d = -.70$, CI[-.84, -.56]), suggesting that individuals are more likely to feel as though they will not be able to let go of what happened and less likely to report continuous negative affect. This also supports the results from Part 1, identifying a latent, unemotional component to holding grudges that co-occurs with one's inability to let go.

Relationships to other constructs

After deciding on the final items for the scale, I tested how the factors related to a host of other constructs. Using the entire dataset, the scale showed highly similar properties as when just using the test data (see Table 8 for descriptive statistics and Table 9 for correlations).

First, I wanted to determine if social desirability was correlated with holding a grudge. There is often concern that participants will underreport negative behaviours, thoughts, and emotions. If this were the case, social desirability and holding a grudge would be negatively correlated. However, it was unrelated to the disdain and emotional persistence subscales, and only weakly correlated with the longevity subscale. If social desirability affected participants' reporting, I would have expected it to exert the strongest influence on the disdain subscale, which reflects participants' own negative cognition. However, the internal consistency of the social desirability measure was low, therefore it may not be the best approximation.

Although women ($M = 3.28$, $SD = 1.58$) reported feeling somewhat more negative affect than men ($M = 2.96$, $SD = 1.52$), W = 12752, $p = .06$, $d = -.21$, CI[-.44, .02], the difference was not statistically significant at the $p < .05$ level. However, women felt they would be holding on to the grudge for longer than men, t (155.29) = -3.10, $p < .01$, $d = -.37$, CI[--.60, -.13]. Gender was unrelated to reported feelings of disdain. These results are interesting, however this sample

was predominately women (76%), therefore they should be replicated in a more gender-balanced sample. Age was unrelated to any of the three aspects of holding a grudge (see Table 9).

I also wanted to establish that holding a grudge would not be correlated with things that one would not expect it to relate to. To do this, I asked participants how much they liked the colour green. I expected this to be unrelated to all three grudge factors, which was the case.

Post-transgression responses. In terms of post-transgression responses, I predicted that holding a grudge would be negatively related to forgiveness but positively related to revenge and avoidance. For specific transgressions, all three subscales were positively correlated with seeking revenge and avoiding the transgressor, although disdain was more strongly associated with both than emotional persistence and longevity. Conversely, all three grudge subscales were negatively correlated with forgiving the transgressor, although disdain again showed the strongest association. I also found this for trait tendencies, although to a much lesser degree. Greater forgivingness was associated with less disdain, emotional persistence, and longevity, whereas more vengefulness was positively linked to all three subscales. I also predicted that trait tendency to apologize would be negatively associated with holding a grudge, but it was actually unrelated to any of the three subscales. This result is not entirely surprising, seeing as one can behave quite differently when one is the victim of a transgression as opposed to when one is the transgressor.

After a transgression occurs, some people also tend to ruminate about what happened, and rumination is associated with greater vengefulness (McCullough, Bellah, Kilpatrick, & Johnson, 2001) and less forgiveness (McCullough, Bono, & Root, 2007). Rumination was also a grudge component identified in Part 1. Therefore, I predicted that holding a grudge would be associated with more rumination. This was the case for all three subscales, although it was more strongly linked to emotional persistence and longevity than disdain.

Personality characteristics. I included two constructs that have shown consistent positive relationships with holding a grudge in past research: interpersonal power and attachment anxiety. I expected greater attachment anxiety and less interpersonal power to be associated with holding a grudge. These hypotheses were with regard to the emotional persistence and longevity subscales, but not the disdain subscale.

I also included the Big Five, despite not having strong predictions about how holding a grudge would relate to the various traits. I did expect higher agreeableness to be associated with lower likelihood of holding a grudge, and higher neuroticism to be associated with higher likelihood of holding a grudge. Emotional persistence and longevity were both linked to greater neuroticism, although disdain was not. In contrast, agreeableness was unrelated to any of the grudge subscales. Similarly, extraversion and conscientiousness were not linked to any of the subscales, and only emotional persistence was associated with less openness. In sum, holding a grudge was not strongly related to the Big Five, with the exception of neuroticism, although this only applied to the subscales representing the long-term impact of the grudge. However, it is worth nothing that the agreeableness and conscientiousness BFI subscales had low internal consistency, potentially affecting the results.

Overall, the only aspects of holding a grudge that were linked to participants' personalities were emotional persistence and perceived longevity. Disdain does not appear to be driven by the traits measured in this study. Based on these results, individuals who experience higher attachment anxiety, less interpersonal power, and greater neuroticism are more likely to experience prolonged negative affect related to the transgression, and to expect that they will be holding the grudge for a long time.

Table 8
Descriptive statistics for full dataset

	Mean	SD	Skew	Kurtosis	Alpha
Disdain	4.57	1.66	-0.41	-0.82	.95
Emotional Persistence	3.22	1.57	0.53	-0.40	.90
Longevity	4.32	1.57	-0.33	-0.33	.89
Rumination	3.44	1.52	0.37	-0.63	.89
Revenge	1.89	0.90	1.03	0.62	.89
Avoidance	3.34	1.14	-0.42	-0.69	.94
Forgiveness	3.10	0.87	-0.17	-0.29	.85
Trait Power	4.57	0.95	-0.34	0.34	.84
Extraversion	4.26	1.38	-0.26	-0.48	.74
Neuroticism	4.74	1.23	-0.63	0.28	.66
Openness	4.97	1.19	-0.59	0.33	.77
Agreeableness	5.10	0.95	-0.12	-0.11	.41
Conscientiousness	4.81	0.96	-0.09	-0.06	.48
Attachment Anxiety	3.72	0.74	-0.13	0.06	.83
Trait Forgiveness	4.16	1.55	-0.14	-0.84	-
Trait Revenge	3.06	1.48	0.54	-0.37	-
Trait Apology	5.67	1.33	-1.31	1.67	-
Social Desirability	4.15	0.70	-0.06	0.24	.56
Liking Green	4.38	1.38	0.12	-0.06	-

Table 9
Correlations between grudge subscales and other constructs

	Disdain		Emotional Persistence		Longevity	
	r	95% CI	*r*[a]	95% CI	*r*	95% CI
Disdain	-	-	.18*	.08, .28	.29*	.20, .38
Emotional Persistence			-	-	.74*	.69, .79
Longevity					-	-
Revenge[a]	.41*	.33, .49	.25*	.15, .39	.29*	.20, .38
Avoidance	.86*	.83, .88	.21*	.11, .30	.29*	.20, .38
Forgiveness	-.71*	-.76, -.66	-.19*	-.29, -.10	-.25*	-.33, -.15
Rumination[a]	.24*	.13, .33	.69*	.63, .75	.71*	.65, .77
Trait Forgiveness	-.12*	-.21, -.05	-.15*	-.25, -.05	-.16*	-.25, -.06
Trait Revenge	.13*	.03, .23	.17*	.07, .26	.13*	.03, .24
Trait Apology	-.00	-.09, .10	-.09	-.19, .01	-.03	-.13, .07
Trait Power	-.04	-.13, .06	-.26*	-.35, -.17	-.23*	-.32, -.13
Attachment Anxiety	.09	-.00, .19	.26*	.16, .37	.31*	.22, .40
Extraversion	-.03	-.13, .06	-.06	-.15, .04	-.07	-.16, .03
Neuroticism	.07	-.03, .17	.19*	.09, .28	.26*	.17, .35
Openness	.02	-.08, .12	-.11*	-.20, -.01	-.10	-.19, .00
Agreeableness	-.07	-.17, .03	-.10	-.19, .00	-.07	-.16, .03
Conscientiousness	.05	-.05, .15	-.08	-.17, .01	-.08	-.18, .02
Social Desirability	.01	-.09, .10	-.09	-.19, .01	-.13*	-.23, -.04
Liking Green	.01	-.09, .11	-.001	-.10, .09	.03	-.06, .13
Age[a]	-.01	-.11, .10	.04	-.06, .15	.06	-.04, .16

Note. [a] = Spearman correlations due to nonnormality; * = Statistical significance

Study 3

After deciding on the final 18-items that would be included in the Grudge Aspect Measure (GAM), I ran another CFA on an independent dataset to further support these decisions. I also wanted to replicate the relationships between holding a grudge and forgiveness, revenge, avoidance, and rumination; as well as between interpersonal power and attachment anxiety. I decided not to include the measures of trait apology or social desirability due to lack of theoretical relevance.

