Learning Healthy Sleep Behaviors: The Importance of Selection, Self-Concepts, and Social Comparison in Narrative Self-Education

Dissertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

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2017

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Abstract

Individuals may attend to persuasive narratives in two manners: (1) through incidental narrative exposure where an individual is exposed to health messages in entertainment content inadvertently and (2) overt narrative exposure or narrative self-education (NSE) through seeking health information online in the form of narratives or testimonials. Health campaigns may utilize a NSE-perspective, tailoring testimonials according to key characteristics of target recipients. This study examines the importance of selection, tailoring, self-concepts, and social comparisons in NSE, testing predictions from social cognitive theory and the selective exposure self- and affect-management. It proposes a 3 (tailoring match vs. tailoring mismatch vs. selective exposure) x 2 (authoritarian/cry-it-out method vs. authoritative/graduated extinction method) experimental design, with the purpose of educating mothers on preschoolers’ ideal sleep hygiene habits and two methods to resolve common bedtime issues in the format of parent testimonials. Results indicated that tailoring testimonials according to participants’ reported parenting style did not enhance persuasive effects. Participants in both the tailored match and tailored mismatch conditions reported increased self-efficacy with respect to the sleep training methods. In the selective exposure condition, authoritative parenting style predicted selection of authoritative testimonials, but these testimonials reduced method self-efficacy and outcome expectations. Authoritarian testimonials were
more effective in positively influencing relevant outcome variables for authoritative parents. Finally, this study demonstrated that social comparisons (i.e., self-evaluation and self-inspiration) are mechanisms of NSE.
Dedication

This work is dedicated to the memories of my father, Vincent J. Kaminski, and my grandmother, Joan Sworden.
Acknowledgments

I would like to express endless gratitude to my advisor, Silvia Knobloch-Westerwick, for mentoring me these past four years. She has supported me in every way as I have grown as a communication researcher and provided me with countless opportunities to enhance my skills. Words cannot express how much I appreciate all the time she has dedicated to teaching me.

I also would like to acknowledge my committee members, Emily Moyer-Gusé, Amy Nathanson, and Michael Slater. I truly appreciate all the time you have spent guiding me through the dissertation process. Each of you has been instrumental in helping me develop a strong line of programmatic research that will carry me through my early career as a scholar.

I would like to extend a thank you to all of the faculty and students in the School of Communication for their endless support, especially the members of Silvia’s research lab. I would especially like to thank Megan Vendemia who has become one of my best friends. Without her friendship and support, I am not sure I would have made it through the first few weeks of graduate school, living apart from my husband and family.

Lastly, and perhaps most of all, I would like to thank my husband, Brandon Robinson, who supported me in pursuing my PhD, even though it meant living in two different cities for the last four years. His love and support has motivated me to succeed.
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Chapter 1: Introduction and Overview

Communication scholars have spent many hardworking hours in the research laboratory examining the best methods to convey health information in hopes that the targeted audience will absorb this information and change their health behaviors accordingly. Embedding health information into entertainment content has been touted for its effectiveness in overcoming resistance and counterarguing that overt persuasive appeals, such as advertisements or brochures, face (Green & Brock, 2000; Moyer-Gusé, 2008). In narrative persuasion studies, information regarding the target health behavior is woven into the storyline so that it is relevant to the characters and plot (Fisch, 2000), and often, the persuasive intent of the narrative is not obvious to participants (see de Graaf, 2014; Hoeken & Sinkledam, 2014, as examples). Learning health information about a specific illness through watching an episode of Grey’s Anatomy is an example of incidental exposure of narrative persuasion where the individual’s primary purpose of watching the episode is for entertainment, but she may incidentally learn health information. For example, Rideout (2008) demonstrated that an HIV-related storyline embedded into an episode of Grey’s Anatomy influenced individuals’ subsequent attitudes regarding the health issue.

However, the persuasive intent of narratives does not always have to be hidden for them to be effective at changing health-related knowledge and behaviors (see Jensen
et al., 2014; Kreuter et al., 2010, as examples). For instance, Jensen et al. (2014) examined the effect of narrative and non-narrative messages on intentions to be screened for colorectal cancer in a health intervention. Participants were aware of their participation in this health program and the persuasive intent of the health messages they received. However, results indicated that narrative messages were still four times more likely to influence intentions to be screened for colorectal cancer compared to non-narrative messages (Jensen et al., 2014). Further, the Internet provides individuals with a wealth of personal testimonials from others who are experiencing similar illnesses or health obstacles. For example, one survey demonstrated that women with weak social support from family and friends sought social support online through narratives on interpersonal and psychosocial information about cancer (Kim, Shah, Namkoong, McTavish, and Gustafson, 2013). In essence, persuasive narratives may divided into two broad categories: (1) incidental narrative exposure where an individual is exposed to health messages in entertainment content inadvertently and (2) overt narrative exposure or narrative self-education through seeking health information in the form of narratives or testimonials.

The proposed study takes a narrative self-education (NSE) perspective where individuals intentionally seek health information in the format of narratives online. This perspective is important to consider, because narrative persuasion research has not yet examined the implications of the self and selective exposure in study design often utilizing forced exposure studies featuring a single narrative (see Green & Brock, 2000; Borrayo, Rosales, & Gonzalez, 2016, for examples). However, in the media selection
process, individuals’ characteristics, interests, and motivations influence which messages they choose and process (Knobloch-Westerwick, 2015a). It is possible that narratives may be even more effective, with the long-lasting results communication researchers desire, if individuals are allowed to select the narrative option that most interests them based on their own characteristics and needs. Tailoring research has taken a step in this direction by matching participants to messages based on their demographics, risk in developing the targeted disease, self-efficacy, and other health variables, but to date, only one study has examined the effectiveness of a tailored narrative (e.g., Jensen et al., 2014). Further, the message selection in tailoring is still forced rather than selective. The current study aims to compare the persuasive effectiveness of tailoring vs. selective exposure to a narrative.

It proposes a 3 (tailoring match vs. tailoring mismatch vs. selective exposure) x 2 (authoritarian/cry-it-out method vs. authoritative/graduated extinction method) design. The population of interest will be mothers of preschool children with the purpose of educating mothers on preschoolers’ ideal sleep hygiene habits and how to resolve common bedtime issues in the format of parent testimonials. The current study draws on SCT and the Selective Exposure Self- and Affect Management model’s theoretical framework which predicts that individuals’ currently activated self-concepts (i.e., mother, daughter, romantic partner) motivate the selection and processing of narratives (SESAM, Knobloch-Westerwick, 2015a). Outcome variables, derived from SCT, include mothers’ self-efficacy and outcome expectations in handling bedtime resistance behaviors both
immediately after media exposure and one week later with behavior change measured one week later as well.

In the following, the theoretical perspectives and corresponding prior research are examined in Chapter 2. Research regarding overt narrative exposure is reviewed as well as common mechanisms utilized in this area including transportation. Then, possible mechanisms of influence for NSE are explored based on SCT. Next, the role of the self and social comparison in narrative persuasion is explained with a focus on tailoring research, SCT, and the SESAM model. An in-depth examination of social comparison motivations and directions is provided to understand the complexity of media exposure’s effects. Hypotheses and research questions are derived from the literature. Finally, an overview of the importance of sleep in young children is provided with an examination of common bedtime problems young children encounter and sleep training methods to overcome these issues. Two methods (cry-it out and graduated extinction) are explained and provide the instructions that will be embedded in the testimonials. Then, an explanation of parenting styles is provided and it is hypothesized as to which sleep training method works best for each parenting style.

Chapter 3 details the procedures and measures used in the current study. It reviews the development and pretesting of the narrative testimonials and their corresponding titles and descriptions. The pretest procedures are explained, and the testimonials, titles, and descriptions that passed the manipulation check were selected based on the results. The chapter then provides the procedures, measures, and analytical approach used in the main study and follow-up survey one week later.
Then, Chapter 4 presents the results of the study, in which 303 mothers of pre-school aged children participated. Repeated-measures ANOVAs examine the effects of forced vs. selective exposure, matched vs. mismatched tailoring, and parenting style on relevant outcome variables including mothers’ self-efficacy, outcome expectations, and behaviors both immediately after media exposure and one week later. Logistic regression models examine if parenting style predicts selection of specific narrative testimonials portraying CIO or GE sleep training methods. Further, parallel moderated mediation analyses examine the influence of parenting style on reading times and subsequent outcome variables. The role of self-evaluation and self-inspiration social comparison as mechanisms of narrative self-education are also examined. Chapter 5 summarizes these findings and ties them to relevant literature. In addition, limitations, future directions, and conclusions are provided. Finally, the appendices present results in tables and figures, including the full set of stimuli and measures utilized in the main session and follow-up survey.
Chapter 2: Theoretical Background

Narrative Persuasion

A narrative is defined as “a representation of connected events and characters that has an identifiable structure, is bounded in space and time, and contains implicit or explicit messages about the topic being addressed” (Kreuter et al., 2007, p. 222). Narratives have the power to influence beliefs and attitudes, and this has been supported by a plethora of studies in the field of communication. Placing health messages in a narrative allows for a more subtle form of persuasion that helps to reduce counterarguing and resistance (Moyer-Gusé, 2008; Slater & Rouner, 2002). Narrative persuasion research has frequently and consistently demonstrated that embedding health behaviors in a narrative message influences individuals’ health-related knowledge, beliefs, and intentions to engage in the behaviors mentioned (e.g., de Graaf, 2014; Lee & Shapiro, 2015; Nan, Dahlstrom, Richards, & Rangarajan, 2015).

