

**A Longitudinal Investigation of the Happy Victimizer Tendency in Childhood:  
A Matter of Control or Care?**

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**Abstract**

This study examined the course and correlates of the happy victimizer tendency—the expectation that harming others to achieve a goal will result in positive emotional outcomes for the transgressor—from 4 to 6 years of age in a community sample of Canadian children ( $N = 150$ ; 50% female; T1  $M_{\text{age}} = 4.53$  years,  $SD = .30$ ; 33% European background). At each time point, we conducted semi-structured interviews with children to assess their emotion expectancies and reasoning in response to hypothetical acts of aggression. Caregivers (84% mothers; 91% college diploma or higher; 41% yearly household income  $\geq$  \$125k CAD) provided ratings of children's inhibitory control and sympathy at study onset. Most 4-year-olds expected to feel good after victimizing others, but this tendency declined through age 6. Children higher in sympathy were less likely to happy victimize at age 4, whereas greater inhibitory control predicted faster decreases in happy victimizing over time.

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How children expect to feel during social interactions serves to motivate and guide their behavioral choices (Arsenio & Lover, 1995; Lemerise & Arsenio, 2000). As a consequence, researchers have devoted significant attention toward understanding children's emotional experiences in contexts involving aggression and unfairness. One of the most robust findings to emerge from this work revolves around what has been termed the *happy victimizer tendency*. Despite understanding that it is wrong to intentionally hurt others (Killen & Smetana, 2015), most preschool-age children expect that an actor who harms others for personal gain will feel positive emotions (e.g., happy). It is not until several years later, around the age of 7 or 8, that children reliably attribute negative (e.g., guilt) or mixed emotions to actors who victimize others (for reviews, see Arsenio, 2014; Krettenauer, et al., 2008).

Although this age-related shift in emotion expectancies has been documented repeatedly, past studies have relied almost exclusively on cross-sectional comparisons of responses from younger and older children. Moreover, the psychological mechanisms that give rise to happy victimizer expectations during this developmental period remain poorly understood. Understanding the factors that contribute to happy victimizing is especially important given that individual differences in emotion expectancies in aggressive contexts are associated with antisocial and prosocial behavioral outcomes (Arsenio, 2014; Malti & Krettenauer, 2013). To address these gaps, we employed a prospective longitudinal design to examine the developmental course and correlates of the happy victimizer tendency during the preschool and early school years. Our central aims were to (a) map the trajectory of happy victimizing during this period, and (b) examine whether children's inhibitory abilities and capacity for other-

oriented concern contribute to individual differences and developmental changes in this phenomenon.

### **Happy Victimization: A Brief Sketch**

Building on earlier research examining children's conceptions of affect–event links (Arsenio & Ford, 1985; Barden, et al., 1980), Nunner-Winkler and Sodian (1988) were the first to investigate the happy victimizer phenomenon systematically. Most 4-year-olds (74%) in the study expected that a hypothetical third-party actor who stole from others for personal gain would feel positive emotions, whereas less than half of 6-year-olds (40%) and a minority of 8-year-olds (10%) did so. Children explained their positive emotion expectancies by appealing to the outcomes achieved by the actor (e.g., getting the desired object). Nevertheless, consistent with the findings from research on the development of moral judgments (Killen & Smetana, 2015), children of all ages stated that it would be wrong to intentionally victimize others. Subsequent research employing similar procedures largely has replicated this age-related decrease in happy victimizer attributions between early and middle childhood (Arsenio & Kramer, 1992; Keller, et al., 2003; for exceptions, see Lourenco, 1997; Murgatroyd & Robinson, 1993).

This decline is thought to reflect an important developmental transition whereby children shift from a selfish focus on the positive outcomes of aggression at younger ages toward a more ethically mature appreciation for the negative consequences of harm for others at later ages (Krettenauer et al., 2008). Notably, this trend coincides with a similar decrease in overt aggression during this period (Tremblay, 2000), and numerous studies have demonstrated that individual differences in happy victimizer expectancies and related emotion attributions are associated with antisocial behavioral outcomes, including aggression, delinquency, and bullying

(Arsenio, 2014; Malti, 2016; Malti & Krettenauer, 2013). Observations of preschoolers' naturally occurring peer interactions further indicate that children who exhibit happy victimizer tendencies during real-life social conflicts (e.g., expressing satisfaction or glee after aggressing) are especially likely to be rejected by their classmates, proactively initiate peer conflicts, and show persistent behavioral problems over time (Arsenio, et al., 2000; Miller & Olson, 2000).

Collectively, these findings support the assertion that children's beliefs about the affective consequences of different social events play an important role in their behavioral decision-making and interpersonal relationships (Arsenio, 2014). As such, understanding the mechanisms that contribute to individual differences and developmental changes in happy victimizing during childhood may inform efforts to prevent or reduce the risk of maladaptive outcomes and nurture prosocial orientations.

Although longitudinal data is necessary to understand the nature and sources of developmental change, prior happy victimizer research has relied primarily on comparisons of younger and older children at a single point in time. Several longitudinal investigations have elicited children's emotion expectancies in ethically relevant contexts; yet these studies typically have focused on the intensity of negative emotions, such as guilt or sadness (e.g., Malti, Gummerum et al., 2009; Malti, et al., 2016). A notable exception is the Munich Longitudinal study, which tracked emotion attributions from early to middle childhood (see Nunner-Winkler, 1999). Congruent with the developmental trends reported in previous cross-sectional studies, descriptive analyses indicated that the percentage of children who expected transgressors to feel good after victimizing others (e.g., stealing a toy) declined from 76% (at age 4) to 23% (at age 8). Interestingly, the expectation that characters who fail to act prosocially (e.g., by not sharing) would experience positive emotions did not show a similar decline with age. This latter finding is

consistent with other research showing that, compared to prohibitions against ethical violations of others' rights or welfare, children view prescriptions for prosocial action to be less obligatory and personally binding (Kahn, 1992). Children also are less likely to anticipate negative emotions for actors who fail to behave in a prosocial manner compared to those who directly aggress against others (Weller & Lagatutta, 2013).