Additionally, in light of the recent publication of an unforgiveness scale (Stackhouse, Ross, & Boon, 2018), I wanted to compare it to the GAM. Similar to holding a grudge, unforgiveness has often been conceptualized as the opposite of forgiveness (Stackhouse et al., 2018), therefore it may be the case that holding a grudge and unforgiveness are, if not the same, quite similar.

The Unforgiveness Measure (UFM) evaluates three factors: cognitive-evaluative unforgiveness, emotional-ruminative unforgiveness, and offender reconstrual (Stackhouse et al., 2018). Cognitive-evaluative unforgiveness indicates a choice made not to forgive the transgressor based on the belief that what he or she did was unforgivable. Emotional-ruminative unforgiveness refers to continual negative emotions and ruminating about the transgression. Finally, offender reconstrual represents a change in how individuals view the transgressor.

When compared to disdain, emotional persistence, and longevity, there are some definite similarities. For instance, both unforgiveness and holding a grudge consist of negative evaluations of the transgressor. However, offender reconstrual stresses seeing the transgressor differently and having trouble distinguishing the person from his or her actions. While this implies a negative evaluation of the transgressor, it is not explicitly captured. In contrast, disdain

is more focused on seeing the transgressor in a negative light. Specifically, whether individuals want anything to do with transgressors and whether they would ever be able, or want, to have positive relationships with them again. In this sense, disdain captures a more severe negative evaluation and desire to be rid of the transgressor than offender reconstrual.

Emotional-ruminative unforgiveness and emotional persistence are similar in the sense of both capturing prolonged hurt, however emotional persistence considers anger and the importance of being reminded of the transgression. Emotional-ruminative unforgiveness also broadly taps into some aspects of longevity, but at a more cursory level. For instance, longevity is concerned solely with individuals' perceptions of how long-term they believe the grudge will be, versus emotional-ruminative unforgiveness which focuses on worrying about how they will be affected in the future.

The UFM purports to measure varied experiences of not forgiving, which appears to include some aspects of holding a grudge. The GAM itself delves into the more nuanced aspects of holding a grudge that are not truly captured in the UFM, such as experiencing feelings of anger and disliking the transgressor. Specifically, I expected the disdain and offender reconstrual subscales, as well as the emotional-ruminative and emotional persistence and longevity subscales to be moderately, positively correlated.

Method

Participants

553 participants, recruited from Amazon's Mechanical Turk, took part in this study. As in Studies 1 and 2, I removed portions of the sample based on evidence of inattention or not following instructions. 52 participant were dropped for responding incorrectly to the attention check items, and 51 were removed for having a number of missing data points. This left a total of

450 participants. There were 235 men and 210 women, one who identified as “other”, and one who preferred not to disclose gender. Their average age was 34 years old (*SD* =11.63). The majority of the sample was Caucasian (66%), followed by South Asian (10%), East Asian (7%), African American (6%), of mixed ethnicity (5%), Latin American (3%), and other (2%).

Of the transgression recalled, 145 (32%) reported that the transgressor was a friend, 107 participants (24%) reported that the transgressor was a family member, 98 a romantic partner (22%), 43 reported a co-worker or boss (14%), 17 an acquaintance (4%), and 16 a stranger (4%). Most participants (n = 204; 45%) said that the transgression had taken place within the past year, with 31% of participants (n = 138) reporting a transgression that had happened more than 3 years ago.

Materials

All the same scales as in Study 2 were used, and all items were rated using this same 7-point scale (1 = *Strongly disagree* – 7 = *Strongly agree*) unless otherwise specified. See Table 11 for internal consistency of each scale.

Transgression. The transgression stimuli was the same as in Studies 1 and 2. Participants were asked to recall and write about an unresolved, moderate-to-severe transgression someone had committed against them. They were also asked how much of an impact the event had on them, how responsible they thought the other person was, and how negative the event was.

Grudge items. Participants responded to the 18 grudge items retained from Study 2.

Unforgiveness. The UFM measures three aspects of unforgiveness: cognitive-evaluative, emotional-ruminative, and offender reconstrual (Stackhouse et al., 2018). The cognitive-evaluative subscale contains four items, for instance “I have no desire to forgive this person” (α = .84 - .90). The emotional-ruminative subscale has six items, such as “I continue to feel hurt by

what happened" (α = .84 - .85). Finally, the offender reconstrual subscale consists of three items, for example "This event changed the way I see this person" (α = .74 - .83).

Big Five Personality traits. Because the internal consistency of the BFI-S, which measured the Big Five personality traits in Study 2, was poor for a number of subscales, I decided to use a different measure in this study. This questionnaire assessed the personality traits with 16 adjectives (Herzberg & Brahler, 2006). Four measured neuroticism (such as anxious and easily upset; α = .67) and conscientiousness (e.g., self-disciplined; α = .74), three measured extraversion (e.g., reserved, quiet – reverse scored; α = .69) and openness (e.g. complex; α = .57), and two measured agreeableness (e.g., sympathetic, warm; α = .66).