Broadly, narrative messages may be encountered in two ways, although this categorization may not speak to all possible nuances: (1) in the form of incidental exposure where persuasion is not intended or (2) or in narrative self-education (NSE) where the persuasive intent is overt and individuals may seek health information in the form of testimonials online in or via health interventions. For instance, incidental persuasion may occur when viewing a medical drama like Grey’s Anatomy, where the
health storylines are “added for their dramatic appeal but nonetheless incidentally promote healthy behaviors” (Moyer-Gusé, 2008, p. 409). The mechanisms influencing persuasion may be different based on individuals’ reasons for seeking out the narrative message. Transportation, a mechanism commonly associated with incidental persuasion, may not be as effective for NSE. Although the situations where individuals encounter narrative messages may be quite complex, the current study examines one aspect of NSE where individuals may seek information in the format of narrative testimonials and investigates if different mechanisms of persuasion may be at work. The next section examines why transportation may not be the best mechanism of influence in NSE.

Transportation as a mechanism of incidental narrative exposure.

Transportation is one of the most popular mechanisms used in narrative persuasion research. The metaphor of “transportation” is used to describe the narrative experience where an individual is a “traveler” taken to a different world and was first coined by Gerrig (1993). The medium (i.e., novel, movie, or TV show) is the mode of transportation that takes an individual to the narrative “world,” where he or she loses access to real world thoughts except those that breathe “life” into the characters. The individual leaves the narrative “world” changed by the experience, and this is when real-world attitudes or beliefs are altered. In narrative processing, individuals engage in a “willing suspension of disbelief” (Coleridge, 1817; see critique by Zillmann, 2011) where individuals first disbelieve in the story world and have to actively engage in a special mental process to overcome this initial disbelief. The components of transportation include “emotional
reactions, mental imagery, and a loss of access to real-world information,” allowing for belief change after leaving the story world (Green & Brock, 2000, p. 703).

It is important to note that both Gerrig (1993) and Green and Brock (2000) assert that transportation is a special mental process unlike the dual process models like the elaboration likelihood model or heuristic-processing model (ELM, HSM; Gerrig, 1993). Green (2006) argues that existing persuasion theories (e.g., ELM or HSM) cannot explain persuasion from narratives since narratives contain events rather than “explicit arguments and lists of facts” (p. S164). Elaboration, per the ELM, involves paying close attention to and evaluation of the arguments in a message, but transportation is immersion into a message (Green & Brock, 2000). Green (2006) asserts that “narratives rely on characters rather than external sources and often are presented as entertainment rather than education” (p. S164). But this conceptualization of transportation does not consider when individuals seek out health narrative testimonials from others for the purpose of evaluating what they should do when facing a similar health situation. Here, transportation is presented as a mechanism of persuasion for entertainment narratives that do not explicitly intend to influence audience’s beliefs or intentions in a specific manner.

**Empirical support for transportation through incidental exposure.** Green and Brock (2000) may have been the first scholars to empirically examine the use of transportation as a mechanism of narrative persuasion, developing and validating a transportation scale. Participants in their first study read a narrative featuring a young woman who witnesses her sister being stabbed to death by a psychiatric patient out on furlough at the mall. The persuasive intent of the narrative was not overt because the
cover story simply asked participants to read a short “fiction feature.” After reading the narrative, participants completed the transportation scale and reported agreement regarding belief in a just, fair world. Results from this study indicated that highly transported participants were more likely to report story consistent beliefs (e.g., the belief that psychiatric patients’ freedoms should be restricted). Since 2000, a number of studies have utilized transportation as a mechanism of belief change in areas such as opinions on homosexuality (Green, 2004), cancer-related knowledge (Murphy, Frank, Moran, & Patnoe-Woodley, 2011), and acceptance of false beliefs (Appel & Richter, 2007) through incidental exposure to narratives. For instance, highly transported women who watched a Desperate Housewives episode when a character is diagnosed with Hodgkin’s lymphoma reported seeking more information about cancer following exposure to the episode (Murphy et al., 2011).

Mechanisms of influence for health narrative education. However, different mechanisms of influence may be functioning when individuals intentionally seek out health information in the format of narratives. For example, Ricketts et al. (2010) compared the effectiveness of assembly instructions for a preschooler’s swing in three conditions: assembly instructions containing a narrative-based safety message, instructions with a concrete but non-anecdotal safety message, and instructions with a traditional abstract safety message. Results from their study indicated that transportation was not a mechanism of persuasive influence, and this result may have occurred because individuals were reading assembly instructions for information rather than to be entertained.
With respect to HSE, it may be necessary to examine variables from behavior change theories as mechanisms of influence. Perrier and Martin Ginis (2016) conducted a meta-analysis of 52 narrative persuasion studies and concluded that most studies were not consistent in their use of behavior change theories for the creation and evaluation of the interventions. Only two studies out of 52 measured all relevant theoretical constructs from the theory. Therefore, these authors call for narrative research to use behavior change theories more consistently in both the development and evaluation of narrative stimuli. The current study draws on SCT and the SESAM model to develop narrative testimonials in response to Perrier and Martin Ginis (2016). Commonly used mechanisms of influence from SCT in narrative persuasion are reviewed in the next section.

**Social Cognitive Theory and Narrative Persuasion**

Since promoting healthy attitudes and behaviors are key goals in narrative persuasion, a strong theoretical framework is needed to understand how elements in a narrative function effectively. SCT (Bandura, 1977, 2004a) is one theory that is frequently used in narrative persuasion studies (e.g., de Graaf, 2014; Hether, Huang, Beck, Murphy, & Valente, 2008; Lee & Shapiro, 2015; M. Robinson & Knobloch-Westerwick, 2016). Further, some of narrative’s effective mechanisms of influence (i.e., perceived similarity and identification) are components of SCT. This section will briefly review the basics of SCT and these mechanisms.

According to SCT, self-efficacy, knowledge about a behavior, outcome expectations, perceived environmental obstacles, perceived facilitators, and goals are the critical variables driving an individual’s behavior change (Bandura, 1977, 2004a). Self-
efficacy is cited as the key variable in behavior change. It is defined as the belief that an individual has the ability to enact a new behavior (Bandura, 1977, 2004a). Individuals acquire new information related to knowledge, outcome expectations, and how to enact behavior change through *social modeling*, or observational learning (Bandura, 2004b). In fact, Bandura argues that most human behaviors are learned through observation of others (Bandura, 1977). *Social modeling* is described as occurring when “observing others, one forms a conception of how new behavior patterns are performed, and on later occasions the symbolic construction serves as a guide for action” (Bandura, 1977, p. 192). In his writings, Bandura has used observational learning and social modeling interchangeably. However, Bandura (2004b) utilized the term *social modeling* when examining how individuals learn via media messages. Further, he highlights modeling through media as a great opportunity to reach a large population, allowing for social models on TV to “serve as transmitters of knowledge, values, cognitive skills, and new styles of behavior” (Bandura, 2004b, p. 78). Thus, the current paper will use the term *social modeling* given our interest in media messages.

Further, SCT predicts that learning via social modeling occurs through the mechanism of social comparison with the role model, specifically self-evaluation. To date, narrative persuasion research has not yet investigated social comparison as a mechanism of influence. This section will first review mechanisms of SCT that have been identified in narrative persuasion literature including perceived similarity and identification. Then social comparison and the role of the self will be further examined to understand how this mechanism functions in NSE.
**Perceived similarity.** Perceived similarity occurs when an individual thinks that he or she is similar to the media character (Cohen, 2001; Moyer-Gusé, 2008). SCT predicts that outcome variables of self-efficacy and behavior change are influenced by perceived similarity between the individual and role model (Bandura, 1977). Narrative persuasion studies have manipulated protagonist similarity with that of the target audience. Similar role models have also been effective in reducing college students’ intentions to drink alcohol (Andsager et al., 2006) and in influencing negative drunk driving outcome expectations (Pinkleton, Weintraub Austin, & Van de Vord, 2010) in health interventions utilizing narratives. Based on these studies, it is evident that perceived similarity is important to consider in narrative persuasion research.

**Identification.** Identification is another commonly used mechanism of narrative persuasion in both incidental exposure studies (see Hoeken, Kolthoff, & Sanders, 2016; Hoeken & Sinkledam, 2014) and health interventions (see McQueen et al., 2011; Pinkleton, Weintraub Austin, Cohen, Miller, & Fitzgerald, 2007). Identification also has roots in SCT, and Bandura (1969) highlighted that there are multiple conceptualizations of identification and a lack of agreement regarding a true definition of the concept in the literature. He used identification, imitation, and social modeling interchangeably, positing that they were all describing the same phenomenon. Bandura’s piece published in 1969 provided two definitions: one more general and the other relating to SCT. The general definition conceptualized identification as a “process in which a person patterns his thoughts, feelings, or actions after another person who serves as a model” which is similar to imitation (Bandura, 1969, p. 214). More specific to SCT, Bandura (1969)
defined identification as a “continuous process in which new responses are acquired, and existing repertoires of behavior are modified to some extent as a function of both direct and vicarious experiences with a wide variety of actual or symbolic models, whose attitudes, values, and social responses are exemplified behaviorally or in verbally coded forms” (Bandura, 1969, p. 255).