Whereas much of the early happy victimization literature focused on the emotions that children attribute to hypothetical third-party transgressors, Keller et al. (2003) demonstrated that this tendency was substantially reduced when children were asked how they *themselves* would feel. Indeed, subsequent research indicates that approximately 42–65% of 4- to 5-year-olds (Hawley, 2003; Gummerum et al., 2010; Keller et al., 2003), 17–26% of 6-year-olds (Chaparro, et al., 2013; Malti, Gasser, et al., 2009), and 3–6% of 7- to 9-year-olds (Chaparro et al., 2013; Keller et al., 2003; Malti, Gasser, et al. 2009) attribute positive emotions to themselves as victimizers. A meta-analysis by Malti and Krettenauer (2013) further demonstrated that, compared to emotion expectancies for others, how children expect themselves to feel after victimization is a stronger predictor of antisocial behavioral outcomes. Thus, compared to other-attributed emotions, self-attributed happy victimizer responses appear to (a) follow a similar developmental trajectory, albeit at a lower frequency and with a faster rate of decline, and (b) more accurately reflect how children respond to affectively charged social encounters in real life. Despite these cross-sectional findings, no studies to date have examined how self-attributed happy victimizer responses develop over time. We addressed this research gap by examining changes in self-reported happy victimizer expectancies from 4 to 6 years of age.

### **Psychological Accounts of Happy Victimization**

Because emotion expectancies have implications for social behavior, it is important to understand why some children expect to feel good after victimizing others despite "knowing" that such behaviors are wrong (Killen & Smetana, 2015). Although there are likely a variety of converging factors involved in this phenomenon, debates over the psychological mechanisms underlying happy victimizing have generally fallen into two camps. One account emphasizes the role of cognitive and regulatory abilities (Gummerum et al., 2016; Lagattuta, 2005; Yuill et al., 1996). Inhibitory control—a core executive function (Diamond, 2013) and a key component of the temperamental dimension of effortful control (Rothbart & Bates, 2006)—is thought to be especially important. Inhibitory control is a broad construct referring to the various abilities involved in managing attention, cognitions, emotions, and behavior to suppress a dominant response in favor of a more appropriate subdominant response (Diamond, 2013). As such, it underlies the capacities for self-control, delay of gratification, and resistance to temptation.

According to this "control" hypothesis, happy victimizer responses stem from the difficulty young children have suppressing the lure of a desired reward (e.g., getting what they want) in favor of a more ethically acceptable concern (e.g., causing harm to the victim). Indeed, despite preschoolers' relatively constrained understanding of mixed emotions and the connections between mental states and behavior, children as young as 3 to 4 years of age are capable of understanding that achieving/failing to achieve one's goals does not *always* lead to positive/negative emotional outcomes (Lagattuta, 2005; Yuill et al., 1996). In support of this control hypothesis, correlational studies indicate that effortful/inhibitory control is positively associated with children's propensity to experience remorse over wrongdoing (Colasante et al., 2014; Kochanska et al., 2009). Experimental research has further demonstrated that inducing inhibitory control (e.g., by requiring children to wait before stating an emotion) decreases happy



victimizer expectancies in 4- to 7-year-olds (Gummerum et al., 2016). Thus, facilitating children's ability to stop and reflect on the event at hand may be key to unlocking the more ethical response of which they are capable.

A second theoretical account posits that happy victimizer attributions reflect a relative disregard for the consequences of one's actions for others (Malti & Krettenauer, 2013; Nunner-Winkler & Sodian, 1988). Four- and 5-year-olds expect that an aggressor will feel good despite being fully aware of the victim's pain and suffering (Lourenco, 1997), and this tendency persists even when the seriousness of the harm is made salient and when children are given opportunities to express other emotions they may be feeling (Arsenio & Kramer, 1992; Nunner-Winkler & Sodian, 1988). As such, positive emotion expectancies cannot be explained by task demands or children's failure to understand the consequences of their behavior. Moreover, believing that victimization will lead to positive emotional and material outcomes for the self has been linked to proactively aggressive behavior (e.g., harming others for personal gain) and the presence of callous-unemotional tendencies in childhood and adolescence (Arsenio, 2014; Frick, et al., 2014).

If this "care" hypothesis is correct, we would expect happy victimizer responses to be associated with a reduced capacity for sympathy, a complex social emotion entailing feelings of sorrow and concern for others' wellbeing (Eisenberg, et al, 2014). In support of this view, research during middle childhood and adolescence has shown that, compared to less sympathetic youth, those higher in sympathy expect to feel more intense negative emotions (e.g., guilt) after hypothetically harming others (Colasante et al., 2019; Daniel et al., 2014). Longitudinal research by Krettenauer et al. (2014) further found that self- and caregiver-reported sympathy at age 15 were negatively associated with happy victimizing responses concurrently and in early

adulthood. Moreover, a reduced capacity for sympathy constitutes a unique risk factor for proactive aggression in early and middle childhood (Jambon et al., 2019), which, as noted above, is linked with happy victimizer beliefs.

Although the "control" and "care" hypotheses have each garnered empirical support, little research to date has explicitly compared the relative merits of these claims in a single study. This is important given that inhibitory control and sympathy are intertwined in development. When faced with another's distress, effectively managing emotions, shifting attention, and regulating impulses allows children to re-direct their focus away from the self and toward the other's pain, thus enhancing their likelihood of experiencing sympathy (Eisenberg et al., 2014). In line with this notion, studies have consistently found that inhibitory/effortful control and sympathy are positively correlated throughout childhood (Eisenberg, et al., 1996; Eisenberg, et al., 2007), and each is associated with fewer behavioral problems, higher rates of prosociality, and enhanced social competence (Kochanska & Knaack, 2004; Kochanska, et al., 1996; Lovett & Sheffield, 2007). Given this overlap, scholars have recently speculated that children's regulatory capacity and their sense of concern for others both may be implicated in happy victimizing during childhood (Arsenio, 2014; Malti, 2016). We addressed this issue in the present study by including caregiver reports of inhibitory control and sympathy.

### **Current Study**

Our first goal was to describe the developmental trajectory of happy victimizing in childhood, including the overall prevalence and within-child rate of change over time. We accomplished this by conducting yearly interviews with children from 4 to 6 years of age. Based on the finding that emotions attributed to the self (rather than to others) are more representative of children's every day psychological experiences (Malti & Krettenauer, 2013), we presented

children with hypothetical vignettes depicting everyday acts of aggression (shoving and stealing) and asked them to report how they would expect to feel after engaging in the behavior and why. Consistent with extant cross-sectional evidence, we hypothesized that the majority of 4-year-olds would exhibit happy victimizing (i.e., expect to feel positive emotions for self-centered reasons), but that this tendency would sharply decline through age 6.

Our second goal was to examine the extent to which "control" and "care" hypotheses explained individual differences and developmental changes over time. Although we expected both inhibitory control and sympathy to be associated with reduced happy victimizer tendencies, it was unclear which of these effects would remain after controlling for shared overlap. Similarly, we did not have *a priori* hypotheses about the relative magnitude or direction of these effects for initial levels (e.g., at age 4) versus developmental changes (e.g., faster/slower declines through age 6).

