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Contents

Balaraman, Dolgin, Goffi, & Raes	Acknowledgements	page i
Balaraman, Dolgin, Goffi, & Raes	Letter from the Editors	page ii
Myers	Reflective Functioning and Dyadic Interactive Behavior	page 1
Kang	Maintenance and Innocence: Psychosocial Motivations that Determine Dominance Strategies of High-status Groups	page 29
Scolpino and Steele	Age-Gap Relationship Stigma	page 49

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This issue would not have been possible without the myriad contributions from the larger psychology community. We acknowledge the accomplishments of the departing editorial team and welcome the new editors.

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Finally, we would like to extend our deepest gratitude to the previous Editorial Board, Danielle Bryson and Ali Reville, for the opportunity to step into their large shoes and continue the mission of NSPB. It is a privilege and an honor to work on this editorial board.

Letter from the Editors

With the current division in our world, locally, nationally and globally, individuals are confronted with stigma, power positions, and the impact of the current political climate on mental health and future generations. Amid all this turbulence, we are grateful for the intellectual courage of researchers who strive to gain a deeper understanding of the complex dynamics that shape our society.

Based on our foundational social justice orientation, we are proud to present this edition's articles that explore the dynamics of interpersonal relationships through different psychological lenses and the broader societal implications. Myers deepens our understanding of reflective functioning in relation to maternal behaviors and parental presence, while Kang examines the effects of innocence and status maintenance motivations on members of high-status groups. Lastly, Scolpino and Steele explore the impact of stigmatization on age-gap couples through an attachment lens.

We are excited to spark conversation and challenge the status quo with this insightful and inspiring scholarship. Welcome to NSPB Volume 21, Issue 1. Thank you to everyone who was involved with this publication.

Sincerely,

Amudha Balaraman
Rebecca Dolgin
Elia Goffi
Heleen Raes

Reflective Functioning and Dyadic Interactive Behavior

Lindsey Myers

The New School for Social Research

Based on the accumulation of interactions with their caregivers, children develop expectations regarding interactions between themselves and their attachment figures. Tied to these expectations are emotions that regulate behavior and eventually come to organize behavior in all significant relationships. Reflective Functioning (RF) is defined as the capacity to understand and interpret one's own and other's behavior as an expression of mental states (Fonagy et al., 2002). There have been numerous papers linking RF to attachment and parent-child interaction. Here, we seek to extend our knowledge of RF and its link to attachment by investigating its role in maternal behaviors such as acknowledgment and overall supportive parental presence. The current pilot study examined 20 mothers' Adult Attachment Interviews (AAIs) using the RF scale and parent-child dyadic interactive behavior utilizing the Coding Interactive Behavior (CIB) manual. The current work underscores the value of measuring RF in AAI responses or other narrative material to gain an early picture of strengths and difficulties in parents of infants *before* they enter a treatment program.

Keywords: reflective functioning, mentalization, attachment, adult attachment interview, coding interactive behavior

Adults with childhood histories of abuse and neglect face significant challenges in freeing themselves psychologically from past traumatic experiences when they become parents (Fraiberg et al., 1975). Fraiberg et al. (1975) explain that "ghosts" are something left by trauma, representing the repetition of the past in the present. Hesse and Main (2006) hypothesized that when traumatic experiences have not been resolved, the parent's memories and difficult emotions associated with these experiences may be reactivated by the infant's crying or distress. Additionally, the infant's distress may provoke a dissociative state during which the parent engages in bizarre or inappropriate behavior with the infant, such as freezing as a result of parental fright (Hesse & Main, 2006).

Between 27% and 71% (Murphy et al., 2014; Riggs et al., 2007; Stalker & Davis, 1998; Stovall-McClough & Cloitre, 2006) of adults with histories of abuse show lapses in the monitoring of reasoning or discourse while talking about traumatic experiences, presumably as a result of dissociated memory systems being activated in trauma-related memories (Main et al., 2008). Such lapses have been shown to be associated with infant attachment disorganization (Madigan et al., 2006, 2011; Main & Hesse, 1990; van IJzendoorn, 1995). However, reflective

functioning (RF) has been shown to be a marker of resilience through which one can overcome adversity during childhood (Fonagy et al., 1994). RF is defined as the capacity to understand and interpret one's own and other's behavior as an expression of mental states (Fonagy et al., 2002). Fonagy et al. (1994) repeatedly demonstrated that the capacity to discuss attachment relationships utilizing mental state constructs illustrated individual differences in parental sensitivity. Stemming from this research, the current study attempts to show that mothers with high burdens of past trauma who possess the ability to engage in RF are more likely to show maternal sensitivity to their toddlers.

Attachment Theory

As first theorized by Bowlby (1969), attachment is a biologically driven instinct within humans designed to preserve and protect the species, in which a child desires proximity to an attachment figure (i.e., caregiver) when there is a perceived threat or discomfort. The relationship formed between the caregiver and child, beginning in infancy and continuing through toddlerhood, is the fundamental foundation from which the child forms a sense of self, learns to relate to others, and develops self-regulatory behaviors and capacities (Bowlby, 1969; Bretherton & Munholland, 1999; Sroufe, 2005).

Ainsworth et al. (1978), guided by Bowlby's theories, initially described three styles of attachment: secure, insecure-avoidant, and insecure-resistant. Infants who are considered securely attached readily seek and accept comfort from their parents. Those classified as insecure-avoidantly attached are reluctant to seek comfort from their parents, and those classified as insecure-resistant are able to seek comfort from their parents, but struggle to accept and be soothed by that comfort (Ainsworth et al., 1978). Main and Solomon (1990) later added a fourth attachment classification referred to as insecure-disorganized. Infants classified as insecure-disorganized may display apprehension towards their caregiver and contradictory, interrupted, stereotypic, or dissociated behaviors when their attachment system is activated (Main & Solomon, 1990). These behaviors reflect an approach/avoidance conflict and are thought to develop as a result of parent-child interactions in which the parent's reactions evoke fear in the infant, or the infant's behavior evokes fear in the parent (Barnett & Vondra, 1999; Lyons-Ruth et al., 1999; Main & Hesse, 1990; Solomon & George, 1999; Tarabulsy et al., 2000).

Based on the accumulation of previous interactions with the caregiver, children develop expectations regarding interactions between themselves and their attachment figures; these expectations are called 'the internal working model of relationships' (Bowlby, 1969, 1973, 1980; Bretherton, 1985; Crittendon, 1990; Fonagy et al., 1994; Main et al., 1985; Zeanah & Barton, 1989). Integrated within the internal working model are emotional experiences that regulate the child's behavior and eventually organize their behavior in all significant relationships, presumed to eventually include their relationship with their own children. Within the Strange Situation Paradigm (SSP; Ainsworth et al., 1978) a procedure used to assess the quality of an infant's attachment, securely attached children demonstrated the expectation of an empathetic response, while avoidant children appeared disinterested, perhaps due to a detached or intrusive caregiver. According to Main et al. (1985), the key determinant of the parent's propensity for transmitting insecurity lies in the characteristics of their internal working model of relationships. The functioning of the parent's internal working model can be assessed through their mental states concerning attachment.

Reflective Functioning

RF is defined as the capacity to understand and interpret, implicitly and explicitly, one's own and other's behavior as an expression of mental states such as feelings, thoughts, fantasies, beliefs, and desires (Fonagy et al., 2002). Cooley (1902, 1964), highlighted the interdependence of reflective function as it applies to others and the self. Cooley (1902) penned; "The thing that

moves us to pride and shame is not the mechanical reflection of ourselves, but an imputed sentiment, the imagined effect of this reflection upon another's mind" (p. 153).

Fonagy et al. (1991) predicted that a caregiver's capacity to conceive of and think about relationships in terms of mental processes and functions would determine the infant's security with the caregiver. They tested this hypothesis during the London Parent-Child Project by utilizing the Adult Attachment Interview (AAI; George et al., 1985). The AAI is a semi-structured interview used to assess the adult's mental representations concerning relationships by asking a series of questions and probes to elicit the interviewee's childhood attachment experiences as well as their current perceptions of the effects of those experiences on present functioning (Fonagy et al., 1991). When coding the AAIs, Fonagy et al. (1991) noticed certain questions seemed to invoke, in some interviewees, a capacity to reflect on the motivation of their own and others' behaviors (Steele & Steele, 2008). Fonagy et al. (1991) created a scale to assess the parent's quality of understanding of another's intentionality with the low end of the scale consisting of parents who were unwilling or unable to reflect on their intentions or those of others, and the high end of the scale consisting of parents who showed the ability to understand the motivations of their parents and themselves, as an adult and earlier as a child.

Upon examining the relationship between the AAI and RF, RF was found to be an even stronger predictor of categorical attachment security on the AAI than the AAI coherence scale (Katznelson, 2014). The coherence scale is generally the AAI scale most strongly related to the distinction between secure and insecure states of mind in the Main et al. (2003) system (Waters et al., 2000). Analyses also revealed a moderate to strong relationship between RF and infant attachment classification, suggesting that parents' reflective capacities (assessed before the birth of their child) were highly predictive of the extent to which their children were securely attached at one year of age (Katznelson, 2014). In other words, the parent's capacity to understand their infant is rooted in their understanding of their attachment relationships and history.

RF and Interactive Behavior

Freud's theory of the unconscious mind (Freud, 1915, 2013) extended the idea of unconscious mental states, making aspects of human behavior meaningful. Through their actions, the caregiver ascribes a mental state to the child, unconsciously and pervasively; the mental state is then perceived by the child (Fonagy & Target, 1997). As the child's development and perception of mental states in themselves and others are dependent on their observation of the mental world of their caregiver, children can only perceive mental states based on

behaviors exhibited by caregivers (Fonagy & Target, 1997). Being able to observe moment-to-moment changes in the child's mental state is what lies at the root of sensitive caregiving. A sensitive caregiver can bridge the focus between physical reality and internally directed attention sufficiently for the child to identify contingencies between internal and external experiences (Fonagy & Target, 1997).

Tronick (1989) proposed the Mutual Regulation Model (MRM) which focuses on the joint or interactive nature of development. Success or failure in accomplishing motivated (i.e., the drive behind action) intentions (i.e., the act in which one intends to achieve) depends on at least three critical processes; first, the integrity and capacity of the child's physiological systems and central nervous system to organize and control the child's physiological states and behaviors; second, the integrity of the infant's communicative system including the central nervous system centers which control and generate messages and meanings and the motor system which makes the message manifest; and finally, the caretaker's capacity to appropriately read the child's communications and willingness to take appropriate action (Tronick & Weinberg, 1997). This final process is reciprocal to the second, where the mother and child create a give-and-take interaction from which each partner interprets, learns, and processes the other's actions to create a dyadic fluency.

By observing each partner within the dyad as well as their reaction to the other partner, investigators can further assess the dyadic relationship. There are very specific nonverbal modalities through which the mother and child communicate. Maternal touch, joint attention, maternal acknowledging, and positive affect are all indicative of positive infant-mother dyadic interactions. Touch, for instance, has been shown to hold an important affect regulatory function in mother-infant interactions, and previous studies have indicated touch can be used to maximize smiles (Stack & LePage, 1996) and elicit positive emotional displays by infants (Stack & Muir, 1990). Indeed, Feldman and colleagues (1998) have published widely on the relevance of the Coding Interactive Behavior (CIB) coding categories that reflect adaptive, healthy parent-child communication patterns (Feldman, 2015). The CIB is a global scheme including 42 codes, each rated from 1 (low) to 5 (high) with good psychometric properties validated internationally in many studies with infants, toddlers, preschoolers, adolescents, and adults in both normative and high-risk samples (Feldman, 2012, 2015).

Mentalization practice provides a more integrated understanding of the self and the environment in an effort to regulate intra- and interpersonal

processes (Sharp & Fonagy, 2008). The term "mental states" applies to a wide range of cognitive, emotional, and volitional processes, including thoughts, feelings, desires, intentions, preferences, beliefs, needs, and dreams (Allen, 2006; Fonagy et al., 1991). Maternal mentalization, or in a broader sense, mentalization of a parent or caregiver, starts at the level of an implicit propensity or explicit willingness to identify these mental states in oneself and one's offspring (Sharp et al., 2008). In a mentalizing mode, the mother stands at an optimum distance from the child where the dyad can represent their mental states to each other (Fonagy, 2006; Fonagy & Target, 1997). An optimally attuned mother attends, labels, and adaptively communicates positive and negative affective, cognitive, perceptual, and physiological mental states to the child, without avoidance or undue overidentification with those states (Beebe et al., 2012). Importantly, mentalizing interactions with the mother are generalized, utilized, and solidified in social relationships, creating a functional template for later emotional understanding, self-regulation, and interpersonal connectedness.

The Current Study

In the current pilot study, we seek to further demonstrate the alliance between mothers' mentalization (i.e., reflective functioning) and maternal sensitivity. According to Feldman (1998), acknowledging is among the central components of the sensitivity construct, with the highest loading on parent sensitivity. As mentalization, acknowledging, and reciprocity are contributing constructs to maternal sensitivity, we hypothesize that mothers' RF scores will be significantly correlated to mothers' acknowledging and dyadic reciprocity. As dyadic reciprocity involves the joint attention and flow of each partner (i.e., mother and child) during an interaction, we hypothesize that child alertness will be correlated with mothers' mentalization scores. Given that acknowledging is considered a key component of maternal sensitivity, we predict that mothers' acknowledging scores will be inter-correlated with parent-supportive presence scores, dyadic reciprocity, and child alertness. The parent-supportive presence scale is a summary scale that addresses the degree to which the parent's presence in its entirety provides a "secure base" for the child in terms of warmth, security, closeness, and mutuality (Feldman, 1998). As the parent-supportive presence scale is the attachment code within Feldman's (1998) coding structure, we will be examining the link between maternal RF along with parent-supportive presence.

Method

Participants

Participants were recruited from families participating in treatment at Montefiore Medical Center in the Bronx, New York. The majority of these families were referred to treatment by the Administration of Child Services (ACS). Data were collected as a part of the randomized control trial (RCT) of the Group Attachment Based Intervention (GABI). GABI is a trauma-informed group therapy intervention for families with children aged 0 to 3 years delivered as a multifamily maltreatment prevention intervention, informed by both reflective functioning and a trauma-informed understanding (Steele et al., 2019). Each GABI session comprises three parts: (1) parents and children are engaged in dyadic interactions facilitated by a clinician; (2) a ‘parent only’ group context for parents to discuss salient issues and challenges that arise for them and a separate and simultaneous ‘child only’ context in which clinicians interact with a child, following their leads in play and facilitating peer interactions; and (3) a reunion between parents and children. A total of 128 parent-child dyads completed baseline assessments. Of those dyads, a subset of 74 dyads, 41 participants from GABI, and 34 participants from Systematic Training for Effective Parenting (STEP) completed treatment, baseline, Time 2 follow-up, and Time 3 follow-up. The current analyses will focus on 20 of the 34 participants from GABI who completed treatment as well as the AAI at intake. Of the sample, 87% identified English as their primary language and an additional 13% identified as speaking both Spanish and English (see Table 1). The majority of the participants were unemployed (67%) compared to employed (20%); 47% of participants received some high school education. The majority of participants identified as Hispanic/Latino (47%), while 33% identified as Black or African American/Afro-Caribbean. The remaining participants identified as Bi-Racial or Multi-Racial (13%) or White (7%). Within our sample, the mothers’ average age was 26 years old. Participants were recruited at Montefiore Medical Center and agreed to come to the New School for Social Research (NSSR) for assessments. They were given \$40 for their participation and \$25 for the participation of their child and a MetroCard to cover travel expenses. Families provided written consent to participate in the research study at the beginning of treatment and provided consent before the administration of each assessment.

Procedure

IRB approval was obtained for the hospital where the clinical intervention occurred as well as at the university where data was collected. Families began each

Table 1

Participant Demographic Information

	<i>N (%)</i>
<u>Child Gender</u>	
Male	6 (40.0)
Female	9 (60.0)
<u>Mother’s Level of Education</u>	
No High School	1 (6.7)
Some High School	7 (46.7)
High School Diploma/GED	2 (13.3)
Some College	4 (26.7)
Some Junior High School	1 (6.7)
<u>Mother’s Employment</u>	
Not employed/parent	10 (66.7)
Employed	3 (20.0)
Student	2 (13.3)
<u>Language Spoken at Home</u>	
English	13 (86.7)
English and Spanish	2 (13.3)
<u>Mother’s Ethnicity</u>	
White	1 (6.7)
Black or African-American/Afro-Caribbean	5 (33.3)
Hispanic/Latino	7 (46.7)
Bi-Racial or Multi-Racial	2 (13.3)

Note: Total N=15

assessment by signing informed consent (Appendix A) and reviewing the assessment protocol. The research assistant, a graduate student from The New School of Social Research, administered the following questionnaires to the parent: demographic and medical background (Appendix B), the Symptom Checklist-90 (SCL-90), the Interpersonal Support Evaluation List (ISEL), the Ages & Stages Questionnaire: Social-Emotional (ASQ-SE), Parenting Stress Inventory, stressors checklist, the Adverse Childhood Experiences Questionnaire (ACEs; Appendix C), child ACEs, and the AAI (Appendix D). Families with children aged 12 months or older were filmed during the Strange Situation Paradigm (SSP), the Bayley cognitive task for the child, and the 10-minute free play session. Upon successful completion, families signed receipts to indicate they received the stipend and the metro card.

Measures

The following measures were used to highlight the interaction between maternal sensitivity, child behavior, and mentalization.

Adverse Childhood Experiences Questionnaire (ACEs; Appendix C)

Adapted from the ACE Study using a cohort from the Kaiser Permanente managed care health group in California, the ACEs questionnaire is a self-report measure used to assess forms of abuse, neglect, and household dysfunction one encounters before the age of 18 (Dube et al., 2003; Felitti et al., 1998). The scores range from 0 to 10, with 10 representing full exposure to all 10 forms of household dysfunction, abuse, and neglect. ACEs protective factors are six questions following the initial ACEs asking if there was anyone who made the person feel loved, protected, and safe. Participants are asked to circle never, once or twice, sometimes, often, or very often. Scores range from 0 to 6, with 6 representing endorsement of all protective factors. The current study utilizes the ACEs to highlight the parents' past adverse experiences, as those experiences can affect both the dyadic interactions with their child as well as their reflective functioning ability.

Coding Interactive Behavior (CIB; Appendix E)

Developed by Feldman (1998), the CIB is a global rating scheme for coding adult-infant interactions for children ages 2 to 36 months. There are 43 scales: 22 adult, 16 child, and five dyadic. These scales address the nature and flow of the interaction, the interactive involvement, and the style of each partner. Codes range from 1 to 5, with 1 implying the minimal level of a specific behavior or attitude and 5 the maximum. The CIB was coded by graduate students and postdoctoral visitors to The New School, who were kept blind to whether the observation was conducted at baseline, end-of-treatment, or six-month follow-up. Leaders of coding groups were trained by the developer of the CIB scales, and consensual coding was conducted to achieve reliability. A high degree of reliability was found between raters with the average Intraclass Correlation Coefficient (ICC) found to be .84 with a 95% confidence interval from .72 to .96. The different scales utilized in the current study from the CIB speak to the maternal sensitivity scale, as well as the parent-child dyadic interaction.

Maternal Acknowledging Scale

The parent demonstrates that he or she is aware of the child's social signals and is receptive to the communication through vocalization, gaze, facial expressions, or body movements (Feldman, 1998). Scoring based on the CIB manual (Feldman, 1998) are as follows: "1" parent does not show any awareness of response to the child's social signals, "3" medium level of acknowledging is observed where some of the infant's signals are recognized while others may be overlooked, "5" parent is consistently responsive to the child's signals

and the parent is able to transmit his/her acknowledging to the child in a non-intrusive, sensitive manner.

Child Alertness

The child is enthusiastic, attending, involved, and demonstrates high levels of positive arousal and activity (Feldman, 1998). We may observe alert facial expressions, focused gaze, smiles, clear signs of joy and exuberance, energy, and "ready" posture (Feldman, 1998). This scale estimates the highest level of alertness the child reached during the observation, not the average of the entire session (Feldman, 1998). Scoring based on the CIB manual (Feldman, 1998) are as follows: "1" low level of alertness where the infant is passive and demonstrates low affective involvement. "3" medium level of alertness is observed; the child shows interest but is not very active. "5" the child is active, happy, and focused and during at least one episode shows a high level of enthusiasm and positive arousal.

Dyadic Reciprocity

Parent and child are involved in a "give-and-take" interaction (Feldman, 1998). Each partner participates in the joint activity, enables the other partner to finish his or her turn, and responds appropriately to the partner's signals (Feldman, 1998). There is a feeling of synchrony and a mutual "dance" as each partner takes a turn in a well-coordinated exchange (Feldman, 1998). Scoring based on the CIB manual (Feldman, 1998) are as follows: "1" no reciprocity is observed. One partner may be withdrawn or rejecting, one partner may show a negative affect, the parent may override and divert the infant's activities, or the two partners don't seem to "go together." "3" medium level of reciprocity is observed in terms of both level and appropriateness. There are moments when the interaction appears synchronous, but these are not observed consistently throughout. "5" interaction is highly reciprocal. Partners move along smoothly, read and respond to their partner's cues, and engage frequently in a "give-and-take" play.

Parent Supportive Presence

This summary scale for the parent section addresses the degree to which the parent's presence in its entirety provides a "secure base" for the child, in terms of warmth, security, closeness, and mutuality (Feldman, 1998). Here, the parent responds appropriately to the child and provides a regulatory environment via their vocalizations, affect, touch, gaze, etc. Scoring based on the CIB manual (Feldman, 1998) is as follows; "1" the parent's presence does not provide a "secure base" and may even intensify the child's anxiety. The child remains disorganized or uninvolved. It appears the parent's presence is the cause of the child's frustration.

Parent provides too little or too much structure, or is rejecting or withdrawn, “3” there are indications that the parent’s presence may serve as a “secure base” function, but these developments are not observed consistently, “5” parent’s presence provides an overall structure for the child that regulates the child’s state, affect, interest, learning, and emerging social skills.

The Reflective Functioning Manual for Application to Adult Attachment Interview (RF scale)

The RF scale (Fonagy et al., 1998) was used to code mothers’ AAIs. Within the AAI, some questions directly demand reflection. These eight questions are considered “demand” questions and include: (1) which parent the participant was closest to and why, (2) whether the participant has ever felt rejection from their parents, (3) how their overall experience with their parent has affected them, (4) if there were any setbacks, (5) why they think their parents behaved as they did, (6) if they experienced any loss of a parent or close one, (7) how the relationship with their parents has changed from childhood to adulthood, and (8) what their current relationship is with their parents.

The RF scale is an 11-point scale that evaluates the quality of mentalization in the context of attachment relationships. The scale ranges from –1 (negative RF, in which interviews are overly concrete, totally lack mentalization, or grossly distorting of the mental states of others) to 9 (exceptional RF, in which interviews show complex, elaborate, or original reasoning about mental states), with a score of 5 (ordinary RF) being the most common. Lower ratings indicate a lack of mental-state accounts while higher ratings indicate increasingly sophisticated and full mental-state accounts of interactions and reactions (Berthelot et al., 2015). RF is scored based on all AAI questions, with the demand questions holding more weight than the permit questions. An overall RF score, representing the participants’ characteristic level of RF, is derived from individual scores which take into account the respondents’ most frequent level of RF responses as well as the frequency of responses

characterized by high and low RF (Berthelot et al., 2015). In the present study, coders were trained at NSSR by Howard Steele, one of the developers of the RF scale. Three reliable training raters independently rated all 20 interviews with high agreement among the three raters (Cronbach’s alpha = .92). Average ratings of the three reliable codes were reported.

Adult Attachment Interview (AAI)

The AAI is an interview used to assess internal working models of attachment relationships (George et al., 1985). Participants are asked to describe their early childhood experiences concerning illness, injuries, separations, rejections, and harsh physical treatment and assess the effects of these experiences on their development as well as their current personality and parenting. The AAI was coded by a reliable coder, using the RF scale.

Results

Initial analyses examined the relationship between maternal acknowledgment ($M = 2.23$, $SD = 1.01$) and mother’s RF ($M = 2.90$, $SD = .87$) at baseline. Scores for acknowledging ranged from 1 to 4. Mother’s RF scores ranged from 1.50 to 5.00. As previously stated, the RF score of 5 is average and most common in normative populations. The current study drew its sample from a clinical population, which can explain the low to moderate RF range seen in Table 2.

Consistent with the predictions, parent acknowledging scores were significantly and positively correlated with mother’s RF scores, $r(18) = .57, p < .001$. To further investigate maternal sensitivity, we examined the relationship between mother acknowledging ($M = 2.23$, $SD = 1.01$) and parent-supportive presence ($M = 2.60$, $SD = .85$). As predicted, maternal acknowledging was significantly and positively correlated with parent-supportive presence ($r(18) = .77, p < .001$). We then moved on to examining the link between

Table 2

Basic Descriptive Statistics for Key Variables

Variable	<i>N</i>	Range	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Mother AAI RF	20	1.50-5.00	2.90	.87	.67	.35
CIB Mother Acknowledging	20	1.00-4.00	2.23	1.01	.73	-.65
CIB Mother Praising	20	1.00-2.50	1.45	.48	.60	-.85
CIB Child Alert	20	1.50-5.00	3.08	.94	-.03	-.36
CIB Dyadic Reciprocity	20	1.00-4.00	2.33	.92	.52	-.15
CIB Parent Supportive Presence	20	1.00-4.00	2.60	.85	-.06	-.06

Note: AAI=Adult Attachment Interview, RF= Reflective Functioning, CIB=Coding Interactive Behavior.

child’s alertness ($M = 3.08, SD = .94$) and maternal RF ($M = 2.90, SD = .87$), which were significantly correlated ($r(18) = .51, p = .05$) and dyadic reciprocity ($M = 2.33, SD = .92$) and maternal RF ($M = 2.90, SD = .87$), which were also significantly correlated ($r(18) = .45, p = .05$).