Cohen’s (2001) conceptualization of identification is often used in narrative persuasion literature (see de Graaf et al., 2009; Hoeken & Fikkers, 2014; Moyer-Gusé, Jain, & Chung, 2012, for examples). Here, identification is “an imaginative process through which an audience member assumes the identity, goals, and perspective of a character” (Cohen, 2001, p. 261). Further, identification is an opportunity for vicarious experience regarding “things we cannot, or have not yet had the chance to, experience in person” (Cohen, 2001, p. 249). Bandura’s and Cohen’s conceptualizations of identification have similar features. For instance, both acknowledge that vicarious experience occurs when individuals share the thoughts, feelings, and goals of the media character or social model. However, their elaboration of ‘vicarious’ experience differs: Cohen (2001) argued that identification involves a loss of self-awareness. On the other hand, Bandura (1969) did not allude to a loss of self-awareness in the process of identification. He argued that during vicarious experiences, social comparison occurs where the individual compares herself with the social model for the purpose of “vicarious thought verification.”

Moyer-Gusé (2015) acknowledged that an individual may fluctuate in and out of identification with the protagonist at different points in the story line. It is possible that
identification may be a mechanism of influence when individuals intentionally seek out narratives to learn healthy information as well. However, since identification has already been examined in the literature as a mechanism of narrative persuasion, the current study will draw upon social comparison as a mechanism of learning from social models as a less thoroughly investigated mechanism thus far (e.g., media characters), per SCT and the SESAM model.

**The Role of the Self and Social Comparison in Narrative Persuasion**

Since previous narrative persuasion literature has mostly utilized concepts like transportation and identification, the focus of research has been on how the loss of one’s self-awareness and loss of access to real-world facts influence subsequent persuasion. However, according to SCT, learning new information about a behavior is acquired through social comparison processes where an individual must evaluate his or her behaviors with those of the social model (Bandura, 1969, 1977). This process is more likely to occur in NSE when individuals are intentionally seeking out health information from personal testimonials of others with similar health issues. However, narrative persuasion research has not yet thoroughly investigated the role of the self in selecting and processing narrative information.

On the other hand, tailoring research has examined the role of the self, but not selectivity, in message design by customizing messages based on an individual’s characteristics and needs. Tailored health messages fall under the category of NSE because individuals are usually aware of the persuasive intent of the health messages they receive from health campaigns or interventions (see Jensen et al., 2014; Kreuter & Wray,
Tailoring research usually employs a forced exposure design where algorithms provide individuals with a personalized message based on responses to baseline measures. This section will review tailoring research, and then connect SCT and selective exposure with the SESAM model for a better understanding of how the self, motivations, and affect of an individual may be central to narrative persuasion. A brief explanation of the SESAM model is provided. Then, current research examining self-concepts in narrative persuasion is reviewed, and hypotheses will be derived through connecting tailoring research with the SESAM model, social comparison motivations, and SCT.

**Tailoring in health interventions.** Health interventions use stimuli that range from generic, stock messages to highly customized messages based on an individual’s characteristics (Noar, Grant Harrington, Van Stee, & Shemanski Aldrich, 2011). A generic message is not tailored to any specific audience or individual. An example is a medical brochure on diabetes that one may find at a physician’s office. On the other hand, targeted health messages are developed for a certain segment of the population such as a health communication campaign on breast cancer screening for Latina women living in the United States (Noar et al., 2011). A tailored message is customized to an individual based on characteristics reported prior to receiving the health message (Kreuter, Farrell, Olevitch, & Brennan, 2000; Noar et al., 2011). More specifically, tailoring is “any combination of strategies and information intended to reach one specific person, based on characteristics that are unique to that person, related to the outcome of interest, and derived from an individual assessment” (Kreuter, Strecher, & Classman, 1999, p. 277). For example, a tailored message to promote cessation of smoking may be
customized based on an individual’s characteristics such as readiness to quit smoking, self-efficacy, and/or level of nicotine addiction (Kreuter & Way, 2003). Today’s computer technology makes tailoring more convenient and cost effective because individuals can complete questionnaires, and computer algorithms will match their characteristics with the most appropriate, customized health message (Kreuter et al., 2000).

Research demonstrates that tailored messages are often more effective than both generic and targeted messages at influencing individuals’ health-related knowledge and behaviors (e.g., Krebs, Prochaska, & Rossi, 2010; Kreuter & Wray, 2003; Noar, Grant Harrington, & Shemanski Aldrich, 2009). Tailored health communication messages have been effective in areas promoting dietary improvement, exercise, smoking cessation, and breast cancer screening (Krebs et al., 2010). For instance, one study demonstrated that participants who were given tailored, illustrated pamphlets regarding breast cancer screening reported greater intentions to get screened for breast cancer compared to participants who received stock message pamphlets either with or without illustrations (Jensen, King, Carcioppolo, & Davis, 2012). Jensen et al. (2012) tailored the messages based on individuals’ demographics, breast cancer risk, and health belief model variables (e.g., self-efficacy, benefits, barriers, and perceived susceptibility). Results from another study regarding improving dietary behaviors indicated that participants who received either tailored print messages alone or tailored print messages with personal counseling reported significantly better dietary outcomes compared to those participants that received targeted print messages (Elder et al., 2005). The materials in this study were
tailored based on individuals’ body mass index, readiness to change dietary behaviors, and their reported top 10 most frequently prepared meals at home.

Tailoring research has not yet investigated the effectiveness of tailored narratives. To date, one study has employed tailored narratives (Jensen et al., 2014). Jensen et al. (2014) examined the effect of stock, tailored, narrative, and tailored narrative messages on intentions to be screened for colorectal cancer. The tailored narrative in this study was customized based on the participants’ gender, race/ethnicity, self-efficacy, response efficacy, stage of change, cancer worry, and curability. Results indicated the tailored narrative was not significantly more effective at increasing screening intentions when compared to non-tailored narratives, although the trends were in the expected direction. However, more research in the area of tailored narratives is necessary before we rule them out as an effective message strategy. The current study compares the effectiveness of tailoring a narrative testimonial to selecting a testimonial. Participants in the tailoring condition were randomly assigned to read a testimonial that matched the parenting style they reported in baseline measures or were assigned to read a testimonial that did not match their reported parenting style to determine the effectiveness of the tailoring technique. The following hypothesis is proposed based on tailoring research:

H1: Overall, participants in the matched tailoring condition will experience higher self-efficacy regarding behaviors modeled by the parent in the testimonial (H1a) and increased positive outcome expectations (H1b) than the mismatched tailoring condition immediately after media exposure.
H2: Overall, participants in the matched tailoring condition will experience higher self-efficacy regarding behaviors modeled by the parent in the testimonial (H2a), increased positive outcome expectations (H2b), and greater behavior change (H2c) than the mismatched tailoring condition one week after media exposure.

One critique of tailoring research is that studies have not yet identified the mechanisms (i.e., moderators and mediators) through which tailoring works (Abrams et al., 1999, Noar et al., 2011; Rimer & Kreuter, 2006). Perceived message relevance has been identified as a mediator in message tailoring (e.g., Jensen et al., 2012), but Jensen et al. (2014) investigated ten mediators including perceived barriers, perceived benefits, self-efficacy, and response efficacy, but none of them were effective. In their discussion, they highlight the need to explore mechanisms of narrative persuasion (e.g., transportation and identification) as possible determinants of influence. However, tailoring research more closely aligns with NSE than incidental narrative exposure and should examine how individuals connect to the character in the tailored narrative as a mechanism for persuasion. Per SCT, individuals learn through observation of others via inferences of social comparison. The next section examines the role of the self and social comparison with narratives.

**The self and narrative selection per SESAM model.** Examining the role of selectivity in narrative persuasion is crucial because individuals can easily search for narratives and personal testimonials regarding various health issues on the Internet (Eddens et al., 2009) and are even making medical decisions based on these personal narratives. In fact, mothers are increasingly seeking advice from other mothers on
parenting websites and personal blogs (Pedersen & Smithson, 2010), preferring other mothers’ advice instead of medical experts’ advice (Madge & O’Conner, 2006). They also seek out parenting websites and blogs for emotional support (Madge & O’Conner, 2006). When mothers are searching for personal narratives for information, persuasion is not incidental rather it is intentional. The SESAM model provides a theoretical framework for examining how mothers are selecting personal testimonials.