In addition to direct effects, we also tested whether inhibitory control and sympathy interacted to predict happy victimizing. Children who are high in both inhibitory control and sympathy may be the least likely to happy victimize or show the fastest declines over time (additive effects). Alternatively, possessing strong inhibitory skills may offset the negative impact of being low in other-oriented concern (or vice versa), thus suggesting a compensatory effect. Given the exploratory nature of this conjecture, we examined interaction effects but did not put forth specific hypotheses.

## Method

### Sample

Participants were drawn from an ongoing longitudinal study social-emotional and behavioral development in early and middle childhood (Jambon et al., 2019). The current sample

consisted of 150 children (50% female) and their primary caregivers (84% mothers; 98% biological parents) recruited from Mississauga, Canada. Children were 4 years old at the initial testing session (T1  $M_{\text{age}} = 4.53$  years,  $SD = .30$ ; Range = 4.03 to 4.99 years). A total of 133 children (89% of the initial sample) were re-tested at the second time point (T2  $M_{\text{age}} = 5.57$  years,  $SD = .35$ , Range = 4.87 to 6.35 years). At the third timepoint, 123 children (82% of the initial sample) were tested (T3  $M_{\text{age}} = 6.55$  years,  $SD = .44$ , Range = 5.30 to 7.56 years).

Approximately 93% of caregivers reported being married/in a domestic partnership. The ethnic composition of the sample was 33% European, 27% Asian, 4% Central/South American, 6% other, 19% multi-ethnic; 11% refused/chose not to answer. Caregivers' self-reported highest level of education was 6% high school/trade school/apprenticeship or less, 67% college or bachelor's degree, and 24% advanced degree; 3% chose not to answer. A little less than half of caregivers (41%) reported a total yearly household income of \$125,000 CAD or more, 23% reported making between \$80,000–\$124,999 CAD, and 22% reported making \$80,000 CAD or less; 14% chose not to answer. All children and caregivers were fluent English speakers. Children with an autism spectrum disorder were excluded from enrollment in the study.

### **Procedure**

Approval was obtained from University of Toronto ethics board prior to the start of data collection (“Longitudinal Study of Emotions, Aggression, and Physiology”, # 00028256). Families were invited to attend the laboratory for a total of three annual testing sessions (T1: November 2015 to July 2017; T2: November 2016 to July 2018; T3: December 2017 to May 2019). Children provided verbal assent and caregivers provided written informed consent. Trained undergraduate research assistants interviewed children in a designated room while caregivers remained in a waiting area and completed questionnaires on a touchscreen tablet. At

the end of each one-hour testing session, caregivers were debriefed and children were gifted an age-appropriate book.

We implemented multiple strategies (e.g., flexible scheduling, birthday card reminders, collecting alternative contact info) to maximize retention. Caregivers were sent an email notice one month prior to their child's expected testing date. Weekly follow-up phone calls were made to families who did not respond to the initial contact attempt at different times of day and days of the week. Once scheduled for a testing session, families were sent reminder emails one week and one day prior to their visit. Attempts to reach non-responsive families continued for 3 months after their child's target testing date.

## **Measures**

### ***Happy Victimization***

At each time point, we conducted semi-structured interviews with children to elicit their emotion attributions and reasoning. Consistent with the methods frequently employed in the happy victimizer literature (Gummerum et al., 2010; Keller et al., 2003; Malti, Gasser et al. 2009), trained interviewers presented children with hypothetical vignettes depicting interpersonal transgressions and asked them to report how they would feel if they had committed the acts and why they would feel that way. To ensure understanding, children were first engaged in a perspective-taking training to familiarize them with the first-person perspective of the upcoming stories. After being shown an image on the computer screen of a hand holding a tennis ball, children were given an actual tennis ball and were asked to imagine that they were the person in the picture. Comprehension checks were used to ensure children understood this first-person perspective (i.e., that *they* were the character holding the ball). Participants who failed the check question (T1-T3 = 7%; 5%, 0%) were corrected and presented with the exercise again. All

children successfully answered the questions after being corrected. The interviewers then asked children to imagine themselves as the main characters in the upcoming stories.

Interviewers then presented children with three hypothetical vignettes depicting social norm transgressions. Each vignette was shown from the first-person perspective of the transgressor and consisted of two illustrated slides projected on the computer screen accompanied by a pre-recorded narration of the events. The first story involved a non-aggressive social rule transgression (standing up during lunch period without permission). This was intended as a warm-up story and, as it does not involve an act of victimization, was not considered further for the current study. The next two stories depicted the main character victimizing a peer for the purpose of obtaining a desirable object (stealing a candy bar from another child's bag when they are not looking; shoving the child next-in-line to obtain the last lollipop being passed out by a teacher). Story order was counterbalanced across participants, with vignette characters matched to the child's gender and skin tone. Interview stimuli and scripts are provided in the Online Supplemental Material.

**Questioning.** After each story, children were first asked, "How would you feel if you did this?" to assess open-ended anticipated emotions. Children who could not verbalize a codable emotion (e.g., "I don't know") after several prompts were presented with the forced choice question, "If you had [committed transgression], would you feel good, bad, or good and bad?". Interviewers were trained to present each of these response options in a deliberate, neutral tone. After stating an emotion, children were then asked to explain the rationale for their response ("Why would you feel [emotion]?") to determine their reasoning. Interviewers followed up incomplete or uncodable responses with additional probes to clarify their meaning.

**Coding.** The first two authors double coded all emotion and reasoning responses at each time point. All discrepancies were discussed until a consensus was reached. Because each coder scored 100% of responses, interrater reliability was not calculated. Anticipated emotions were initially assigned to one of 11 discrete emotion categories or an "other" category (the full scheme is provided in the Online Supplemental Material). Up to two emotions were coded for each story. Nearly all children provided a codeable emotion (T1-T3= 93%, 99%, 100%), and approximately 14%, 15%, and 19% of children reported more than one emotion across the three time points, respectively.

Children's reasoning for each emotion was initially coded into one of four categories using a coding scheme adapted from prior research (Colasante, et al. 2019, Malti, Gummerum, et al., 2009). *Ethical* reasons reflected principles of fairness, justice, or references to the welfare of others (e.g., "It's not fair to steal", "He'll be sad"). *Sanction-oriented/conventional* reasons reflected censure from authority figures or peers, concerns over anticipated rule violations, or disruptions to group functioning (e.g., "I'll get in trouble by the teacher", "It's against the rules"). *Self-focused* responses reflected self-centered benefits or excuses for the behavior (e.g., "I love chocolate", "He didn't want it anyway"). An *uncodable/other* category was used for all other responses (e.g., "Because", "It's bad"; "It's not nice"). Approximately 1%, 3%, and 5% of children provided more than one reason for an emotion across the three time points, respectively.