Once recognizing the link between a child’s alertness and dyadic reciprocity to maternal RF, we examined the intercorrelations between mother acknowledging, parent supportive presence, child alertness, and dyadic reciprocity. Mother acknowledging was significantly and positively correlated with parent-supportive presence ($r(18) = .77, p < .001$), child alertness ($r(18) = .62, p < .05$), and dyadic reciprocity ($r(18) = .78, p < .001$). However, though not significantly correlated, results indicated trending in the positive predicted direction of parent supportive presence ($M = 2.60, SD = .85$) and mother’s RF scores ($M = 2.90, SD = .87; r(18) = .37, p = .11$) as seen in Table 3.

Qualitative Results

The current analyses revealed overall low to moderate RF scores ($M = 2.90, SD = .87$). The total RF scores, however, take into account various aspects of the overall interview, as detailed above. Though the majority of the interviews had at least one, if not multiple, instances of negative or limited RF, there were a handful that displayed exceptional RF. A rating of “-1” indicates a hostile refusal of RF. One participant, after stating their sister had passed away as an infant, was asked if they thought that this death had an effect on their family or what effect it may have had, responded; *“That’s a dumb question, I can’t answer that, only my mother can answer that”* (-1). The hostility in this response is notable and is an example of the refusal to engage in mental state language.

A rating of “0” indicates bizarre, inappropriate, or unintegrated RF. When asked how the child’s relationship has changed with their father, one child participant responded, *“He knows that and we go through something that I should never added on to, but anyways, now I have his car. He lent me his car, he’s giving me money, he’s*

trying to make up, but it’s not over” (0). Here, we see an example of a bizarre and incoherent response to the question. Instead of reflecting upon how their relationship with their parent has changed from their childhood to adulthood, the speaker jumps to a material object irrelevant to the question, showing a lack of integration.

A rating of “1” indicates a lacking or absence of RF, also referred to as disavowal;

“Interviewer: What would you generally say it was like for you as a small child?”

Subject: I mean, I was small, little, so I wouldn’t know (1).”

Here, we see an example of disavowal, exhibiting low RF (1), and pleading ignorance to the question.

A rating of “3” indicates a limited capacity to acknowledge mental states, often one-dimensional, predictable, naïve, and/or simplistic. One participant, when asked why they thought their aunt and uncle behaved as they did, replied *“I think my uncle acted like that cause he was raised that way. He’s the oldest of eight kids so he had most of the responsibilities to take care of them. And then my aunt.... I guess she had no choice, I don’t know”* (3). In this response, the subject uses family structure as a way to explain behavior. Though we can understand this as being truthful, it does not expand on the uncle’s mental states, illustrating a simplistic response. A rating of “5” indicates a basic, normative capacity of RF. An example of this is as follows:

“Interviewer: Why do you think your mom did those things?”

Subject: I don’t think my mom understood me as a child. I think that um, I think I like, I don’t think my mom really liked having children altogether and I think that she just, I think my behaviors may have made her feel insecure herself or like not sure what to do as a parent”(5).

Table 3

Correlation Matrix for Key Measures (N = 15)

Measure	1	2	3	4	5
1. Mother AAI RF	--	.570**	.370	.512*	.454*
2. CIB Parent Acknowledging	.570**	--	.770***	.624**	.783***
3. CIB Parent Supportive Presence	.370	.770***	--	.353	.844***
4. CIB Child Alert	.512*	.624**	.353	--	.428
5. CIB Dyadic Reciprocity	.454*	.783***	.844***	.428	--

*Note: * p < .05. ** p < .01. ***p < .001*

Table 4*Examples of Reflective Functioning*

Description of RF	Example question and response
<p>-1 Negative RF Anti-reflective or bizarre/inappropriate. May express hostility or active evasion in response to opportunity for reflection.</p>	<p><i>I: Okay, and do you think, like what was the effect on your family, on your parents, having lost---</i></p> <p><i>S: That's a dumb question, I can't answer that, only my mother can answer that"</i></p>
<p>1 Absent but not repudiated RF Subject does not mention mental states, in spite of clear opportunity to do so. May be sociological, excessively generalized, concrete or overwhelmingly egocentric.</p>	<p><i>I: What would you generally say it was like for you as a small child?</i></p> <p><i>S: I mean, I was small, little so I wouldn't know.</i></p>
<p>3 Questionable or Low RF RF may be there by suggestion, but it is unclear and is as likely to be a cliché as a proper reflective statement.</p>	<p><i>I: And why do you think your aunt and uncle behaved as they did during your childhood?</i></p> <p><i>S: I think my uncle acted like that cause' he was raised that way. He's the oldest of eight kids so he had most of the responsibilities to take care of them. And then my aunt.... I guess she had no choice, I don't know.</i></p>
<p>5 Ordinary RF Makes reflection explicit. Even if mental state is fairly simple it is described clearly and briefly reflected on in a way which does not suggest resentment of what might be socially expected.</p>	<p><i>I: Why do you think your mom did those things?</i></p> <p><i>S: I don't think my mom understood me as a child. I think that um, I think I like, I don't think my mom really liked having children altogether and I think that she just, I think my behaviors may have made her feel</i></p>
<p>5 Ordinary RF Makes reflection explicit. Even if mental state is fairly simple it is described clearly and briefly reflected on in a way which does not suggest resentment of what might be socially expected.</p>	<p><i>I: And your grandparents, why do you think they behaved as they did?</i></p> <p><i>S: They didn't behave bad, they just tried to shield me from everything. And, I wish, I wish they didn't at times because, I got so used to that and I didn't believe them that my parents were the way they were. Until I, you know, I went out for myself to...to figure it out. And it got worse because I had one, basically one picture of them how they, in my head how I thought they were, and one picture of how they really are.</i></p>

Note: I: Interviewer, S: Subject.

The reader does not have to make assumptions or try to understand where the subject is going with this response. It is distinct and coherent, with the subject clearly trying to tease apart mental states and their impact on behavior. Further examples of low and high RF can be seen in Table 4.

Discussion

The goal of this pilot study was to investigate the link between maternal RF and parent-child interactive behavior, specifically maternal acknowledging and parent-supportive presence. In line with previous research, we found that RF is associated with both parent behavior, as well as with parenting and child behavior. Fonagy & Target's (1997) account of reflective functioning states that RF organizes the experiences of one's own

and others' behaviors in terms of mental state constructs. There is general agreement that self-organization initially entails the integration of bodily experiences, defining the physical boundaries of self and world (Brownell & Kopp, 1991). The caregiver's recognition of the child's intentional stance is communicated nonverbally from birth, and this communication is a key component of the infant's development of self-regulation. Here, we highlight the interplay between mother's RF and mother's behavior.

Fonagy and Target's (1997) theory of reflective functioning states that RF organizes the experiences of one's own and others' behaviors in terms of mental state constructs. The caregiver's recognition of the child's intentional stance is communicated nonverbally from birth, and this communication is a key component of the infant's development of self-regulation. Here, we highlight the interplay between mother's RF and mother's

behavior in terms of acknowledging and parent supportive presence.

The finding that a mother's RF is correlated with mother's acknowledging is in line with numerous theoretical concepts. Acknowledging is a central component of parental sensitivity, which also has much in common with Bion's (1962) notion of the role of the mother's capacity to mentally "contain" the affect state intolerable for the baby and respond in terms of physical care in a manner that acknowledges the child's mental state yet serves to modulate unmanageable feelings. Parental sensitivity is also highlighted within Bowlby's (1969, 1973, 1980) attachment theory, where the caregiver provides their infant with a sense of security or a "secure base" from which the infant learns to explore their surroundings with confidence and trust that their needs, both emotional and physical, will be met. Therefore, it is not surprising that a child's alertness is linked to maternal acknowledgment. The social processes which accelerate the mentalizing quality of self-organization are the very same as those which ensure security of attachment (Fonagy & Target, 1997). Though reflective capacities can vary among individuals, the understanding of how mental states affect our social behaviors is of key importance. As our participants are from a clinical sample, one would hypothesize that their RF scores would be low to moderate, which they are. However, upon comparing mothers' RF scores and acknowledging scores, we found a significant, positive correlation, demonstrating that there is a relationship between mothers' ability to mentalize about past and current relationships. In line with this, we also found there is an interplay between mothers' acknowledgment, parent supportive presence, child alertness, and dyadic reciprocity. This highlights the flow and understanding of one's mental states to others.

Though we did not examine the child's attachment classification, we utilized Feldman's (1998) attachment construct of parent supportive presence to investigate the link between attachment and maternal acknowledging in terms of interactive behavior. It has been well established that in infancy, mothers of securely attached children are more sensitive to their children's needs (Ainsworth et al., 1971; Isabella, 1993). Beebe et al. (2013) have shown that interactions between baby and mother show both self-regulation and sensitivity to the state of the other. Our findings support Beebe et al. (2013) in that we found a significant correlation between acknowledging, parent supportive presence, and dyadic reciprocity in terms of dyadic interactive behavior. Research has shown that measures that assess attuned and cooperative interactive behaviors are also strongly correlated with attachment security (Bailey et al., 2017).

Berthelot et al. (2015) investigated the intergenerational transmission of attachment in abused

and neglected mothers and trauma-related RF and determined it is not the experience of trauma, per se, but the absence of mentalization regarding trauma that underlies the risk of infant attachment disorganization. This provides further support for Fraiberg and colleagues (1975) conceptualization of the "ghosts in the nursery" as an absence and theorizes that perhaps it is not an absence of mentalization, but more specifically, an absence of mentalization in regards to trauma that has the most important implications (Berthelot et al., 2015). Taking these findings into consideration, we are not surprised we found a trending correlation rather than a significant one between parent supportive presence and maternal RF. Many of the women within our sample have experienced all 10 ACEs, which would categorize them as abused and neglected during childhood (Berthelot et al., 2015). Given that adults with childhood histories of abuse and neglect face significant challenges in freeing themselves psychologically from past traumatic experiences when they become parents (Fraiberg et al., 1975), it is not hard to imagine that past maltreatment may impact the parent's ability to mentalize and therefore their ability to be both a sensitive caregiver as well as a secure base for their child.

An unexpected finding was that some of the mothers within our sample demonstrated the ability to overcome past traumatic experiences through RF. The awareness of the emotional impact of abusive experiences may help mothers to maintain an appropriate perspective that not only takes into account their reactivity to their infants' distress, triggering memories and feelings related to their traumatic past (Fonagy et al., 2011) but also keeps the infant in mind so they can respond appropriately to their infant's needs. Thus, the parent is able to soothe and comfort their child, creating the secure base necessary for secure attachment.

Future research may consider expanding on the findings from this pilot study by examining the link between RF, dyadic interactive behavior, ACEs, and mothers' attachment classification. Specifically, we plan to investigate what Lieberman et al., (2005) termed "identification with the protector", or protective factors, where traumatized parents can mobilize themselves to alleviate their child's fear and pain by accessing not only their early feelings of vulnerability but also memories of feeling protected and cared for by a benevolent attachment figure. It is also of great importance to investigate the impact of GABI and STEP on these dyads at future time points to fully assess the impact of treatment over time. The current work underscores the value of measuring reflective functioning in AAI responses or other narrative material to gain an early picture of strengths and difficulties in parents of infants before they enter a treatment program. The information

gained may help clinicians target parents' and children's psychosocial needs more effectively, specifically by adding mentalization practice to therapy sessions through modeling or explicit discussion.

Limitations

A limitation of the current study is the small sample size. Given the transient nature of high-risk populations, the length of the study, and the commitment required, the number of families dropped significantly from T1 to completion of treatment, with a total of 74 out of 128 dyads completing treatment.

References

- Ainsworth, M. D. S., Bell, S. M., & Stayton, D. J. (1971). Attachment and exploratory behavior of one-year olds. In H. R. Schaffer (Ed.), *The origins of human social relations* (pp. 49-67). Academy Press.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978, 2015). *Patterns of attachment: A psychological study of the strange situation*. Lawrence Erlbaum.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. N. (2015). *Patterns of attachment: A psychological study of the strange situation* (1st ed.). Psychology Press.
- Allen, J. (2006). Mentalizing in practice. In J. Allen & P. Fonagy (Eds.), *Handbook of mentalization-based treatment* (pp. 3-30). Wiley & Sons.
- Bailey, H. N., Bernier, A., Bouvette-Turcot, A.-A., Tarabulsy, G. M., Pederson, D. R., & Becker-Stoll, F. (2017). Deconstructing maternal sensitivity: Predictive relations to mother-child attachment in home and laboratory settings. *Social Development, 26*(4), 679 – 693. <https://doi.org/10.1111/sode.12220>
- Barnett, D., & Vondra, J.I. (1999). A typical pattern of early attachment: Theory, research, and current directions. *Monographs of the Society for Research in Child Development, 64*(3), 1-24.
- Beebe, B., Lachman, F., Markese, S., & Bahrnick, L. (2012). On the origins of disorganized attachment and internal working models: Paper I. A dyadic systems approach. *Psychoanalytic Dialogues, 22*(2), 253-272. <https://doi:10.1080/10481885.2012.666147>
- Beebe, B., & Steele, M. (2013). How does microanalysis of mother-infant communication inform maternal sensitivity and infant attachment? *Attachment & Human Development, 15*(5-6), 583-602. <https://doi.org/10.1080/14616734.2013.841050>
- Berthelot, N., Ensink, K., Bernazzani, O., Normandin, L., Luyten, P., & Fonagy, P. (2015). Intergenerational transmission of attachment in abused and neglected mothers: The role of trauma-specific reflective functioning. *Infant Mental Health Journal, 36*(2), 200-212. <https://doi:10.1002/imhj.21499>
- Bion, W. R. (1962). *Learning from experience*. Heinemann.
- Bowlby, J. (1969). *Attachment and loss, Vol. I: Attachment*. Basic Books.
- Bowlby, J. (1973). *Attachment and loss. Volume II: Separation*. Basic Books.
- Bowlby, J. (1980). *Attachment and loss, Volume III: Loss*. Basic Books.
- Bretherton, I. (1985). Attachment theory: retrospect and prospect. *Monographs of the Society for Research in Child Development, 50*(1/2), 3-35. <https://doi.org/10.2307/3333824>
- Bretherton, I., & Munholland, K. A. (1999). Internal working models in attachment relationships: A construct revisited. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 89-111). Guilford Press.
- Brownell, C. A., & Kopp, C. B. (1991). Common threads, diverse solutions: Concluding commentary. *Developmental Review, 11*(3), 288-303.
- Cooley, C. H. (1964). *Human nature and the social order* (Rev. ed.). Schocken Books (Original work published 1902).
- Crittenden, P. M. (1990). Internal representational models of attachment relationships. *Infant Mental Health Journal, 11*(3), 259-277. [https://doi.org/10.1002/1097-0355\(199023\)11:3<259::aid-imhj2280110308>3.0.co;2-j](https://doi.org/10.1002/1097-0355(199023)11:3<259::aid-imhj2280110308>3.0.co;2-j)
- Dube, S. R., Felitti, V. J., Dong, M., Chapman, D. P., Giles, W., & Anda, R. F. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences study. *Pediatrics, 111*, 564-572. <https://doi.org/10.1542/peds.111.3.564>
- Feldman, R. (1998). *Coding interactive behavior manual* [Unpublished manuscript]. Bar-Ilan University.
- Feldman, R. (2012). Parenting behavior as the environment where children grow. In L. C. Mayes & M. Lewis (Eds.), *The Cambridge handbook of environment in human development*. (pp. 535-567). Cambridge University Press. <https://doi.org/10.1017/CBO9781139016827.031>
- Feldman, R. (2015). Mutual influences between child emotion regulation and parent-child reciprocity support development across the first 10 years of life: Implications for developmental psychopathology. *Development and Psychopathology, 27*(4 pt 1), 1007-1023. <https://doi.org/10.1017/S0954579415000656>
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., & Marks, J. S. (1998). The relationship of adult health status to childhood abuse & household dysfunction. *American Journal of Preventive Medicine, 14*, 245-258. [https://doi.org/10.1016/S0749-3797\(98\)00017-8](https://doi.org/10.1016/S0749-3797(98)00017-8)

- Fonagy, P. (2006). The mentalization-focused approach to social development. In J. Allen & P. Fonagy (Eds.), *Handbook of mentalization-based treatment* (pp. 53–100). Wiley & Sons.
- Fonagy, P., Gergely, G., Jurist, E.L., & Target, M. (2002). *Affect regulation, mentalization, and the development of the self*. Other Press.
- Fonagy, P., Luyten, P., & Strathearn, L. (2011). Borderline personality disorder, mentalization, and the neurobiology of attachment. *Infant Mental Health Journal*, 32(1), 47–69. <https://doi.org/10.1002/imhj.20283>
- Fonagy, P., Steele, H., Moran, G., Steele, M., & Higgitt, A. (1991). The capacity for understanding mental states: The reflective self in parent and child and its significance for security of attachment. *Infant Mental Health Journal*, 13(3), 200–217. [https://doi.org/10.1002/1097-0355\(199123\)12:3<201::AID-IMHJ2280120307>3.0.CO;2-7](https://doi.org/10.1002/1097-0355(199123)12:3<201::AID-IMHJ2280120307>3.0.CO;2-7)
- Fonagy, P., Steele, M., Steele, H., Higgitt, A., & Target, M. (1994). The Emanuel Miller Memorial Lecture 1992. The theory and practice of resilience. *Journal of Child Psychology and Psychiatry*, 35(2), 231–257. <https://doi.org/10.1111/j.1469-7610.1994.tb01160.x>
- Fonagy, P., & Target, M. (1997). Attachment and reflective function: Their role in self-organization. *Development and Psychopathology*, 9(4), 679–700. <https://doi.org/10.1017/s0954579497001399>
- Fonagy, P., Target, M., Steele, H., & Steele, M. (1998). *Reflective-functioning manual, version 5.0, for application to adult attachment interviews*. University College London.
- Fraiberg, S., Adelson, E., & Shapiro, V. (1975). Ghosts in the Nursery. *Journal of the American Academy of Child Psychiatry*, 14(3), 387–421. doi:10.1016/s0002-7138(09)61442-4
- Freud, S. (1915, 2013). *The Unconscious. S.E. Vol.XIV*: 166–204. Tree of Knowledge.
- George, C., Kaplan, N., & Main, M. (1985). *Adult Attachment Interview* [Unpublished manuscript] (2nd ed.). University of California.
- Hesse, E., & Main, M. (2006). Frightened, threatening, and dissociative (FR) parental behavior in low-risk samples: Description, discussion, and interpretations. *Development and Psychopathology*, 18(2), 309–343. <https://doi.org/10.1017/S0954579406060172>
- Isabella, R. A. (1993). Origins of attachment: Maternal interactive behavior across the first year. *Child Development*, 64(2), 605–621. <https://doi.org/10.2307/1131272>
- Katznelson, H. (2014). Reflective functioning: A review. *Clinical Psychology Review*, 34(2), 107–117. <https://doi.org/10.1016/j.cpr.2013.12.003>
- Lieberman, A. F., Padrón, E., Horn, P. V., & Harris, W. W. (2005). Angels in the nursery: The intergenerational transmission of benevolent parental influences. *Infant Mental Health Journal*, 26(6), 504–520. <https://doi.org/10.1002/imhj.20071>
- Lyons-Ruth, K., Bronfman, E., & Parsons, E. (1999). Chapter IV. maternal frightened, frightening, or atypical behavior and disorganized infant attachment patterns. *Monographs of the Society for Research in Child Development*, 64(3), 67–96. <https://doi.org/10.1111/1540-5834.00034>
- Madigan, S., Bakermans-Kranenburg, M.J., van Ijzendoorn, M. H., Moran, G., Pederson, D.R., & Benoit, D. (2006). Unresolved states of mind, anomalous parental behavior, and disorganized attachment: A review and meta-analysis of a transmission gap. *Attachment & Human Development*, 8(2), 89–111. <https://doi.org/10.1080/14616730600774458>
- Madigan, S., Benoit, D., & Boucher, C. (2011). Exploration of the links among fathers' unresolved states of mind with respect to attachment, atypical paternal behavior, and disorganized infant–father attachment. *Infant Mental Health Journal*, 32(3), 286–304. <https://doi.org/10.1002/imhj.20297>
- Main, M., Goldwyn, R., & Hesse, E. (2003). *Adult attachment classification system* [Unpublished manuscript]. (Version 7.2). University of California at Berkeley.
- Main, M., & Hesse, E. (1990). Parent's unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened and/or frightening parental behavior the linking mechanism? In M.T. Greenberg, D. Cicchetti, & E.M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 161–182). University of Chicago Press.
- Main, M., Hesse, E., & Goldwyn, R. (2008). Studying differences in language use in recounting attachment history. In H. Steele & M. Steele (Eds.), *Clinical applications of the Adult Attachment Interview* (pp. 31–68). Guilford Press.
- Main, M., Kaplan, N. & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds.), *Growing points in attachment theory: Monographs for the Society for Research in Child Development*, 50(1/2), 66–104. Wiley.
- Main, M., & Solomon, J. (1990). Procedures for identifying infants as disorganized/disoriented during the Ainsworth Strange Situation. In M. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years* (pp. 121–160). University of Chicago Press.

- Murphy, A., Steele, M., Dube, S. R., Bate, J., Bonuck, K., Meissner, P., Goldman, H., & Steele, H. (2014). Adverse Childhood Experiences (ACEs) questionnaire and Adult Attachment Interview (AAI): Implications for parent-child relationships. *Child Abuse & Neglect, 38*(2), 224-233.
<https://doi.org/10.1016/j.chiabu.2013.09.004>
- Riggs, S.A., Paulson, A., Tunnell, E., Sahl, G., Atkison, H., & Ross, C.A. (2007). Attachment, personality, and psychopathology among adult inpatients: Self-reported romantic attachment style versus adult attachment interview states of mind. *Development and Psychopathology, 19*(1), 263-291.
<https://doi.org/10.1017/S0954579407070149>
- Sharp, C., & Fonagy, P. (2008). The parent's capacity to treat the child as a psychological agent: Constructs, measures, and implications for developmental psychopathology. *Social Development, 17*(3), 737-754.
<https://doi.org/10.1111/j.1467-9507.2007.00457.x>
- Sharp, C., Fonagy, P., & Goodyer, I. G. (Eds.). (2008). *Social cognition and developmental psychopathology*. Oxford University Press.
- Solomon, J., & George, C. (1999). The measurement of attachment security in infancy and childhood. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 287-316). Guilford Press.
- Sroufe, L. (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & Human Development, 7*(4), 349-367.
<https://doi.org/10.1080/14616730500365928>
- Stack, D. M., & LePage, D. E. (1996). Infants' sensitivity to manipulations of maternal touch during face-to-face interactions. *Social Development, 5*(1), 41-55.
- Stack, D. M., & Muir, D. W. (1990). Tactile stimulation as a component of social interchange: New interpretations for the still-face effect. *British Journal of Developmental Psychology, 8*(2), 131-145.
- Stalker, C., & Davies, F. (1998). Working models of attachment and representations of the object in a clinical sample of sexually abused women. *Bulletin of the Menninger Clinic, 62*(3), 334-350.
- Steele, H., Murphy, A., Bonuck, K., Meissner, P., & Steele, M. (2019). Randomized Control Trial Report on the effectiveness of group attachment-based intervention (Gabi©): Improvements in the parent-child relationship not seen in the Control Group. *Development and Psychopathology, 31*(1), 203-217
<https://doi.org/10.1017/s0954579418001621>
- Steele, H., & Steele, M. (2008). On the origins of reflective functioning. In F. Busch (Ed.), *Mentalization: Theoretical considerations, research findings, and clinical implications. Psychoanalytic Inquiry Book Series, 29*. (pp. 133-158). The Analytic Press.
- Stovall-McClough, K.C., & Cloitre, M. (2006). Unresolved attachment, PTSD, and dissociation in women with childhood abuse histories. *Journal of Consulting and Clinical Psychology, 74*(2), 219-228.
<https://doi.org/10.1037/0022-006X.74.2.219>
- Tarabulsky, G., Larose, S., Pederson, D.R., & Moran, G. (2000). Comprendre le rôle des relations d'attachement parent-infant dans le développement humain [Understanding the role of parent-infant attachment relationships in human development]. In G. Tarabulsky, S. Larose, D.R. Pederson, & G. Moran (Eds.), *Attachment and development: The role of early relationships in human development* (pp. 1-24). Presses de l'université du Québec.
- Tronick, E.Z. (1989). Emotions and emotional communication in infants. *American Psychologist, 44*(2), 112-119.
- Tronick, E. Z., & Weinberg, M. K. (1997). Depressed mothers and infants: Failure to form dyadic states of consciousness. In L. Murray & P. J. Cooper (Eds.), *Postpartum depression and child development* (pp. 54-81). Guilford Press.
- van Ijzendoorn, M. H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin, 117*(3), 387-403.
<https://doi.org/10.1037/0033-2909.117.3.387>
- Waters, E., Merrick, S., Treboux, D., Crowell, J., & Albersheim, L. (2000). Attachment security in infancy and early adulthood: A twenty-year longitudinal study. *Child Development, 71*(3), 684-689.
- Zeanah, C. & Barton, M. (1989). Introduction: Internal representations and parent-infant relationships. *Infant Mental Health Journal, 10*(3), 135-141.
[https://doi.org/10.1002/1097-0355\(198923\)10:3<135::AID-IMHJ2280100302>3.0.CO;2-H](https://doi.org/10.1002/1097-0355(198923)10:3<135::AID-IMHJ2280100302>3.0.CO;2-H)

Appendix A

Parent and Child Assessment: Consent for Participation

Study Conducted by Drs. Miriam & Howard Steele and Colleagues
The Center for Attachment Research
The New School for Social Research

Please read the following information and if you consent to your child participating, sign and complete the form.