The SESAM model is rooted in the selective exposure paradigm and examines how individuals’ characteristics influence their media selections (Knobloch-Westerwick, 2015a; Zillmann & Bryant, 1985). A basic assumption of the SESAM model is that individuals select messages to manage and regulate their self-concepts, which include traits, demographics, affective and cognitive states, and behaviors (Knobloch-Westerwick, 2015a). Thus, media use motivations are derived from individuals’ self-concepts. According to the SESAM model and other dynamic models, a reciprocal relationship occurs where an individual’s characteristics influence media selection and that media exposure subsequently influences or reinforces the individual’s characteristics, leading to accumulative effects over time (Früh & Schöbach, 1982; Knobloch-Westerwick, 2015a; Slater, 2007). In essence, the SESAM model examines (1) the role of an individual’s self-concept in media selection, (2) motivations to maintain a specific self-concept via social comparison with media messages, and (3) affect produced from social comparison.

For a clear understanding of the SESAM model, it is necessary to define self-concepts since they play a central role in media message selection. A self-concept is
dynamic and is comprised of an individual’s traits, demographics, cognitions, affect, and motivations (Knobloch-Westerick, 2015a). The SESAM model is particularly concerned with the working self (Markus & Wurf, 1987), which are the self-representations of an individual that are accessible at a particular time. The self-representations of the working self are activated “in response to whatever motives the individual is striving to fulfill” (Markus & Wurf, 1987, p. 314), and the working self will subsequently influence information processing, motivations, and affect (Knobloch-Westerick, 2015a). Individuals strive to activate certain self-concepts by selecting media messages related to those self-concepts, per the SESAM model (Knobloch-Westerick, 2015a). Further, the currently activated self-concept drives behavior change (Comello & Farman, 2016; Wheeler, DeMarree, & Petty, 2007).

For example, an individual may choose to listen to love songs on the way to a dinner date with a spouse to activate self-concepts that pertain to romance, marriage, and relationships. In this example, an individual purposefully seeks out a media message to boost a particular motivation relating to romance. Knobloch-Westerick, M. Robinson, Willis, and Luong (2016) investigated activation of self-concepts utilizing magazine pages in a prolonged, selective exposure study spanning eight days where females made 16 magazine excerpt selections four days in a row. Results indicated that the more young women focused on their romantic, professional, and parent future selves, the more time they spent with the magazines featuring these topics. Narrative research examining self-concepts is scarce, but the next section will examine this literature.
**Self-Concepts in narrative persuasion research.** Recently, narrative persuasion researchers have begun examining the role of the self, speculating that individuals consume narratives to be temporarily released from their own identities so that they can vicariously experience and understand alternative identities (e.g., Herzog, 1944; Mar & Oatley, 2008; Nell, 1988; Oatley, 2011; Slater, Johnson, Cohen, Comello, & Ewoldsen, 2014; Vorderer & Knobloch, 2000). For example, the temporarily expanding the boundaries of the self (TEBOTS) model predicts that individuals consume narratives to be temporarily released from their social identities and the associated demands of daily maintenance of them by vicariously experiencing media characters’ perspectives (Slater et al., 2014). The TEBOTS model does not propose that individuals lose complete self-awareness; instead, they incorporate the media character’s self-concepts with their own to temporarily expand the boundaries of their self-concepts. Transportation, identification, simulation, or vicarious experience are proposed mechanisms through which individuals expand their self-concepts to include those of a media character (e.g., Herzog, 1944; Mar & Oatley, 2008; Slater et al., 2014). However, few studies have examined how narratives influence self-concepts, and they have all implemented forced exposure designs (e.g., Gabriel & Young, 2011; Richter, Appel, & Calio, 2015; Sestir & Green, 2010).

One study incorporated narratives featuring self-concepts that women may consider important to themselves. Richter et al. (2015) examined how narratives can influence a woman’s gender-related self-concept by utilizing a narrative featuring a mother who highlights the unpleasant daily details about parenting in a humorous, playful manner. Participants in the study either read this story, which emphasized femininity, or a
control story. Results demonstrated that more highly transported participants who read the mother narrative reported higher levels of femininity after narrative exposure compared to the control condition. Further, participants with no children rated themselves as more feminine compared to participants with children in the mother narrative condition. These results contradict predictions from the SESAM model because those participants who were most dissimilar to the protagonist and most unlikely to engage in social comparison experienced the most influence in femininity with respect to their self-concepts.

Based on the SESAM model, it is expected that mothers in the selective exposure condition will choose the testimonial that most corresponds to their parenting style as it aligns more closely with their activated self-concepts as a parent (see the Parenting Style and Behavioral Treatments for Children’s Sleep section for an explanation of different parenting styles). Thus, the following hypotheses are proposed:

H3: Mothers who identify as authoritarian will be more likely to select a testimonial featuring an authoritarian parent.

H4: Mothers who identify as authoritative will be more likely to select a testimonial featuring an authoritative parent.

RQ1: Which testimonial will neglectful and indulgent mothers be more likely to select?

Subsequently, mothers in the selective exposure condition who choose to read testimonials featuring a parent character whose parenting style aligns with their own will
likely experience the greatest persuasive influence. Thus, the following hypotheses are proposed:

H5: The more the mother’s selections align with her parenting style (authoritative or authoritarian), the more she will experience higher self-efficacy regarding behaviors modeled by the parent in the testimonial (H5a) and increased positive outcome expectations (H5b) via greater selective exposure to testimonials that align with her parenting style.

H6: The more the mother’s selections align with her parenting style, the more she will experience higher self-efficacy regarding behaviors modeled by the parent in the testimonial (H6a), increased positive outcome expectations (H6b), and greater behavior change (H6c) one week later via greater selective exposure to testimonials that align with her parenting style.

RQ2: How will testimonial selection influence neglectful and indulgent mothers’ self-efficacy, outcome expectations, and behavior change immediately and one week after media exposure?

RQ3: How will testimonial selection influence neglectful and indulgent mothers’ self-efficacy, outcome expectations, and behavior change immediately and one week after media exposure?

A final research question is posited in this section regarding a comparison of the effectiveness of tailoring and selective exposure to narrative testimonials:
RQ4: Will tailoring or selective exposure to a testimonial be more effective at influencing mothers’ self-efficacy and outcome expectations immediately after media exposure and one week, including behavior change?

Influence of Social Comparison Motivations on Narrative Self-Education

The SESAM model contends that the self and one’s accessible self-concepts are dynamic and changing. Individuals are thus motivated to maintain specific self-concepts through social comparisons with media messages (Knobloch-Westerwick, 2015a). This section will review the intricacies of social comparison motivations and directions as they are important to the SESAM model’s media selection predictions and subsequent media effects. Social comparison hypotheses are then derived from the SESAM model and SCT.

Social comparison motivations and directions. Social comparison theory examines “opinion influence processes in social groups” (Festinger, 1954, p. 117). Festinger’s (1954) early theorizing of social comparison only considered the self-evaluation motivation, which is the process that occurs through comparisons of one’s own abilities or opinions to those of similar others to assess their effectiveness or correctness. Later research has yielded additional social comparison motivations (e.g., Corcoran, Crusius, & Mussweiler, 2011; Wood, 1989). Ultimately, social comparisons can be differentiated in four ways: (1) the motivation with which an individual engages in the social comparison, (2) the selection of a comparison target, (3) the comparison direction, and (4) the resulting positive or negative effects on an individual (e.g., assimilation or contrast effects). Other social comparison motivations that have been identified include (a) self-enhancement where individuals seek messages that will reflect
positively upon themselves (Corcoran et al., 2011; Knobloch-Westerwick & Hastall, 2010); (b) self-inspiration or self-improvement where individuals strive to improve the self and grow to “fulfill one’s potential” (Markus & Wurf, 1987, p. 314); and (c) self-consistency where individuals seek messages that are attitude-consistent for reinforcement purposes (Knobloch-Westerwick, 2015a; Markus & Wurf, 1987).

In selecting a comparison target and direction, rather than an individual only comparing with a similar other (lateral social comparison direction), one can also engage in an upward social comparison (e.g., a professional athlete or celebrity) or experience downward social comparison with individuals who are worse off than them in some ability (Buunk, Collins, Taylor, VanYperen, & Dakof, 1990; Lockwood & Kunda, 1997; Wills, 1981; Wood, 1989). Comparison direction depends on an individual’s social comparison motivation. For example, after an individual experiences a threat to one’s self-esteem, she may engage in a downward social comparison with another individual she thinks is worse off to boost self-esteem through self-enhancement (Wills, 1981). On the other hand, an individual could engage in an upward social comparison with someone who is considered “better off” (Lockwood & Kunda, 1997). The social comparison motivation driving an upward comparison like this is the need for self-improvement or self-inspiration. However, choosing an upward social comparison direction may produce either positive or negative effects on an individual depending on the perceived attainability of the trait or ability (Lockwood & Kunda, 1997). An upward social comparison with an expert may provide self-boosting inspiration when the expert’s successes are believed to be attainable by the individual, but one will experience a self-
deflating effect if the expert’s successes are perceived as unattainable. Interestingly, the notion of “attainability” may be redundant with self-efficacy where an individual experiences high self-efficacy following comparison with another individual or media character.