Following the procedures used in other happy victimizer studies (e.g., Krettenauer et al., 2014), emotions and reasoning were combined to create a dichotomous happy victimizer score for each story (0 = *no*, 1 = *yes*). To be assigned a score of 1 (*yes*), a response had to (a) reference a positive emotion based on self-focused reasons (e.g., feeling happy because they got what they wanted) and (b) *not* reference a negative emotion based on ethical reasons (e.g., feeling bad out

of concern for others' wellbeing). Responses containing a mix of positive self-focused emotions and negative emotions based on non-ethical concerns (e.g., feeling bad out of fear of punishment or concern about rule breaking) were assigned a score of 1 (*yes*). All codable responses that did not reference a positive emotion were assigned a score of 0 (*no*). Finally, responses that did not include at least one codable emotion (e.g., saying they would feel "wrong", "greedy") and reason (e.g., "it's bad", "because", "don't know") were treated as missing. Requiring positive emotions to be justified by self-focused reasons helped to ensure that children's responses reflected a genuine focus on the gains of transgressing, which is central to the conceptualization of happy victimization (Arsenio, 2014; Krettenauer et al., 2008). The overall frequency of happy victimizer responses for each story are provided in the Online Supplemental Material.

Dichotomously coded responses to the two stories were moderately correlated at each measurement occasion (T1:  $r = .44$ , T2:  $r = .39$ , T3:  $r = .62$ ,  $ps < .001$ ) and were summed to create a composite *happy victimizing* score at each time point (0 = *no happy victimizer response*, 1 = *happy victimizer response given in one story*; 2 = *happy victimizer response given in both stories*). The percentage of children who did not provide a codable response to either story, and thus had missing interview data, was 21% at T1 (31 of 150 participants), 11% at T2 (14 of 133 participants), and 5% at T3 (6 of 123 participants). Approximately 3% of children (5 out of 150) had missing interview data across all waves, yet all children had data available from caregiver reports and/or interviews and were retained in the analyses (more details are provided in the Missing Data section below).

### ***Caregiver Questionnaire Ratings***

**Sympathy.** At T1, caregivers rated children's sympathy using a total of 10 items. Five items were drawn from a measure developed by Eisenberg et al. (1996; e.g., "My child feels



sorry for other children who are being teased”) and were scored on a 7-point scale (0 = *never*; 3 = *about half of the time*; 6 = *always*). An additional five items were drawn from the sympathy subscale of the Holistic Student Assessment-Parent Report (HSA-PR; Malti, et al., 2018; e.g., “Feels bad for other kids who are sad or have problems”) and were scored on a 4-point scale (0 = *not at all true*, 3 = *almost always true*). The HSA items were transformed into a 7-point-scale and all 10 items were averaged to create a single *sympathy* composite, with higher scores reflecting greater other-oriented concern ( $\alpha = .92$ ). All items are described in the Online Supplemental Material.

**Inhibitory Control.** At T1, caregivers rated children’s inhibitory control using 7 items from the Child Behavior Questionnaire-Short Form (Putnam & Rothbart, 2000). Five items were drawn from the inhibitory control subscale (e.g., “Can wait before entering into new activities if he/she is asked to”) and two items were taken from the attentional focusing subscale (e.g., “when drawing or coloring in a book, shows strong concentration”). Items were rated on a 7-point scale (0 = *never*; 3 = *about half of the time*; 6 = *always*) and combined to create a single composite, with higher scores reflecting greater inhibitory control ( $\alpha = .70$ ). All items are described in the Online Supplemental Material.

### ***Control Variables***

Children’s receptive verbal ability was measured using the verbal subtest of the Kaufman Brief Intelligence Test 2<sup>nd</sup> edition (KBIT-2; Kaufman & Kaufman, 2004). Scores were calculated by subtracting each child’s number of errors from their total correct responses. We also included variables representing child gender (0 = *female*, 1 = *male*), total household income (1 = *less than \$10,000*, 5 = *\$40,000–\$49,000*, 9 = *over \$125,000*), and caregiver education (1 = *less than high school*, 4 = *college diploma*, 7 = *Ph.D. or equivalent*).

### **Missing Data**

Rates of missing data ranged from 0% (gender, sympathy) to 22% (T3 happy victimizer scores). We conducted two sets of analyses to better understand the nature of the missing data; all correlations reported below are significant at  $p < .05$ . Longitudinal attrition analyses revealed that children of less educated caregivers were less likely to participate at T2 ( $r = -.20$ ). An examination of the missing data correlates for children who participated at a given time point (i.e., those who completed interviews but did not provide codable responses to either of the vignettes) indicated that children with lower verbal ability were more likely to have missing happy victimizer scores at all time points (T1-T3;  $r$ s = .24, .30, .22), and lower household income was associated with missing happy victimizer data at T1 ( $r = .23$ ) and T2 ( $r = .20$ ). This indicated that the likelihood of having missing data was partly accounted for by family demographic variables and children's verbal ability and, as such, could be handled under the assumption that the data were missing-at-random (MAR). Following best practice guidelines for missing data estimation under the MAR assumption (Graham, 2012), we retained income, caregiver education, and verbal ability in all models.

### **Analysis Plan**

#### ***Power Analysis***

We conducted a power analysis to determine whether a sample of 150 was adequately powered to detect a significant correlation between our predictors and outcomes. Given the limited number of studies explicitly examining links between sympathy/inhibitory control and happy victimizer emotion expectancies, we based our analysis on the effect sizes reported in past meta-analyses conducted with child samples on related phenomena, including the relations between executive functioning skills and theory of mind understanding ( $r = .38$ ; Devine &

Hughes, 2014), inhibitory control and academic skills ( $r = .27$ ; Allan et al., 2014), empathy and aggression ( $r = -.23$ ; Miller & Eisenberg, 1988), and emotion attributions and antisocial behavior ( $r = .20$ ; Malti & Krettenauer, 2013). Based on the average of these estimated effects ( $r = .27$ ),  $\alpha = .05$  (two-tailed), and power = .90, a sample size of 140 would be needed to reject the null hypothesis.

### ***Longitudinal Modeling Procedures***

All analyses were conducted using *Mplus* 8.4. We used latent growth curve (LGC) modeling to examine changes in happy victimizing. Scores were treated as ordinal data using the CATEGORICAL command, which assumes that the observed categorical responses (in our case, offering happy victimizer responses to 0, 1, or 2 stories) reflect a continuous underlying latent construct (e.g., "happy victimizing tendency"; Lee, et al., 2018; Mehta, et al., 2004). The ordinal response categories are linked to the continuous latent construct by way of thresholds, which represent the estimated cut-off scores on the underlying tendency/trait signifying the point at which children would be expected to shift from one category (e.g., no happy victimizer responses) to the next (e.g., happy victimizer response to one story). The number of thresholds is equal to one less the number of response categories; two threshold values were estimated for the happy victimizing variable at each time point.