WHY IS THIS RESEARCH STUDY BEING DONE AND WHY HAVE I BEEN ASKED TO TAKE PART IN THIS RESEARCH STUDY?

- By taking part in this study, you will help us to understand how parent-child attachment relationships develop, and how parenting and parent-child groups help families.

DO I HAVE TO TAKE PART IN THIS RESEARCH STUDY?

- Your participation is voluntary. This means that you decide whether you want to join the study after speaking with the researcher, or other members of the research team.
- If you decide to take part, you will be asked to sign this consent form. Your signature means that you agree to be a subject in this research.
- After reading this form and discussing what it says, you should ask all the questions you want to ask. You should take as much time as you need to decide.
- If you do not understand some of the terms used in this form, ask the person who is discussing the study with you to give additional information that may make this easier to understand.
- You do not have to consent to participate in the study immediately, or ever.
- You may take home a copy of this consent form to think about it or discuss the information with family or friends before you decide.
- You will be given a copy of this form whether or not you agree to participate in this study.
- Do not sign the form unless you have had all your questions answered and understand exactly what is involved.
- If you decide to take part, you are still free to withdraw at any time without giving a reason.

WHAT WILL HAPPEN IF I TAKE PART IN THIS RESEARCH STUDY?

Only those tasks marked with a check will be included in today's assessment.

- **Adult Attachment Interview** -This is a structured interview including approximately 21 questions, which focus on your family and what happened to you as a child. The interview is taped and takes approximately 1 hour to complete.
- **Ages and Stages Questionnaire, Social Emotional:** This involves a series of tasks to assess social competence.
- **Bayley Scales of Infant and Toddler Development Screening Test:** A 20-minute assessment to determine if child development is at age level.
- **Cortisol Collection:** Approximately 50 strands of hair will be collected from the back of the parent's and child's heads for cortisol analysis.
- **Parent-Infant Relationship Global Assessment** - This is a 10-minute observational assessment of the parent-child relationship during free play.
- **Physical Markers of Nutritional Health and Obesity** – This will include weighing parent and child and measuring the height of parent and child.

- **Snack Time:** This is an unstructured activity where you and your child take a break and enjoy a snack. You can bring one from home or we can provide one.
- **Strange Situation** - The purpose of this study. Is to look at how your child reacts to a series of events involving you and an unfamiliar person in a playroom with toys. Participating in this study will involve you and your child in 20 minutes of activity.
- **Qualitative Feedback Interview** - This is a brief interview in which the parent is asked about his or her experiences in the research project.
- **Questionnaires:** You may be asked to fill out up to seven of the following questionnaires.
 - Clinical Conflict Tactics Scale
 - Language Development Survey
 - Family Support Scale
 - Parenting Stress Index
 - Adverse Childhood Experiences Study Questionnaire
 - Child Behavior Checklist
 - Strengths and Difficulties Questionnaire
 - Symptom Checklist -90
 - Interpersonal Support Evaluation List
 - Diagnostic Classification: Zero to Three Psychosocial and Environmental Checklist
 - Demographic and Medical History Form
 - Survey of Wellbeing for Young Children
 - Patient Health Questionnaire-9

WHAT ARE THE POSSIBLE SIDE EFFECTS, DISCOMFORTS, RISKS, OR INCONVENIENCES I CAN EXPECT FROM BEING IN THIS RESEARCH STUDY?

Here is a list of the known risks associated with this research:

- Because of the very personal nature of some of the questions that you will be asked you may find some of the questions upsetting. If at any time you feel the questions are too personal you may ask to stop the interview, or you may choose to skip any questions you do not want to answer.
- One possible risk is harm resulting from the disclosure of your data outside the research setting. To mitigate this risk, whenever possible, we collect data completely anonymously, such that even if data were disclosed outside the research setting, it could not be linked to you. Video data, though identifiable by nature, are not labeled with names or other identifying information.

ARE YOU LIKELY TO BE ANY BENEFITS TO TAKING PART IN THIS RESEARCH STUDY?

- You will not benefit from being in this research study. However, the information learned from this study may benefit the advancement of scientific knowledge, which in turn may benefit people in the future.

WHAT OTHER CHOICES DO I HAVE IF I DO NOT TAKE PART IN THIS RESEARCH STUDY?

You may choose not to participate in this study.

WILL I BE PAID FOR BEING IN THE STUDY?

- You will receive a total of \$40 for your participation and \$25 for your child's participation.
- You will receive your stipend in cash, and you will receive a MetroCard for travel after the visit.
- If you withdraw from the study, you will still be compensated for the portion of the time you participated in this research study.

WHO MAY SEE MY RECORDS?

- The research records will be kept private and your name will not be used in any written or verbal reports.
- Your research records may be inspected by members of the research team, the sponsor(s), and other institutions that participate in this study. These are Einstein Center for Babies, Toddlers and Families (CBTF) and The New School for Social Research.
- Support for this study is provided by: The Health Research and Services Administration, Maternal and Child Health Bureau, of the Department of Health and Human Services.
- The research records will be kept secure, and computer records will be password protected.

WILL THERE BE ANY COSTS TO ME?

- There will be no costs to you for participating in this study.

WHO CAN ANSWER MY QUESTIONS ABOUT THE STUDY?

Researcher's Name: Howard Steele

Office Address: Center for Attachment Research, 80 Fifth Ave. 6th Floor, New York, NY 10011

Office Phone: (212) 229-5727 x 3118

- If any questions arise related to this research project, or you believe you have any injury related to this study, you can call the researcher above.
- If you have questions regarding your rights as a research subject, please contact the Human Protections Administrator, via phone: at 212.229.8947 x2382, or email: at irb@newschool.edu.

TO STOP PARTICIPATING IN THIS STUDY BEFORE THE STUDY IS FINISHED?

Yes, you can be asked to stop if:

- You fail to follow instructions given to you by the researcher.
- You do not qualify for the study.

MAY I STOP THE STUDY AT ANY TIME?

- Your participation in this study is voluntary and you may withdraw from the study at any time without giving a reason.
- If you agree to participate and withdraw later, some of your information may have already been entered into the study and that will not be removed. If you choose to withdraw and would like previously collected information to be destroyed, please let the researcher know and we will do so.
- Your treatment by doctors and staff at the institution(s) involved in this study, now and in the future, will not be affected in any way. If you agree to participate and withdraw later.
- Your decision not to be in this research study. Will not result in any loss of benefits to which you are otherwise entitled.

WHAT ARE MY RIGHTS IF I TAKE PART IN THIS RESEARCH STUDY?

- Your participation in this study is voluntary.
- You do not waive any of your legal rights by participating in this research study.
- Your treatment by doctors and staff at the institution(s) involved in this study, now and in the future, will not be affected in any way if you refuse to. Participate or if you enter the study and withdraw later.
- You do not waive any legal rights or release The New School or its agents from liability for negligence. consenting to participate.

PARTICIPANT:

FOR FUTURE CONTACT, PLEASE INITIAL YOUR CHOICES BELOW:

I consent to be contacted in the future to learn about:

_____ New research protocols that I may wish to join.

_____ General information about research findings.

_____ Information about the test on my sample that may benefit me or my family members about choices regarding preventative or clinical care.

_____ I DO NOT AGREE TO BE CONTACTED IN THE FUTURE, EVEN IF THE RESULTS MAY BE IMPORTANT TO MY HEALTH OR MY FAMILY’S HEALTH.

Your wish does not constitute a guarantee that you will be contacted.

Informed Consent Signature Page

The following is a list of items we discussed in this research study. If you have any questions about any of these items, please ask the person who is discussing the study with you for more information before agreeing to participate.

- What the study is about.
- What I must do when I am in the study.
- The possible risks and benefits to me.
- Who to contact if I have questions or if there is a research-related injury?
- Any costs and payments.
- I can discontinue participating in the study at any time without penalty.
- Other choices.
- All written and published information will be reported as group data with no reference to my name.
- I have been given the name of the researcher and others to contact.
- I have the right to ask any questions.

_____ Initial here to indicate that you consent for the videos and questionnaire data collected as part of this research to be used for training purposes, which may include but are not limited to inclusion in an online training course for professionals that is private, and password protected, presentation by the lead researchers at professional lectures and conferences, use in supervision with clinicians who are in training. Though you are indicating your agreement today, an attempt will also be made to reach you at the below phone number to inform you of times when the video is used in these other settings.

Name of Child 1 _____ Child 1’s Birthdate _____ / _____ / _____

Name of Child 2 _____ Child 2’s Birthdate _____ / _____ / _____

Parent’s Name _____

Parent's Signature _____

Parent's Phone Number _____

Current Date _____

Researcher's Name _____

Researcher's Initials _____

Appendix B

Additional Information

What level of Education have you completed?

- Some Junior High Schools •
- Some High Schools •
- High School or GED •
- Some College •
- Advanced Degree • (Please specify: _____)

Are you working?

- Full Time •
- Part-Time •
- No •

Do you have Medicaid? Yes • No •

(If they don't have Medicaid ask about the amount of income)

Under \$20,000 • \$20,000-\$39,999 • \$40,000-\$59,999 • \$60,000-\$79,999• \$80,000-\$99,999 •

Where are you currently living?

- Private apartment/house
- Government supported housing
- With family/friend
- Homeless/shelter

How many times have you been pregnant? _____

How many times have you given birth? _____

What is the birth order of the child/children who is in the assessment today? _____

Have you ever had a child removed from your care? Yes • No •

How many times have you used the emergency room in the...?

(Please list the number of times) _____
Week Month 6 Months

How many times have you taken your child to the emergency room in the past...?

(Please list the number of times) _____
Week Month 6 Months

What other psychological treatments are you receiving?

- Psychiatric •
- Psychopharmacological •
- Couple therapy •
- Individual therapy •
- Parent-child psychotherapy with another child •

How often? For how long?

Are you currently taking any medication? Yes • No •

(E.g., Psychotropic, anxiety medication, depression medication, Pain medication)

Type: (Please list)

Have you ever been hospitalized for psychiatric reasons? Yes • No •

Have you ever been incarcerated?
Yes • No •

How many accidents have you had in the past.... Week Month 6 Months
(Please list the number of times)

How many accidents has your child/children had in the past....
(Please list the number of times) Week Month 6 Months

(Details)

Is your child registered for:
ACD Day Care •
Early Head Start •
Head Start •
Pre-Kindergarten •

Is your child receiving early intervention services? Yes • No •
(Please list all services your child is receiving; Speech Therapy, Occupational Therapy, Physical Therapy, and Special Instruction)

Additional Notes:

Appendix C

Adverse Childhood Experiences Questionnaire

Name _____

Date _____

Adverse Childhood Experiences Study Questionnaires (Parent)

(Short version adapted from the website of United States Centers for Disease Control and Prevention (CDC) at <http://www.cdc.gov/needphp/ace/>)
(Murphy, A, personal communication Shanta Dube, 2007)

- 1.) Sometimes parents or adults hurt children. While you were growing up, that is during your first 18 years of life, how often did a parent, stepparent, or another adult in your home swear at you, insult you or put you down?
Never one, twice sometimes often very often

- 2.) While you were growing up, that is during your first 18 years of life, how often did a parent, stepparent, or another adult in your home act in a way that made you afraid that you might be physically hurt?
Never one, twice sometimes often very often

- 3.) While you were growing up, that is during your first 18 years of life, how often did a parent, stepparent, or another adult in your home push, grab, shove, slap or throw something at you?
Never one, twice sometimes often very often

- 4.) While you were growing up, that is during your first 18 years of life, how often did a parent, stepparent, or another adult in your home hit you so hard that you had marks or were injured?
Never one, twice sometimes often very often

- 5.) Some people, while growing up in their first 18 years of life, have a sexual experience with an adult or someone at least five years older than themselves. These experiences may have involved a relative, family friend, or stranger. During the first 18 years of life, did an adult or older relative, family friend, or stranger ever touch or fondle your body in a sexual way?
Yes No

- 6.) Have you sexually touched their body?
Yes No

- 7.) Have any type of sexual intercourse (oral, anal, vaginal) with you?
Yes No

- (Skip Question 8, if answered "Yes" to question 7)
- 8.) Attempt to have any type of sexual intercourse (oral, anal, vaginal) with you?
Yes No

- 9.) During the first 18 years of life did you ever live with anyone who was a problem drinker or alcoholic?
Yes No

And who was that? _____

21.) There was someone to take you to the doctor if you needed it.
Never one, twice sometimes often very often

22.) Your parents were too drunk or high to take care of the family.
Never one, twice sometimes often very often

23.) You knew that was someone to take care of you and protect you.
Never one, twice sometimes often very often

And who was that? _____

24.) There was someone in your family who helped you feel special or important.
Never one, twice sometimes often very often

And who was that? _____

25.) You felt loved.
Never one, twice sometimes often very often

And who was that? _____

Appendix D
Adult Attachment Interview
 AAI Protocol – ALP July 2015

Intro: I'm going to be interviewing you about your childhood experiences, and how those experiences may have affected your adult personality. So, I'd like to ask you about your early relationship with your family, and what you think about the way it might have affected you. We'll focus mainly on your childhood, but later we'll get to your adolescence and then to what's going on right now. This interview often takes about an hour, but it could be anywhere between 45 minutes and an hour and a half.

1. Could you start by helping me get oriented to your early family situation, who made up the family you grew up in, and where you lived? If you could tell me where you were born, whether you moved around much, what your family did for a living?

- ✓ Did you see your grandparents much? If they died before your birth, do you know much about him or her?
- ✓ Other people in your household? If siblings, do they now live nearby?
- ✓ If necessary, "who would you say raised you?"

2. I'd like you to try to describe your relationship with your parents as a young child, starting from as far back as you remember

3. Now I'd like to ask you to choose five adjectives or words that reflect your relationship with your mother, starting from as far back as you can remember in early childhood—as far back as you can go, but say, age 5-12 is fine. Go ahead and think about it for a minute. I'll write each one down as you give it to me.

- ✓ Okay, now I'd like to ask why you chose each of these. You said your relationship with your mother was [ADJECTIVE]. Can you think of a specific memory or incident that would illustrate why you chose that?
- ✓ If quite general: "That's a good general description, but I'm wondering if there was a particular time that happened, that made you think about it as [ADJECTIVE]?"
- ✓ Always ask "any other memory/event/incident come to mind?"
- ✓ Repeat for each adjective

4. Repeat #3, five adjectives re: relationship with father

5. Now could you tell me, to which parent did you feel the closest, and why?

- ✓ Why do you think there wasn't this feeling with the other parent?

6. When you were upset as a child, what would you do?

- ✓ When you were upset emotionally when you were little, what would you do? Can you think of a specific time that happened?
- ✓ Can you remember what would happen when you were physically hurt? Do any specific incidents come to mind?
- ✓ Were you ever ill when you were little? Do you remember what would happen? Incidents?
- ✓ If holding hasn't come up: "I'm wondering, do you remember being held by either of your parents at any of these times—I mean when you were upset, hurt, or ill?"

7. What is the first time you remember being separated from your parents?

- ✓ How did you respond?
- ✓ Do you remember how your parents responded?
- ✓ Are there any other separations that stand out in your mind?

8. Did you ever feel rejected as a young child? Of course, looking back on it now, you may realize it wasn't really rejection, but what I'm trying to ask about here is whether you remember having felt rejected in childhood. (Can also say "pushed away or ignored"?)

- ✓ How old were you when you first felt this way?
- ✓ What did you do?
- ✓ Why do you think your parents did these things? Do you think he/she realized he was rejecting you?

8a. Were you ever frightened or worried as a child?

9. Were your parents ever threatening to you in any way? Maybe for discipline, or even jokingly?

- ✓ Some people have memories of threats or of some kind of behavior that was abusive. Did anything like this happen to you, or in your family?
- ✓ What would happen? How old were you at the time? Did it happen frequently? How severe?
- ✓ Do you feel this experience affects you now as an adult?
- ✓ Does it or would it influence your approach to your child?
- ✓ Did you have any such experiences involving people outside of your family?

10. In general, how do you think your overall experiences have affected your adult personality? Are there any aspects of early experiences that you consider a setback to your development?

11. Why do you think your parents behaved as they did during your childhood?

12. Were there other adults that you were close to, like parents, as a child?

- ✓ Or any other adults who were especially important to you, even though not parental? (Find out when and how significant these relationships were)

13. Did you experience the loss of a parent or other close loved one while you were a young child—for example, a sibling or a close family member?

- ✓ Could you tell me about the circumstances? How old were you at the time? How did you respond?
- ✓ Was this death sudden or was it expected?
- ✓ Can you recall your feelings at that time?
- ✓ Have your feelings regarding this death changed much over time?
- ✓ Did you attend the funeral?
- ✓ If a parent or sibling: What would you say the effect was on your [other family members] and how did this change over the years?
- ✓ Would you say that this loss has affected your adult personality?
- ✓ What about your approach to your child?

13a. Were there any other important losses in childhood? (Query as above)

13b. Have you lost others close to you as an adult? (Query as above)

14. Have you ever had any other experiences you regard as potentially traumatic? (After interpretation is made by the participant, make clear you mean “overwhelmingly and immediately terrifying events”)

15. Now I’d like to ask you a few more questions about your relationship with your parents. Were there many changes in your relationship with your parents between your childhood and adulthood?

16. What is the relationship with your parents like for you now as an adult?

- ✓ Do you have much contact with them right now?
- ✓ What is your relationship with them like currently?
- ✓ Could you tell me about any sources of dissatisfaction in your current relationship with your parents? Any particular sources of satisfaction?

17. Now I’d like to move to a different sort of question, not about your relationship with your parents but with your children. (If none, then an imagined young child.) How do you feel now when separated from your child/children?

- ✓ Do you ever feel worried about your child?

18. If you had three wishes for your child twenty years from now, what would they be? (The kind of future you would like to see for your child).

19. Is there anything that you feel you learned from your own childhood experience? I'm thinking here of something you feel you might have gained from the kind of childhood you had.

20. We've been focusing a lot on the past in this interview, but now I'd like to ask you, what would you hope your child will have learned from his/her experience of being parented by you?

Appendix E

Coding Interactive Behavior

CIB Coding Sheet

Subject ID _____ Date _____
 Coder's Name: _____

Parent Codes

1. Forcing _____
2. Overriding _____
3. Acknowledging _____
4. Imitating _____
5. Elaborating _____
6. Parent Gaze / Joint Attention _____
7. Positive Affect _____
8. Parent Depressed Mood _____
9. Parent Negative Affect / Anger _____
10. Hostility _____
11. Vocal Appropriateness, Clarity _____
12. Parent Anxiety _____
13. Appropriate Range of Affect _____
14. Consistency of Style _____
15. Resourcefulness _____
16. On-Task Persistence _____
17. Appropriate Structure / Limit-Setting _____
18. Praising _____
19. Criticizing _____
20. Affectionate Touch _____
21. Enthusiasm _____
22. Parent Supportive Presence _____

Child Codes

23. Child Gaze / Joint Attention _____
24. Positive Affect _____
25. Negative Emotionality/Fussy _____
26. Withdrawal _____
27. Emotional Lability _____
28. Child Affection to Parent _____
29. Alert _____
30. Fatigue _____
31. Child Vocalization / Verbal Output _____
32. Child Initiation _____
33. Child Compliance to Parent _____
34. Child Reliance on Parent for Help _____
35. On-Task Persistence _____
36. Child Avoidance of Parent _____
37. Competent Use of Environment _____
38. Creative-Symbolic Play _____

Dyadic Codes

- 39. Dyadic Reciprocity _____
- 40. Adaptation-Regulation _____
- 41. Fluency _____
- 42. Constriction _____
- 43. Tension _____

Lead-Lag Relationship

- 44. Parent-Led Interaction _____
- 45. Child-Led Interaction _____

Clinical CodesParent Codes

- 46. Dissociation
- 47. Ignoring

Child Codes

- 48. Simultaneous Display of Contradictory Behaviors
- 49. Fear

Dyadic Codes

- 50. Role Reversal

Domestic Violence Markers**Parent Codes:**

- 51. Perplexing, confusing, inappropriate behaviors:
- 52. Mother self-blame:
- 53. Hostile/non-constructive imitation:
- 54. Dissociation:
- 55. Attribution of negative intentions to child or child's behavior:
- 56. Exaggerated startle response:
- 57. Passivity:
- 58. Aggression in play/towards the child

Child Codes

- 59. Aggression in play/towards mother:
- 60. Non-specific hyper-arousal:
- 61. Ambivalence/fear towards mother:

Dyadic Codes:

- 62. Role reversal:

Maintenance and Innocence: Psychosocial Motivations that Determine Dominance Strategies of High-Status Groups

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In contexts of social progress towards more egalitarian intergroup relations, dominance-based high-status groups experience threats to their status and group image. This motivates individuals to maintain their high-status position (i.e., maintenance motivation) and seek to be perceived as innocent of unfair advantages (i.e., innocence motivation). The present research examines the effects of these motivations on individual members of dominance-based high-status groups. Maintenance and innocence motivations were hypothesized to predict the endorsement of four dominance strategies among White people as well as males from the U.S.A. ($N = 343$). The strategies predicted were defensive helping, willful ignorance, competitive victimhood, and blatant hostility. Multiple regression analyses were performed to determine the main effects and interaction effects of the two motivations on each strategy. The results generally suggested that high-status groups are motivated to address threats to their dominant status and group image, and measuring the maintenance and innocence motivations can help predict certain dominance strategies.

Keywords: intergroup relations, status, innocence, maintenance, motivation

The maintenance of an intergroup hierarchy is dependent on perceptions of existing group relations as stable and legitimate, which progress towards more egalitarian social values can challenge (Tajfel & Turner, 1979). Thus, in societies like the United States of America that were established and organized as dominance hierarchies, the positions and identities of historically high-status groups (hereinafter HSGs) can become increasingly threatened when positional differences are perceived as unstable and illegitimate (Killian, 1985).

One way this occurs is through the acknowledgment and acceptance of critical views of past and present group relations as being unjust and illegitimate (Richeson & Ambady, 2001). In such circumstances, it is predicted that individual members of HSGs are motivated by two specific needs-based motivations to pursue a variety of strategies to mitigate threats to their dominance-based status and positive ingroup identity. Specifically, these dominance strategies are: defensive helping (Nadler et al., 2009), willful ignorance (Bailey, 2017), competitive victimhood (Young & Sullivan, 2016), and blatant hostility (Bruneau et al., 2020). Although these strategies have been studied independently in previous research, a predictive model that determines the psychological conditions for their endorsement and use has yet to be

developed. Therefore, the primary objective of the current study is to test a theoretical model that predicts support for these dominance strategies based on the degree of HSGs' members' motivations to manage social identity threats.

Forms of Status: Dominance or Prestige

Status, or the measure of one's social rank, can significantly influence one's outcomes, such that higher status increases the likelihood of acquiring psychological and material resources (Ridgeway, 2014). In addition to interpersonal factors that define one's status, the status of the social group that one is a member of plays a significant role (Ridgeway, 2014). For instance, members of HSGs in the U.S.A. (e.g., White people; men) generally tend to have more desirable outcomes in terms of wealth, education, employment, and health compared to their lower-status counterparts, in large part due to the status of their ingroup (Coleman, 2016; Hess et al., 2015).

However, the value of high status, whether individual- or group-based, is not simply determined by mere possession, but also by the means of attainment. Indeed, the dual-strategies theory of status proposes that dominance-based status is attained through the oppression and coercion of others, while prestige-based status relies

on gaining freely earned respect from others (Cheng et al., 2010; Maner & Case, 2016). When applied to the intergroup context of the U.S.A., the status attained by White people and heteronormative, cisgender men are arguably dominance-based when considering the country's past and present history of intergroup oppression (e.g., sexism, racism).

Research has demonstrated support for the instability hypothesis of the dual-strategies theory of status. It suggests that individuals with dominance-based status become especially concerned with preserving their social rank over all else under conditions of hierarchy instability, while those with prestige-based status prioritize the outcomes of the group regardless of the security of their social rank (Case & Maner, 2014; Maner & Mead, 2010, 2012). Thus, as societal norms increasingly reflect egalitarian social values that challenge hierarchical group relations, the instability hypothesis suggests that members of dominance-based HSGs are likely to attempt to maintain the hierarchy and their position at all costs. Conversely, if a HSG's status was based on prestige, the group members are likely to promote the egalitarian social values that create a horizontal structure to benefit everyone and not solely their ingroup.