Therefore, social comparisons may produce either positive or negative effects on an individual’s self esteem and affect (Buunk et al., 1990). When an individual is engaging in an upward social comparison for the purpose of self-improvement, either an assimilation or contrast effect may occur (Mussweiler, Rüter, & Epstude, 2004; Wood, 1989). Positive affect through enhanced self-esteem results from assimilation effects where an individual sees herself as similar to the upward comparison target (Mussweiler et al., 2004; Wood, 1989). However, negative affect and/or reduced self-esteem is experienced when an individual views herself as dissimilar when comparing to the upward comparison target, producing a contrast effect. In certain situations, contrasting with a dissimilar target may actually produce positive effects. For instance, comparing to an individual who smokes and experiences associated negative health effects (e.g., chronic respiratory diseases or cancer) will likely trigger a contrasting effect where an individual’s intentions to smoke are reduced.

With a firm understanding of the complexities of social comparison motivations, we can explore media effects research drawing on social comparison theory. Media effects researchers have only recently begun to examine media effects as a process of social comparison, mostly focusing on body image (Grabe, Ward, & Hyde, 2008).
Several studies have examined the nuances of social comparison research related to body image (see Knobloch-Westerwick, 2015b; Tiggemann & Polivy, 2010, as examples).

One study induced upward or downward social comparison by asking participants to compare to a thin model based on appearance or intelligence (Tiggemann & Polivy, 2010). Participants who engaged in upward social comparison through comparing based on appearance reported themselves to be less thin and less attractive than the models. On the other hand, when engaging in downward social comparison by focusing on intelligence, participants reported themselves to be more intelligent than the models and were also more satisfied with their own bodies. Knobloch-Westerwick (2015b) implemented a five-day prolonged exposure study where participants viewed a selection of magazine pages portraying the thin ideal. In this study, body satisfaction depended on the type of social comparison motivations individuals engaged in, where participants with a self-improvement motivation reported an increase in body satisfaction and weight loss behaviors measured three days after exposure. However, participants who engaged in social comparison for self-evaluation reasons experienced reduced body satisfaction following exposure to the thin models. It is evident that few studies have examined the intricacies of social comparison motivations, directions, and subsequent effects. The next section will connect SCT and the SESAM model to examine how social comparisons can act as mechanisms of NSE.

**Social comparisons as mechanisms of narrative self-education.** SCT contends that learning from watching a social model performing a specific behavior occurs through “inferences from social comparison,” specifically self-evaluation (Bandura, 1977, p.
In line with social comparison theory, SCT predicts that self-evaluation occurs with a role model that the individual considers similar to himself (Bandura, 1977). Per SCT, behavior change is not immediate but occurs through an accumulation of feedback responses from the individual and relevant others (Bandura, 1977). This accumulation of feedback highlights the need to examine persuasive effects as a transactional, dynamic process that occurs over time, similar to the SESAM model (Knobloch-Westerwick, 2015a) or reinforcing spirals model (Slater, 2007).

Although scholars have called for more research to examine how social comparison influences behavior change in health interventions (e.g., Suls & Martin, 2002), narrative persuasion research has not yet investigated the role of social comparison in attitude or behavior change. In one related study, participants read weight-loss messages featuring high or low efficacy information and base-rate or exemplar information (Knobloch-Westerwick & Sarge, 2015). Participants who read the exemplar message reported the greatest behavior change, whereas exposure to the base-rate information was not effective. Although social comparison was not measured in the study, the authors concluded that affiliation with exemplars and contrasting with base-rate portrayals may have resulted in the differential effects of exposure. M. Robinson and Knobloch-Westerwick (in prep) have explored self-evaluation as a mechanism of behavior change in narrative persuasion. Results from this study demonstrated that the more individuals engaged in self-evaluation with the protagonist portraying high sleep hygiene self-efficacy, the greater the individual’s reported sleep hygiene self-efficacy three days after narrative exposure. Further, Chae (2015) conducted a survey examining...
the relationship between media exposure to celebrity moms who engage in intensive mothering and mothers’ contemporary conceptions of motherhood based on social comparison theory. Results from the survey identified that exposure to celebrity mother discourse was associated with endorsement of the intensive mothering ideology and social comparison orientation only in mothers who also had careers. Chae (2015) concluded that celebrity mothers served as role models for working mothers but not stay at home mothers. These results highlight the need to examine the role of currently activated self-concepts and the importance of similarity between role model and audience. Social comparison may be an important mechanism of behavior change that should be examined in NSE and can aid in explaining the differential effects of narrative testimonials.

It is important to examine the social comparison motivations individuals bring to the processing of narratives. Self-evaluation and self-inspiration motivations were measured in the current study. Both SCT and social comparison theory acknowledge that individuals select a similar other for self-evaluation purposes. If the individual is perceived as similar, assimilation effects will occur, but if the individual is perceived as dissimilar, contrast effects are more likely (Mussweiler et al., 2004). For example, if a mother perceives the parent in the testimonial to be similar, she will experience an assimilation effect, increasing her self-efficacy and outcome expectations and making behavior change more likely to occur. These positive effects will likely not occur if a mother participant perceives herself to be dissimilar to the parent in the testimonial. In fact, this participant’s self-efficacy and outcome expectations will be reduced and
behavior change will likely not occur. Thus, assimilation is examined a moderator of the mechanism of self-evaluation in this study. Further, the role of selection in social comparison is important, according to the SESAM model, since self-concepts are regulated by attending to media messages that initiate various social comparison mechanisms (Knobloch-Westerwick, 2015a). Hence, selection is investigated as a moderator of assimilation since the ability to choose a testimonial based on a mother’s activated self-concept will likely have a greater influence on assimilation and subsequent self-evaluation.

The following hypotheses are proposed to test a first stage dual moderated mediation model with self-evaluation as mediator, assimilation as moderator, and exposure condition as a second moderator.

H7: Assimilation moderates the indirect effect of the testimonial mother’s parenting style on participants’ self-efficacy via self-evaluation social comparison such that participants who perceive themselves to be more similar to the parent in the testimonial and engage in self-evaluation experience increased self-efficacy both (H7a) immediately after media exposure and (H7b) one week later, and these relationships depend on exposure condition.

H8: Assimilation moderates the indirect effect of the testimonial mother’s parenting style on participants’ outcome expectations via self-evaluation social comparison such that participants who perceive themselves to be more similar to the parent in the testimonial and engage in self-evaluation experience more...
positive outcome expectations both (H8a) immediately after media exposure and (H8b) one week later, and these relationships depend on exposure condition.

H9: Assimilation moderates the indirect effect of the testimonial mother’s parenting style on participants’ behavior change via self-evaluation social comparison such that participants who perceive themselves to be more similar to the parent in the testimonial and engage in self-evaluation experience increased behavior change three days later, and these relationships depend on exposure condition.

Self-inspiration social comparison may also act as a mechanism of influence in narrative persuasion. Positive effects occur through self-inspiration if an individual perceives that the modeled attribute or ability is attainable, but negative effects occur if the attribute is perceived as unattainable. For the current study, participant’s self-efficacy immediately after media exposure will serve as perceived attainability in changing sleep hygiene behaviors and increased outcome expectations. Thus, self-efficacy is examined as a moderator of the mechanism of self-inspiration. The role of selection is also investigated in the self-inspiration hypotheses. The following hypotheses are proposed to test a first stage dual moderated mediation model with self-inspiration as mediator, self-efficacy as moderator, and exposure condition as a second moderator.

H10: Participant self-efficacy moderates the indirect effect of the testimonial mother’s parenting style on participants’ outcome expectations via self-inspiration social comparison such that participants with high self-efficacy who engage in
self-inspiration experience more positive outcome expectations one week later, and these relationships depend on exposure condition.

H11: Participant self-efficacy moderates the indirect effect of the testimonial mother’s parenting style on participants’ outcome expectations via self-inspiration social comparison such that participants with high self-efficacy who engage in self-inspiration experience more behavior change one week later, and these relationships depend on exposure condition.

**Importance of Sleep in Young Children**

This section will review the importance of sleep in young children, common sleep problems they encounter, and behavioral treatments available for parents to remedy their children’s sleep problems. The behavioral treatments are then linked to parenting style.

Sleep is defined as “a reversible behavioral state of decreased responsiveness and interaction with the environment” (Davis, Parker, & Montgomery, 2004, p. 65). Most preschoolers need about 10 to 11 hours of sleep per night (Keefe-Cooperman & Brady-Amoone, 2014; Lavigne et al., 1999). Sleep is very important to young children’s health and well-being because of its role in cognitive, emotional, and physical development, but sleep problems can occur even in healthy children (Davis et al., 2004; Keefe-Cooperman & Brady-Amoone, 2014). The sleep habits young children develop persist into adulthood including any sleep problems that exist during early childhood (Sadeh, 2005). Some scholars even contend that lack of sleep during the critical period of early childhood has negative effects on development even if sleep becomes more normal at a later age.
(Touchette et al., 2007). Thus, it is critical for children to develop healthy sleep habits at an early age.