In the unconditional LGC model, the intercept represents children's tendency to happy victimize when time is equal to zero, and the slope factor represents the amount of linear change in happy victimizing over the duration of the study. We set the loadings for the slope parameters to 0, 1, and 2. For identification purposes, the mean of the intercept was fixed to zero and the thresholds for each category were constrained to equality over time, thus establishing longitudinal measurement invariance. With these constraints, the thresholds provide information

on the tendency to offer happy victimizer responses at age 4 and the slope mean describes the average expected change in happy victimizer tendencies corresponding to a 1-year increase in age. The variance estimates of the intercept and slope reflect the amount of interindividual variability in initial tendencies and rate of change over time, respectively.

We first estimated an unconditional LGC model to determine overall model fit and the general trajectory of happy victimizing over the three-year period. All study variables were included as covariates in this model to aid in the estimation of missing data and to obtain bivariate correlations between the predictors and the intercept and slope. We then tested a conditional model by regressing the intercept and slope factors onto sympathy, inhibitory control, and control variables (household income, caregiver education, gender, and verbal ability). In the second conditional model, we included an Inhibitory Control x Sympathy interaction term to examine potential moderating effects on the intercept and slope.

Despite rigorous attempts to maintain equally spaced, 1-year intervals between testing sessions, there was some variability in the exact age when children were tested at each wave. To determine whether these within-wave age differences had an impact on the results, we conducted sensitivity analyses by re-running each of the models described above with children's age at each time point entered as a time-varying covariate (TVC). Specifically, we regressed the residual terms of the HV scores onto continuous variables representing children's exact age at each respective time point (i.e., T1HV on T1age; T2HV on T2age; T3HV on T3age).

### ***Bayesian Estimation Procedures***

All analyses were conducted using the BAYES estimator. We selected Bayesian estimation because it outperforms other estimators (e.g., Full Information Maximum Likelihood and Weighted Least Squares) when handling categorical, non-normally distributed data in

relatively small samples (i.e.,  $N < 200$ ; Muthen & Asparouhov, 2012; Muthen & Asparouhov, 2015). Below we briefly describe the procedures we employed and offer a more detailed explanation in the Online Supplemental Materials. We also refer the reader to other sources for more thorough and non-technical descriptions of Bayesian analyses and best practices (DePaoli & van de Schoot, 2017; van de Schoot et al., 2014; Zyphur & Oswald, 2015).

For each model, we requested four Markov Chain Monte Carlo (MCMC) chains with a potential scale reduction factor of .01 set for the convergence criteria. Model fit was determined using posterior predictive checking; an excellent fitting model is expected to have a posterior predictive  $p$  value (PPP) of .50 and a 95% confidence interval for the chi-square fit statistic difference centered around zero. Rather than obtaining a "true" estimate of a parameter (e.g., regression coefficients), Bayesian estimation calculates a distribution of likely values known as the *posterior distribution*. We report the median point value and standard deviation of the posterior distribution, Bayesian  $p$  value, and 95% credibility interval (CI) for each parameter. A Bayesian  $p$  value reflects the proportion of the posterior distribution that includes or is greater/less than zero (for negatively/positively signed parameters, respectively). The 95% CI indicates that there is a 95% chance that the value of a parameter in the population falls within that given range. We used diffuse (non-informative) priors for all parameters based on the default settings in *Mplus*.

## Results

### Descriptive Statistics and Bivariate Correlations

At T1, approximately 42% of 4-year-olds did not expect to feel any positive emotions after transgressing (i.e., had happy victimizer scores of 0), and this percentage increased over time: T2–T3 = 55%–68%. The proportion of children expecting to feel positive emotions in one

of the two stories remained relatively stable from T1 to T2 (20% to 24%) before declining to 14% at T3. The proportion of children reporting positive emotions in response to both stories showed the sharpest decline from T1 to T2 (38% to 22%) before leveling off at T3 (19%).

Bivariate correlations between all study variables are provided in Table 1. Happy victimizing showed moderate rank-order stability over time. Notably, being higher in sympathy at 4 years of age was associated with less happy victimizing at ages 4 and 5, whereas being higher in inhibitory control at age 4 was associated with less happy victimizing at age 6. Higher verbal ability scores also were associated with less happy victimizing at 6 years of age.

### **Growth Models**

The unconditional LGC model fit the data well: PPP = .57, 95% confidence interval of  $\chi^2$  values centered around zero [-32.88, 24.82]. Estimates for means/thresholds, variances, and covariances for the intercept and slope factors are provided in Table 2. Using the formulas provided in Lee et al. (2018), we also calculated the estimated probabilities of offering happy victimizer responses to none, one, or both stories at each time point based on this linear model (see Figure 1). As expected, and consistent with past cross-sectional research, the negative mean of the slope factor confirmed that happy victimizer tendencies significantly decreased with age.

In terms of correlations, more sympathetic children had a lower propensity for happy victimizing at the initial assessment (intercept;  $r = -.207$ ,  $SD = .11$ ,  $p = .023$ , 95% CI [-.437, -.006]), but sympathy was not associated with declines in this tendency over time (slope;  $r = .019$ ,  $SD = .09$ ,  $p = .42$ , [-.158, .201]). In contrast, inhibitory control was not associated with initial happy victimizing levels ( $r = .063$ ,  $SD = .11$ ,  $p = .276$ , [-.146, .282]), yet children higher in inhibitory control showed faster declines in happy victimizing over time ( $r = -.166$ ,  $SD = .10$ ,  $p = .036$ , [-.367, .013]).

In the conditional model, we simultaneously regressed the intercept and slope factors onto all study variables to disentangle their unique effects. This conditional growth model fit the data well (PPP = .48, [-29.36, 29.61]). After controlling for the effects of all other predictors, the pattern of results reported above remained (see Table 4): Sympathy was uniquely and negatively associated with the intercept (but not the slope), whereas inhibitory control was uniquely and negatively associated with the slope (but not the intercept). In the second conditional model (PPP = .41, [-30.79, 32.63]), the Inhibitory Control x Sympathy interaction term did not significantly predict the intercept ( $\beta = .150$ ,  $SD = .134$ ,  $p = .13$ , [-.110, .410]) or slope ( $\beta = -.069$ ,  $SD = .160$ ,  $p = .33$ , [-.375, .243]).

Finally, sensitivity analyses based on models with children's exact age at each timepoint included as TVCs produced virtually identical results to those reported above, suggesting that within-wave variations in children's age did not influence the findings substantively. A detailed description of results of the TVC analyses is provided in the Online Supplemental Material.