However, this raises the question of legitimacy: the perception of conditions as normative and fair (Jost & Major, 2001). Social Identity Theory (SIT; Tajfel & Turner, 1979) suggests that a group's position and status must be perceived as legitimate for maintaining both hierarchy stability and positive distinctiveness (i.e., positive self-concept based on intergroup perceptions). Importantly, positive distinctiveness is based on the external social perceptions of the ingroup, and research demonstrates that individuals are motivated to perceive their ingroups favorably by abiding by the values that determine these positive perceptions (van Leeuwen & Täuber, 2012). Therefore, when normative perceptions of legitimacy are based on egalitarian social values, HSGs' members' explicit actions to maintain dominance has the effect of reducing their positive distinctiveness. Ultimately, the desire to concurrently maintain both the ingroup's high status itself, and the perception of their status as legitimate, results in clashing motivations for members of dominance-based HSGs.

Needs-based Motivations

Researchers have identified maintenance motivation and innocence motivation as two influential factors that affect how HSGs' members react to threats against their ingroup's dominance, and threats to the legitimacy of the group, respectively (Phillips & Lowery, 2018). These motivations are rooted in the two fundamental social needs for agency/power and morality/acceptance (Abele & Wojciszke, 2013). The needs-based model of

reconciliation helps shed light on the reactive behaviors of HSGs' members facing hierarchy instability (Schnabel & Nadler, 2015).

According to the model, HSGs' members may experience themselves and their ingroup as victims, perpetrators, or both based on the social perceptions of the ingroup as oppressive (e.g., racist, sexist, etc.), and the interpretations that follow. In such cases, victims are motivated to restore their lost agency by seeking empowerment while perpetrators are motivated to gain a positive moral image due to the threat to their social acceptance (Nadler & Schnabel, 2008).

Research by SimanTov-Nachlieli and Schnabel (2014) adds that those who are both victim and perpetrator simultaneously show an increased desire to restore both needs, though it is important to note that the need for power was stronger than that of social acceptance. Consequently, greater need for social acceptance did not increase prosocial behavior, while greater need for power led to more anti-social behaviors against the outgroup. Thus, both innocence and maintenance motivations may simultaneously influence HSGs' members depending on the social needs that are most relevant to the individual and the social context.

In line with this view, research shows that the strength of a group's needs is dependent on perceptions of legitimacy. In two studies, Siem et al. (2013) found that members of HSGs were less motivated to fulfill their social acceptance needs when status inequality was perceived as legitimate, and more motivated to do so when it was not. Concurrently, members of lower-status groups were less motivated to fulfill their empowerment needs when status inequality was perceived as legitimate, and more motivated to do so when it was not. Thus, the more illegitimacy of status that is perceived, the more motivated individuals will be to secure their respective needs.

The results of these studies collectively show that individuals' behaviors depend on their specific social needs, which are influenced by contextual factors. These needs are determined by HSGs' members' subjective experiences of intergroup conflicts, as well as their perceptions of status relations as legitimate. As such, in a context of social progress towards more egalitarian intergroup relations, HSGs' members are likely to perceive and appraise circumstances in vastly different ways.

Considering this, it is likely that HSGs' members will primarily act according to their maintenance motivation if they perceive themselves as victims. Alternatively, if they identify as perpetrators, the innocence motivation may drive their actions. However, groups with dominance-based status are likely to be aware of their public reputations as oppressive (e.g., racist, sexist, etc.), thus experiencing dual-identification

when facing threats to their legitimacy. It is likely that both innocence and maintenance motivations simultaneously influence HSGs' members, depending on the social needs that are most relevant to the individual and the social context. Therefore, a motivation-based approach helps to better understand the ways that HSGs function in relation to hierarchy instability due to social progress towards more egalitarian intergroup relations.

Dominance Strategies

As discussed, HSGs' members' motivations drive individuals to meet their relevant needs. The strategies are defensive helping, willful ignorance, competitive victimhood, and blatant hostility.

Defensive Helping

When HSG members strategically aid low-status outgroups with the goal of legitimizing and preserving dominance by providing dependency-oriented help over autonomy-oriented help, defensive helping is likely to occur (Nadler et al., 2009). Through dependency-oriented help, HSG members use their power to provide immediate forms of aid to low-status groups, reinforcing dependence. Considering the needs-based model, this ultimately serves the HSGs' needs for agency/power and morality/acceptance by appearing prosocial towards low-status outgroups, and simultaneously preventing them from the autonomy to challenge status relations. Indeed, extensive research suggests that when hierarchical social relations are perceived as less stable, HSGs' members tend to offer more patronizing assistance and dependency-oriented help to the lower-status groups (Cunningham & Platow, 2007; Halabi et al., 2008; Jackson & Esses, 2000; Nadler et al., 2009). An example of this is demonstrated in research that shows a positive relationship between benevolent sexism (i.e., a chivalrous but disempowering approach to women) and men's preference for dependency-oriented helping (Shnabel et al., 2016).

Willful Ignorance

HSGs' members choose to be willfully ignorant when they deny the existence of oppression and status inequality, even despite exposure to disconfirming information (Bailey, 2007). In such cases, effort is made to interpret and act on information in a biased manner that ultimately functions to benefit the individual. Research demonstrates that HSGs' members seek legitimacy for their position by denying the existence of dominance-based status inequalities (Belmi et al., 2018; Knowles & Lowery, 2012; Phillips & Lowery, 2020). Thus, being willfully ignorant can be a process of motivated reasoning, such that HSGs' members can deliberately choose what to know, and how to act on their knowledge, based on their innocence and maintenance motivations.

A pertinent example of willful ignorance is the ideology of colorblindness, through which White Americans have been shown to deny or minimize status differences through motivated reasoning. A study conducted by Chow and Knowles (2016) found that when White Americans perceived threat to intergroup status relations, those who scored higher on a measure of passive opposition to equality increased their support for colorblind public policies. Additionally, this was found to occur especially in cases when the intergroup status relations were framed from an ingroup dominance perspective. Lastly, they became less inclined to include race-related topics for discussion in a hypothetical presidential debate. As evidenced in this research, the willful ignorance strategy is used to suggest that there is no need to question the legitimacy of status relations if status differences are attributable to personal merit, thereby securing both needs for agency/power and morality/acceptance for HSGs' members.

Competitive Victimhood

Groups can compete for victimhood status to claim a more favorable ingroup moral image relative to relevant outgroups. Although identifying as a victim may appear disempowering, the Intergroup Competitive Victimhood model shows that it serves the purpose of reducing the moral criticisms leveled against groups (Noor et al., 2008a; Noor et al., 2008b). Therefore, to address this threat to status and legitimacy, and the corresponding associated needs, ingroup members can fight against accusations that they are oppressive and insist that the lower-status outgroups are seeking to harm them instead.

Indeed, research supports the effectiveness of competitive victimhood as a dominance strategy. In a series of studies, Sullivan et al. (2012) found that when groups were accused of causing relevant outgroups harm, they were more likely to report experiencing greater discrimination than those groups. Importantly, stigma reversal, which is the stigmatization of individuals for belonging to a HSG based on the critical perceptions of their dominance-based status (Killian, 1985), mediated the relationship. Engaging in competitive victimhood was shown to effectively decrease collective guilt and stigma reversal. Thus, by accusing lower-status groups of attempting to upend the status quo egalitarian status relations, HSG members can claim comparatively greater unjust harm relative to the outgroups, and declare the present state of intergroup status relations as legitimate, as well as their own status within it.

Blatant Hostility

Through blatant hostility, individuals justify dominance and reject the normative egalitarian values that

define status legitimacy by overtly asserting superiority over relevant outgroups (Bruneau et al., 2020). By acting blatantly hostile, the belief that the dominance-based intergroup hierarchy is inherently legitimate is supported. This is based on the intrinsic view that relevant outgroups are comparatively lower in value and are thus deserving of lesser status and worse treatment relative to the high-status ingroup.

Blatantly hostile members of HSGs focus predominantly on the maintenance of dominance; thus, explicit support for dominance can predict support for blatant hostility in a broad way. The Social Dominance Orientation scale (SDO; Sidanius & Pratto, 1999) has been shown to predict prejudice against lower-status groups across many social dimensions, as well as support for hierarchy-enhancing policies and against hierarchy-attenuating policies (Ho et al., 2015). Additionally, research conducted on the dehumanization of outgroups has also shown that many blatantly hostile HSG members, who view certain outgroups as less than human, support active and aggressive discrimination, such as torture, housing discrimination, collective punishment, and segregation (Kteily et al., 2015, 2016). By legitimizing HSG members' dominance through blatant hostility, concerns about abiding by normative egalitarian social values are eliminated. By applying an alternative standard for determining a HSG's group image, blatant hostility fulfills the needs for agency/power and morality/acceptance.

Current Research

The primary goal of this research was to find support for a bifactorial design of innocence motivation and maintenance motivation, measured as independent continuous predictors (Figure 1). Therefore, I predicted White and cis-male Americans' support for defensive helping, willful ignorance, competitive victimhood, and blatant hostility would depend on the strengths of their innocence motivation, maintenance motivation, and their interactions. Based on this model, each strategy is predicted based on the interaction effect of the motivations, in addition to the independent main effects. Thus, it is predicted that the interaction of the motivations will increase support for each strategy over and above what each motivation predicts on its own. In this manner, the hypotheses are as follows:

Hypothesis 1

The innocence and maintenance motivations will independently predict defensive strategies such as defensive helping, willful ignorance, competitive victimhood, and blatant hostility.

Figure 1

Socially Motivated Dominance Strategies

		Socially Motivated Dominance Strategies	
		Lower Maintenance Motivation	Higher Maintenance Motivation
Innocence Motivation	Higher	<p>Willful Ignorance (High IM x Low MM)</p> <ul style="list-style-type: none"> • Examples: Colorblindness, Pay Gap Denial, White Fragility • Members of high-status groups protect their group image and status by avoiding awareness of group status differences and denying conflict. 	<p>Competitive Victimhood (High IM x High MM)</p> <ul style="list-style-type: none"> • Examples: #WhiteGenocide, Reverse racism, #HimToo • Members of high-status groups protect their group image and status by claiming to suffer greater harm relative to a threatening outgroup.
	Lower	<p>Defensive Helping (Low IM x Low MM)</p> <ul style="list-style-type: none"> • Examples: White savior complex, Voluntourism, Benevolent Sexism • Members of high-status groups protect their group image and status by offering dependency-oriented help to a threatening outgroup. 	<p>Blatant Hostility (Low IM x High MM)</p> <ul style="list-style-type: none"> • Examples: White Supremacy, Nazis/KKK, Red Pill/Black Pill • Members of high-status groups reject moral norms to avoid group image threat and protect their status by openly asserting superiority over a threatening outgroup.

Hypothesis 2a

Autonomy-oriented helping will depend on the relationship between innocence and maintenance motivations. Specifically, endorsement of the autonomy-oriented helping strategy will be likeliest when innocence motivation and maintenance motivation are simultaneously low.

Hypothesis 2b

Dependency-oriented helping and anti-helping will depend on the relationship between innocence and maintenance motivations, such that endorsement of the dependency-oriented helping strategy and anti-helping strategy will be likeliest when innocence and maintenance motivations are simultaneously high.

Hypothesis 3

Willful ignorance will depend on the relationship between innocence and maintenance motivations, such that endorsement of the willful ignorance strategy will be likeliest when innocence motivation is high and maintenance-motivation is low.

Hypothesis 4

Competitive victimhood will depend on the relationship between innocence and maintenance motivations, such that endorsement of a competitive victimhood strategy will be likeliest when innocence and maintenance motivations are both high simultaneously.

Hypothesis 5

Blatant hostility will depend on the relationship between innocence and maintenance motivations, such that endorsement of the blatant hostility strategy will

be likeliest when innocence motivation is low and maintenance motivation is high.

Method

Participants

In total, 480 participants were recruited through Amazon's Mechanical Turk (Mturk); however, 139 participants were excluded based on failed attention check questions or incompleteness of the survey. Data of excluded participants were removed without replacement due to a lack of time available to complete the study by the deadline required, and attention check questions and incomplete surveys were used to screen for attentiveness (Paolacci et al., 2010). A missing data analysis was not conducted. The final sample included 343 participants. Participants were residents within the United States who were 18 years of age or older. The mean age of participants was 36.62 years ($SD = 10.52$), ranging from 19 to 67 years of age. The participants were 216 males and 123 females, while 4 participants indicated "other/prefer not to say". Of all the participants, 287 identified as White and 56 as non-White. All participants were paid \$2.00 USD for taking the survey, which took about 10 minutes to complete.

Procedure

Approval was granted by University of Oslo's Institutional Review Board. Recruited participants responded to the questionnaire on Qualtrics. At the start of the survey, participants were asked to provide informed consent regarding potential risks, their right to withdraw, and their right to anonymity before proceeding. Participants who did not meet the minimum age of 18 and geographic requirement of living within the United States were dismissed. Then, participants were grouped into the two social group conditions: Race ($N = 210$) and Gender ($N = 133$). Thus, participants were categorized as males (of all races) reporting on their relation to females in the gender condition, and White people (both male and female) reporting on their relation to People of Color in the Race condition. Participants identifying as non-White female or non-White other-gender did not fall into either high-status social group condition of being White or male; therefore, they were dismissed from the study.

In the next section, participants were randomly assigned into threat conditions that piqued awareness of the context of social progress towards more egalitarian intergroup relations. To account for both natural and activated motivations, participants either a) viewed a video clip of an outgroup member critiquing the HSG's dominance; b) viewed a video clip of an advertisement designed as a social intervention against the HSG's

dominance; or c) did not view anything, before taking the survey. The video clips were all of equal length (2 minutes) and corresponded specifically to the participants' social group (i.e., race or gender). The threat conditions were not considered as predictor variables in the model; rather, they were utilized to increase the contextual awareness of participants' dominance-based status to further the variability of motivations.

Next, participants proceeded to the main survey that corresponded with their social group condition (i.e., White people of all genders proceeded to the race-based survey while males identifying with any race proceeded to the gender-based survey). Both race-based and gender-based surveys were identical, except that each measure reflected appropriate group context. Participants were presented with the group-adapted Innocence Motivation and Maintenance Motivation scales before proceeding to the outcome variable scales measuring defensive helping, willful ignorance, competitive victimhood, and blatant hostility. Items were randomly presented for all scales. Dependent variable scales were also presented in random order. Throughout the survey, attention checks in which participants were asked to select a specific answer choice (e.g., "Strongly Disagree") were used to filter out data from potentially disengaged participants.

In the final section, participants were asked to report whether they had participated in the study seriously or not before being provided with an option to comment on the study and continuing to the debriefing form. In the debriefing form, participants were notified regarding the aim of the study and assured that all data would be kept secure.

Measures

Maintenance and Innocence Motivations

Scales were developed to measure participants' Maintenance Motivation and Innocence Motivation due to a lack of appropriate measures available to measure the variables. Items were modeled after those found in Shnabel and Nadler's (2008) Power and Social Acceptance Needs scale.

Maintenance Motivation. Across six 7-point Likert-type scale items, participants were asked how strongly they agreed or disagreed with statements reflecting desires for their particular ingroup to maintain a high-status position in society. For example, "It is important that (ingroup members) have considerable influence in society", and, "(ingroup members) should give up some power for (outgroup members)" (reverse scored). The reliability of the scale was $\alpha = .81$. Items were highly correlated and exploratory factor analysis reflected scale unidimensionality.

Innocence Motivation. Across six 7-point Likert-type scale items, participants were asked how strongly they agreed or disagreed with statements reflecting desires for their ingroup to be perceived as innocent of dominance-based status. Examples of the items are: “It is important to me that (ingroup members) are perceived as morally innocent by society”, and, “People ought to recognize that many (ingroup members) feel superior to (outgroup members)” (reverse scored). The reliability of the scale was $\alpha = .75$. Items were highly correlated and exploratory factor analysis reflected scale unidimensionality.

Face validity of both scales was assumed based on the theoretical robustness of the “Big Two” needs-based model. The two scales were significantly correlated, $r = .67$, $p < .001$, $n = 343$; however, multicollinearity was not an issue. An initial regression analysis with the z-standardized innocence and maintenance scores, as well as their interaction, showed tolerable multicollinearity indices.

Defensive Helping

A four-item forced-choice scale was created to measure participants’ support for dependency-oriented helping relative to autonomy-oriented helping and anti-helping. Items were modeled after the Helping Orientations Inventory scales (Maki et al., 2017). Participants were asked to select one statement for each item that reflected support for 1) dependency-oriented helping 2) autonomy-oriented helping, or, 3) anti-helping to relevant outgroups. For example, 1) dependency-oriented help: “(Ingroup members) should help guide and assist (outgroup members) in society so that they can sufficiently succeed”; 2) autonomy-oriented help: “(ingroup members) should give up a greater share of power to (outgroup members) so that they can freely succeed”; or 3) anti-help: “(Outgroup members) do not need or deserve more than what they already have.”

Each item choice contributed to a composite score for each helping type ranging from 0 to 4. Since participants chose one of the three options for each item, the defensive helping measure is such that scores are not independent from each other.

Willful Ignorance

A five-item 7-point Likert scale was created to measure participants’ support for willful ignorance ($\alpha = .88$). Items were adapted from the Privilege subscale of the Colorblind Racial Attitudes Scale (Neville et al., 2000). Participants were asked how strongly they agreed or disagreed with statements that reflected the belief that differences in group status did not exist or were not influential in determining individuals’ outcomes. For example, “No one has any advantages in society

because of their race (or gender)”, and, “A person’s race (or gender) is important in determining their outcomes in life” (reverse scored).

Competitive Victimhood

A five-item 7-point Likert scale was created to measure participants’ support for Competitive Victimhood (Noor et al., 2008). Items were modeled after the Competition Over Victimhood scale (De Guissmé & Licata, 2017). Participants were asked how strongly they agreed or disagreed with statements that reflected the belief that their ingroup (i.e., HSG) experienced more collective victimization compared to relevant outgroups. For example, “In recent times, White people have suffered more than People of Color”, and, “White people have become victims of injustice in society”. The reliability of the scale was $\alpha = .9$. Items were highly correlated and exploratory factor analysis reflected scale unidimensionality.

Blatant Hostility

Three scales were used to measure blatant hostility. The first scale was composed of three 7-point Likert scale items from the Intrinsic Motivation to Express Prejudice subscale (Forscher et al., 2015). Participants were asked how strongly they agreed or disagreed with statements measuring how intrinsically motivated they were to express prejudice against relevant outgroups. For example, “My beliefs motivate me to express negative views about women.” The reliability of the scale was $\alpha = .87$.

The second scale measured explicit support for ingroup dominance. Four 7-point Likert scale items were taken from the Social Dominance Orientation: Pro-dominance subscale (Ho et al., 2015) and adapted to the specific intergroup relations of interest. Participants were asked how strongly they agreed or disagreed with statements reflecting their support for explicit dominance of their ingroup over relevant outgroups. For example, “Women are simply inferior to men.” The reliability of the scale was $\alpha = .94$. Items were highly correlated and exploratory factor analysis reflected scale unidimensionality. Face validity was assumed based on the robustness of the Social Dominance Theory and SDO scale (Sidanius & Pratto, 1999).

Additionally, Kteily et al.’s (2015) Blatant Dehumanization slider scale was used. Participants were asked to rank their ingroup and the relevant outgroup as more or less evolved on a scale from 0 to 100 which corresponded with images reflecting the “Ascent of Man”. Zero corresponded to the left side of the image (i.e., quadrupedal human ancestor) and 100 corresponded to the right side of the image (i.e., ‘full’ modern-day human). The scale has strong external validity (Kteily et al., 2015).

Results

The Impact of Social Group Status and Threat Condition on Dominance Strategies

Initial analyses of variance (ANOVAs) were conducted to determine if there were any differences in outcomes based on participants' threat condition and group condition. Importantly, the threat condition was not considered as a predictor variable in the model; rather, this was utilized to increase contextual awareness of hierarchy instability due to social progress towards more egalitarian intergroup relations. Nothing of major consequence to the goals of the study were found, and the results of this analysis were not a primary focus of the study; therefore, they will not be discussed. If interested, please contact the author to inquire about these results instead.

The Relationships between Maintenance Motivation, Innocence Motivation, and Dominance Strategies

To determine if Maintenance Motivation and Innocence Motivation predicted the outcome variables, multiple regression analyses were performed using the PROCESS macro in SPSS (Hayes, 2017). Prior to analysis, Maintenance Motivation and Innocence Motivation were z-standardized to establish means of 0 and standard deviations of 1.

To determine higher-order interaction effects of Social Group and Maintenance Motivation and Innocence Motivation, the Social Group factor was re-coded such that Gender and Race were contrast coded at -0.5 and 0.5, respectively. The PROCESS macro calculated the interaction variables of Social Group x Maintenance, Social Group x Innocence, and the three-way interaction of Social Group x Maintenance x Innocence. Significant effects are reported in the following section.

Defensive Helping: Anti-helping

The model explained 41% of the variance in Anti-helping: $R^2 = 0.41$, $F(7, 335) = 33.54$, $p < .001$. Maintenance Motivation significantly increased Anti-helping, $b = 0.48$, $t = 6.16$, $p < .001$. Innocence Motivation also significantly increased Anti-helping, $b = 0.31$, $t = 3.71$, $p < .001$. Additionally, the interaction of Maintenance x Innocence had a significant and positive effect on Anti-helping, $b = 0.30$, $t = 5.33$, $p < .001$ (Table 1).

Defensive Helping: Dependency-oriented Helping

The model explained 18% of the variance in Dependency-oriented Helping, $R^2 = 0.18$, $F(7, 335) = 10.37$, $p < .001$. Maintenance Motivation significantly increased Dependency-oriented Helping, $b = 0.29$, $t = 2.98$, $p = .003$. Innocence Motivation did not have a significant effect on Dependency-oriented Helping. However, the interaction of Maintenance x Innocence had a significant and negative effect on Dependency-oriented Helping, $b = -0.47$, $t = -6.83$, $p < .001$ (Table 2).

Defensive Helping: Autonomy-oriented Helping

The model explained 46% of the variance in Autonomy-oriented Helping and is significant, $R^2 = 0.46$, $F(7, 335) = 41.07$, $p < .001$. Both Maintenance Motivation and Innocence Motivation significantly decreased Autonomy-oriented Helping, $b = -0.77$, $t = -9.05$, $p < .001$ and $b = -0.28$, $t = -3.02$, $p = .003$ respectively. Additionally, the interaction effect of maintenance x innocence had a significant and positive effect on Autonomy-oriented Helping, $b = 0.18$, $t = 2.89$, $p = .004$ (Table 3).

Willful Ignorance

The model explained 52% of the variance in Willful Ignorance, $R^2 = 0.52$, $F(7, 335) = 50.82$, $p < .001$.

Table 1

Regression Coefficients Predicting Anti-helping

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	95.0% Confidence Interval for B	
	<i>B</i>	Std. Error	<i>Beta</i>			Lower Bound	Upper Bound
(Constant)	.520	.067		7.797	<.001	.389	.652
Innocence (I)	.313	.084	.238	3.711	<.001	.147	.479
Maintenance (M)	.479	.078	.364	6.164	<.001	.326	.632
Group (G)	.164	.133	.061	1.227	.221	-.099	.426
IxM	.298	.056	.243	5.329	<.001	.188	.408
IxG	.098	.169	.037	.581	.562	-.234	.430
MxG	.087	.155	.033	.561	.575	-.219	.393
MxIxG	.067	.112	.032	.598	.550	-.153	.287

Notes: R Square = .41 ($p < .001$)

Table 2

Regression Coefficients Predicting Dependency-oriented Helping

	Unstandardized	Coefficients	Standardized	<i>t</i>	Sig.	95.0% Confidence	
	<i>B</i>		Coefficients			<i>Beta</i>	Lower Bound
(Constant)	1.915	.083		23.120	<.001	1.752	2.078
Innocence (I)	-.036	.105	-.026	-.340	.734	-.241	.170
Maintenance (M)	.288	.096	.208	2.981	.003	.098	.477
Group (G)	.121	.166	.043	.733	.464	-.204	.447
IxM	-.474	.069	-.369	-6.830	<.001	-.610	-.337
IxG	.204	.209	.074	.973	.331	-.208	.615
MxG	-.253	.193	-.091	-1.311	.191	-.632	.127
MxIxG	-.156	.139	-.070	-1.123	.262	-.429	.117

Notes: R Square = .18 ($p < .001$)

Table 3

Regression Coefficients Predicting Autonomy-oriented Helping

	Unstandardized	Coefficients	Standardized	<i>t</i>	Sig.	95.0% Confidence	
	<i>B</i>		Coefficients			<i>Beta</i>	Lower Bound
(Constant)	1.915	.083		23.120	<.001	1.752	2.078
Innocence (I)	-.036	.105	-.026	-.340	.734	-.241	.170
Maintenance (M)	.288	.096	.208	2.981	.003	.098	.477
Group (G)	.121	.166	.043	.733	.464	-.204	.447
IxM	-.474	.069	-.369	-6.830	<.001	-.610	-.337
IxG	.204	.209	.074	.973	.331	-.208	.615
MxG	-.253	.193	-.091	-1.311	.191	-.632	.127
MxIxG	-.156	.139	-.070	-1.123	.262	-.429	.117

Notes: R Square = .46 ($p < .001$)

Both Maintenance Motivation and Innocence Motivation significantly increased Willful Ignorance, $b = 0.37$, $t = 4.73$, $p < .001$ and $b = 0.71$, $t = 8.33$, $p < .001$, respectively. The interaction of social group x maintenance had a significant negative effect, $b = -0.36$, $t = -2.31$, $p = .02$. Additionally, the interaction of social group x innocence was significant and positive, $b = 0.45$, $t = 2.65$, $p = .008$ (Table 4).