Results

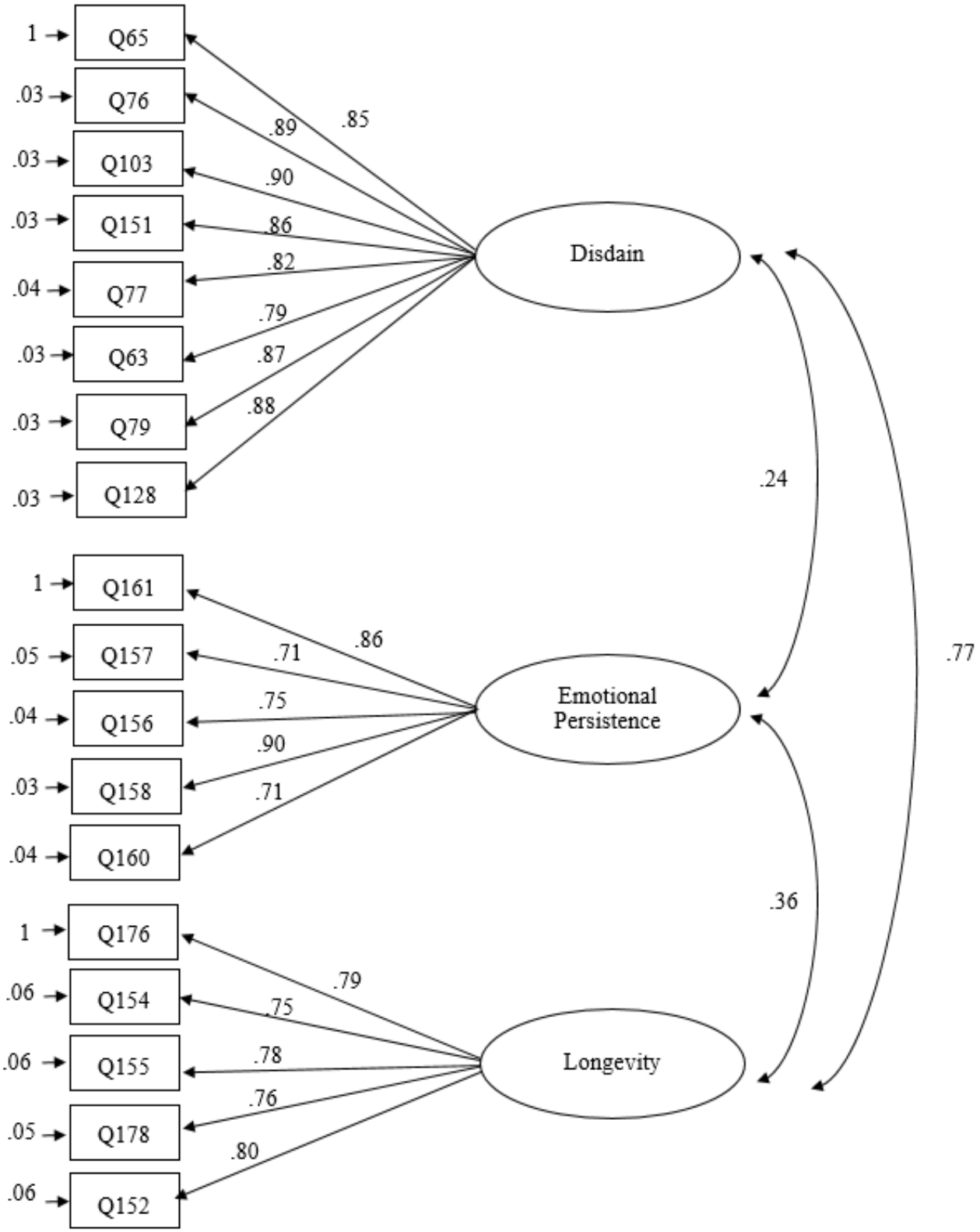
CFA

The purpose of this study was to conduct an independent CFA on a unique dataset to corroborate the results from Study 2. There was no evidence of nonnormality based on each individual item's skew and kurtosis (skew < 1.07; kurtosis < 1.22). I estimated all models using maximum likelihood. As expected, the three-factor model had acceptable fit, with three of the four fit statistics indicating a good fit (see Table 10). The RMSEA value was somewhat higher than desired (.09, CI [.08, .10]), potentially suggesting that the model was too complex. In light of this, I also ran a two-factor model, combining the emotional persistence and longevity subscales into one factor. This model did not fit the data well (see Table 10). Overall, like Study 2, the three-factor model fit the data best (see Figure 13). All items had high factor loadings and acceptable internal consistency and were positively correlated with one another, although emotional persistence and longevity were the most strongly related (see Table 12).

Table 10
Robust Model Fit Statistics

	2-Factor	3-Factor
TLI	.87	.91
CFI	.89	.92
RMSEA	.11	.09
SRMR	.07	.07

Figure 13
Structural equation model for final scale



Relationships to other constructs

Next I examined how the GAM would relate to the other variables measured in this study and to compare this with the results of Study 2. See Table 11 for descriptive statistics. As in Study 2, none of the three subscales were related to how much participants reported liking the colour green. This supports the hypothesis that holding a grudge should not be connected to individuals' colour preferences.

In contrast to Study 2, there were no gender differences in any of the three grudge aspects. This sample was much more balanced (52% male, 48% female), therefore these results may be more informative. This study also diverged from Study 2 in terms of associations with age. Age was positively linked with feelings of disdain and perceived longevity. These results are interesting, given that holding a grudge is often seen as an immature thing to do.

Post-transgression responses. All three subscales were moderately positively linked to desiring vengeance, replicating what I found in Study 2. Avoiding the transgressor was strongly correlated with disdain, moderately correlated with longevity, and modestly correlated with emotional persistence. Greater disdain correlated strongly with less forgiveness, which was also moderately negatively related to longevity and emotional persistence. Greater rumination about the transgression was strongly linked to greater longevity and emotional persistence, and, to a lesser extent, disdain. In terms of unforgiveness, I expected that greater disdain would be associated with seeing the transgressor differently. This was the case, although the correlation was only moderate, implying that the two constructs are different in meaningful ways. Seeing the transgressor differently was also positively associated with emotional persistence and longevity, although these relationships were not as strong as with disdain. I also predicted that emotional-ruminative unforgiveness, or experiencing continual negative emotions and ruminating about the

transgression, would be linked to both emotional persistence and longevity, which was the case. These relationships were both moderate. However, emotional-ruminative unforgiveness was not related to disdain. This may be because emotional-ruminative unforgiveness appears to be more focused on oneself, whereas disdain is targeted toward the transgressor. I did not make any predictions about how cognitive-evaluative unforgiveness, which refers to feeling as though the transgression was unforgivable, would be associated with any aspects of holding a grudge, and found that it was strongly correlated with disdain, and moderately correlated with emotional persistence and longevity. It makes sense that deciding not to forgive would be associated with feeling disdain toward the transgressor, still experiencing negative affect, and expecting to be affected by the transgression indefinitely.

Overall, these results suggest that the different types of unforgiveness, while related to holding a grudge, are not the same. However, the fact that the scale is a broad measure of unforgiveness essentially means that it incorporates holding a grudge to some degree. This supports the notion that the scales, while evaluating similar constructs, serve different purposes. The UFM is more suited to examining broad unforgiveness, whereas the grudge scale can be informative when one wants to delve more specifically into holding grudges.

Personality characteristics. Having a less forgiving personality was weakly linked to feeling disdain toward a specific transgressor, and was moderately associated with emotional persistence and longevity. In contrast, being more vengeful was weakly related to disdain and longevity, and moderately associated with emotional persistence.

Although the associations between longevity and power and attachment anxiety were not replicated in this study, their lack of association with disdain was supported. In contrast, like in Study 2, greater emotional persistence was linked to more attachment anxiety and less

Table 11
Study 3 descriptive statistics

	Mean	SD	Skew	Kurtosis	Alpha
Disdain	5.23	1.60	-0.67	-0.51	.96
Emotional Persistence	4.31	1.49	-0.03	-0.80	.89
Longevity	5.27	1.27	-0.78	0.27	.88
Rumination	3.88	1.53	0.06	-0.87	.90
Revenge	2.11	1.09	0.88	-0.10	.93
Avoidance	3.77	1.07	-0.76	-0.26	.94
Forgiveness	2.72	1.00	0.07	-0.75	.90
Emotional-Ruminative Unforgiveness	3.85	1.09	-0.03	0.52	.82
Cognitive-Evaluative Unforgiveness	4.08	1.49	0.14	-0.29	.91
Offender Reconstrual	5.42	1.10	-1.10	1.72	.73
Trait Power	4.59	1.10	-0.44	0.22	.88
Extraversion	3.01	1.54	0.69	-0.24	.90
Neuroticism	3.40	1.34	0.21	-0.62	.83
Openness	5.13	1.07	-0.41	0.27	.51
Agreeableness	5.39	1.13	-0.75	0.54	.70
Conscientiousness	5.31	1.02	-0.61	0.52	.69
Attachment Anxiety	3.30	0.92	0.08	-0.74	.89
Trait Forgiveness	3.90	1.61	-0.05	-0.89	-
Trait Revenge	2.75	1.70	0.79	-0.44	-
Liking Green	5.05	1.38	-0.22	-0.34	-

interpersonal power.

Despite using a different measure of the Big Five, I was able to replicate the three significant relationships that were found in Study 2, this time using a scale with better psychometric properties. As a result, I am confident in the findings that more neurotic individuals are more likely to experience emotional persistence and perceived longevity after a transgression, and individuals who are less open are also more likely to experience emotional persistence.

Much like Study 2, aside from forgivingness and vengefulness, personality traits did not play an important role in participants' feelings of disdain for the transgressor, nor the expectation that they will be holding the grudge for a long time. In contrast, greater attachment anxiety and neuroticism, and less openness predicted prolonged negative emotions as a result of the transgression.