### **Discussion**

Children's expectations about the emotional consequences of social events play a key role in guiding their behavior (Arsenio & Lover, 1995; Lemerise & Arsenio, 2000). Cross-sectional research has shown that most preschool age children believe that successfully using aggression to obtain a reward will make them feel good, but that this "happy victimizer" tendency declines across the elementary school years (Arsenio, 2014). To date, however, few studies have used a longitudinal design to examine intra-individual changes and inter-individual variations in happy victimizing during the childhood years. The present investigation advances this literature by mapping changes in self-reported happy victimizing from 4 to 6 years of age and testing competing hypotheses concerning the regulatory and affective mechanisms underlying this

phenomenon. Given that children's anticipated emotions are linked to their real life aggressive and antisocial tendencies (Malti & Krettenauer, 2013), these findings may help to inform future efforts to prevent or ameliorate long-term maladaptive behavioral patterns from emerging.

We found that a majority of 4-year-olds expected to feel good after committing self-serving interpersonal transgressions, whereas by the age of 6 only a minority did so. Although researchers commonly describe children as "happy victimizers" well into middle childhood (e.g., Lagattuta, 2005), this assumption largely stems from research examining children's expectations regarding how *others* will feel. By contrast, our results are consistent with the age-related trends reported in past cross-sectional studies focused on children's expectations regarding their own emotional experiences (Hawley, 2003; Gummerum et al., 2010; Keller et al., 2003). These findings provide empirical support for the hypothesis that, compared to children's beliefs regarding how others might feel, self-attributed happy victimizer expectancies are less prevalent and decline more rapidly over time.

Our prospective longitudinal design also revealed important insight into the mechanisms thought to give rise to the happy victimizer phenomenon during this period. Inhibitory control and sympathy were positively correlated as expected ( $r = .32$ , see Table 1), yet each showed unique patterns of association with children's emotional expectancies. In partial support of the "care" hypothesis, we found that children higher in sympathy were initially less likely to happy victimize at age 4. This finding aligns with research showing that highly sympathetic children are particularly likely to focus their attention on the needs of others, express concern for others' pain and suffering, and engage in prosocial actions to alleviate others' distress (Eisenberg et al., 2014). Being attuned to the needs of others likely functions to amplify the aversive consequences of victimization, thus outweighing the positive gains that result from achieving one's own goals.



Happy victimization often is characterized as a normative and universal feature of preschoolers' emotional lives (e.g., Krettenauer et al., 2008; Lourenco, 1997; Nunner-Winkler, 1999). In light of these results, however, we believe it is time for researchers to adopt a more nuanced view of this phenomenon during the early childhood years (also see Arsenio, 2014; Malti, 2016). Specifically, it remains the case that a sizeable proportion of preschoolers *do not* show this response pattern, and those who do display a reduced sense of concern for others. Although we are not aware of any work linking preschoolers' happy victimizer attributions to behavioral problems at later ages, fixating on the positive consequences of victimization is uniquely associated with proactive aggression and the presence of callous-unemotional tendencies (Arsenio, 2014; Frick et al., 2014). This is concerning given that both proactive aggression and callous-unemotionality are risk factors for severe and persistent antisocial outcomes later in development.

Many existing intervention and prevention programs for early childhood conduct problems are explicitly designed to address social skill "deficits" in high-risk and clinical populations (Shaw & Taraban, 2017). However, preschoolers who selectively use aggression for self-gain are often socially dominant, intelligent, and skilled in their interactions with peers (Hawley, 2014), which may help to explain why intervention initiatives have been relatively ineffective in reducing proactive aggression and bullying behavior (Ellis, et al., 2016). Accounting for preschoolers' own expectations regarding the emotional consequences of hurting others may facilitate early identification of children fitting the profile of the socially competent aggressor (Hawley, 2014). Targeting the capacity to reflect on the consequences of actions and consider the needs of others (e.g., through perspective-taking training) may increase the likelihood that children will begin to associate aggressive actions with unpleasant feelings of

concern or regret, rather than exclusively fixating on the potential for reward. Over time, these nascent affect-event schemas may solidify and help to inhibit future aggressive impulses (Arsenio & Lover, 1995). These efforts are likely to be most effective if they are enacted when happy victimizer tendencies are at their peak during the preschool and early school years, as there is some evidence that similar programs implemented at later ages may have little impact on aggressive and bullying behaviors (Ellis et al. 2016).

We also found partial support for the "control" hypothesis; children higher in inhibitory control showed faster declines in happy victimizing over time. Greater inhibitory skills during the preschool years may accelerate children's developing ability to coordinate and integrate their own perspective with those of the victim being harmed, allowing them to resist the immediate allure of material gain to focus on the negative repercussions of victimization for others as well as the self (Arsenio & Lover, 1995; Malti, 2016). This interpretation is consistent with research indicating that executive functioning skills in early childhood, including inhibitory control, contribute to later advances in mental state understanding (Devine & Hughes, 2014). In addition, preschoolers who are better at controlling their impulses may be quicker to adopt impression management strategies at later ages, allowing them to avoid expressing undesirable or unacceptable views. This interpretation aligns with research showing that inhibitory control is positively associated with children's willingness to lie to cover up a misdeed (Talwar & Lee, 2008), and that socially desirable responding is linked with lower rates of happy victimizing during the middle childhood years (Krettenauer et al., 2013).

Interestingly, inhibitory control was not associated with the general propensity to happy victimize at the beginning of the study. This contrasts with Gummerum et al.'s (2016) finding that inducing inhibitory abilities reduces happy victimizer responses in children as young as 4

years of age. However, other studies have shown that prompting children's initial responses to consider whether a victimizer could feel alternative emotions—thereby reducing the impulse to provide the most dominant response—successfully elicits mixed and negative emotion attributions in 6- and 8-year-olds, but not 4-year-olds (Arsenio & Kramer, 1992). Thus, it remains unclear whether individual differences in inhibitory control contribute to happy victimizing when it is most prevalent during the preschool years, although it does appear to increase in importance with age.

We also found that sympathy, despite being correlated with happy victimizer scores at T1 and T2, did not predict growth in children's responses over time. Given that more sympathetic children were less likely to happy victimize from the outset, there may simply have been less room for subsequent declines in the tendency. This illustrates how growth modeling can be used to address important developmental questions, such as the extent to which variability in a construct at different ages reflects stable between-child differences vs. within-child change processes. In addition, our operationalization of happy victimization as the presence of positive emotions based on self-centered concerns, although appropriate for our research questions, did not allow us to differentiate between various negative emotional expectancies that may emerge over development. Sympathy may contribute to increases in negative emotions grounded in a concern for others' welfare (i.e., ethical guilt), but may be unrelated or even associated negatively with the development of non-ethical negative emotions such as fear of punishment or anxiety over rule-breaking. As ethical and non-ethical negative emotion expectancies are differentially linked to aggressive and prosocial outcomes (Tani & Ponti, 2018), future research should examine the processes that contribute to different types of negative emotions children associate with victimization.