One common, unhealthy sleep habit that develops at an early age is media use before bedtime including playing on an iPad or watching TV. In one study, watching TV was reported as the most popular activity prior to bedtime in a sample of five to 18-year-olds (Foley et al., 2015). Many studies have demonstrated that media use before bedtime is associated with delayed sleep onset, shorter sleep durations, and more frequent nighttime awakenings (e.g., Brockmann et al., 2015; Foley et al., 2015). Three mechanisms linking media use’s negative effects on young children’s sleep have been identified in the sleep literature: (1) sleep displacement, (2) increased mental, emotional, and physiological arousal, and (3) depression of melatonin due to exposure to light from screen use (Chellappa et al., 2013; Cain & Gradisar, 2010; Foley et al., 2015). The detrimental influence of media use prior to bedtime extends to children’s cognitive performance (Nathanson & Fries, 2014), behavior, and ability to pay attention during the day (Barlett, Gentile, Barlett, Eisenmann, & Walsh, 2012). Negative effects of children’s sleep issues may also lead to secondary effects such as parental depression and conflict among family members (Adams & Rickert, 1989; Hiscock & Wake, 2002). Research has called for replacing media use with more soothing bedtime activities such as taking a bath and storybook reading (Hale, Berger, LeBourgeios, & Brooks-Gunn, 2011; Sadeh, 2005). Thus, one purpose of the proposed study is for the testimonials to inform parents that rowdy bedtime activities or media use should be replaced with a soothing nighttime routine that include bath time and reading.
Common bedtime problems young children encounter. Bedtime problems including bedtime resistance, stalling, bedtime refusal, and frequent nighttime wakings affect approximately 20% to 30% of infants, toddlers, and preschoolers (Burnham, Goodlin-Jones, Gaylor, & Anders, 2002; Mindell, Kuhn, Lewin, Meltzer, & Sadeh, 2006). Night wakings are one of the most common sleep problems for infants and toddlers, but 25% to 50% of children over 6 months of age continue to wake up throughout the night (Mindell & Owens, 2003). Bedtime refusal behaviors may include stalling, verbal protests, crying, refusing to go to bed, getting out of bed multiple times, and attention-seeking behaviors such as multiple requests for drinks or using the restroom. Nighttime wakings occur when a young child is unable to fall back to sleep on his or her own and requires a parent’s help through comforting (Mindell et al., 2006). If a parent is summoned for a nighttime waking, the child may cry, protest, or get out of bed, thus prolonging the waking and increasing frustration of both the parent and child. The inability of children to sleep through the night or “self-soothe” is caused by both environmental and biological factors (i.e., temperament or maturation of neural and circadian mechanisms; Mirmiran, Maas, & Ariagno, 2003; Sadeh & Anders, 1993).

Treatment strategies for bedtime problems include behavioral management techniques, parent education, and medication. Research demonstrates that behavioral treatments may be more effective than medications that have possible harmful side effects (Owens, Rosen, & Mindell, 2003). Two of the most effective behavioral treatments (e.g., unmodified extinction and graduated extinction) will be reviewed here and employed in the testimonials for the proposed study.
Behavioral treatments for children’s sleep problems. Behavioral interventions for young children’s sleep problems typically involve “time-limited parent training strategies that incorporate behaviorally-based interventions, founded on principles of learning and behavior (e.g., reinforcement, extinction, shaping)” (Mindell et al., 2006, p. 1266). Both parent and child must modify their behaviors to ensure the child sleeps better. The effectiveness of these behavioral interventions has been extensively studied (Mindell et al., 2006).

Unmodified extinction. Although unintentional, parents often reinforce bad sleep behaviors by providing excessive attention and comfort to young children at bedtime and throughout the evening if their children wake up (Stevens, 2015). However, it is best for the parent to ignore the child when he or she awakens during the night and cries out for attention. Unmodified extinction, also known as the cry-it-out method (CIO), is a technique where the parents put the child to sleep at a certain time and completely ignore the child’s cries for attention both at bedtime and throughout the night if he or she awakens (although parents will monitor for injury or illness; Stevens, 2015). The purpose of the behavioral treatment is for the child to develop “self-soothing” skills so that he or she can fall back to sleep without the help of a parent. A critique lodged against CIO is that it is stressful for parents to ignore a child crying throughout the night (Mindell et al., 2006; Stevens, 2015). However, if parents attend to the child while implementing CIO, they are reinforcing the bad sleep behaviors. Hence, a child will cry even longer because he or she knows that a parent will eventually come into the bedroom. However, research
demonstrates that behavioral improvements following CIO are typically long lasting (Owens, Palermo, & Rosen, 2002).

**Graduated extinction.** Since CIO is usually difficult for parents, graduated extinction (GE) is a better-accepted alternative (Owens et al., 2002). This behavioral technique involves a parent checking on the child according to his or her schedule and then gradually decreasing the frequency of check-ins (Glaze, 2004). For example, if a child is crying out for attention, the parent will wait 3 to 5 minutes before checking on the child. When the parent goes in the child’s bedroom, he or she will briefly comfort the child for 15 seconds to a minute (Mindell et al., 2006). Further, parents are asked to minimize any interactions during the check-in that may reinforce attention-seeking behavior. Then, parents will gradually wait longer intervals (e.g., 10 minutes or 15 minutes) when a child cries. The lengthening of time between check-ins can either take place in one night or successive nights (Mindell et al., 2006). Similar to CIO, the goal is for children to self-sooth on their own so that they may fall back to sleep after awakening during the night. GE is associated with less parental distress and better compliance in completing the behavioral intervention (Mindell et al., 2006; Reid, Walter, & O’Leary, 1999).

For the current study, the mothers in the testimonials will implement the CIO or GE methods with their children (see the Stimuli Development section below). Thus, mothers reading the testimonials will observe how the methods can be utilized with their children. Participants may find comfort in knowing that other parents struggle when
letting their children cry during the night, but the end results are positive with the child learning how to self-soothe and develop good sleep hygiene behaviors.

**Parenting style and behavioral treatments for children’s sleep.** Baumrind’s (1971) original typology of parenting styles only considered parental control as a factor. However, scholars critiqued the typology for not considering the influence of communication where a child may be able to change parents’ rules through argumentation (see Lewis, 1981, for a review). Thus, Maccoby and Martin (1983) demonstrated that parenting styles are comprised of two dimensions: demandingness and responsiveness. Authoritarian parenting is characterized by high demand and low responsiveness (Maccoby & Martin, 1983). Authoritarian parents hold high expectations for their children and provide little positive feedback. Further, children who misbehave with authoritarian parents tend to be harshly punished (C. Robinson, Mandleco, Olsen, & Hart, 1995). Authoritative parents are high in both demandingness and responsiveness. These parents will take their children’s feelings and needs into consideration when making decisions and allow their children to “speak their minds.” They also provide comfort when their children are upset and explain their reasoning behind their expectations (C. Robinson et al., 1995). On the other hand, indulgent parents are high in responsiveness but low in demandingness (Maccoby & Martin, 1983). Finally, neglectful parents are both low in responsiveness and demandingness. Neglectful and indulgent parents experience difficulty in disciplining their children and tend to ignore their children’s bad behavior (C. Robinson et al., 1995).
For the most part, authoritative parenting is considered most successful in developing children’s psychosocial maturity, relationships with others, independence, and academic success (Baumrind, 1971; C. Robinson et al., 1995). Parenting style also influences children’s sleep behaviors (Owens-Stively et al., 1997). It has been suggested that a supportive parenting style that is warm while providing some supervision or control is recommended as best for promoting a variety of healthy behaviors (Golan & Crow, 2004; Spilsbury et al., 2005). The authoritative parenting style most closely aligns with this description. On the other hand, a coercive, controlling style (i.e., authoritarian parenting style) is associated with mixed or negative results on children’s healthy behaviors (Steinberg, Lanborn, Darling, Mounts, & Dornbusch, 1994). For instance, children with authoritative or authoritarian parents reported less or no change in behavioral problems at school compared to children with parents who were indulgent or neglectful that experienced more behavioral problems (Steinberg et al., 1994). However, in this study, children with authoritarian parents reported greater levels of stress which ultimately could reduce overall health and well-being.

Limited empirical research has examined the relationship between parenting style and children’s sleep problems (Owens-Stively et al., 1997; Sadeh, Tikotzky, & Scher, 2010; Spilsbury et al., 2005). In fact, scholars have highlighted the need to understand how parenting styles influence children’s sleep issues and behavioral interventions aimed at improving sleep behaviors (Owens & Mindell, 2011). The few studies that have been conducted produced differing conclusions, but they demonstrate that authoritarian and authoritative styles are better than permissive (e.g., indulgent and neglectful) styles in
handling children’s sleep issues. Several studies examining ethnic differences in parenting styles demonstrated that more authoritative or authoritarian parenting styles produced healthier sleep outcomes compared to an indulgent parenting style (Meijer, Habekoehe, & Witenboer, 2001; Owens-Stively et al., 1997). Results from Spilsbury et al. (2005) indicated that an authoritative parenting style that encourages social maturity was linked to healthier sleep outcomes in a sample of adolescent children. Other studies have demonstrated that minimal parental involvement during an infants’ bedtime and throughout the night is associated with better sleep (Sadeh, Flint-Ofir, Tirosh, & Tikotzky, 2007; Tikotzky & Sadeh, 2009). When parents demonstrate indulgent or neglectful parenting approaches and are unable to set limits for their children, there is a greater risk for sleep problems and extra difficulty in attempting to remedy them (Sadeh et al., 2010).