Table 12
Correlations between grudge subscales and other constructs

	Disdain		Emotional Persistence		Longevity	
	r^a	95% CI	r	95% CI	r^a	95% CI
Disdain	-	-	.25*	.16, .34	.40*	.32, .48
Emotional Persistence			-	-	.72*	.66, .77
Longevity					-	-
Revenge[a]	.38*	.28, .46	.36*	.27, .44	.34*	.26, .43
Avoidance	.86*	.83, .89	.20*	.11, .30	.40*	.31, .48
Forgiveness	-.75*	-.80, -.70	-.26*	-.34, -.17	-.33*	-.42, -.24
Emotional-Ruminative	.04	-.05, .14	.59*	.53, .65	.52*	.44, .59
Cognitive-Evaluative[a]	.61*	.54, .67	.28*	.18, .37	.29*	.20, .38
Offender Reconstrual	.53*	.46, .60	.26*	.16, .36	.34*	.25, .43
Rumination	.19*	.09, .28	.69*	.64, .74	.66*	.59, .72
Trait Forgiveness	-.19*	-.28, -.10	-.26*	-.34, -.17	-.30*	-.38, -.20
Trait Revenge [a]	.09*	.00, .18	.22*	.13, .30	.13*	.04, .22
Trait Power	-.00	-.10, .09	-.19*	-.27, -.10	-.08	-.17, .01
Attachment Anxiety	-.04	-.14, .05	.13*	.04, .22	.10	-.00, .19
Extraversion [a]	.02	-.08, .12	.01	-.09, .11	-.03	-.12, .07
Neuroticism	.06	-.04, .15	.20*	.11, .29	.18*	.08, .28
Openness	.04	-.05, .14	-.14*	-.23, -.05	-.01	-.11, .09
Agreeableness	.03	-.06, .13	-.05	-.14, .04	.03	-.07, .13
Conscientiousness	.03	-.07, .13	-.10	-.19, -.01	.00	-.10, .10
Liking Green [a]	.02	-.08, .11	-.03	-.13, .07	.00	-.09, .09
Age [a]	.12*	.03, .21	.07	-.03, .17	.11*	.02, .21

Note. [a] = Spearman correlations due to nonnormality; * = Statistical significance