The three-way interaction effect of social group, maintenance, and innocence was also found to be significant and positive, $b = 0.31$, $t = 2.76$, $p = .006$. Further analysis showed that the two-way interaction of maintenance x innocence was significant and negative in the male subsample, $b = -0.18$, $t = -2.22$, $p = .03$, but not for the White people subsample, $b = -0.12$, $t = 1.63$, $p = .10$.

Competitive Victimhood

The model explained 66% of the variance in Competitive Victimhood and is significant, $R^2 = 0.66$,

$F(7,335) = 94.00$, $p < .001$. Both Maintenance Motivation and Innocence Motivation significantly increased Competitive Victimhood, $b = 0.95$, $t = 13.00$, $p < .001$ and $b = 0.44$, $t = 5.62$, $p < .001$ respectively. The interaction effect of Maintenance Motivation and Innocence Motivation was also significant and positive, $b = 0.14$, $t = 2.64$, $p = .009$ (Table 5).

The main effect of Social Group was significant and negative, $b = -0.34$, $t = -2.71$, $p = .007$. There were no other significant main or interaction effects.

Blatant Hostility: Motivation to Express Prejudice

The model explained 21% of the variance in Blatant Hostility: Motivation to Express Prejudice and is significant, $R^2 = 0.21$, $F(7,335) = 13.01$, $p < .001$. Maintenance Motivation significantly increased the Motivation to Express Prejudice, $b = 0.49$, $t = 6.18$, $p < .001$. However, there were no other significant main or interaction effects (Table 6).

Table 4*Regression Coefficients Predicting Willful Ignorance*

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	95.0% Confidence Interval for B	
	<i>B</i>	Std. Error	<i>Beta</i>			Lower Bound	Upper Bound
(Constant)	3.215	.067		48.040	<.001	3.084	3.347
Innocence (I)	.705	.085	.484	8.331	<.001	.538	.871
Maintenance (M)	.369	.078	.253	4.727	<.001	.215	.522
Group (G)	-.169	.134	-.057	-1.260	.209	-.432	.095
IxM	-.044	.056	-.032	-.777	.438	-.154	.067
IxG	.449	.169	.154	2.653	.008	.116	.782
MxG	-.359	.156	-.123	-2.306	.022	-.666	-.053
MxIxG	.309	.112	.132	2.758	.006	.089	.530

Notes: R Square = .52 ($p < .001$)**Table 5***Regression Coefficients Predicting Competitive Victimhood*

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	95.0% Confidence Interval for B	
	<i>B</i>	Std. Error	<i>Beta</i>			Lower Bound	Upper Bound
(Constant)	2.753	.063		44.020	<.001	2.630	2.876
Innocence (I)	.444	.079	.273	5.623	<.001	.289	.600
Maintenance (M)	.946	.073	.581	12.993	<.001	.803	1.090
Group (G)	-.338	.125	-.101	-2.705	.007	-.584	-.092
IxM	.138	.052	.091	2.637	.009	.035	.241
IxG	.160	.158	.049	1.012	.312	-.151	.471
MxG	-.206	.146	-.063	-1.417	.157	-.493	.080
MxIxG	.189	.105	.072	1.803	.072	-.017	.395

Notes: R Square = .66 ($p < .001$)**Table 6***Regression Coefficients Predicting Blatant Hostility: Motivation to Express Prejudice*

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	95.0% Confidence Interval for B	
	<i>B</i>	Std. Error	<i>Beta</i>			Lower Bound	Upper Bound
(Constant)	1.723	.068		25.281	.000	1.589	1.857
Innocence (I)	.058	.086	.050	.670	.503	-.112	.227
Maintenance (M)	.491	.079	.421	6.179	.000	.334	.647
Group (G)	-.128	.136	-.054	-.938	.349	-.396	.140
IxM	.056	.057	.052	.982	.327	-.056	.168
IxG	-.258	.172	-.111	-1.496	.136	-.597	.081
MxG	.170	.159	.073	1.071	.285	-.142	.482
MxIxG	.039	.114	.021	.345	.730	-.185	.264

Notes: R Square = .21 ($p < .001$)

Blatant Hostility: Ingroup Dominance

The model explained 40% of the variance in Blatant Hostility: Ingroup Dominance and is significant, $R^2 = 0.40$, $F(7, 335) = 32.18$, $p < .001$. Maintenance Motivation significantly increased support for Ingroup Dominance, $b = 0.80$, $t = 11.01$, $p < .001$. The main effect of Social Group was also significant and negative, $b = -0.37$, $t = -2.94$, $p = .004$. There were no other significant main or interaction effects (Table 7).

Blatant Hostility: Outgroup Dehumanization

The results indicated that the model explained 22% of the variance in Blatant Hostility: Outgroup Dehumanization scores and is significant, $R^2 = 0.22$, $F(7, 335) = 13.57$, $p < .001$. Maintenance Motivation significantly increased Outgroup Dehumanization, $b = 5.63$, $t = 6.03$, $p < .001$. Additionally, the interaction effect of Maintenance Motivation and Innocence

Motivation was significant and positive, $b = 2.26$, $t = 3.36$, $p = .001$ (Table 8).

Discussion

Main Effects: Innocence and Maintenance Motivations on Dominance Strategies

The results supported the predictions regarding the effect of maintenance motivation on the dominance strategies. Maintenance motivation significantly predicted the strength and direction of all seven outcome measures. Specifically, the maintenance motivation had a negative effect on autonomy-oriented helping, and a positive effect on anti-helping, dependency-oriented helping, willful ignorance, competitive victimhood, and the three forms of blatant hostility.

Second, innocence motivation did have a nega-

Table 7

Regression Coefficients Predicting Ingroup Dominance

	Unstandardized	Coefficients	Standardized	<i>t</i>	Sig.	95.0% Confidence	
	<i>B</i>		Coefficients			<i>Beta</i>	Lower Bound
(Constant)	1.809	.063		28.849	<.001	1.686	1.933
Innocence (I)	-.103	.079	-.084	-1.302	.194	-.259	.053
Maintenance (M)	.804	.073	.655	11.008	<.001	.660	.948
Group (G)	-.368	.125	-.146	-2.936	.004	-.615	-.121
IxM	.062	.053	.055	1.188	.236	-.041	.166
IxG	.025	.159	.010	.155	.877	-.287	.337
MxG	-.203	.146	-.082	-1.390	.165	-.490	.084
MxIxG	.076	.105	.039	.723	.470	-.131	.283

Notes: R Square = .04 ($p < .001$)

Table 8

Regression Coefficients Predicting Blatant Hostility: Outgroup Dehumanization

	Unstandardized	Coefficients	Standardized	<i>t</i>	Sig.	95.0% Confidence	
	<i>B</i>		Coefficients			<i>Beta</i>	Lower Bound
(Constant)	1.809	.063		28.849	<.001	1.686	1.933
Innocence (I)	-.103	.079	-.084	-1.302	.194	-.259	.053
Maintenance (M)	.804	.073	.655	11.008	<.001	.660	.948
Group (G)	-.368	.125	-.146	-2.936	.004	-.615	-.121
IxM	.062	.053	.055	1.188	.236	-.041	.166
IxG	.025	.159	.010	.155	.877	-.287	.337
MxG	-.203	.146	-.082	-1.390	.165	-.490	.084
MxIxG	.076	.105	.039	.723	.470	-.131	.283

Notes: R Square = .22 ($p < .001$)

tive effect on autonomy-oriented helping, and a positive effect on anti-helping, willful ignorance, and competitive victimhood, as predicted. However, it did not significantly predict support for dependency-oriented helping or any form of blatant hostility. Despite non-significance, the slopes for ingroup dominance and dehumanization were directionally correct, and those for motivation to express prejudice and dependency-oriented helping were relatively small.

Dominance Strategies Depend on the Relationship Between Innocence and Maintenance Motivations

Several interaction effects were found to be significant, some of which occurred as predicted while others did not. For anti-helping, the interaction was such that the maintenance motivation had a stronger positive effect at high levels of innocence motivation. Thus, endorsement of anti-helping is most likely to occur when both motivations are simultaneously high, which supports the prediction (Figure 2).

For dependency-oriented helping, the interaction was such that the maintenance motivation had a positive effect at low levels of innocence, and a negative effect at higher levels of innocence. Thus, endorsement of dependency-oriented helping is most likely to occur when innocence is low and maintenance is high simultaneously, but also likely when innocence is high and maintenance

is low simultaneously. Therefore, the prediction was partially supported (Figure 3).

For autonomy-oriented helping, the interaction was such that the maintenance motivation had a stronger negative effect at low levels of innocence motivation. Thus, endorsement of autonomy-oriented helping is more likely to occur when both motivations are simultaneously low, which supports the prediction (Figure 4).

There was no interaction effect for willful ignorance. However, the method factor of the social group resulted in a three-way interaction, and the male and White people subsamples were analyzed separately. This showed a significant interaction of the motivations in the male subsample but went against the prediction. Maintenance had a stronger positive effect at low levels of innocence motivation, such that men were willfully ignorant when their maintenance motivation is high and innocence motivation is low. Therefore, the prediction was not supported (Figure 5).

For competitive victimhood, the interaction was such that the maintenance motivation had a stronger positive effect at high levels of innocence motivation. Thus, endorsement of competitive victimhood is most likely to occur when both motivations are simultaneously high. Therefore, the prediction was supported (Figure 6).

Finally, one interaction effect was found to be significant among the three measures of blatant hostility.

Figure 2

Interaction of Maintenance and Innocence Motivations on Anti-helping

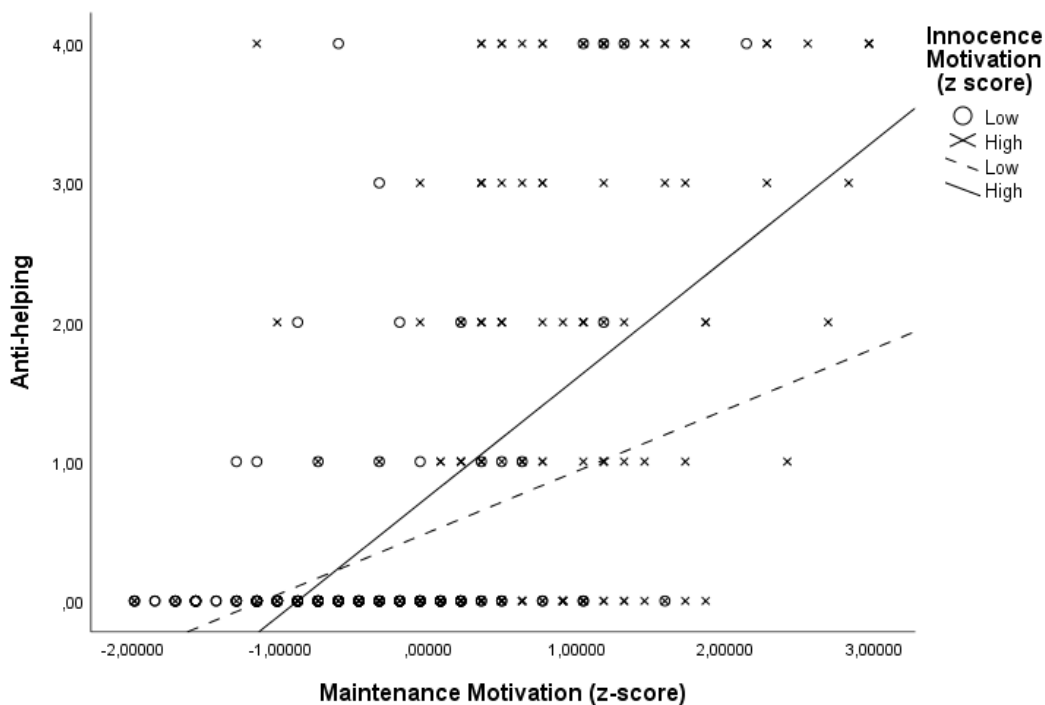


Figure 3

Interaction of Maintenance and Innocence Motivations on Dependency-oriented Helping

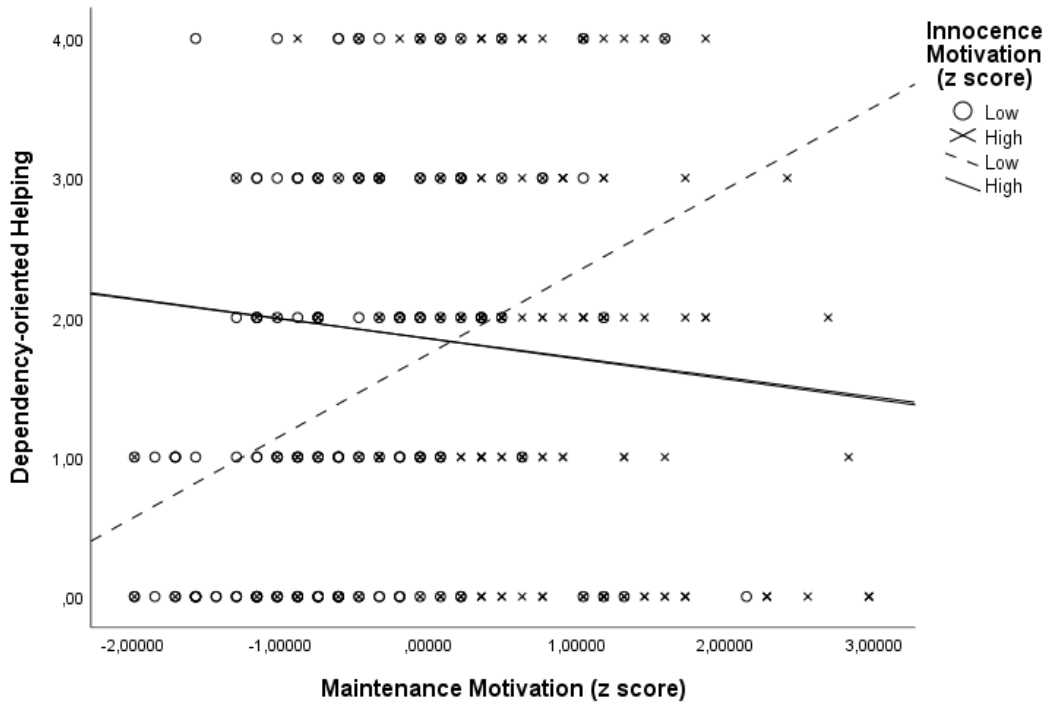


Figure 4

Interaction of Maintenance and Innocence Motivations on Autonomy-oriented Helping

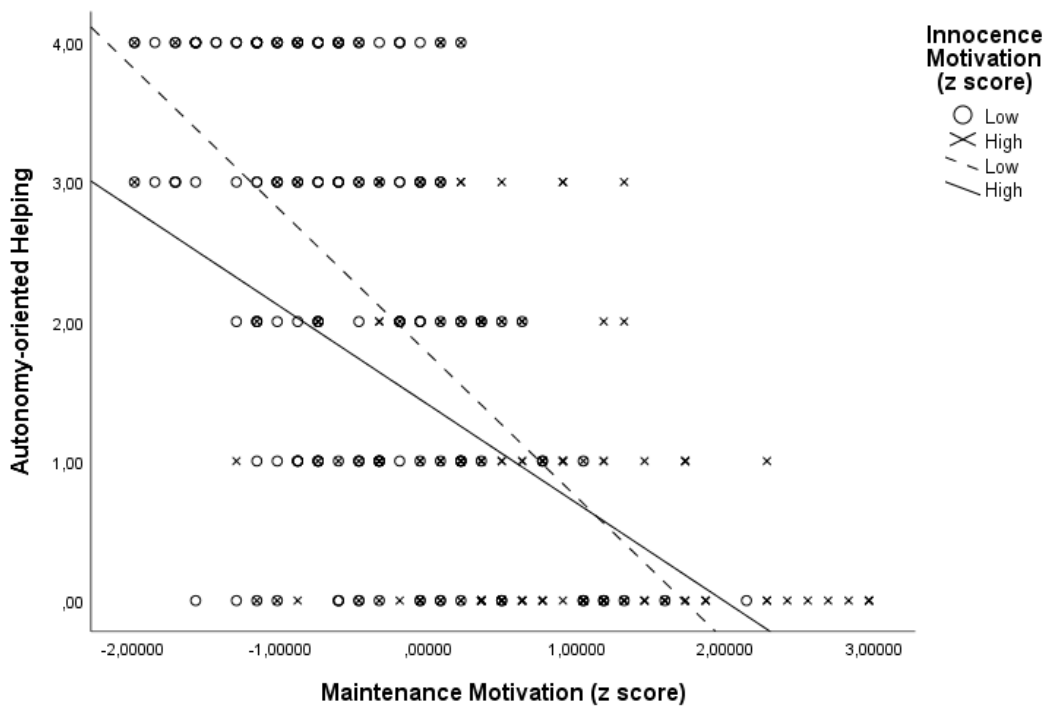


Figure 5

Interaction of Maintenance and Innocence Motivations on Willful Ignorance

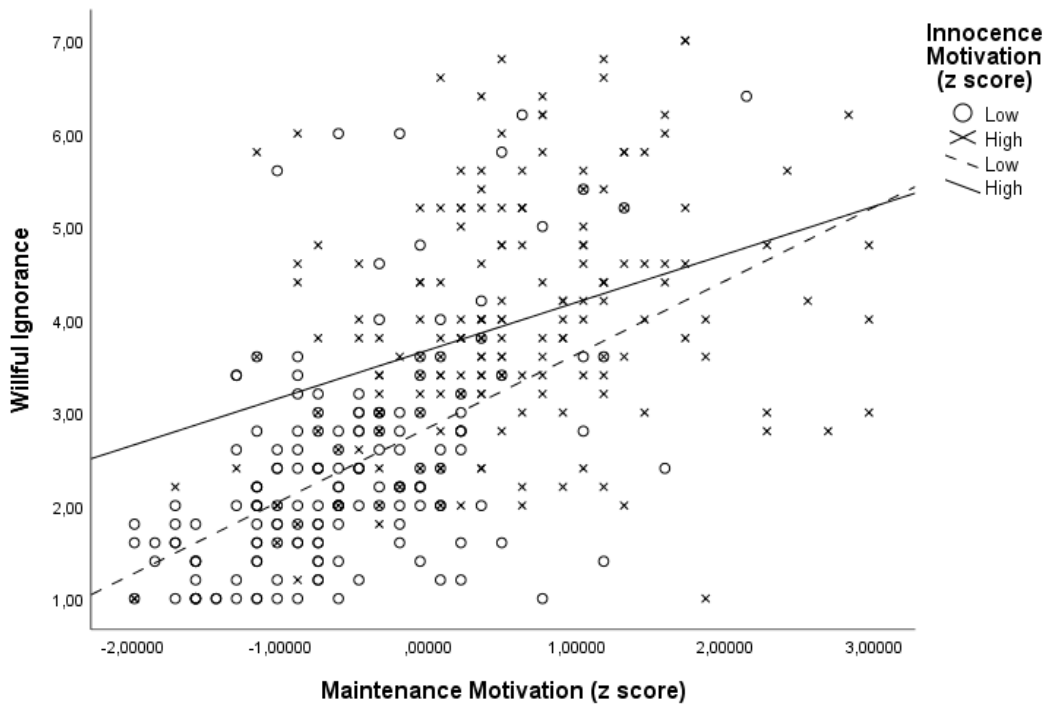
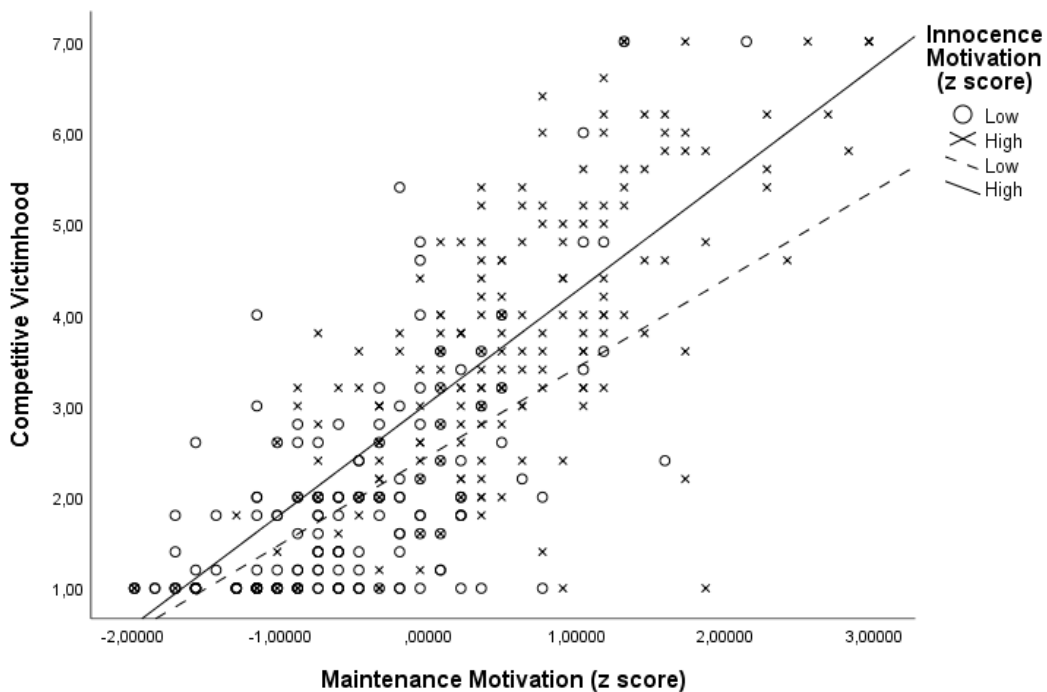


Figure 6

Interaction of Maintenance and Innocence Motivations on Competitive Victimhood



However, regardless of the significance, they all reflected the same pattern. The motivations interacted to increase outgroup dehumanization, such that maintenance had a stronger positive effect at high levels of innocence. Thus, participants are more likely to endorse blatant hostility when they have higher maintenance and higher innocence motivations. Therefore, the prediction was not supported (Figures 7-9).

Roughly half of the outcomes occurred as predicted; therefore, the results of this study partially supported the hypothesized model.

Current High Status Group Strategies

These findings generally align with the current literature, which claims that HSG members are motivated to address threats to their dominant status and group image (Phillips & Lowery, 2018). The significant main effects of the maintenance motivation reflect support for the theoretical reasoning that an increase in threat leads to more support for dominance strategies. Additionally, the significant main effects of the innocence motivation show that it can also predict those strategies in which it is necessarily an influence, such as willful ignorance and competitive victimhood. These strategies can be predicted by the innocence motivation specifically because they function primarily to re-legitimize the group’s moral image.

The significant interactions found for defensive helping and competitive victimhood were also consistent with the current literature. Specifically, the research suggests that HSGs’ members are more likely to provide dependency-oriented helping over autonomy-oriented helping when the ingroup’s social rank is at risk (Nadler et al, 2009; van Leeuwen & Täuber, 2011). Consequently, the results based on the three measures of defensive helping (i.e., anti-helping, dependency-oriented helping, and autonomy-oriented helping) showed this effect. This clearly demonstrates that an individual’s helping behaviors depend on their concurrent maintenance and innocence motivations.

For competitive victimhood, the research suggests that HSGs’ members seek a victim identity to disidentify with accusations of the ingroup as more powerful and perpetrating injustice (Noor et al., 2008). In line with this view, the results demonstrate that an individual’s sense of competitive victimhood is related to their motivated concerns for both maintenance and innocence, particularly in tandem as opposed to merely one or the other independently.