In addition to the novel insights this study provided, it is also important to discuss its limitations. Our sample, although ethnically diverse, was predominantly comprised of middle to upper-middle socioeconomic status families living in a large, urban area. Although the developmental trajectory we observed is consistent with prior studies (Chaparro, et al., 2013; Gummerum et al., 2010; Keller et al., 2003), caution should be used when generalizing these findings to less affluent populations.

The caregiver report measures we used in this study, although valid, are rather broad in scope and subject to certain biases (Eisenberg et al., 2014; Rothbart & Bates, 2006). Behavioral tasks would provide a more objective and fine-grained assessment of these constructs. For instance, the degree to which children fixate on the victim's pain vs. the positive outcomes of aggression may be more closely linked to performance on tasks assessing inhibitory strength (i.e., ability to overcome a strong prepotent response) rather than endurance (i.e., capacity to sustain inhibition of a prepotent response for long periods of time; Simpson & Carroll, 2019). Relatedly, future studies should assess a broader range of children's cognitive functioning (e.g., flexibility, working memory, counter-factual reasoning skills) to delineate which of these distinct-yet-interrelated mechanisms may be driving changes in emotion expectancies. For example, developing the ability to simultaneously hold differing perspectives in working memory, rather than the capacity to enact or sustain the inhibition of salient reward cues, may better explain declines in happy victimizer responses.

We focused on inhibitory control and sympathy given their centrality in prior theorizing and research on this phenomenon (Arsenio, 2014; Krettenauer et al., 2008), and because individual differences in each construct begin to stabilize during early childhood and are predictive of future social-emotional adjustment outcomes (Eisenberg et al., 2014; Rothbart &

Bates, 2006). Nevertheless, a variety of factors not examined in the present study likely contribute to developmental changes in happy victimizer expectations during this period. For instance, by the age of 3 or 4 children reliably judge intentional ethical violations as wrong, yet their reasoning about issues of fairness, rights, and others' welfare increases in sophistication across development as they begin to integrate information from differing perspectives, consider mitigating circumstances, and apply their ethical concepts to more abstract and unfamiliar situations (Killen & Smetana, 2015). Despite widespread agreement among scholars that judgments and emotions are intricately linked (Malti & Ongley, 2014), the degree to which ethical cognitions and emotional expectancies co-develop over time remains unknown. Similarly, although children's understanding of the world is formed through their social experiences, there is a surprising dearth of research examining how interactions in family or peer contexts may serve to promote or discourage happy victimizer tendencies.

Consistent with the conceptualization of victimization as involving a violation of others' welfare or rights (Arsenio, 2014), our hypothetical vignettes depicted clear-cut instances of direct (shoving) and indirect (stealing) aggression. By contrast, prior studies have often included a range of stories depicting aggressive and non-aggressive interpersonal conflicts, such as failing to act prosocially (e.g., Nunner-Winkler, 1999) or honor agreements (e.g., Krettenauer et al., 2014). This is notable given that children differentiate between aggressive and non-aggressive social transgressors in their evaluations and expected emotional outcomes (Kahn, 1992; Weller & Lagattuta, 2013). Moreover, Nunner-Winkler (1999) found that children continue to attribute positive emotions to actors who refrain from helping or sharing well into middle to late childhood. Research comparing longitudinal trajectories and correlates of happy victimizing in both aggressive and prosocial omission contexts will provide a more comprehensive

understanding of the processes involved in this phenomenon. Doing so may also help to clarify whether, and under what circumstances, showing happy victimizer tendencies at different ages reflects a normative or atypical response pattern (Nunner-Winkler, 1999). Relatedly, we limited our investigation to 4 to 6 years because this age range represents a period marked by rapid shifts in emotion expectancies (Hawley, 2003; Gummerum et al., 2010; Keller et al., 2003). Following children over a longer developmental time frame will help to clarify whether the presence of happy victimizer expectancies in early childhood has relevance for social and behavioral adjustment at later ages.

One final issue that has thus far received scant attention concerns the prevalence of missing data in studies employing the happy victimizer paradigm. Despite our best efforts to maximize comprehension, approximately one-fifth of participants at T1 were unable to provide a codable response to either story. In their pioneering study, Nunner-Winkler and Sodian (1988) also found that between 25% to 45% of 4-year-olds' responses to each story could not be classified reliably. By including auxiliary variables that correlated with missing data patterns, we were able to utilize the full sample in order to maximize power and reduce the potential for biased results (Graham, 2012). However, happy victimizer research has rarely provided information on the proportion of missing responses or what steps were taken to deal with this issue. Moreover, many prior studies have focused solely on how children may expect themselves or others to feel without asking them to explain their underlying reasons and motivations. These omissions make it difficult to evaluate claims regarding the nature and generality of happy victimization in very young children. Moving forward, we strongly recommend that researchers (a) take steps to maximize children's comprehension of interview questions, (b) assess their reasons for expecting to feel certain emotions, (c) report detailed information regarding the

proportion of responses that are deemed uncodable and methods for handling missing data, and (d) include theoretically and empirically relevant measures in the estimation of missing data in order to reduce the potential for biased and misleading results.

In conclusion, this study constitutes one of the first longitudinal investigations of the happy victimizer phenomenon during the childhood years. Most (but not all) preschoolers expected to feel good after victimizing others based on self-focused concerns, but this tendency rapidly declined with age. We also found partial support for the "control" and "care" hypotheses in that both were associated with happy victimizer responses, but at different points of development. Whereas declines in happy victimizing seem to be normative across early childhood, those with more care and control may be on the fast track to reconsidering positive feelings after harming others. Exactly which negative emotions children transition into (and why) remains a potentially fruitful avenue for future study.