Figure 14
Correlation comparisons between Studies 2 and 3 - Disdain

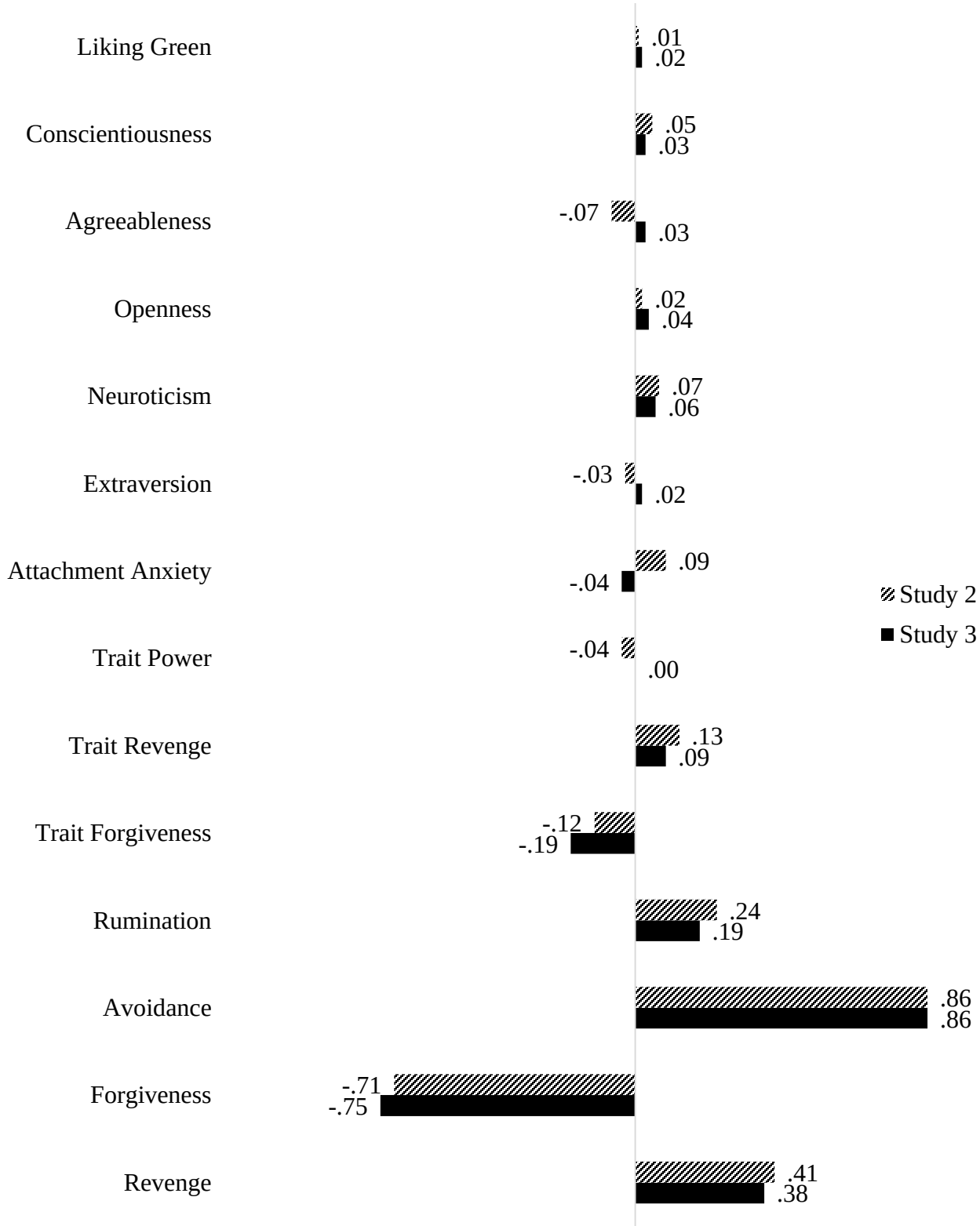


Figure 15
Correlation comparison between Study 2 and 3 – Emotional Persistence

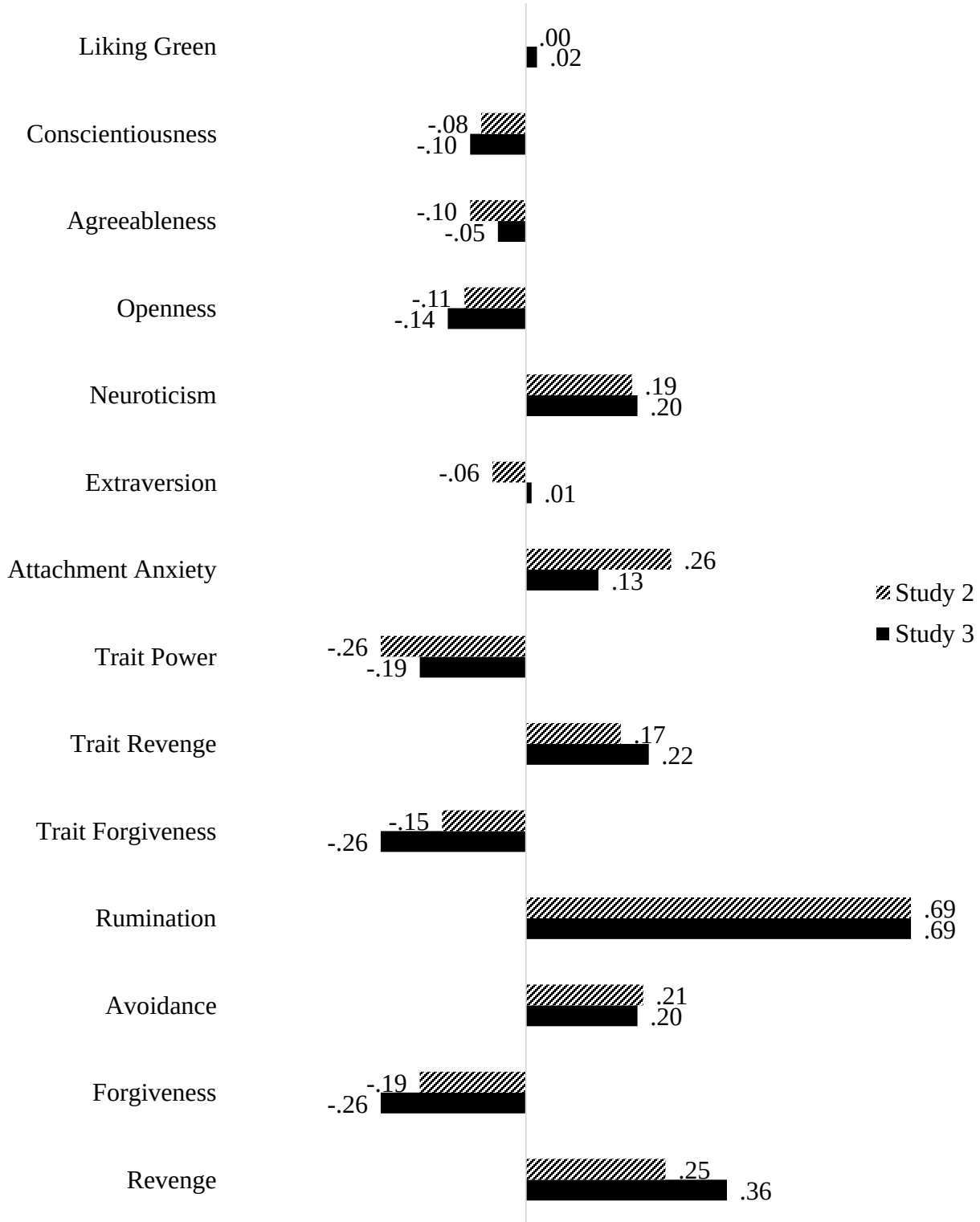
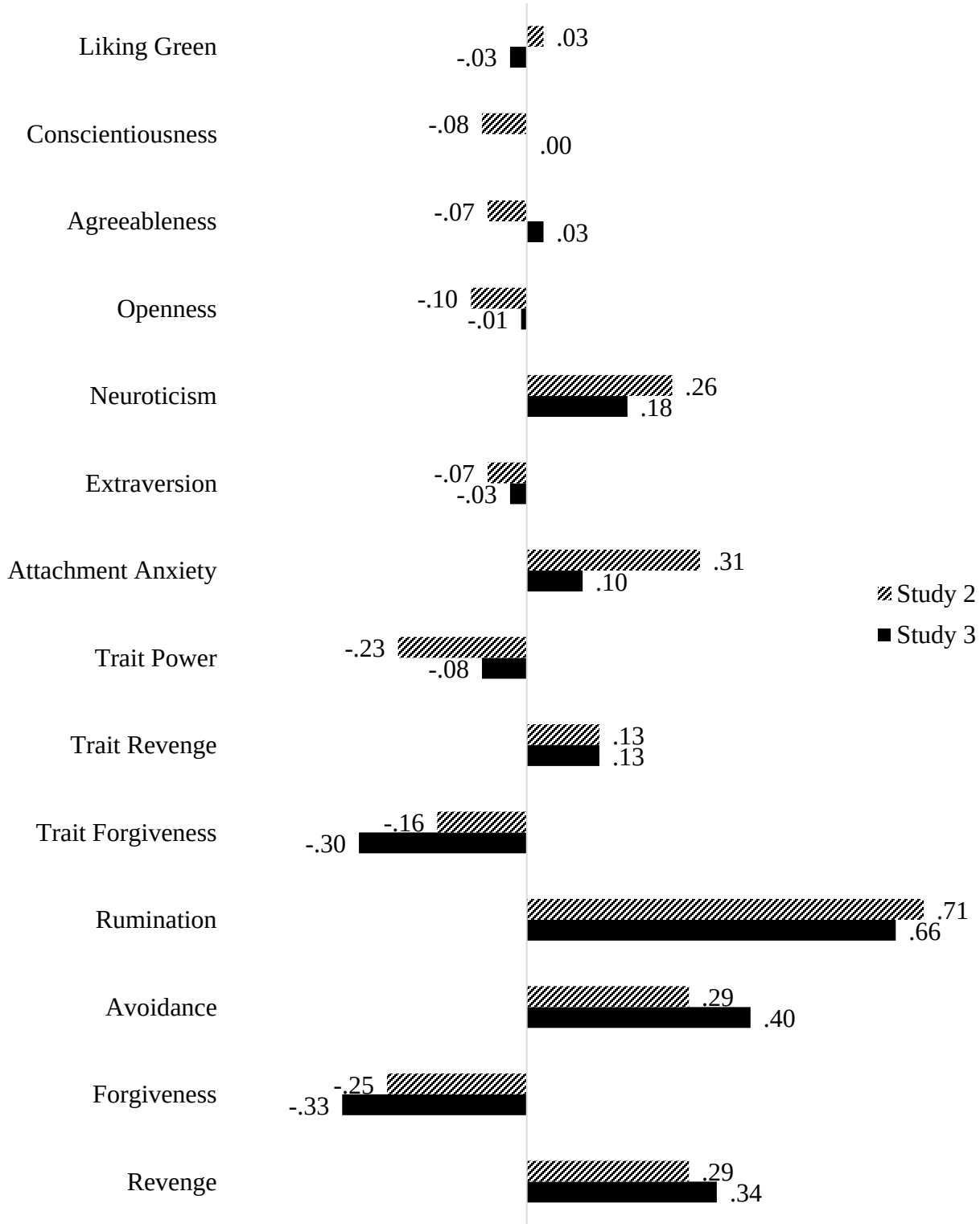


Figure 16
Correlation comparison between Study 2 and 3 – Longevity



General Discussion

The purpose of this set of studies was to take the key components of holding a grudge and translate them into a functional tool to quickly and accurately measure the construct. Using exploratory factor analyses, I was able to reduce the number of relevant items, and retain only the best exemplars. Subsequent confirmatory factor analyses determined that, for the sake of measurement, there are three primary components of holding a grudge: feelings of disdain toward the transgressor (disdain), persistent negative emotion derived from the transgression (emotional persistence), and the perception that one will not be able to let go of what happened (longevity).

These components map onto several of the key themes that were identified during thematic analysis. The disdain subscale captures both the idea that the transgressors are bad people (i.e. moral superiority), and that victims do not want transgressors to be part of their lives (i.e. severing ties). The longevity and emotional persistence subscales reflect participants' inability to let go, with prolonged experience of negative emotions likely contributing to the perception that they will not be able to get over what happened. The emotional persistence subscale also represents the notion that the negativity can be easily triggered by reminders of what happened (i.e., latency). Altogether, these analyses suggest that the crux of holding a grudge is its continuity. Most individuals experience some degree of negativity after someone has committed a transgression against them, but in order for it to truly become a grudge, these feelings must be, and be perceived as, sustained.

All three subscales were positively correlated with one another, although emotional persistence and longevity were more strongly related than disdain and emotional persistence or disdain and longevity. This makes sense theoretically. Continuing to experience negative

emotions about a specific incident should affect whether individuals feel like they will ever be able to move past the transgression. In contrast, people can feel disdain for a transgressor and not have it affect them emotionally. In turn, if they are not as emotionally affected, they should be less likely than those who are to feel as though they will ever be able to move on.