The results that did not confirm the predictions are challenging to interpret. For instance, with regard to willful ignorance, it is argued that HSGs’ members’ desire to avoid culpability for benefiting from dominance can lead them to deny the existence of inequality or distance

Figure 7

Interaction of Maintenance and Innocence Motivations on Motivation to Express Prejudice

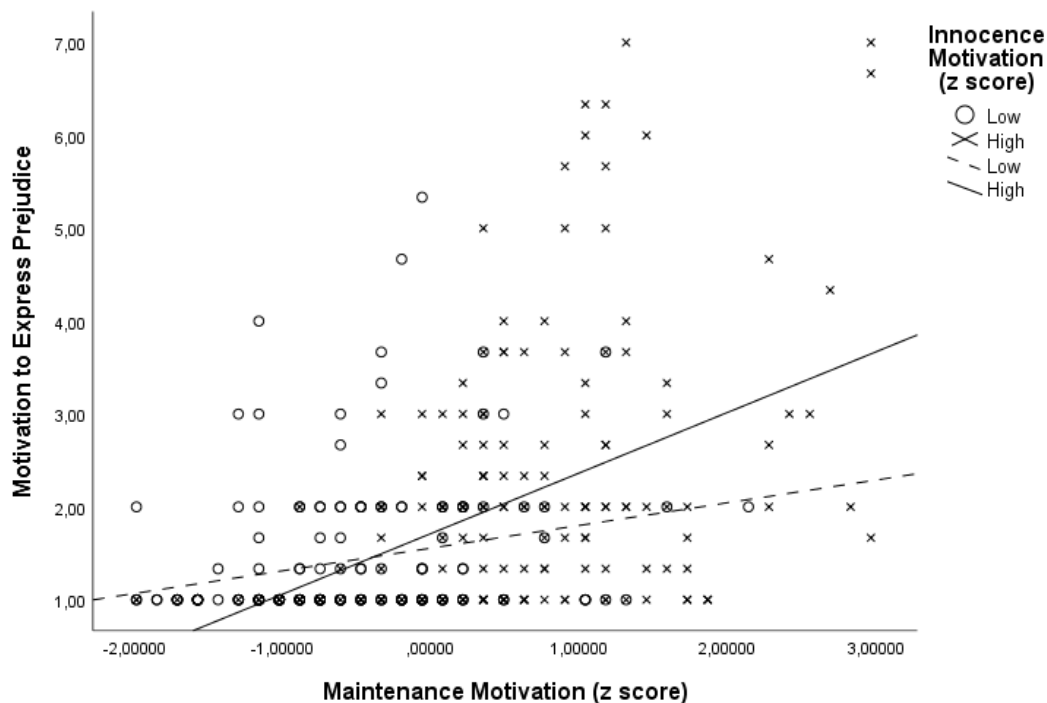


Figure 8

Interaction of Maintenance and Innocence Motivations on Ingroup Dominance

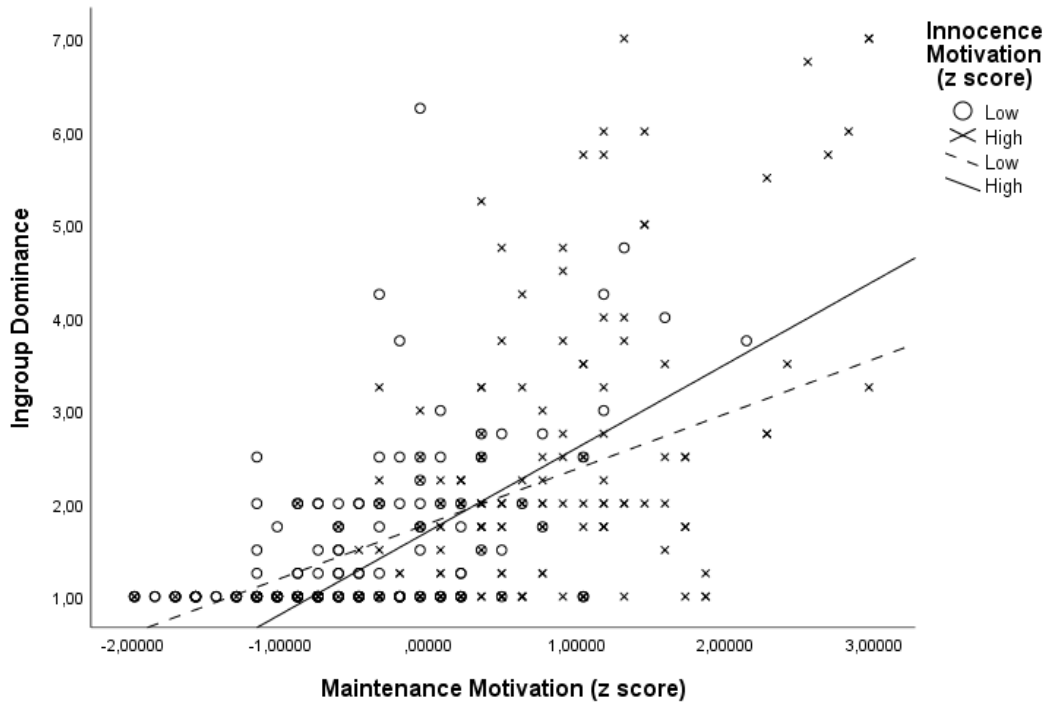
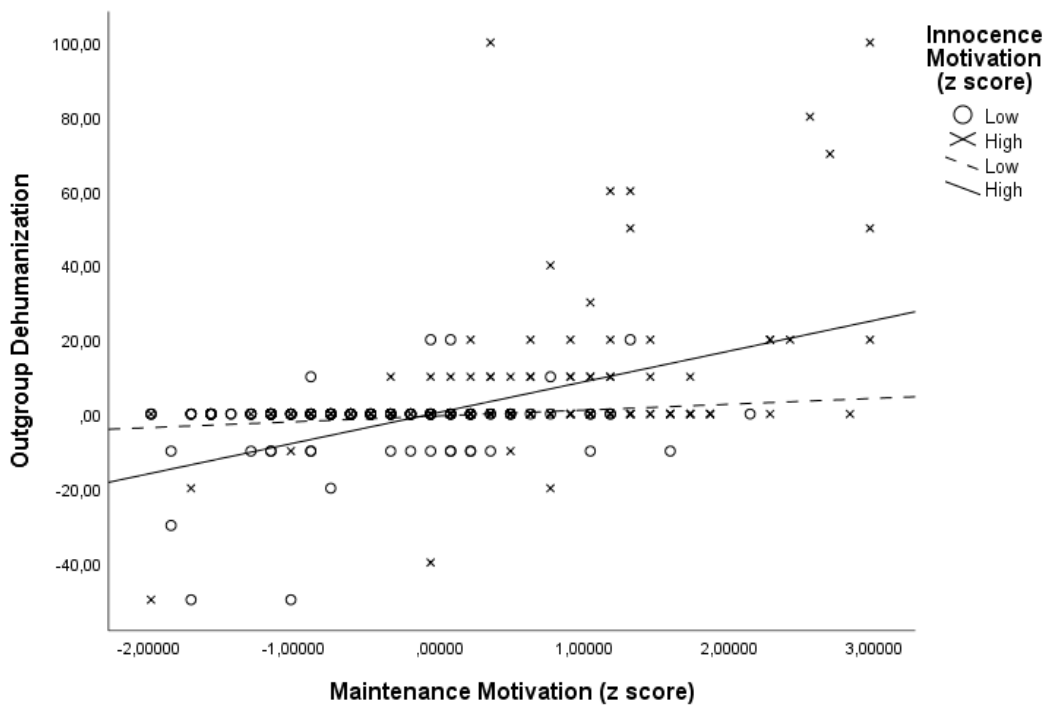


Figure 9

Interaction of Maintenance and Innocence on Outgroup Dehumanization



themselves from the ingroup (Knowles et al., 2014). This investment in the rejection of dominance is motivated by individuals' interest in retaining legitimacy, which is largely dependent on moral image. This was measured as a desire for the ingroup to be viewed positively. Thus, it is surprising that the results stand in opposition to this view, and it is unclear how to interpret this finding.

The interaction effect that predicted blatant hostility also occurred in a way that deviated from the literature. Though blatant hostility is arguably a rejection of normative standards that redefines the morality of dominance, the results showed that those who were more blatantly hostile were indeed simultaneously higher in both maintenance and innocence motivations. This could be a reflection of the fact that dissonance-reducing efforts can reinforce commitment to behavior. Indeed, people have been shown to double down on their decisions once they have taken a significant step towards an outcome that they may not have initially endorsed (Harmon-Jones & Harmon-Jones, 2002). Potentially, individuals high in both motivations could adopt a competitive victim identity that justifies retaliatory behaviors.

Research does, in fact, support the pattern that competitive victimhood strategy justifies retaliatory actions against perceived wrongdoing (Sullivan et al., 2012). Retaliating with the intent to balance the inequality that is perceived to exist against them may conflict with their innocence motivation. By trying to reduce dissonance, it could be that blatant hostility is reinforced. However, it is surprising that participants in this study endorsed blatant hostility given that the effort required to self-report was low, and innocence motivation was operationalized in such a way that portrays the HSG members as well-intentioned, while blatant hostility is explicitly malicious.

Implications

These results potentially reflect the mutual compatibility of certain strategies. For example, since innocence and maintenance motivations can only independently predict willful ignorance, rather than a concurrent pairing of the two, it may be that any other strategies could mutually occur with willful ignorance. One speculation for this is that willful ignorance can be used to legitimize group image to justify the other strategies. Participants' honest but potentially anti-social or non-normative views, may have been considered viable based on the legitimizing belief that status differences do not exist. Thus, by self-reporting as willfully ignorant of status differences, it may have been easier for participants to legitimize their decision to support competitive victimhood, blatant hostility, or dependency-oriented helping.

With further research, the implications for devel-

oping interventions may be widespread. Understanding the specific motivations driving behaviors and attitudes, and how they interact, may be informative for interventions that take a needs-based approach. When considering the dual-strategies theory of status, along with the promising outcome for autonomy-oriented helping, it seems possible to find more effective ways of securing individuals' needs for social acceptance and power through a prestige-based approach. Alternatively, working to distance a group's moral image from the personal identity of those using a competitive victimhood or blatant hostility strategy could effectively reduce the innocence motivation that interacts with the maintenance motivation to decrease their support.

Limitations and Future Directions

Several limitations can be noted regarding the current study. First, the maintenance and innocence motivations were measured using newly developed items. The scales had good factor structure, good internal consistency, and good face validity; however, external validity needs to be tested for further validation of the scales. Additionally, the outcome measures were also developed based on existing scales which were adapted to the relevant social context. Analysis showed strong internal consistency and unidimensionality, but these scales were also dependent on face validity. Therefore, the developed scales were appropriate for this exploratory study but further research should be conducted to establish stronger validity of the measures for all variables.

The use of explicit self-report measures may not have been able to account for participants' self-enhancement and social desirability biases. Because of the non-normative views represented by the scale items measuring the maintenance and innocence motivations, as well as those of the dominance strategies, it may be that the participants' ideal self-perceptions were reported rather than their true latent and/or implicit responses. This was partially addressed by including the threat condition, which aimed to make the hierarchy instability context salient and rouse responses that may otherwise have been inhibited.

In acknowledging that the number of hypothesis tests run in this study is high, familywise error (i.e., alpha inflation) may be a concern. While this suggests a higher likelihood of a Type I error, the use of a familywise error correction (e.g., Bonferroni correction) was not considered applicable based on several issues outlined in a highly cited article by Perneger (1998). Primarily, the use of the Bonferroni method has been applied for determining whether all null hypotheses are simultaneously true (i.e., the general null hypothesis), which was not of interest in this study. Additionally, there is an increased risk of a Type II error associated with a

Bonferroni correction, which is a trade-off at best. Lastly, Perneger (1998) argued that such corrections are best applied only when there are hypotheses that were not determined a priori, and this was not the case for the current study in question. However, inflation of the critical value should be addressed in the future.

Even though men and White people both belong to HSGs, gender and race relations are qualitatively different in a real-world context. Additionally, the strong regional focus on intergroup relations in the US context potentially limits the scope of generalizability. Thus, the nuanced differences that exist in reality between race and gender relations, and the limited cultural scope, challenge the generalizability of the results. To account for this in the research, Social Group was contrast coded and included as a method factor, and very few differences were found. However, future studies should aim to go further and explicitly consider other dominance-based intergroup relations, additionally in different cultural contexts.

Conclusion

Despite the complex nature of intergroup relations, understanding the needs of individuals as group members can provide more awareness of psychosocial outcomes. In a context of social progress towards more egalitarian intergroup relations, HSGs with dominance-based status struggle to maintain legitimacy, a necessary component for secure status relations. Because of these unstable conditions, HSGs' members are found to be motivated by dominance maintenance and innocence preservation in order to secure their needs for power and acceptance. The current study found that measuring the maintenance and innocence motivations can help predict certain dominance strategies. Although the proposed model was only partially supported, it is clear that these motivations have a relevant influence on HSGs. Therefore, more efforts to better understand such motivations and their outcomes will contribute to a more comprehensive awareness of intergroup relations.

References

- Abele, A. E., & Wojciszke, B. (2013). The Big Two in social judgment and behavior [Editorial]. *Social Psychology*, 44, 61–62. doi: 10.1007/978-3-319-28099-8_864-1.
- Belmi, P., Phillips, L. T., Laurin, K., & Engstrom, H. R. (2018). Is it fair to get ahead by playing politics? The ambiguity of the merit of political maneuvering enables self-serving judgments. *Manuscript submitted for publication*.
- Bruneau, E., Szekeres, H., Kende, A., Kteily, N., & Tropp, L. R. (2020). Beyond dislike: Blatant dehumanization predicts teacher discrimination. *Group Processes and Intergroup Relations*, 23(4), 560-577–577. doi:10.1177/1368430219845462
- Case, C. R., & Maner, J. K. (2014). Divide and conquer: When and why leaders undermine the cohesive fabric of their group. *Journal of Personality and Social Psychology*, 107(6), 1033. doi: 10.1037/a0038201
- Cheng, J. T., Tracy, J. L., & Henrich, J. (2010). Pride, personality, and the evolutionary foundations of human social status. *Evolution and Human Behavior*, 31(5), 334-347. doi:10.1016/j.evolhumbehav.2010.02.004
- Chow, R. M., & Knowles, E. D. (2016). Taking race off the table: Agenda setting and support for color-blind public policy. *Personality and Social Psychology Bulletin*, 42(1), 25-39. doi: 10.1177/0146167215611637
- Coleman, M. G. (2016). At a loss for words: Measuring racial inequality in America. *The Review of Black Political Economy*, 43(2), 177-192. doi: 10.1007/s12114-015-9229-y
- Cunningham, E., & Platow, M. J. (2007). On helping lower status out-groups: The nature of the help and the stability of the intergroup status hierarchy. *Asian Journal of Social Psychology*, 10(4), 258-264. doi: 10.1111/j.1467-839X.2007.00234.x.
- De Guissmé, L., & Licata, L. (2017). Competition over collective victimhood recognition: When perceived lack of recognition for past victimization is associated with negative attitudes towards another victimized group. *European Journal of Social Psychology*, 47(2), 148-166. doi: 10.1002/ejsp.2244
- Forscher, P. S., Cox, W. T., Graetz, N., & Devine, P. G. (2015). The motivation to express prejudice. *Journal of Personality and Social Psychology*, 109(5), 791. doi:10.1037/pspi0000030
- Halabi, S., Dovidio, J. F., & Nadler, A. (2008). When and how do high status group members offer help: Effects of social dominance orientation and status threat. *Political Psychology*, 29(6), 841-858. doi: 10.1111/j.1467-9221.2008.00669.x
- Harmon-Jones, E., & Harmon-Jones, C. (2002). Testing the action-based model of cognitive dissonance: The effect of action orientation on postdecisional attitudes. *Personality and Social Psychology Bulletin*, 28(6), 711-723. doi: 10.1177/0146167202289001
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Hess, C., Milli, J., Hayes, J., Hegewisch, A., Mayayeva, Y., Román, S., & Augeri, J. (2015). *The status of women in the states: 2015*. Institute for Women's Policy Research. <https://statusofwomendata.org/wp-content/uploads/2015/02/Status-of-Women-in-the-States-2015-Full-National-Report.pdf>

- Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., Foels, R., & Stewart, A. L. (2015). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO7 scale. *Journal of Personality and Social Psychology, 109*(6), 1003. doi: 10.1037/pspi0000033
- Jackson, L. M., & Esses, V. M. (2000). Effects of perceived economic competition on people's willingness to help empower immigrants. *Group Processes & Intergroup Relations, 3*(4), 419-435. doi: 10.1177/1368430200003004006
- Jost, J. T., & Major, B. (2001). Emerging perspectives on the psychology of legitimacy. In J.T. Jost, & B. Major (Eds.), *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations* (pp. 3-30). Cambridge University Press.
- Killian, L. M. (1985). The stigma of race: Who now bears the mark of Cain? *Symbolic Interaction, 8*(1), 1-14. doi: 10.1525/si.1985.8.1.1
- Knowles, E. D., & Lowery, B. S. (2012). Meritocracy, self-concerns, and Whites' denial of racial inequity. *Self and Identity, 11*(2), 202-222. doi: 10.1080/15298868.2010.542015
- Knowles, E. D., Lowery, B. S., Chow, R. M., & Unzueta, M. M. (2014). Deny, distance, or dismantle? How white Americans manage a privileged identity. *Perspectives on Psychological Science, 9*(6), 594-609. doi: 10.1177/1745691614554658
- Kteily, N., Bruneau, E., Waytz, A., & Cotterill, S. (2015). The ascent of man: Theoretical and empirical evidence for blatant dehumanization. *Journal of Personality and Social Psychology, 109*(5), 901. doi: 10.1037/pspp0000048
- Kteily, N., Hodson, G., & Bruneau, E. (2016). They see us as less than human: Metadehumanization predicts intergroup conflict via reciprocal dehumanization. *Journal of Personality and Social Psychology, 110*(3), 343. doi: 10.1037/pspa0000044
- Maki, A., Vitriol, J. A., Dwyer, P. C., Kim, J. S., & Snyder, M. (2017). The helping orientations inventory: Measuring propensities to provide autonomy and dependency help. *European Journal of Social Psychology, 47*(6), 677-693. doi: 10.1002/ejsp.2267
- Maner, J. K., & Case, C. R. (2016). Dominance and prestige: Dual strategies for navigating social hierarchies. *Advances in Experimental Social Psychology* (Vol. 54, pp. 129-180). Academic Press. doi: 10.1016/bs.aesp.2016.02.001
- Maner, J. K., & Mead, N. L. (2010). The essential tension between leadership and power: when leaders sacrifice group goals for the sake of self-interest. *Journal of Personality and Social Psychology, 99*(3), 482. doi: 10.1037/a0018559
- Mead, N. L., & Maner, J. K. (2012). On keeping your enemies close: Powerful leaders seek proximity to ingroup power threats. *Journal of Personality and Social Psychology, 102*(3), 576. doi: 10.1037/a0025755
- Mead, N., & Maner, J. (2012). When me versus you becomes us versus them: How intergroup competition shapes ingroup psychology. *Social and Personality Psychology Compass, 6*(8), 566-574. doi: 10.1111/j.1751-9004.2012.00447.x
- Nadler, A., Harpaz-Gorodeisky, G., & Ben-David, Y. (2009). Defensive helping: Threat to group identity, ingroup identification, status stability, and common group identity as determinants of intergroup help-giving. *Journal of Personality and Social Psychology, 97*(5), 823. doi: 10.1037/a0015968
- Nadler, A., & Shnabel, N. (2008). Instrumental and socioemotional paths to intergroup reconciliation and the needs-based model of socioemotional reconciliation. *The Social Psychology of Intergroup Reconciliation, 37-56*. doi: 10.1093/acprof:oso/9780195300314.003.0003
- Neville, H. A., Lilly, R. L., Duran, G., Lee, R. M., & Browne, L. (2000). Construction and initial validation of the color-blind racial attitudes scale (CoBRAS). *Journal of Counseling Psychology, 47*(1), 59. doi: 10.1037/0022-0167.47.1.59
- Noor, M., Brown, R., Gonzalez, R., Manzi, J., & Lewis, C. A. (2008a). On positive psychological outcomes: What helps groups with a history of conflict to forgive and reconcile with each other? *Personality and Social Psychology Bulletin, 34*(6), 819-832. doi: 10.1177/0146167208315555
- Noor, M., Brown, R., & Prentice, G. (2008b). Precursors and mediators of intergroup reconciliation in Northern Ireland: A new model. *British Journal of Social Psychology, 47*(3), 481-495. doi: 10.1348/014466607X238751.
- Perneger, T. V. (1998). What's wrong with Bonferroni adjustments. *Bmj, 316*(7139), 1236-1238. doi: 10.1136/bmj.316.7139.1236
- Phillips, L. T., & Lowery, B. S. (2018). Herd invisibility: The psychology of racial privilege. *Current Directions in Psychological Science, 27*(3), 156-162. doi:10.1177/0963721417753600
- Phillips, L. T., & Lowery, B. S. (2020). I ain't no fortunate one: On the motivated denial of class privilege. *Journal of Personality and Social Psychology, 119*(6), 1403. doi:10.1037/pspi0000240
- Paolacci, G., Chandler, J. J., & Ipeirotis, P. G. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making, 5*(5), 411-419. doi: 10.2139/ssrn.1626226

- Richeson, J. A., & Ambady, N. (2001). When roles reverse: Stigma, status, and self evaluation. *Journal of Applied Social Psychology, 31*(7), 1350–1378. doi:10.1111/j.1559-1816.2001.tb02677.x
- Ridgeway, C. L. (2014). Why status matters for inequality. *American Sociological Review, 79*(1), 1-16. doi: 10.2307/43187523
- Shnabel, N., Bareket, O., Bar-Anan, Y., Kende, A., & Lazar, Y. (2016). Help to perpetuate traditional gender roles: Benevolent sexism increases engagement in dependency-oriented cross-gender helping. *Journal of Personality and Social Psychology, 110*(1), 55-75–75. doi: 10.1037/pspi0000037
- Shnabel, N., & Nadler, A. (2008). A needs-based model of reconciliation: satisfying the differential emotional needs of victim and perpetrator as a key to promoting reconciliation. *Journal of Personality and Social Psychology, 94*(1), 116. doi: 10.1037/0022-3514.94.1.116
- Sidanius, J., & Pratto, F. (2001). *Social dominance: An intergroup theory of social hierarchy and oppression*. Cambridge University Press.
- Siem, B., Von Oettingen, M., Mummendey, A., & Nadler, A. (2013). When status differences are illegitimate, groups' needs diverge: Testing the needs-based model of reconciliation in contexts of status inequality. *European Journal of Social Psychology, 43*(2), 137-148. doi: 10.1002/ejsp.1929
- SimanTov-Nachlieli, I., & Shnabel, N. (2014). Feeling both victim and perpetrator: Investigating duality within the needs-based model. *Personality and Social Psychology Bulletin, 40*(3), 301-314. doi: 10.1177/0146167213510746
- Sullivan, D., Landau, M. J., Branscombe, N. R., & Rothschild, Z. K. (2012). Competitive victimhood as a response to accusations of ingroup harm doing. *Journal of Personality and Social Psychology, 102*(4), 778. doi: 10.1037/a0026573
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Brooks-Cole.
- van Leeuwen, E., & Täuber, S. (2011). Demonstrating knowledge: The effects of group status on outgroup helping. *Journal of Experimental Social Psychology, 47*(1), 147-156. doi:10.1016/j.jesp.2010.09.008
- van Leeuwen E., & Täuber S. (2012). Outgroup helping as a tool to communicate ingroup warmth. *Personality and Social Psychology Bulletin, 38*(6), 772-783. doi:10.1177/0146167211436253

Age-Gap Relationship Stigma

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The present study sought to examine the impact of stigmatization on age-gap couples. Age-gap couples can be defined as having ten or more years in age separation. In this study, a sample of 103 participants were compared: 51 individuals in age-gap relationships and 52 in age-matched relationships. All participants completed the Experience in Close Relationship Scale (ECR-S) as a measure of anxious and avoidant attachment styles in adults in romantic relationships. Participants then completed a novel questionnaire measuring exposure to stigma and stereotyping as a result of their age-gap relationship, and the subsequent effect on mental health and relationship success. Results demonstrated that participants in age-gap relationships reported higher levels of exposure to and negative impacts from stigmatization, results also showed that an increase in age difference between romantic partners was correlated with increased exposure to stigmatization. Findings from this study provide key insights into the effects of stigmatization on the well-being of individuals in age-gap relationships.

Keywords: Age-gap relationship, stigma, relationship, stereotype, age-gap romance

Throughout history, age-gap relationships have remained an intriguing yet largely misunderstood dynamic across varying cultures and societies. In the United States, roughly six percent of all married couples are in age-gap relationships, defined as having 10 or more years of age separation (U.S. Census Bureau, 2017). These statistics indicate that although not as common as age-matched relationships, age-gap relationships are certainly not rare. Throughout the United States, age-gap relationships continue to be disparaged on social media and other networking sites, and carry negative connotations in society (Silva, 2019).

Harmful stereotypes about age-gap relationships continue to perpetuate, such as that individuals in age-gap relationships experience inequality in the relationship, suffer from parental relationship problems or seek exploitation through financial or sexual domination (Silva, 2019). The stigmatization of age-gap relationships negatively impacts the mental health of those involved in the relationship (Silva, 2019). Compared to age-matched couples, it may be that some of the leading causes of mental health issues and high failure rates in age-gap relationships are the undue stress and pressure from society, family members, friends, and coworkers. This undue stress and pressure are results of exposure to age-gap relationship-related stigma.

In Western societies, heterosexual men tend to be slightly older than their female partners (Cupach & Spitzberg, 2011). Although the age gap typically falls between zero to three years, a recent study demonstrated that most men were open to dating a female partner up to 15 years younger than themselves. On average, adult men prefer female partners slightly younger than themselves, and adult females prefer slightly older male partners (Lehmiller & Christopher, 2008).

In contrast, women were open to dating a male partner up to ten years older than themselves, but were rarely open to dating younger men (Lehmiller & Christopher, 2008). Thus, it could be that society is more accepting of (and even celebrates) men who date younger women while conversely condemning women who date younger men or younger women who date older men (Lehmiller & Christopher, 2008). It is also important to note that although research is scarce pertaining to age-gap relationships amongst the LGBTQ2+ community, evidence suggests the LGBTQ2+ community (particularly the gay male community) is more accepting and willing to partake in age-gap relationships as compared to the heterosexual community (Olson, 2020).

When a couple is in a relationship that receives social support and external validation, those factors tend to strengthen the relationship (Cupach & Spitzberg,

2011). Conversely, social disapproval can be a significant stressor in a relationship (Cupach & Spitzberg, 2011). Family ties can be severed, feelings of discomfort may arise when discussing the relationship, and shame about the relationship can negatively impact the relationship itself and the mental well-being of those involved (Cupach & Spitzberg, 2011). Individual criticism may still be distressing in age-gap relationships even when a broad social stigma is absent (Smisek, 2019). In 2006, Lehmiller and Agnew found a negative correlation between perceived marginalization and relationship commitment in age-gap relationships. This demonstrated that individuals in age-gap relationships who perceived more social disapproval were more likely to end their relationship with their partner. Lehmiller and Agnew (2006) also found that it was more damaging for the relationship when member(s) of an age-gap relationship were marginalized by their own social network rather than by society as a whole, illustrating that individuals in age-gap relationships may be better able to ignore societal stigma than the judgment from friends and family. This also suggests that low success rates of long-term commitment in age-gap relationships may not be due to perceived factors such as inequity or sexual attraction. Instead, the low success rate may result from societal pressures, harmful viewpoints, and judgments. Multiple theories have been constructed to explain age-gap relationships. The current study challenged these theories as insufficient explanations of long-term commitment in age-gap relationships.