With respect to behavioral treatments of children’s sleeping problems, it seems that CIO most closely aligns with the authoritarian style of parenting and GE parallels authoritative parenting. A parent with more of an authoritarian style may be better able to comply with the stringent guidelines for CIO because authoritarian parents set strict rules and are better able to withhold emotional expressions from their children (C. Robinson et al., 1995). On the other hand, authoritative parents may choose GE as a better method because it still allows them to be responsive to their child’s needs and feelings. An indulgent parent will likely experience difficulty implementing both methods of extinction because both require setting limits for their children and implementing them. Finally, it is not expected that a neglectful parent implement any sleep training methods.
If the parent cannot comply with the guidelines set for extinction, the parent may end up reinforcing inappropriate bedtime behaviors. These factors were taken into consideration in the development of hypotheses and research questions for the current study.

The short descriptions for the testimonials will allude to the parenting style (e.g., authoritative or authoritarian) of the parent character in the testimonial. Participants in the selective exposure condition will choose a testimonial they would be most interested in reading based on this description.
Chapter 3: Methods

Stimuli Development

In order to ensure that the testimonial manipulations were working as intended, an online pretest was conducted using a sample of mothers from Amazon Mechanical Turk. Testimonial titles and their corresponding short descriptions were also pretested for the selective exposure index pages.

Testimonials. A testimonial format was selected because it is a story with characters but does not require extensive creative development that a traditional dramatic story would entail (Slater, Buller, Waters, Archibeque, & Leblanc, 2003). It is also a typical format that one would find online. A content analysis of cancer survivor testimonials online identified 7,795 testimonials on 3,738 different websites (Eddens et al., 2009). For the current study, narrative testimonials were adapted from parenting blogs on the Internet and were all approximately 800 words in length. A total of 14 versions of stories were pretested (7 GE vs. 7 CIO). General positive sleep hygiene behaviors, based on recommendations from American Academy of Sleep Medicine (2005), were embedded in the testimonials with examples including avoidance of media devices prior to bedtime and the benefits of establishing a calming bedtime routine with activities such as bathtime and storybook reading.
Parenting style and behavioral treatment for children’s sleep problems. The testimonials featured mothers engaging in either the CIO or GE methods (see Appendix D for testimonials). The mother who depicted the CIO method engaged in more authoritarian behaviors, whereas the mother who used the GE method engaged in more authoritative behaviors. The behavioral treatment manipulations were approximately the same word length in the stories. For the CIO method, the mother ignored the child’s outbursts during the night when he or she woke up. An example from a testimonial is: “A very unhappy Chris woke up at 2am as she had been for the past several weeks. I heard her crying again on the monitor, but I stayed strong. I kept reminding myself that consistency is key in the cry it out method.”

On the other hand, the GE method featured a parent waiting 3 to 5 minutes after the child begins crying during the night to check in on the child and provide some comfort. Then, the next time the child cried, the parent character waited 10 to 15 minutes before checking on the child. For example, “A very unhappy Chris woke up at 2am as she had been for the past several weeks. I waited 5 minutes and then went back into her room. I spent no more than a minute in there, and I told her she was safe and that she needed to go back to sleep. I crawled back into my bed and went to sleep. At 3:30am, Chris woke up again crying! I couldn't believe it. This time, I waited 10 minutes to go back into her room. I gave her a few words of kind encouragement.”

Short testimonial descriptions. Participants in the selective exposure condition selected a testimonial that interested them based on the title of the testimonial and a short, 25-word description of it. The descriptions alluded to the parenting style portrayed in the
testimonials. Forty-two titles (21 CIO and 21 GE) and their corresponding descriptions were pretested (see Appendix C for final titles/descriptions). The titles and descriptions within each parenting style were relatively vague and uniform so that they would match any testimonial.

**Procedure.** Participants were recruited to participate in a 30-minute survey regarding “general responses to magazine articles.” After providing consent, participants completed demographic items including their age, gender, and ethnicity. They also reported how many preschool-age children they had and their children’s ages, ethnicity, and gender. If participants did not meet the requirements of the study (i.e., female mother with at least one preschool-aged child), they received a notification that thanked them for their willingness to participate but that they did not meet the study’s requirements to proceed further. Participants meeting the study’s qualifications were then randomly assigned to read and evaluate 21 magazine titles and their corresponding descriptions or to read and evaluate four testimonials. The titles with their descriptions and testimonials were presented in a random order to participants. After reading the title/description or testimonial, participants rated items regarding the mother character’s parenting style. They also evaluated how interesting the titles, descriptions, and testimonials were. After completing the survey, participants were thanked for their participation.

**Expected results.** ANOVAs examined the stimuli manipulation check items regarding parenting style. It was expected that the titles/descriptions and testimonials depicting the authoritarian parenting style and the CIO method would rate higher on strictness, and lower on items pertaining to responsiveness to child’s needs, lower on
parent’s warmth and comfort provided to the child, and lower on allowing the child to put input into the bedtime routine. On the other hand, the testimonials and titles/descriptions pertaining to the authoritarian parenting style and graduated extinction method would be rated lower on strictness and higher on parent responsiveness, higher on warmth and comfort, and higher on input allowed from the child. Further, it was expected that the leads/descriptions and testimonials would not differ on interest level among each other.

Sample. Mothers \(N = 159\) with preschool age children were recruited from Amazon Mechanical Turk, an online crowdsourcing website that is becoming increasingly popular for recruitment of participants in the social sciences (see Buhrmester, Kwang, & Gosling, 2011). Participants’ age ranged from 21 to 61 years \(M = 33.80, SD = 6.38\). They had an average of 2.07 \((SD = 1.11)\) children total, with an average 1.24 \((SD = 0.57)\) preschool age children. The sample of mothers was 9.4% African-American/Black, 17.6% Asian, 63.5% White/Caucasian, 8.8% Hispanic/Latina, and 3.5% Other. Participants reported ethnicity for their preschool age children as well with 11.9% identifying as African-American/Black, 17.6% Asian, 65.4% White/Caucasian, 10.7% Hispanic/Latino, and 4.4% Native American. Almost half of the participants indicated having at least one male preschool child (46.5%), and 59.1% indicated they had at least one female preschool child.

Measures.

Strictness (ratings). Parent character strictness was measured based on the following item, “The parent is very strict with her child” on a scale from 1 (completely disagree) to 7 (completely agree).
**Responsiveness (ratings).** Participants also evaluated how responsive the parent character was with her child with the following item “The parent is responsive to her child’s feelings and needs” on a scale from 1 (*completely disagree*) to 7 (*completely agree*).

**Input from child (ratings).** Similarly, participants indicated if the parent character allowed her child to give input into creating a bedtime routine with the item “The parent allows the child to give input into the bedtime routine” on a scale from 1 (*completely disagree*) to 7 (*completely agree*).

**Comforting (ratings).** How warm and comforting the mother character was with the child in the testimonial or testimonial title/description was also measured with the item “The parent is warm and comforting to her child” on a scale from 1 (*completely disagree*) to 7 (*completely agree*).

**Interest (ratings).** Finally, participants rated how interesting the titles/descriptions or testimonials were with the following items: “The article was interesting” or “This lead is interesting” on a scale from 1 (*completely disagree*) to 7 (*completely agree*).

**Results.**

**Testimonial results.** First, an ANOVA was conducted with all 14 stories to examine significant differences in participants’ reporting of how interesting the testimonials were. This initial analysis revealed that two testimonials were more interesting than the others; therefore, these testimonials (both the CIO and GE versions) were removed from subsequent analyses. The four GE and four CIO testimonials with the strongest manipulations were chosen for the main study, and ANOVAs were run with
only these eight testimonials. The ANOVA for strictness was significant, $F(7, 192) = 8.70$, $p < .001$. As can be seen in Table A.1, post hoc comparisons with the Student-Newman-Keuls test demonstrated that the authoritarian/CIO testimonials ranked significantly higher in parental strictness than the authoritative/GE testimonials. Similarly, the ANOVA examining parent responsiveness was also significant, $F(7, 192) = 7.09$, $p < .001$. Post hoc comparisons with the Student-Newman-Keuls test indicated that the GE testimonials scored significantly higher on parent responsiveness than the CIO testimonials (see Table A.1). The ANOVA for child input into bedtime routine was also significant, $F(7, 192) = 11.15$, $p < .001$. As predicted, the GE testimonials were ranked higher in allowing the child to give input than the CIO testimonials (see Table A.1). The GE testimonials also scored higher in warmth and comfort of the parent than CIO testimonials, $F(7, 192) = 7.05$, $p < .001$. Finally, these testimonials did not significantly differ in how interesting participants reported them to be $F(7, 192) = .79$, $p = .60$.