Despite these positive correlations, because disdain and emotional persistence and disdain and longevity were both only weakly related, each subscale should be used independently rather than as one composite measure of holding a grudge. If one were to combine all three subscales, information would be lost, and the extent to which individuals are experiencing each aspect might be misinterpreted.

Holding a grudge and other post-transgression responses

In addition to creating the scale, I wanted to determine how holding a grudge relates to other post-transgression responses, namely forgiveness and unforgiveness, desiring vengeance, avoiding transgressors, and ruminating about the offence. Across two studies I found that, as expected, greater disdain, emotional persistence, and perceived longevity were associated with less forgiveness. Disdain was the most strongly related aspect. This implies that, of the three aspects of holding a grudge, feeling disdain toward the transgressor was the main factor contributing to why individuals did not forgive. However, holding a grudge and forgiving do not appear to be opposite constructs given that the correlations between emotional persistence and longevity were weak-to-moderate. This aligns with what I observed when interviewing participants. Forgiveness was not a prominent theme in their responses. Instead, they focused on letting go of the grudge, suggesting that, although related, a prime distinction between holding a grudge and forgiving is the absence of negative and presence of positive thoughts and emotions.

Interestingly, all three factors were similarly moderately related to seeking revenge. The

lack of strong association between these two post-transgression responses provides evidence that holding a grudge and seeking revenge are not the same thing. In fact, supporting the results from my interviews, many participants who scored high on the GAM did not score high on seeking vengeance. The mean values for revenge were somewhat low, indicating that participants were not likely to exact vengeance in general, whereas the means for all three grudge aspects were above the midpoint of the scale. This provides evidence that holding a grudge is more prevalent than seeking revenge. However, in order to more adequately distinguish between the two constructs, future research should examine whether holding a grudge is a necessary precondition to seeking revenge, or whether it exists as an independent response.

Ruminating about the transgression, while positively correlated with all three grudge aspects, was much more strongly related to emotional persistence and longevity. This makes sense, given that rumination occurs over time. This study was nonexperimental, therefore cannot establish causality, but it is likely the case that ruminating about what happened is an important factor in experiencing persistent negative affect and feeling as though one will never be able to move on. Although greater dispositional and state rumination are associated with negative affect (McLaughlin, Borkovec, & Sibrava; Resibios, Kalokerinos, Verleysen, Kuppens, Van Mechelen, Fossati, Verduyn, 2018; Thomsen, Jorgenson, Mehlsen, & Zachariae, 2004), experiencing negative affect could also cause individuals to ruminate as a form of emotion regulation. More research should look into the interconnection between rumination and these two facets of holding a grudge.

The desire to have nothing to do with the transgressor was a component of the disdain subscale, therefore it makes sense that avoidance and disdain are very closely related. However, the measure of avoidance used in this study was value-neutral. Items were strictly about whether

participants are currently avoiding the transgressor and not focused on feelings or judgements about him or her. Disdain incorporates negative evaluations of the transgressor, thereby providing more information about the underlying desire to avoid. From these results, it seems as if still being affected emotionally and feeling that one will be affected indefinitely do not necessarily imply a strong desire to avoid transgressors. However, because it is not always feasible to avoid certain people, it could be the case that participants' relationships to transgressors, such as being family members or coworkers, makes it difficult to avoid them, thereby underrepresenting the strength of the relationship.

Much like revenge and avoidance, unforgiveness was related to, yet distinct, from holding a grudge. Although there are similar aspects to both constructs, such as altered views of the transgressor and prolonged negative affect, there were also notable differences. One aspect of unforgiveness that is not directly part of holding a grudge is lack of desire or willingness to forgive. I learned from Part 1 that many individuals wish they could in fact forgive, or at least let go of the grudge. Therefore, although related to both emotional persistence and longevity, desire not to forgive is not a universal characteristic of holding a grudge. Overall, the UFM appears to evaluate some aspects of holding a grudge. However, given that there are many forms that unforgiveness can take, the GAM offers an instrument that is targeted specifically toward holding grudges rather than unforgiveness as a general concept.

Holding a grudge and individual differences

Although the GAM is obviously most pertinent to the specific transgression recalled, personality traits play a role in how individuals respond to transgressions. Much of this research has examined how trait forgiveness and revenge relate to other personality traits, however some work has focused on how personality traits relate to specific transgressions. In terms of the Big

Five, one study established that being agreeable related to more forgiving, but this was accounted for by trait forgiveness (Koutsos, Wertheim, & Kornblum, 2008). In contrast, I found that the only traits that related to holding a grudge were neuroticism and openness. The positive link between holding a grudge and neuroticism makes sense, given that neuroticism is also linked to experiencing negative affect over time and being less resilient (Liu, Wang, & Li, 2012; Miller, Vachon, & Lynam, 2009). Rumination also partly accounts for the association between neuroticism and depression (Muris, Roelofs, Rassin, Franken, & Mayer, 2005; Roelofs, Huibers, Peeters, & Arntz, 2008), although this is diminished when one is able to control one's thoughts (Lu, Yang, Zhang, & Qui, 2017). Thought control is a large component of holding a grudge, therefore it would be interesting to tests whether the link between neuroticism and holding a grudge is attributed to thought control specifically.

The fact that greater emotional persistence was associated with less openness to experience was a more surprising finding. However, it does support past findings that openness is negatively linked to stressor-related negative affect (Leger, Charles, Turiano, & Almeida, 2016). I was also surprised that holding a grudge was not related to agreeableness. I predicted that being less agreeable would be linked to holding a grudge based on past research supporting a negative relationship between agreeableness and seeking revenge (McCullough et al., 2001; McCullough & Hoyt, 2002; Rey & Extremera, 2014). However, as indicated by these studies, holding a grudge and seeking revenge are not the same thing, therefore, agreeableness may be related to components of revenge that do not overlap with holding a grudge. Additionally, agreeableness is associated with better conflict resolution and experiencing less hurt and anger (Jensen-Campbell & Graziano, 2001), therefore those who are more agreeable should be less likely to hold grudges. This was not the case in either study.

With regard to additional personality traits, I expected that feeling less interpersonal power and more attachment anxiety would be linked to holding a grudge. Having power has been linked to forgiving (Karremans & Smith, 2010), therefore not having power may be associated with holding grudges. This hypothesis was only supported with regard to emotional persistence. Individuals who felt as though they tend to have less power in their relationships with others reported greater persistent negative affect as a result of the transgression. Similarly, after experiencing social rejection, individuals who feel as though they are not powerful are more likely to experience negative affect than those who feel powerful (Kuehn, Chen, & Gordon, 2015). Transgressions can be seen as a form of social rejection, with the transgressor communicating that the victim is unworthy. It could also be the case that the transgression, which is inherently disempowering, triggers a more intense and persistent emotional reaction in individuals who already feel powerless, therefore confirming their lack of power and making it harder to move on emotionally.

Feeling as though one does not have power over others also relates to attachment anxiety, which refers to feelings of unworthiness and worry that one is unloved (Feeney et al., 1994). I predicted these studies would support past research showing that high attachment anxiety is linked to holding grudges (van Monsjou et al., 2015). Across both studies, like trait power, it was only linked to the emotional persistence aspect of holding a grudge. This relationship makes sense, given that attachment anxiety is associated with emotion dysregulation (Clear, Zimmer-Gembeck, 2017; Goodall, 2015; Neilsen, Lonfeldt, Wolitzky-Taylor, Hageman, Vangkilde, & Daniel, 2017; Wei, Vogel, Ku, & Zakalik, 2005). Hurtful behaviour also makes anxious individuals feel as though their perceptions of themselves as unworthy of love and attention have been confirmed (Feeney, 2004), likely contributing to prolonged negative affect. In light of their

inability to successfully regulate their emotions, it is no wonder that individuals high in attachment anxiety report continual negative affect after being the victims of a transgression.