Attachment Narrative

A prevalent stigma related to age-gap relationships is the younger partner suffering from psychological problems related to attachment styles resulting from experiences with an absent or abusive parental figure growing up (i.e., having “daddy” or “mommy” issues). Attachment style can be described as the way in which one interacts with and attaches oneself to important individuals in one’s life (Fraley & Roisman, 2019). In the 1970s, Mary Ainsworth identified four main attachment styles that develop in humans because of early interactions with a primary caregiver. These attachment styles include Secure, Insecure Avoidant, Insecure Ambivalent/Resistant, and Insecure Disorganized (Ainsworth, 1979).

Secure attachment is characterized by stable, fulfilling relationships and is seen in individuals low in anxiety and avoidance. Those exemplifying secure attachment styles are confident their needs will be met and can trust that they will receive necessary support. Insecure Avoidant attachment is characterized by a fear of commitment, where one might gravitate toward more distant relationships, and is seen in individuals low in anxiety and high in avoidance. An individual with

Insecure Ambivalent/Resistant Attachment will often exhibit clingy and dependent behavior due to fear of rejection, exemplifying behavior high in anxiety and low in avoidance. Insecure Disorganized attachment develops as a result of inconsistent and potentially abusive behavior from a primary caregiver which results in a struggle to form secure bonds in adult relationships (Ainsworth, 1979). Individuals with anxious attachment display excessive worry regarding their partner’s well-being, difficulty forming interpersonal relationships, and over-dependency. Those with avoidant attachment have been shown to be defensive in their relationships, exhibit persevering self-control, and be emotionally detached (Beeney et al., 2019).

In 2016, Skentelbery and colleagues tested the theory of age-gap relationships characterized by “mommy” or “daddy” issues by examining the attachment style of women who dated men ten or more years older than themselves. They found that compared to women in age-matched relationships, there were no significant differences in attachment styles. They also found that 74% of the women in age-gap relationships had a Secure attachment style. Furthermore, while women in age-gap relationships reported significant external opposition to their pairing, Lehmiller & Agnew (2006) found that they did not experience different levels of relationship satisfaction as compared to women in age-matched relationships.

Stigmatization

In 1995, a study by Regan and colleagues examined how happiness is perceived in age-gap relationships. One group of participants was shown pictures of age-matched couples, and the other group was shown pictures of couples with significant age gaps. The participants then rated the pictures on a 1-7 Likert scale according to happiness. The study revealed that nearly all the participants judged couples with a large age gap to be less happy. In 2018, Sela and colleagues theorized that individuals in age-gap relationships face stigma due to outsiders’ assumption that the relationship is based on exploitation rather than mutual care. This idea was tested by surveying 211 women and 190 men on their views toward age-gap couples. The participants responded with how acceptable, upsetting, or disgusting they perceived an age-gap couple to be. They found that younger people were less accepting of age-gap relationships than older people. Sela and colleagues (2018) suggested that this might stem from a reputational standpoint; younger people may have more to lose if an age-gap relationship is exploitative. These studies thus strongly demonstrate the existence of bias and stigma toward age-gap relationships due to skewed perceptions in parts of the population (Sela, 2018).

Research has shown that individuals in age-gap relationships tend to experience more depressive symptoms compared to age-matched couples. A study by Kim and colleagues (2015) found that when the age difference between a heterosexual couple is three years or more, the severity of depressive symptoms experienced by the individuals in the relationship was 0.645 higher ($SE = 0.109, p < .000$) than that of age-matched couples. Depressive symptoms increased by 0.194% ($SE = 0.082, p = 0.018$) with every one to two years of additional age difference as compared to age-matched couples (Kim et al., 2015). However, a study by Lehmilller and Agnew (2006), which explored the impact of socially devalued relationships on romantic relationship commitment, found that mental health issues in age-gap relationships may be the result of societal stigma and stereotypes rather than internal psychological problems or problems within the relationship (Lehmilller & Agnew, 2006).

Within overarching stereotypes concerning age-gap relationships, women often face the brunt of judgment and disapproval. In heterosexual age-gap relationships, whether the woman is the younger or the older of the two partners, she is judged by society more critically than the man. In addition, where there is a significant age difference, female-older relationships garner significantly stronger opposition compared to male-older relationships (Banks & Arnold, 2001). One example of a common stereotype women face is the “cougar” phenomenon, where an older woman dating a younger man is often perceived to be a wealthy divorcee, strongly motivated by exploitative sex and “flings” with younger attractive men. Research has shown that in most age-gap relationships where the woman is older, relationships tend to last a minimum of two years, with a sizable percentage culminating in marriage (Milaine & Carmichael, 2015). Thus, women are harshly judged for being in an age-gap relationship as a “cougar” or “gold digger,” while the male (as the older or younger partner) is celebrated by society (Milaine & Carmichael, 2015). As society tends to apply sexist and ageist concepts to women’s sexuality and value, age-gap relationships are often explained away as a midlife crisis or an attempt for an older woman to cling to her youth. These stigmas can lead women to avoid any type of age-gap relationships to avoid being stereotyped (Milaine & Carmichael, 2015).

Niccolai and colleagues conducted a study in 2021 with men and women in age-gap relationships to determine how they overcame stigma. Their analysis revealed that, in an effort to overcome stigma, participants drew from “love narratives” to reframe their involvement with a significantly older or younger partner as something outside of their control. Participants also used techniques of passing (ability to feel and appear closer in age to their

partner), lampooning (using humor to deflect the threat of stigma) and dismissing (repudiation of the stigma). These techniques were used in defense of or as a reaction against the stigma they faced (Niccolai et al., 2021).

Most research on age-gap relationships describes white heterosexual couples, with a greater focus on younger women. There is a need for more research on age-gap couples within the LGBTQ2+ community, as well as more research considering racially diverse participants and additional stigma toward mixed-race age-gap relationships. Non-heterosexual or interracial couples already facing relationship stigma from society are compounded with stigma toward their age-gap relationship. For example, lesbian or gay male age-gap couples experience more stigma than heterosexual age-gap couples as their age-gap relationship takes a turn from the traditional “daddy/daughter” narrative into “father/son” or “mother/daughter” dynamics (Olson, 2020). This translates into an even more uncomfortable reality for members of the LGBTQ2+ community already facing stigmatization.

Much of the research on age-gap couples has examined the negative aspects of the relationship. Emerging studies, however, have been more focused on potentially positive aspects of such relationships. In one instance, a study in Denmark showed that for couples in age-gap relationships, having a younger spouse was beneficial to the older spouse’s survival rate (Drefahl, 2010). A study by McWherter and colleagues (1993) found that there tends to be less tension in conforming to socially constructed gender roles between individuals in age-gap relationships. Participants also noted a greater sense of freedom for interpersonal authenticity. Many times, this reduction in gender anxieties leads to more open sexuality and a deeper bond between individuals in the relationship. (McWherter et al., 1993).

It is important to note that much of the research on age-gap couples has been conducted in the United States. Lawson and colleagues (2021) carried out one of the only studies on age-gap relationships outside of the U.S. and in a non-Western society, where they sought to explore the impact of age-gap relationships in Tanzania. In Tanzania, age-gap relationships are more the norm than age-matched relationships (Lawson et al., 2021). The study surveyed 993 female participants in age-gap relationships, finding that the spousal age gap was not associated with a higher risk of divorce. Interestingly, in husband-older marriages, women’s mental health and independence in decision-making were better as compared to age-matched or wife-older marriages. They concluded that, in Tanzania, age-gap relationships do not influence marital stability and that significant age gaps are neither costly nor beneficial to either partner (Lawson et al., 2021). This research suggests that when external bias, stigma,

and judgment from society are removed from an age-gap couple's relationship, it thrives. This is strong evidence that such relationships in Western settings may have lower success rates and greater negative psychological consequences due to societal stigma as opposed to internalized psychological factors or instances of inequality (Lawson et al., 2021). However, it is also extremely valuable to keep in mind the vast differences in cultural norms between Tanzania and the United States in terms of relationship dynamics, age of consent, and attitudes toward polygamy. For this reason, we cannot directly extrapolate Lawson and colleagues (2021) findings to attitudes toward age-gap relationships in the United States due to the significant contrast in social standards.

Stigma Exposure by Region

While there has been little to no research done on the impact of location on stigma toward age-gap couples, research on racial stigma suggests bias toward “non-normative” age-gap relationships may be most prevalent in Southern areas of the United States. Research has suggested that in certain regions in the United States, marginalized individuals are more prone to exposure to stigmatization and stereotyping than others. In a study by Stephens-Davidowitz (2013), racially charged language was analyzed and ranked using Google Data to determine which states had the most racial animosity. Results demonstrated that states like West Virginia and Louisiana topped the list with the highest prevalence of racially charged language while states like Colorado and Hawaii ranked lowest. This study was valuable in quantifying levels of stereotyping as internet searches provided more insight into racism and conservative ideology than asking potential participants to self-report potentially ‘taboo’ socially expressed thoughts (Stephens-Davidowitz, 2013). However, it is also important to note that the prevalence of diversity in a state likely factored into racial animosity. Another study by Elmendorf and Spencer (2014) found that the list of states requiring federal approval before making changes under the Voting Rights Act aligned with the states with most issues of anti-Black prejudice and stereotyping. Results showed that out of the seven states with the highest percentage of individuals biased toward Black Americans, six of those states were located in the South. This concluded that issues of widespread stereotyping, racism, and bias toward Black people were more prevalent in the Southern than in the Northern regions of the United States.

Throughout history, interracial, homosexual, and many other types of “non-normative” relationships have been stigmatized. Research continues to make great strides in removing stigma attached to non-normative relationships and developing a more

holistic understanding of age-gap relationships and why individuals continue to face stereotyping and stigma (McWherter et al., 1993; Milaine & Carmichael, 2015; Skentelbery et al., 2016). However, prejudice toward age-gap couples continues to exist. Age-gap couples are fetishized, romanticized, and stigmatized by the public and family, friends, and co-worker (Banks & Arnold, 2001; Sela et al., 2018; Silva, 2019). There is a great need for more research regarding the negative impact that stigma and stereotyping can have on individuals within an age-gap relationship and the relationship itself. These individuals are at an increased risk of being stigmatized, with exposure to stereotyping and stigma leading to higher rates of stress, anxiety, insecurity, and other mental health issues (Cupach & Spitzberg, 2011; Lehmler & Agnew, 2006; Smisek, 2019). This stigma can cause undue stress on the relationship itself and is a major cause of the high rates of age-gap relationship failure (Cupach & Spitzberg, 2011). It is crucial to understand why this is the case in order to more effectively start to dismantle such stereotypes, which are very often not rooted in reality (Milaine & Carmichael, 2015; McWherter et al., 1993; Skentelbery et al., 2016).

Specific Aims

The present study aimed to test the hypothesis that individuals in age-gap relationships are exposed to higher rates of stigmatization and stereotyping compared to individuals in age-matched relationships and, further, that exposure to stigmatization has a negative impact on their mental health. The present study also examined whether age difference is an efficient metric of relationship health and success and whether people in age-gap relationships are disproportionately receiving stigma, stereotyping, and bias.

Hypothesis 1: Age difference between partners is not an efficient indicator of healthy adult attachment, thus both age-gap and age-matched participants will have similar scores on the Experience in Close Relationship Scale – Short Form (ECR-S) anxiety and avoidance scales.

Hypothesis 2: Individuals in age-gap relationships will report that they are more exposed to, and negatively impacted by, stigmatization as compared to individuals in age-matched relationships.

Hypothesis 3: An increase in age difference between two partners will positively correlate with increased rates of exposure to stigma.

Hypothesis 4: Location (region) will positively correlate with stigma exposure.

Methods

Participants

In the psychological literature, age-gap relationships are defined as having a greater than ten year age difference, whereas aged-matched relationships are defined as having a zero to three year difference between the two partners (Lehmiller & Agnew, 2006). Therefore, to qualify for the study, participants in age-gap relationships had a minimum age difference of ten or more years between the two partners, while participants in the age-matched condition were required to have a 0-3 year difference. This study did not include individuals in relationships with age gaps between 4-9 years, as addressed in the limitations section below.

The sample consisted of 103 participants, with 52 identifying as being in age-matched relationships and 51 identifying as being in age-gap relationships. It is important to note that participants took part in the study individually, without their romantic partner with whom they were currently in an age-gap relationship. Participants self-identified as female (59.2%), male (39.8%), or non-binary (1%). Participants ranged in age from 21-70 years ($M = 35.7$, $SD = 11.7$). Participants self-identified as White (81.6%), African American (5.8%), Hispanic or Latino (3.9%), Asian (3.9%), Other (3.8%), or Pacific Islander or Hawaiian (1%). Participants self-identified as heterosexual (75.7%), bisexual (14.6%), homosexual (7.8%), or other (1.9%).

All participants lived in the United States, including the Northeast (50.4%), Midwest (14.6%), West (13.6%), Southeast (10.7%), and Southwest (10.7%). Demographic measures of participants' current romantic partners demonstrated that 66% of the partners were male and 34% were female. The race of the romantic partners was reported as White or Caucasian (80.6%), Asian (6.8%), African American (5.8%), Hispanic or Latino (3.9%), Other (1.9%), or American Indian / Native Alaskan (1%).

The length of current romantic relationships amongst all participants was self-reported as ranging from three to 512 months (i.e., 42.7 years; $M = 88.6$ months, $SD = 104$). For participants in age-gap relationships, the length of the current romantic relationship ranged from three to 320 months (i.e., 26.7 years; $M = 69.6$ months, $SD = 69.4$) as compared to participants in age-matched relationships, which ranged from three to 512 months (i.e., 42.7 years; $M = 107$ months, $SD = 128$). Age difference in years between a participant and their romantic partner was also self-reported, with participants in age-gap relationships ranging from ten to 35 years age difference ($M = 17.9$, $SD = 8.46$) and participants in age-matched relationships ranging from zero to three years age difference ($M = 1.29$, $SD = 1.18$). Sixty-six

percent of the participants in the age-gap relationship group reported being older than their romantic partner, while 50% of participants in the age-matched relationship condition reported being older than their romantic partner.

Procedure

After receiving Internal Review Board (IRB) approval from The New School for Social Research (IRB Case Number 2021-93), participants for both age-gap and age-matched conditions were recruited via Amazon's MTurk database, social media, and The New School undergraduate psychology cohort. Participants recruited through MTurk received \$2.00 in monetary compensation for completing the survey. A poster was created to recruit age-gap participants via social media, detailing the purpose of the experiment with a QR code to access the survey directly (see Appendix A).

Other participants recruited directly through social media, specifically Instagram, received a direct message asking them to complete the survey voluntarily. There was no monetary or other compensation offered to these participants. They were found by searching for hashtags on Instagram such as "age-gap" or recruiting from age-gap couple Instagram pages. Students at The New School were recruited via an email lists and received one research credit for participating in the survey. Interested participants were sent an online link via Qualtrics for completing one of two surveys.

The first survey was tailored to age-matched participants, and the second survey was tailored to age-gap participants. Upon clicking their selected survey both the age-gap and age-matched participants were first required to confirm their eligibility for the study with a Yes/No response (see Appendix B). The eligibility requirements between the age-gap and age-matched participants were different, as noted in each eligibility requirement request. If eligible, participants were prompted to sign a research consent form. Each of the two surveys used had identical consent forms except for a provision added to one notating the \$2.00 monetary compensation that was only sent to the compensated participants recruited via MTurk.

After signing the consent form, participants were then directed to fill out the demographics survey, followed by the ECR-S, and then the questionnaire. The survey ended after the questionnaire for unpaid volunteer participants, while paid participants were asked to enter their MTurk Worker ID to confirm their identity and receive compensation. Names of students who participated at The New School were provided to the psychology department to confirm they would receive one research credit for their participation in the survey. The demographics survey, ECR-S, and questionnaire

were the same across both survey links.

Approximately 20 age-gap responses directly from MTurk participants were excluded from the study. Respondents who indicated they were in romantic relationships with an age difference of fewer than ten years did not fit the inclusion criteria of being in an age-gap relationship. As the age requirements for the study were clearly defined (see Appendix C), responses by MTurk participants not meeting the required criteria were rejected, and those participants did not receive monetary compensation.

Measures

Experience in Close Relationships Scale – Short Form

The Experience in Close Relationship Scale – Short Form (ECR-S; Wei et al., 2007) is a shortened version of the original 36-item (Brennan et al., 1998) and subsequent 18-item (Fraley et al., 2000) ECR. The ECR-S consists of 12 items measuring avoidant and anxious attachment for adults in romantic relationships. The ECR-S is a widely used tool in study of adult attachment with impressive psychometric qualities and has been indicated in numerous studies to be a valid measure of avoidance and anxiety in romantic relationships (Brenk-Franz et al., 2018; Guzmán-González et al., 2020; Marci et al., 2018). Wei and Team (2007) confirmed ($N = 851$) two factors with high internal consistency, with alpha coefficients ($\alpha = .78$) for Attachment Anxiety and for Attachment Avoidance ($\alpha = .84$). Correlations between Anxiety and Avoidance subscales were low ($r = .19$), indicating that both measures reflect distinct dimensions of attachment.

We utilized the Experiences in ECR-S to demonstrate that age-gap and aged-matched couples do not differ in attachment style. The form contains twelve questions, each on a 7-point scale. Results consisted of two scores, one rating attachment anxiety, and one rating attachment avoidance. The minimum score for each scale is seven and the maximum is 42. Individuals who score high on either scale are said to have an insecure adult attachment style, and those who score high on both avoidance and anxiety are said to have a disorganized fearful attachment style. In comparing the ECR-S score results from this study ($n = 103$; Anxiety = $M = 22.50$, $SD = 7.57$; Avoidance = $M = 14.70$, $SD = 6.97$) to those of Wei and Team's 2007 study of undergraduate students ($n = 165$; Anxiety = $M = 22.45$, $SD = 7.14$; Avoidance = $M = 14.97$, $SD = 6.40$) it can be concluded that the results align, indicating that the measure is reliability in the present study. The ECR-S can be found in Appendix D.

Stigma and Stereotyping in Age-gap Relationships Questionnaire

Due to the lack of research studies available

on exposure to stigma and stereotyping in age-gap relationships, a novel questionnaire was created to address the experiences of the participant population better (see Appendix E). Questions were developed based on similar existing questionnaires assessing stigma, including Link's Perceived Discrimination and Devaluation Scale (Link et al., 1987) and Cohen's Perceived Stress Scale (Cohen et al., 1983). Link's scale has been widely used to measure discrimination and stigma toward people with mental illnesses (Brown et al., 2010; Boge et al., 2018; Latalova et al., 2014), while Cohen's scale is popular for assessing perceived stress levels (Uvais et al., 2020). As these specific scales did not quite fit the goal of the current study, we modified the questions to assess perceived stigma toward age-gap couples more accurately.

The new questionnaire allowed participants to self-report how strongly they felt they had been exposed to stigmatization due to an age gap in their romantic relationships. The questionnaire contains twenty questions, each rated on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants are asked how strongly they feel that age-gap relationship stigma exists for them, how strongly they feel about whether they have been on the receiving end of said stigma, how much that stigma has or has not impacted them and their relationship, and how strongly they believe that stigma might cause the dissolution of their relationship.

Participants were also assessed on their feelings surrounding the health of their relationship. For example, participants were asked questions such as "If applicable, how strongly do you believe that intergenerational issues with your partner play a role with issues in your relationship?" to allow for deeper insight into whether potential relationship issues were directly related to stigmatization or other issues related to the age difference between the participant and their partner. Following these questions, once the ECR-S and questionnaire were completed and returned, the results of the age-gap participants were compared to the age-matched participants.

A Principal Factor Analysis with Varimax Rotation was completed for all questionnaire components. Results from the analysis determined three factors, with one factor accounting for 60% of the variance. The results of this analysis prompted the removal of questions 10, 11, and 19 from the computation of the stigma score. Thus, the stigma score was the sum of questions 1-9, 12-18, and 20 (reverse scored). The internal consistency of the remaining 17 questions was analyzed (Cronbach's $\alpha = 0.96$), suggesting a highly reliable questionnaire.

Results

Statistical software Jamovi (Jamovi Project, 2021) was used to produce descriptive statistics and

conduct the independent-sample t-tests and correlations analysis. To ensure normal sample distribution for age-matched and age-gap participants, skew and kurtosis were assessed for the ECR-S Avoidance Scale, ECR-S Anxiety Scale, and stigmatization questionnaire. All results indicated normal skewness and kurtosis (Age-Gap: *skew* = -0.218, *kurtosis* = -1.37, Age-Matched: *skew* = 1.6, *kurtosis* = 2.16).

ECR-S Scale Analysis

Findings demonstrated no significant difference (*Mdiff* = 3.1, *t*(101) = 2.11, *p* = .037, *d* = .42, 95% *CI* [0.187, 6.01]) in the ECR-S Scale on Attachment Anxiety when comparing participants in the age-gap condition (*M* = 24, *SD* = 7.88) to participants in the age-matched condition (*M* = 20.9, *SD* = 6.99). However, results of the ECR-S Scale on Avoidance (*Mdiff* = 6.07, *t*(101) = 4.89, *p* < .001, *d* = .96, 95% *CI* [3.61, 8.54]) illustrated a significant difference between age-gap (Anxiety: *M* = 24.0, *SD* = 7.88; Avoidance: *M* = 17.8, *SD* = 6.94) and age-matched groups (Anxiety: *M* = 20.9, *SD* = 6.99; Avoidance: *M* = 11.7 *SD* = 5.61).

Stigma Questionnaire Analysis

The stigmatization questionnaire demonstrated a significant difference between age-gap (*M* = 50.8, *SD* = 11.9) and age-matched (*M* = 24.5, *SD* = 7.09) participants for Stigma Score (*Mdiff* = 26.3, *t*(101) = 13.7, *p* < .001, *d* = 2.69, 95% *CI* [22.5, 30.1]), where higher scores indicated increased exposure to stigmatization and stereotyping as well as higher rates of self-reported negative impacts of stigmatization and stereotyping. Lower scores indicated a lower exposure to stigmatization and stereotyping and fewer negative impacts.

Relationship Between Age Difference and Stigma Exposure

A correlational analysis showed a positive relationship between in relationship age-gap and exposure to stigma, such that the larger the age gap, the greater the exposure to stigma (*r* (103) = 0.604, *p* < .001, 95% *CI* [0.71, 0.47]).

Role of Location on Stigma Exposure

Location also played a significant role in mapping exposure to stigma. Participants located in the Midwest (*M* = 49.2, *SD* = 16) and Southeast (*M* = 47.8, *SD* = 13.3) scored highest on the stigma questionnaire, participants from the West (*M* = 44.2, *SD* = 18.6) scored in the middle, while individuals from the Southeast (*M* = 36.5, *SD* = 15.6) and Northeast (*M* = 30.3, *SD* = 12.9) scored the lowest. A one-way ANOVA was performed to compare the effects of region on stigma exposure for all participants, indicating a statistically

Figure 1

Correlation of Stigma Scores and Age Difference between Couples

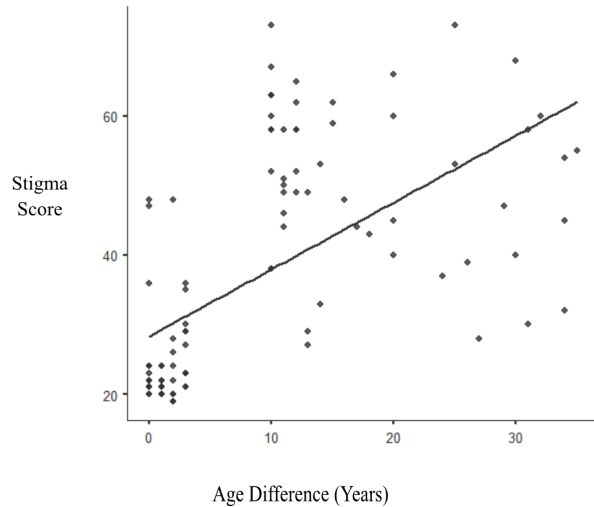


Table 1

Correlation of Stigma Scores and Age Difference between Couples

		Age Difference (Years)	Stigma Score
Age Difference (Years)	Pearson's <i>r</i>	—	
	p-value	—	
	95% CI Upper	—	
	95% CI Lower	—	
Stigma Score	Pearson's <i>r</i>	0.604***	—
	p-value	<.001	—
	95% CI Upper	0.714	—
	95% CI Lower	0.465	—

Note. * *p* < .05, ** *p* < .01, *** *p* < .001

significant difference in stigma scores between the regions, *F*(4, 28) = 7.35, *p* < .001.

Correlation Analysis of Variables Linked to Age-Difference

Additionally, a correlational analysis of all variables possibly related to the age-gap variable was computed (see Table 2), which indicated that multiple variables were associated with the age-gap variable, including avoidance from the ECR-S (*r* = 0.277), and stigma (*r* = 0.604). As demonstrated in the table below, these variables are also all related to one another.