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Table 1  
*Descriptive Statistics and Bivariate Correlations Among All Study Variables*

	M	SD	Observed Range	1	2	3	4	5	6	7	8	9
1. Household income	8.05	1.56	1 to 9	1	.13 <sup>†</sup>	.11	.18*	-.16	.15	-.13	.02	.07
2. Caregiver education	4.99	0.98	1 to 7		1	.03	.09	.06	.01	-.15	-.07	.20**
3. Child gender (male)	.50	.50	0 or 1			1	-.14 <sup>†</sup>	.06	-.03	.08	-.15 <sup>†</sup>	-.20*
4. Verbal ability	13.84	4.20	1 to 26				1	-.07	-.07	-.26**	-.11	.03
5. T1 HV (4 years)	0.98	0.90	0 to 2					1	.38**	.21 <sup>†</sup>	-.21*	.04
6. T2 HV (5 years)	0.69	0.82	0 to 2						1	.29**	-.26**	-.02
7. T3 HV (6 years)	0.53	0.79	0 to 2							1	-.08	-.29**
8. Sympathy	4.16	1.19	0.80 to 6.00								1	.32**
9. Inhibitory control	3.99	0.91	0.86 to 6.00									1

Note. N = 150. HV = happy victimizer scores

<sup>†</sup>  $p \leq .10$  \*  $p \leq .05$  \*\*  $p \leq .01$ .

Table 2  
*Parameter Estimates for the Unconditional LGC Model*

	Median point estimate ( <i>SD</i> )	95% credibility interval	<i>p</i> value
Means			
Intercept	0.00 (.000)	--	--
Slope	-0.401 (.097)	-.595, -.219	< .001
Variances			
Intercept	0.256 (0.114)	.118, .559	< .001
Slope	0.185 (0.075)	.090, .376	< .001
Covariance	-.041 (.065)	-.194, .063	.22
Thresholds			
$\tau_1$	-0.263 (0.117)	-.498, -.036	.012
$\tau_2$	0.374 (0.117)	.141, .602	.001

*Note.* *SD* = standard deviation of the posterior distribution; *p* = proportion of posterior distribution that is equal to or greater/less than zero (for negative/positively signed coefficients, respectively).

Table 3  
*Parameter Estimates for the Conditional LGC Model*

	Intercept					Slope				
	Unstandardized		Standardized		<i>p</i> =	Unstandardized		Standardized		<i>p</i> =
	Coeff ( <i>SD</i> )	95% CI	Coeff ( <i>SD</i> )	95% CI		Coeff ( <i>SD</i> )	95% CI	Coeff ( <i>SD</i> )	95% CI	
Income	-.014 (.131)	[-.273, .249]	-.020 (.177)	-.365, .331	.454	.018 (.091)	-.161, .197	.035 (.172)	-.302, .369	.417
Education	.065 (.164)	-.255, .395	.057 (.139)	-.213, .333	.342	-.099 (.136)	-.369, .162	-.120 (.159)	-.427, .197	.226
Gender (male)	-.013 (.311)	-.638, .600	-.006 (.135)	-.269, .255	.484	-.060 (.248)	-.557, .425	-.037 (.151)	-.332, .256	.400
Verbal ability	-.029 (.042)	-.115, .053	-.111 (.153)	-.405, .194	.236	-.030 (.032)	-.093, .032	-.157 (.163)	-.481, .158	.167
Sympathy	<b>-.348</b> <b>(.153)</b>	<b>-.681, -.081</b>	<b>-.369</b> <b>(.141)</b>	<b>-.644, -.089</b>	<b>.005</b>	.115 (.117)	-.110, .363	.170 (.167)	-.166, .484	.160
Inhibitory control	.262 (.194)	-.101, .673	.216 (.150)	-.081, .508	.074	<b>-.296</b> <b>(.161)</b>	<b>-.628, .006</b>	<b>-.338</b> <b>(.171)</b>	<b>-.662, .007</b>	<b>.027</b>
Total <i>R</i> <sup>2</sup>			.25					.30		

*Note.* Coeff = Coefficient; *SD* = standard deviation of the posterior distribution; CI = credibility interval; *p* = proportion of posterior distribution that is equal to or greater/less than zero (for negative/positively signed coefficients, respectively). Significant effects (*p* ≤ .05) are bolded.

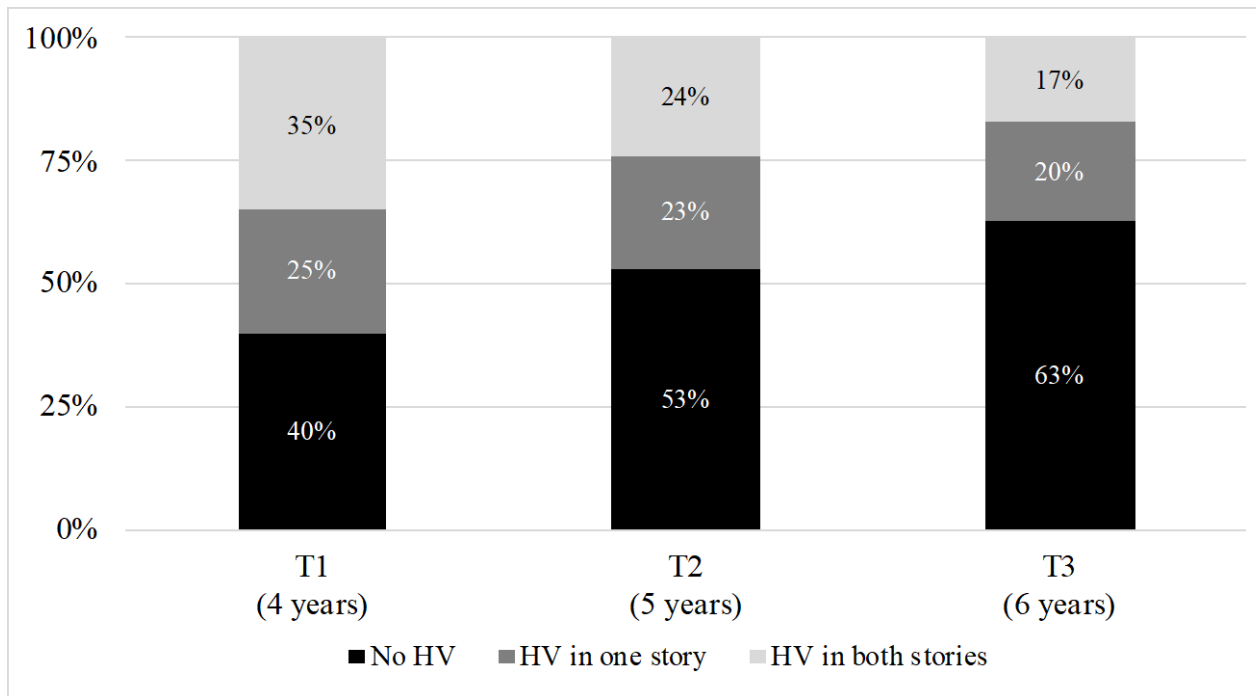


Figure 1. Expected percentage of children offering happy victimizer responses to none, one, or both stories over time. Percentages were derived using the threshold, mean, variance, and covariance estimates from the unconditional LGC model based on the formula provided in Lee et al. (2018, p. 306).