In sum, the different aspects of holding a grudge are not strongly related to any of the personality traits measured in this study that were not directly related to post-transgression responding. As expected, individuals who tend to be more forgiving were less likely to report holding a grudge than less forgiving individuals, and those who tend to be more vengeful were more likely to report holding a grudge than less vengeful individuals. However, when it came to personality traits that are more indirectly related to conflict resolution, emotional persistence is the most strongly related grudge aspect, compared to disdain and perceived longevity. This means that certain personality traits do not make one more inclined to feel disdain toward the transgressor, nor feel as though one will never be able to move past the transgression.

Limitations and future directions

Although developing this measure of holding grudges is a great first step, there are still a number of avenues to expand on. The trouble with measuring specific grudges is that the scale is administered at one point in time, therefore only captures the grudge in its current state. Holding a grudge is something that is often in flux based on a variety of factors, such as whether it has recently been triggered, or whether it is in a period of latency. These temporal changes are difficult to assess with questionnaires, and it should be noted that this final scale is useful for quickly measuring the basic aspects of holding a grudge, but that it does not account for all aspects. However, administering this scale over a period of time could also be useful to examine how thoughts and feelings change, if they in fact do. This could be a way to determine the accuracy of individuals' perceptions of their ability to move on.

Similarly, an avenue for future research could be to develop scales that represent some of

the other components or consequences of holding a grudge, for instance the two subscales I dropped during the first analysis. One evaluated participants' need for validation from others and the transgressor, and the other determined how negative individuals thought holding the grudge was.

Another limitation of targeting specific transgressions is the lack of insight into dispositional grudges and how they differ both in content and thought patterns. Although possible to convert this current scale into a trait measure by translating the items into those that inquire about general tendencies, such as "When people do things to hurt me I tend to think poorly of them", it may be the case that the important aspects of grudge-holding at the trait level are different than those at the state level. As such, future research would benefit from taking a bottom-up approach to understanding what it means to be a person who tends to hold grudges.

Finally, the long-term effect of holding grudges seemed to be negative. Determining whether this is always the case, or if there are actually times when holding a grudge may be functional, or even beneficial, would prove interesting. If it turns out that there is little value in holding grudges, it would be valuable to think about potential interventions that might help individuals let go of them.

Summary of findings

Holding grudges is a complex and multi-faceted occurrence. Despite being commonplace, it is rarely discussed, and much of our knowledge about the phenomenon comes from personal experience or anecdotes. With this research I was able to interview individuals about their experiences with holding grudges and subsequently generate a theory about the components and processes involved. Although necessarily unique for every individual, there were many common themes present across the multitude of interviews I conducted. These

included a need for validation from oneself, others, and the transgressor; a sense of moral superiority over the transgressor; the inability to let go and move on from what happened; a degree of latency, in which the grudge would dissipate over time; the desire to end the relationship with the transgressor; and general negative expectations of others.

I then took these themes and developed the Grudge Aspect Measure, which quantitatively evaluates the extent to which individuals are experiencing three independent subcomponents of holding a grudge. The three aspects are their level of disdain for transgressors, including disliking them and not wanting anything to do with them (disdain); whether or not they are still affected emotionally by the transgression (emotional persistence); and if they think they will ever be able to move on from what happened (perceived longevity). Together these three subscales are a valid and reliable way to quickly and simply measure the extent to which individuals are holding a grudge. As expected, they were related to other post-transgression responses. In particular, when holding a grudge, individuals were also less forgiving; more vengeful, avoidant, and unforgiving; and more likely to ruminate about what occurred. Similarly, individuals who were generally less forgiving and more vengeful were more likely to report holding a grudge. However, other personality traits were less strongly associated with holding grudges. Specifically, although greater neuroticism was linked to holding a grudge, the rest of the Big Five traits were largely unrelated. Finally, of the three aspects of holding a grudge, emotional persistence was the most strongly related to personality traits, including perceptions of interpersonal power and attachment anxiety. Overall, these findings contribute to the scant literature on holding grudges and provide a tool for assessing the degree to which individuals are experiencing three key aspects of a grudge.

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Appendix A

Complete List of Items included in Study 1 EFA

1 I feel like this person doesn't care about or respect me.
2 I want this person to understand why I'm upset and how what they did affected me.
3 This person doesn't appreciate how I feel.
4 I want him/her to make it up to me.
5 I want this person to realize how wrong he or she was.
6 I want this person to express remorse for what he/she did.
7 I would feel better if this person learned from what he/she did.
8 I want this person to apologize.
9 I want this person to feel bad about what he/she did.
10 I want reassurance from others that my reaction to what happened is legitimate.
11 Holding on to this makes me feel empowered.
12 I deserve an apology.
13 I'm holding a grudge against this person.
14 I have a right to hold on to this.
15 I just want this person to learn from what he or she did.
16 Letting go of this would make me vulnerable.
17 I have a right to be angry.
18 This person doesn't deserve to be forgiven.
19 I am intentionally not forgiving this person.
20 Being heard and validated makes me feel better about holding on to this.
21 Confiding in others helps me cope with what happened.
22 Talking about it with someone helps to reinforce my perspective.
23 I feel like I never knew who this person was.
24 Talking about this with others helps to validate my feelings.
25 I've accepted the fact that this person will likely do the same thing over and over again.
26 I can still remember every detail of what happened.
27 I replay the events over in my mind.
28 I intentionally think about what happened.
29 I think about what happened because I want to be mad at this person.
30 I obsess over what happened.
31 I don't want to think about this anymore.
32 When thoughts about what happened come to mind, I try to ignore them.
33 I try to avoid talking or thinking about it.
34 I feel like I should be able to get over what happened.
35 It's up to me to let go of this.
36 I feel like I'm being irrational.
37 I see how my mindset can be destructive.
38 I'm making things worse than they have to be.
39 Holding on to this is a personal challenge.

40 This person has a lot of issues that he or she needs to work on.
41 I look at this person differently than I did before.
42 I would never be able to trust this person again.
43 This person is not a likeable person.
44 I'll never like this person again.
45 How negatively I feel about this has gotten worse over time.
46 This will bother me less over time.
47 I will eventually forget about what happened.
48 Time has helped change my perspective on what happened.
49 I will let go of this over time.
50 I think about what happened less over time.
51 Reflecting on what happened has helped.
52 I made a decision to cut this person out of my life.
53 I actively avoid this person now.
54 I am not going to allow this person back into my life.
55 I want nothing to do with this person.
56 I think poorly of this person now.
57 I've questioned my entire relationship with this person.
58 I've realized that this person is not a good person.
59 I am able to look back and see positive things about our relationship.
60 I try to distract myself from thoughts of what happened.
61 I've learned to control my anger by distracting myself.
62 I think about what happened if there's nothing to distract me.
63 I try to compartmentalize my thoughts and feelings about what happened.
64 Holding on to this isn't healthy.
65 I would be happier if I let go of this.
66 I feel immature holding on to this.
67 I feel guilty about holding on to this.
68 Holding on to this is holding me back.
69 I would like to let go of what happened.
70 Holding on to this is counterproductive.
71 I'm embarrassed that I'm holding on to this.
72 I feel like holding on to this reflects badly on me.
73 I'm okay with holding on to this.
74 I've learned to live with the fact that I'm holding on to this.
75 I've resigned myself to the way things currently are.
76 I've gotten used to holding on to this.
77 Holding on to this is just part of my life now.
78 Cutting this person out helped me get over what happened.
79 I'm holding on to this to protect myself.
80 Having this person in my life means experiencing the same problems over and over again.
81 Having this person in my life is not a good thing.