Table 2

Correlations Among Variables Linked to Binary Age-Difference Variable (3 years or less gap versus 10 years or more)

		Age Difference (Years)	ECR-S: Anxiety Scale	ECR-S: Avoidance Scale	Stigma Score
Age Difference (Years)	Pearson's <i>r</i>	—			
	p-value	—			
ECR-S: Anxiety Scale	Pearson's <i>r</i>	0.157	—		
	p-value	0.113	—		
ECR-S: Avoidance Scale	Pearson's <i>r</i>	0.277***	0.463***	—	
	p-value	0.005	<.001	—	
Stigma Score	Pearson's <i>r</i>	0.604***	0.473***	0.716***	—
	p-value	<.001	<.001	<.001	—

Table 3

Regression Results Examining Multiple Correlates of The Individuals in Large Age-Gap Relations (10 years or more)

Overall Model Test						
Summary	<i>R</i>	<i>R</i> ²	<i>F</i>	<i>df</i> 1	<i>df</i> 2	<i>p</i>
1	0.652	0.452	24.4	3	99	<.001

Model Coefficients - Age Difference (Years)							
Predictor	Estimate	SE	<i>t</i>	<i>p</i>	Stand. Estimate	95% Confidence Interval	
						Lower	Upper
Intercept	-0.984	2.5806	-0.381	0.704			
ECR-S: Anxiety Scale	-0.162	0.1198	-1.349	0.181	-0.119	-0.294	0.0561
ECR-S: Avoidance Scale	-0.426	0.1642	-2.597	0.011	-0.29	-0.511	-0.0683
Stigma Score	0.544	0.0703	7.735	<.001	0.867	0.645	1.09

In order to further explore whether these were overlapping influences on age-gap relationships or independent and additive, a linear regression was conducted (see Table 3). It was revealed that, collectively, the model accounted for 45% of the variance in the age-gap variable. The standardized estimates in the summary table of coefficients underline the overlapping nature (multicollinearity) of the predictor variables, such that only stigma carries significant weight, $\beta = .86$, $p < .001$; with (low) avoidance providing independent additive influence, $\beta = -0.29$, $p < .01$. This revealed that stigma carried so much weight because it is correlated with avoidance ($r = 0.72$).

Discussion

Overall, the results of this study demonstrated

that individuals in age-gap relationships are more exposed to stigma than individuals in age-matched relationships. The ECR-S was included as an indicator of healthy adult attachment. This was used to control for age-gap and age-matched relationships as average scores for both groups on the anxiety and avoidance scales were low, suggesting that, on average, all participants were in healthy relationships with minimal anxiety and avoidance. Results also demonstrated a lack of significant difference in anxious attachment styles amongst both groups. However, the two groups had a significant difference in avoidant attachment styles, with age-gap individuals scoring higher.

Interestingly, avoidance provided a significant independent additive influence when examining correlates of individuals in large age-gap relationships. This low avoidance prompts the question: are those 'low' in avoidance more likely to be in age-gap relationships?

This demonstrates that while we did not find anxious attachment styles prevalent in the age-gap relationships studied, avoidant attachment did appear to typify such relationships. Regression analysis suggested that very low avoidance influences large age gap relationships. Thus, this demonstrates that maladaptive attachment does on some level exist in age-gap relationships.

However, this observation is not necessarily a detriment to such relationships, as individuals with low avoidance attachment seek closeness with others and prioritize social relationships (Ainsworth, 1979). This does not suggest that age-gap relationships are wrong, but instead poses an interesting topic of exploration for future studies. As such little research exists on attachment styles in age-gap relationships, it will be important to conduct more studies exploring this phenomenon to corroborate or shed new light on our findings.

Importantly, when analyzing the results of the stigmatization questionnaire, participants in age-gap relationships self-reported significantly higher rates of exposure to stigmatization than age-matched participants. A positive correlation was also found between an age gap and exposure to stigmatization, suggesting someone in a 10-year age-gap relationship will likely experience less stigma than someone in a 30-year age-gap relationship. These findings may suggest that a cause of the high rate of relationship failure and divorce in age-gap relationships may be closely attributed to stigma and stereotyping, as opposed to issues related to equitability and attachment styles (Silva, 2019).

This was confirmed in the given questionnaire, as age-gap couples were more likely to report fear of dissolution of their relationship due to stigma stemming from family, friends, and media. It is also notable that mean exposure to stigma scores were affected by location (region) within the United States. Further research into the effects of exposure to stigma by location would be beneficial in determining if populations in certain regions may be more or less accepting of age-gap relationships, thus furthering bias of negative outcomes due to increased exposure to stigma.

Limitations

The results of the present study should only be interpreted with considering the following limitations. It is essential to acknowledge that the sample used represents majority Caucasian (81.6%) and heterosexual (75.7%) participants with more than half (50.5%) located in the Northeast region of the United States. Therefore, caution should be used when generalizing the results to individuals of color, members of the LGBTQ2+ community, and those located in different regions of the

United States. It is also important to acknowledge that individuals in romantic relationships with age differences between four to nine years were not included in the study.

Current research has yet to establish a defined age-relationship status for these individuals and thus it would have been challenging to include this population in the study. For instance, if we concluded that age-matched participants would have an age difference between 0-9 years and age-gap participants had a difference of 10+ years, it would be challenging to measure the difference in exposure to stigma between someone with an 8- or 9-year age difference to someone with a 10-year age difference. In addition, all participants spoke English and were from the United States, thus the study results cannot be generalized to those residing in other countries. Another potential limitation includes differences in compensation between participants recruited via MTurk versus those recruited via The New School psychology department, the former of which received \$2.00 compensation while the latter received a course credit. Due to the difference in impact of these two compensations, as the monetary amount can be viewed as less valuable than course credit, this may have affected whether individuals using the MTurk database were likely or not to participate in the survey. As a result, participant demographics may be skewed toward those in The New School cohort and thus represent the general population less accurately.

Future Directions

There is a lack of substantial research on age-gap relationships, particularly in the context of external factors to which such individuals may be exposed. The present study aimed to contribute to this area of limited research by demonstrating that the age-gap population is exposed to greater rates of stigmatization than age-matched couples, which may negatively impact mental health and relationship status. Future research should expand on these results by attempting to identify the root of this stigma and understand how it impacts individuals exposed to it so that it can be more adequately addressed.

Future research should also consider a larger and more diverse sample in order to contribute to the growing literature on this topic and better reflect the United States' population. Research into compounding stigmatization is also crucial; it will be imperative to investigate the impact of stigma on LGBTQ+ individuals, people of color, and different genders in age-gap relationships to gain a more holistic understanding of their experiences. This will allow us to better understand and increase efforts to dismantle toxic societal narratives around their experiences.

Conclusion

Emerging research continues to show that age-gap couples are exposed to a higher rate of stigmatization than aged-matched couples. However, there is a lack of research on how such stigmatization negatively impacts the mental health and well-being of the individuals involved and its impact on relationship satisfaction and success. The current study has provided preliminary, albeit crucial, insights into this matter by demonstrating that individuals in age-gap relationships are in fact more likely to experience stigma, mental health struggles, and have relationship issues as a result. With these insights, we can begin to formulate ideas on how to change narratives and socially constructed realities on age-gap relationships.

References

- Ainsworth, M. D. (1979). Attachment as related to mother-infant interaction. *Advances in the Study of Behavior*, 1-51. [https://doi.org/10.1016/s0065-3454\(08\)60032-7](https://doi.org/10.1016/s0065-3454(08)60032-7)
- Banks, C. A., & Arnold, P. (2001). Opinions towards sexual partners with a large age difference. *Marriage & Family Review*, 33(4), 5–18. https://doi.org/10.1300/j002v33n04_02
- Beeney, J. E., Stepp, S. D., Hallquist, M. N., Ringwald, W. R., Wright, A., Lazarus, S. A., Scott, L. N., Mattia, A. A., Ayars, H. E., Gebreselassie, S. H., & Palkonis, P. A. (2019). Attachment styles, social behavior, and personality functioning in romantic relationships. *Personality disorders*, 10(3), 275–285. <https://doi.org/10.1037/per0000317>
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Experiences in close relationships inventory. *PsycTESTS Dataset*. <https://doi.org/10.1037/t23266-000>
- Brenk-Franz, K., Ehrental, J., Freund, T., Schneider, N., Strauß, B., Tiesler, F., Schauenburg, H., & Gensichen, J. (2018). Evaluation of the short form of “experience in close relationships” (revised, German version “ECR-RD12”) - a tool to measure adult attachment in primary care. *PLOS ONE*, 13(1). <https://doi.org/10.1371/journal.pone.0191254>
- Brown, C., Conner, K. O., Copeland, V. C., Grote, N., Beach, S., Battista, D., & Reynolds, C. F. (2010). Depression stigma, race, and treatment seeking behavior and attitudes. *Journal of Community Psychology*, 38(3), 350–368. <https://doi.org/10.1002/jcop.20368>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385–396. <https://doi.org/10.2307/2136404>
- Cupach, W. R., & Spitzberg, B. H. (2011). *The Dark Side of Close Relationships II*. Routledge.
- Drefahl, S. (2010). How does the age gap between partners affect their survival? *Demography*, 47(2), 313–326. <https://doi.org/10.1353/dem.0.0106>
- Elmendorf, C. S., & Spencer, D. M. (2014). After Shelby County: Getting section 2 of the Vra to do the work of Section 5. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2414652>
- Fraley, R. C., & Roisman, G. I. (2019). The development of adult attachment styles: Four lessons. *Current Opinion in Psychology*, 25, 26–30. <https://doi.org/10.1016/j.copsyc.2018.02.008>
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, 78(2), 350–365. <https://doi.org/10.1037/0022-3514.78.2.350>
- Jamovi Project (2021). *Jamovi* (Version 1.6)
- Latalova, K., Kamaradova, D., & Prasko, J. (2014). Perspectives on perceived stigma and self-stigma in adult male patients with depression. *Neuropsychiatric Disease and Treatment*, 1399. <https://doi.org/10.2147/ndt.s54081>
- Lawson, D. W., Schaffnit, S. B., Hassan, A., & Urassa, M. (2021). Shared interests or sexual conflict? spousal age gap, women’s wellbeing and fertility in rural Tanzania. *Evolution and Human Behavior*, 42(2), 165–175. <https://doi.org/10.1016/j.evolhumbehav.2020.08.009>
- Lehmiller, J. J., & Christopher, R. A. (2008). Commitment in age-gap heterosexual romantic relationships: A test of evolutionary and socio-cultural predictions. *Psychology of Women Quarterly*, 32(1), 74–82. <https://doi.org/10.1111/j.1471-6402.2007.00408.x>
- Lehmiller, J. J., & Agnew, C. R. (2006). Marginalized relationships: The impact of social disapproval on romantic relationship commitment. *Personality and Social Psychology Bulletin*, 32(1), 40–51. <https://doi.org/10.1177/0146167205278710>
- Marci, T., Moscardino, U., & Altoè, G. (2018). The brief experiences in close relationships scale - Revised child version (ECR-RC): Factor structure and invariance across middle childhood and early adolescence. *International Journal of Behavioral Development*, 43(5), 409–423. <https://doi.org/10.1177/0165025418785975>
- Milaine, A., & Carmichael, J. T. (2015). The “Cougar” phenomenon: An examination of the factors that influence age-hypogamous sexual relationships among middle-aged women. *Journal of Marriage and Family*, 77(5), 1250–1265. <https://doi.org/10.1111/jomf.12213>
- Niccolai, A., & Swauger, M. (2021). Minding the (age) gap: The identity and emotion work of men and women in age-discrepant romantic relationships. *Sociological Focus*, 54(1), 19–38. <https://doi.org/10.1080/00380237.2020.1845258>

- Olson, L. (2020). *Age Differences in Gay Couples*. Psychology Today. <https://www.psychologytoday.com/us/blog/finally-out/202003/age-differences-in-gay-couples>
- Regan, P. C., & Sprecher, S. (1995). Gender differences in the value of contributions to intimate relationships: Egalitarian relationships are not always perceived to be equitable. *Sex Roles, 33*(3-4), 221–238. <https://doi.org/10.1007/bf01544612>
- Sela, Y., Pham, M. N., Mogilski, J. K., Lopes, G. S., Shackelford, T. K., & Zeigler-Hill, V. (2018). Why do people disparage may–December romances? Condemnation of age-discrepant romantic relationships as strategic moralization. *Personality and Individual Differences, 130*, 6–10. <https://doi.org/10.1016/j.paid.2018.03.004>
- Silva, T. (2019). “Daddies,” “Cougars,” and their partners past midlife: Gender attitudes and relationship and sexual well-being among older adults in age-heterogenous partnerships. *Socius: Sociological Research for a Dynamic World, 5*, 237802311986945. <https://doi.org/10.1177/2378023119869452>
- Skentelbery, S. G., & Fowler, D. M. (2016). Attachment styles of women-younger partners in age-gap relationships. *Evolutionary Behavioral Sciences, 10*(2), 142–147. <https://doi.org/10.1037/ebs0000064>
- Smisek, E. (2019, December 9). *Prejudice Against Age-Gap Couples*. The Wake. <https://wakemag.org/online/2019/12/9/prejudice-against-age-gap-couples>
- Stephens-Davidowitz, S. I. (2013). The cost of racial animus on a black presidential candidate: Using Google Search data to find what surveys miss. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2238851>
- U.S. Census Bureau. (2017). *Current Population Survey (CPS)*. www.census.gov/programs-surveys/cps.html
- Uvais, N. A., Aziz, F., & Hafeeq, B. (2020). Covid-19-related stigma and perceived stress among dialysis staff. *Journal of Nephrology, 33*(6), 1121–1122. <https://doi.org/10.1007/s40620-020-00833-x>
- Wei, M., Russell, D. W., Mallinckrodt, B., & Vogel, D. L. (2007). The experiences in Close relationship scale (ecr)-short form: Reliability, validity, and factor structure. *Journal of Personality Assessment, 88*(2), 187–204. <https://doi.org/10.1080/00223890701268041>

Appendix

Appendix A

Advertisement to Recruit Compensated Age-Gap Participants



10 min(s) to complete

2.00

Online Questionnaire

Online

New School

The proposed study will examine the impact that stigmatization has on age-gap couples. Stigmatization can have a negative impact on an individual's mental health, identity formation and create feelings of shame. Stigmatized individuals are also exposed to increased risks of social isolation, mental and physical abuse, and stereotyping.

Find out more online

Poster printed on 21/10/2021 Study expires on 29/11/2021

Appendix B

Survey Eligibility Requirements for Age-Gap Participants

Thank you for taking the time to participate in this study:

IMPORTANT: Please carefully read through the instructions below regarding the eligibility requirements for this study. It is imperative that you follow the below instructions to be eligible for compensation for your participation.

1. You must be over 21 years of age.
2. You must be in an Age-Gap Relationship as defined as having (10) or more years age difference between you and your romantic partner.
3. You are eligible to participate if you are currently in an Age-Gap Relationship or have previously been in one, so long as in either condition the relationship lasted for a minimum of (3) months. If the relationship is less than (3) months you are not eligible for this study.

Do you wish to proceed given the eligibility requirements listed above?

- Yes
 No

Survey Eligibility Requirements for Age-Matched Participants

Thank you for taking the time to participate in this study. Please carefully read through the instructions below regarding the eligibility requirements for this study. It is imperative that you follow the below instructions to be eligible for compensation for your participation.

I check responses individually and if the below conditions are not met, I will reject your submission:

1. You must be over 21 years of age.
2. You must be in an Age-Matched Relationship as defined as between 0-3 years age difference between you and your romantic partner.
3. You must have been in your romantic relationship for a minimum of (3) months or you are not eligible for this study.

Do you wish to proceed given the eligibility requirements listed above?

- Yes
 No

Appendix C

Informed Consent Form for Adults aged 21+

Please read through the below consent form and at the bottom of the page please provide your name, signature, and the date in order to proceed with the survey.

Thank you for taking part in our research study at The New School for Social Research, directed by Howard Steele, Ph.D., and Derek Scolpino, MA, Ph.D. Student.

We are interested in understanding the impact that stigmatization has on age-gap couples by assessing an individual's potential exposure to stigmatization and stereotyping. The findings from this study will provide key insights into the effects of stigmatization on the well-being of individuals in age-gap relationships, which can be used to help change societal narratives and better address mental health needs of those impacted.

For the study we would like to conduct you will be asked to fill out three surveys following this form. After you sign the form below you will be prompted to the first survey in which you will provide us with your demographic information, followed by two questionnaires which will be used to assess your potential exposure to stigmatization and its impact. In total, the three multiple choice questionnaires should take 10-15 minutes to complete. You will be asked to fill self-report assessments that will be listed on an unaffiliated platform, Qualtrics. Additionally, we will not ask for directly or indirectly identifiable information in the survey hosted on Qualtrics. Please note that despite our best efforts, there is the possible risk of intrusion by outside agents (i.e., hacking) whenever information is shared over the internet.

While you will not directly benefit from taking part in this research study, we hope society will benefit from the knowledge gained. Some subjects also appreciate the opportunity to discuss feelings about relationships and childhood experiences.

The risks of this research are minimal but as components of the session inquire exploring past experiences and relationships, it does have the potential to give rise to possibly upsetting memories. However, you will be provided with referral information to the New School for Psychological Services, where brief therapy may be offered in-person or via HIPAA-Compliant Zoom if you feel the need to speak to someone after the conclusion of the survey. Your participation in this study is confidential. However, if a disclosure is made suggesting a threat of suicide, harm to others and/or child abuse, it is mandated by law that it be reported.

Taking part in this study is voluntary. You can stop at any time. Withdrawal or refusal to participate will not result in any penalty. You do not waive any legal rights or release The New School or its agents from liability for negligence by consenting to participate.

You will receive \$2.00 for participating in this study.

If you have any questions about the research study, please contact the researcher, Derek Scolpino via email at scold659@newschool.edu. If you have any questions about your rights as a research subject, or with research related complaints, please contact The Human Protections Administrator by phone or email.

Agreement

I confirm that I am at least 21 years old. I certify that I have read and understood this consent form and agree to participate as a subject in this research study as described above. I consent to research procedures that involve the use of information pertaining to my participation for teaching purposes. The participation of myself in this research is given voluntarily. I understand that I may discontinue participation at any time. I certify that I have been given a copy of this consent form to take with me.

Signature

Full Name

Date

Appendix D

The Experiences in Close Relationship Scale (ECR)-Short Form

Instructions:

The following statements concern how you feel in romantic relationships. Please respond to each statement by indicating how much you agree or disagree:

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
It helps to turn to my romantic partner in times of need.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need a lot of reassurance that I am loved by my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to get close to my partner, but I keep pulling back.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find that my partner doesn't want to get as close as I would like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I turn to my partner for many things, including comfort and reassurance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My desire to be very close sometimes scares people away.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to avoid getting too close to my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't worry about being abandoned.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually discuss my problems and concerns with my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get frustrated if my romantic partner is not available when I need them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am nervous when my partner gets too close to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I worry that a romantic partner won't care about me as much as I care about them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Scoring Information

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1 It helps to turn to my romantic partner in times of need.	7	6	5	4	3	2	1
2 I need a lot of reassurance that I am loved by my partner.	1	2	3	4	5	6	7
3 I want to get close to my partner, but I keep pulling back.	1	2	3	4	5	6	7
4 I find that my partner doesn't want to get as close as I would like.	1	2	3	4	5	6	7
5 I turn to my partner for many things, including comfort and reassurance.	7	6	5	4	3	2	1
6 My desire to be very close sometimes scares people away.	1	2	3	4	5	6	7
7 I try to avoid getting too close to my partner.	1	2	3	4	5	6	7
8 I don't worry about being abandoned.	7	6	5	4	3	2	1
9 I usually discuss my problems and concerns with my partner.	7	6	5	4	3	2	1
10 I get frustrated if my romantic partner is not available when I need them.	1	2	3	4	5	6	7
11 I am nervous when my partner gets too close to me.	1	2	3	4	5	6	7
12 I worry that a romantic partner won't care about me as much as I care about them.	1	2	3	4	5	6	7

Anxiety = 2, 4, 6, 8 (reverse), 10, 12

Avoidance = 1 (reverse), 3, 5 (reverse), 7, 9 (reverse), 11

Scoring and Interpretation:

Results consist of two scores for the two separate factors: attachment anxiety and attachment avoidance. The minimum score for each scale is 7 and a maximum score of 42. In addition, scores are represented in terms of percentile ranks in accordance with Wei et al.'s (1998) undergraduate sample, where higher percentiles represent more difficulties with adult attachment compared to peers.

People who score high on either or both of these dimensions are assumed to have an insecure adult attachment orientation. By contrast, people with low levels of attachment anxiety and avoidance can be viewed as having a secure adult attachment orientation (Brennan et al., 1998). In addition, higher scores are significantly and positively related to depression, anxiety, interpersonal distress, or loneliness.

Developer Reference:

Wei, M., Russell, D. W., Mallinckrodt, B., & Vogel, D. L. (2007). The experiences in Close Relationship Scale (ECR)-Short Form: Reliability, validity, and factor structure. *Journal of Personality Assessment*, 88, 187-204. <http://wei.public.iastate.edu>

Appendix E

Stigma Questionnaire

Please rate the following questions on a scale of 1-5:

1. How strongly do you feel you have been exposed to stigmatization because of the age difference in your relationship?

1	2	3	4	5
Not At All	Slightly	Average	Very Often	Extremely Often

2. How often do you feel you have been stereotyped due to the age difference between you and your partner?

1	2	3	4	5
Not At All	Slightly	Average	Very Often	Extremely Often

3. How often do you experience anxiety caused by the age difference in your relationship?

1	2	3	4	5
Not at All	Sometimes	Average	Very Often	Extremely Often

4. How often do you experience depression caused by the age difference in your relationship?

1	2	3	4	5
Not at All	Sometimes	Average	Very Often	Extremely Often

5. How often does your relationship negatively impact your overall mental well-being?

1	2	3	4	5
Not at All	Sometimes	Average	Very Often	Extremely Often

6. If you experience stress, anxiety, depression, or other mental health issues because of your current relationship, how strongly do you attribute those issues to the age difference between you and your partner?

1	2	3	4	5
Not at All	Sometimes	Average	Strongly	Very Strongly

7. If applicable, how strongly do you believe that internal psychological issues play a role in issues in your relationship due to the age difference between you and your partner?

1	2	3	4	5
Not at All	Sometimes	Average	Strongly	Very Strongly

8. If applicable, how strongly do you believe that inter-generational issues with your partner play a role in issues in your relationship?

1	2	3	4	5
Not at All	Sometimes	Average	Strongly	Very Strongly

9. How strongly do you feel that stigma as a result of the age difference between you and your partner has led to obstacles and negative experiences in your relationship?

1	2	3	4	5
Not at All	Slightly	Average	Strongly	Very Strongly

10. How accepting is your family of your relationship?

5	4	3	2	1
Not at All	Slightly	Average	Accepting	Very Accepting

11. How accepting are your friends of your relationship?

5	4	3	2	1
Not at All	Slightly	Average	Accepting	Very Accepting

12. How strongly do you feel that you have been subjected to stigmatization and stereotyping from society specifically due to the age difference between you and your partner?

1	2	3	4	5
Not at All	Slightly	Average	Strongly	Very Strongly

13. How strongly do you feel that you have been subjected to stigmatization and stereotyping from your family and friends specifically due to the age difference between you and your partner?

1	2	3	4	5
Not at All	Slightly	Average	Strongly	Very Strongly

14. How strongly do you feel that you have been subjected to stigmatization and stereotyping because of the media in regard to the age difference between you and your partner?

1	2	3	4	5
Not at All	Slightly	Average	Strongly	Very Strongly

15. How strongly do you feel that stigma and judgement from family, friends and society at large may lead to the dissolution of your relationship?

1	2	3	4	5
Not at All	Slightly	Average	Strongly	Very Strongly

16. How strongly do you believe that age difference in your current romantic relationship has led to the dissolution of other relationships with family, friends, and coworkers?

1	2	3	4	5
Not at All	Slightly	Average	Strongly	Very Strongly

17. How strongly do you feel that stigmatization and stereotyping as a result of the age difference between you and your partner negatively impacts you on a daily basis?

1	2	3	4	5
Not at All	Slightly	Average	Strongly	Very Strongly

18. If you have been subjected to stigmatization in your relationship due to age difference between you and your partner, how strongly do you feel that your relationship would significantly benefit from the removal of said stigmatization in terms of satisfaction and commitment?

1	2	3	4	5
Not at All	Slightly	Average	Strongly	Very Strongly

19. How positively do you feel regarding the long-term outlook of your relationship?

5	4	3	2	1
Not Positive	Slightly Positive	Average	Very Positive	Extremely Positive

20. How strongly do you feel that narratives in society and throughout the media are portraying age-gap couples (defined by having an age difference of 10 or more years) are positive?

5	4	3	2	1
Not at All	Slightly	Average	Strongly	Very Strongly

Questionnaire Scoring:

Stigma Score:

Add together responses from questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 17, 18, 20 (reversed)

Lowest Score Possible: 17

Highest Score Possible: 85

Questions 10, 11 & 19 were omitted from calculating the stigma score

Higher scores indicate higher exposure to stigmatization and stereotyping. Higher scores also indicate higher rates of self-reported negative impacts of stigmatization and stereotyping. Lower scores indicate a lower exposure to stigmatization and stereotyping and less negative impacts.