82 I feel like I have something to prove to this person.
83 Knowing that this person still cared about me would make me feel good.
84 Holding on to this has inspired me to be a better person.
85 I'm a stronger person as a result of holding on to this.
86 I won't be affected by this anymore when I've had personal successes.
87 Once I've achieved things and moved on in my life I will be able to let go.
88 The best way to get back at this person is by being successful.
89 I want to do better in life than this person.
90 Holding on to this motivates me to live a better life.
91 I would feel good if this person reached out to me.
92 Holding on to this has been a learning experience.
93 Holding on to this has matured me as a person.
94 I no longer feel strong emotions about what happened.
95 What happened still has an emotional impact on me.
96 My negative feelings have decreased over time.
97 I still think about what happened, but I don't feel any emotions about it.
98 I'm less upset about what happened now.
99 I still feel the same today as I did right after it happened.
100 I want this person to feel bad that I'm not in his or her life anymore.
101 Avoiding this person is a good enough way to punish him/her.
102 Ignoring this person is the best way to punish him/her.
103 I cut this person out of my life to punish him/her.
104 I've wasted a lot of time and energy holding on to this.
105 This person isn't worth my time or energy.
106 I've lost peace of mind.
107 If I wanted to, I could choose to let go of this.
108 I can control how much I think about what happened.
109 How much control I have over my thoughts and emotions varies.
110 When thinking about this, sometimes my emotions build up and I can't control them.
111 Sometimes thoughts about what happened consume me.
112 I don't understand why this person did what he or she did.
113 I can see this person's side of the story.
114 What this person did doesn't make sense.
115 I am able to see both sides of what happened.
116 I wish this person well.
117 I want this person to succeed in life.
118 Getting back at this person wouldn't make me feel better.
119 I don't want bad things to happen to this person.
120 I tried to get back at this person.
121 I want this person to get a taste of his or her own medicine.
122 Cutting this person off was a way of getting the upper hand.
123 Cutting this person off was a way to get some control over the situation.
124 Cutting this person out of my life was a way of expressing how angry I felt.

125 I cut this person out of my life to make a statement.
126 I'm not talking to this person so he/she knows that I'm holding a grudge.
127 I felt justified in cutting this person out.
128 If I could cut this person out of my life, I would.
129 Being reminded of what happened makes it hard to get over.
130 Seeing or hearing about this person brings back the negative feelings.
131 I feel hurt when I'm reminded of what happened.
132 Reminders of what happened reignite my anger.
133 I can't see myself letting go of this anytime soon.
134 I feel like this will always be with me.
135 I don't know if I'll be able to move on from this.
136 I'm deciding not to let go of this.
137 What happened will always bother me.
138 I don't know how to get over this.
139 I will always remember what this person did.
140 I feel like I'm a better person than him/her.
141 I would never do what this person did.
142 I tried to work things out, but he/she screwed it up.
143 I'm not the kind of person who would try to get back at him or her.
144 I'm relieved this person isn't in my life anymore.
145 Cutting this person out of my life has helped me develop better relationships with others.
146 Cutting this person out of my life has helped me develop better self-confidence and self-respect.
147 Cutting this person out of my life was liberating.
148 I'm better off not having this person in my life anymore.
149 Holding on to this doesn't affect me on a day-to-day basis.
150 I try not to let holding on to this affect me.
151 The negativity exists, but it's in the background.
152 The negativity is in the back of my mind.
153 I'm still hurt by what happened.
154 I'm still disappointed by what happened.
155 I'm still angry about what happened.
156 I feel anxious about the situation.
157 Cutting this person out of my life hurt me.
158 Sometimes I'm sad that this person is no longer in my life.
159 Sometimes I feel like reaching out to this person.
160 Sometimes I miss our relationship.
161 I still care about this person.
162 I'm sad about what happened.
163 Cutting this person out of my life was hard to do.
164 I'm not willing to change my mind about this, regardless of what the other person does.

165 I will always dislike this person, regardless of what he or she says or does.
166 If this person tried to apologize, I wouldn't want to hear it.
167 There is nothing this person could do to make things better.
168 I would try to act normal if I saw this person.
169 I want this person to think that I don't care about what happened anymore.
170 I try not to show that this upsets me.
171 I want this person to think I've moved on.

Appendix B

Complete List of Items included in Study 2 EFA

1 I feel like this person doesn't care about or respect me.
2 I have a right to hold on to this.
3 Letting go of this would make me vulnerable.
4 This person doesn't deserve to be forgiven.
5 I feel like I never knew who this person was.
6 I've accepted the fact that this person will likely do the same thing over and over again.
7 I can still remember every detail of what happened.
8 I replay the events over in my mind.
9 I intentionally think about what happened.
10 I think about what happened because I want to be mad at this person.
11 This person has a lot of issues that he or she needs to work on.
12 I look at this person differently than I did before.
13 I would never be able to trust this person again.
14 This person is not a likeable person.
15 I'll never like this person again.
16 How negatively I feel about this has gotten worse over time.
17 I made a decision to cut this person out of my life.
18 I actively avoid this person now.
19 I want nothing to do with this person.
20 I think poorly of this person now.
21 I've questioned my entire relationship with this person.
22 I've realized that this person is not a good person.
23 I've learned to live with the fact that I'm holding on to this.
24 I've gotten used to holding on to this.
25 Holding on to this is just part of my life now.
26 Having this person in my life means experiencing the same problems over and over again.
27 Having this person in my life is not a good thing.
28 The best way to get back at this person is by being successful.
29 I want to do better in life than this person.
30 What happened still has an emotional impact on me.
31 I still feel the same today as I did right after it happened.
32 Avoiding this person is a good enough way to punish him/her.
33 Ignoring this person is the best way to punish him/her.
34 This person isn't worth my time or energy.
35 I want this person to get a taste of his or her own medicine.
36 I'm not talking to this person so he/she knows that I'm holding a grudge.
37 If I could cut this person out of my life, I would.
38 Being reminded of what happened makes it hard to get over.
39 I feel hurt when I'm reminded of what happened.
40 Reminders of what happened reignite my anger.

41 I can't see myself letting go of this anytime soon.
42 I feel like this will always be with me.
43 I don't know if I'll be able to move on from this.
44 I'm deciding not to let go of this.
45 What happened will always bother me.
46 I don't know how to get over this.
47 I will always remember what this person did.
48 I feel like I'm a better person than him/her.
49 I'm better off not having this person in my life anymore.
50 The negativity is in the back of my mind.
51 I'm still hurt by what happened.
52 I'm still disappointed by what happened.
53 I'm still angry about what happened.
54 I feel anxious about the situation.
55 I'm not willing to change my mind about this, regardless of what the other person does.
56 I will always dislike this person, regardless of what he or she says or does.
57 If this person tried to apologize, I wouldn't want to hear it.
58 There is nothing this person could do to make things better.
59 I want this person to think I've moved on.

Appendix C

Grudge Aspect Measure

Instructions: You are going to be provided with a variety of statements regarding how you feel about the person and what happened. Please indicate how much you agree or disagree with each one (rated from 1 – *Strongly disagree* to 7 – *Strongly agree*).

Disdain

1. I'll never like this person again.
2. I want nothing to do with this person.
3. Having this person in my life is not a good thing.
4. If I could cut this person out of my life, I would.
5. I think poorly of this person now.
6. I would never be able to trust this person again.
7. I've realized that this person is not a good person.
8. This person isn't worth my time or energy.

Emotional Persistence

9. I'm still hurt by what happened.
10. I feel hurt when I'm reminded of what happened.
11. Reminders of what happened reignite my anger.
12. Being reminded of what happened makes it hard to get over.
13. I'm still angry about what happened.

Perceived Longevity

14. I don't know how to get over this.
15. I feel like this will always be with me.
16. I can't see myself letting go of this anytime soon.
17. I don't know if I'll be able to move on from this.
18. What happened will always bother me.