**Title/description results.** ANOVAs were conducted with the original 42 titles and their corresponding descriptions. Four titles/descriptions for the authoritarian/CIO testimonials and four titles/descriptions for the authoritative/GE testimonials were chosen for the main study based on their strong scores on the manipulation check items. Then, ANOVAs were run with only these eight titles/descriptions. The ANOVA for strictness was significant, $F(7, 185) = 10.33$, $p < .001$. Post hoc comparisons with Student-Newman-Keuls test indicated that the CIO titles scored significantly higher in parental strictness than the GE titles (see table A.2. Likewise, the ANOVA examining parental
responsiveness was significant, $F(7, 185) = 11.29, \ p < .001$. The GE titles scored significantly higher in parental responsiveness than the CIO titles (see Table A.2).

Further, the ANOVA for child input was significant as well, $F(7, 185) = 17.86, \ p < .001$. Scores regarding allowing the child to give input into bedtime routines were significantly higher for the GE titles than the CIO titles. Similarly, rankings of the mother’s level of warmth and comfort were significantly different between the GE and CIO testimonials, $F(7, 185) = 8.62, \ p < .001$ Finally, the titles and their descriptions did not differ regarding how interesting they were, $F(7, 67) = .56, \ p = .79$.

Main Study

Mothers of preschool children between the ages 2 to 5 ($N = 303$ complete entries) were recruited by Qualtrics to participate in a two-part online study assessing the effects of exposure type (tailoring match vs. tailoring mismatch vs. selective) and behavioral treatment method (CIO vs. GE) on mothers’ sleep hygiene-related outcome expectations, self-efficacy, and behavior change. In exchange for their participation in the main study, Qualtrics provided participants with compensation. In the first online session, participants completed basic demographic information, baseline measures to assess their parenting style, their child’s initial sleep hygiene behaviors, baseline self-efficacy and outcome expectations regarding behaviors that could improve their children’s sleep, and various other distractor items related to their child’s diet, physical activity, and reading behaviors.

They were then randomly assigned to one of the three exposure conditions: tailored match based on reported parenting style, tailored mismatch based on reported parenting style, or the selective exposure condition. In the tailored conditions,
participants were randomly assigned to read a parent testimonial that either was a match or mismatch to their reported parenting style in the baseline to provide equal groups for comparison. Participants in selective exposure condition were asked to select a testimonial to read that most interested them. Participants read about a child that had the same gender as the youngest pre-school aged child they reported in the demographics section. After reading the first testimonial, all participants reported their similarity with the mother character and social comparison items. Then, participants read a second testimonial based on the condition they were assigned and completed similarity and social comparison items again. Finally, they responded to self-efficacy and outcome expectation measures. One week after the main session, participants completed a brief post-test to assess self-efficacy, outcome expectations, and any behavior change.

**Participants and group assignment.** A total of 420 individuals completed the main study session with 303 participants completing the delayed follow-up session. Participants who only completed the first study session were removed from any further data analysis. The remaining 303 participants passed data quality checks implemented by Qualtrics in the survey. The sample consisted of female mothers between the ages of 20 and 50 ($M = 33.39$, $SD = 5.94$), and participants identified as 9.2% African-American/Black, 7.3% Asian, 76.6% White/Caucasian, 11.9% Hispanic/Latino, 2.6% Native American, and .7% Other.

Participants were asked to indicate their highest educational degree with 2% listing that they had not graduated high school, 14.2% had high school degrees, 24.1% had some college with no degree, 13.9% had Associate’s degrees, 30.7% had Bachelor’s
degrees, had 13.2% Master’s degrees, had 1.3% professional school degrees (e.g., MD, DDC, JD), and had .7% Doctoral degrees. They also reported their current work status: 41.3% were currently not working, 11.9% were working part-time only, 39.9% were working full-time only, 2.3% were working full-time with part-time work as well, 3% were students, and 4.6% were self-employed. Further, 6.6% of participants were single, 1% were casually dating, 1% were exclusively dating one person, 6.3% were in a steady relationship, 5.3% were engaged, 77.2% were married, and 2.6% were divorced. Participants indicated who typically gets their child ready for bed, and 93.1% indicated mother, 31% father, 1.3% sibling, 2.3% grandparent, and .7% Other.

Participants reported having a range of 2 to 6 or more children of any age ($M = 2.26$, $SD = 1.08$). Regarding children of preschool age, the sample ranged from participants having 1 to 4 or more ($M = 1.23$, $SD = .49$). When participants had more than one preschooler, they were asked to complete the survey items considering their youngest preschool-aged child. Thus, the child of interest had an average age of 3.30 years ($SD = 1.14$). The sample of preschool-aged children identified as 11.9% African-American/Black, 6.9% Asian, 75.9% White/Caucasian, 14.2% Hispanic/Latino, 2.6% Native American, and 1% Other.

Based on previous conceptualizations of parenting style, original expectations were that three groups would be created through scoring: one group high on authoritative dimensions, one group high on authoritarian dimensions, and another high on permissive dimensions. However, the parenting style scoring based on the PSDQ (Robinson et al., 2001) created unequal groups that could not be used for comparison with only seven
participants falling into the authoritarian parenting style in the tailoring conditions. Thus, a hierarchical cluster analysis, using the Ward method and squared Euclidian distances, served to create two groups based on parenting style items (see Parenting Style section below under Measures) to examine hypotheses. The first group \((n = 176)\) was characterized by individuals who engaged in more authoritative behaviors \((M = 37.59, SD = 4.80)\) and relatively few authoritarian \((M = 16.43, SD = 5.11)\) and permissive behaviors \((M = 14.61, SD = 3.57)\). On the other hand, the second group \((n = 127)\) was more closely aligned in engaging in behaviors from all three parenting styles but still used more authoritative behaviors \((M = 35.01, SD = 5.21)\) than authoritarian \((M = 26.74, SD = 7.10)\) and permissive behaviors \((M = 26.02, SD = 6.77)\). These two groups served as the parenting style variable for H1, H2, and RQ4.

**Procedure**

**Recruitment.** The recruitment announcement advertised an online, two-part study on “general reactions to magazine articles.” Participants were recruited by Qualtrics via email and received incentives based on a points system. The recruitment email provided potential participants with information on the monetary incentives available for participating in the survey; therefore, participants knew what kind of incentive to expect before committing to participate.

**Main study session.** Participants completed the first study session online. After providing consent, they responded to demographic items (i.e., age, sex, and ethnicity of both themselves and their preschool child). Then, participants completed various health behavior questions regarding their pre-school aged child including sleep hygiene as the
topic of interest with distractors of physical activity and diet. Baseline measures regarding sleep hygiene-related self-efficacy and outcome expectations were also included in the questionnaire with physical activity and diet distractors embedded. Participants also completed the parenting scale and other measures including social comparison orientation, which served as a control variable for the current study. Next, participants were randomly assigned to one of the experimental conditions (tailoring match vs. tailoring mismatch vs. selective exposure).

In the tailoring condition, participants were randomly assigned to read a testimonial that was either a match or mismatch to their reported parenting style from the baseline in order to provide equal groups for comparison. Qualtrics software assigned the testimonial based on the algorithm that calculated parenting style. They saw the title and short description of the testimonial and were asked to read the following article. For the selective exposure condition, participants were directed to an overview page providing four titles of the parent testimonials with short descriptions of each (see Figure B.1). Participants were asked to select the article they would be most interested in reading. After media exposure, participants completed several measures of social comparison and similarity to the characters in the testimonials.

After completing these measures, participants in the selective exposure condition were taken to a second overview page with a sample of four different testimonial titles and descriptions and asked to make a second selection they would be interested in reading. Similarly, participants in the tailored condition read another randomly assigned testimonial based on a match or mismatch with their parenting style. After media
exposure, participants again completed social comparison and similarity items. Finally, they responded to sleep hygiene-related outcome expectations and self-efficacy measures. At the end of the session, participants were thanked and informed that Qualtrics would be contacting them again to complete a follow-up session one week later.

**Follow-up session.** One week after the first online session, participants were asked to complete a follow-up survey measuring mothers’ sleep-related self-efficacy, outcome expectations, and any behavior changes regarding the sleep training methods. They were thanked again for their participation and debriefed.

**Measures**

**Baseline health behavior questionnaire.** Participants were asked to complete a questionnaire including the targeted sleep behaviors with diet and physical activity as distractors. The abbreviated form of the Children’s Sleep Habits Questionnaire assessed children’s bedtime behaviors (6 items), nighttime waking behaviors (6 items), and daytime tiredness (3 items) in the last week (Owens, Spirito, & McGuinn, 2000; Cronbach’s α = .79, $M = 38.16$, $SD = 8.37$). Participants reported whether their children engaged in these behaviors on 5-point a scale from 0 (*never*) to 4 (*always*). A higher score indicated more sleep-related problems. Example items were “Child falls asleep alone in own bed,” “Child awakens more than once during the night,” and “Child seems tired during the daytime.” Participants reported how many hours per night their child typically sleeps ($M = 9.70$, $SD = 1.48$) and how many minutes a typical nighttime wakening lasts for their child ($M = 10.06$, $SD = 11.67$). Thirty-four percent of preschoolers had a TV in their bedroom, and they spent an average of 5.41 nights ($SD = $
1.88) watching TV in their rooms before bed. Further, almost 30% of the children spent an average of 4.13 nights per week ($SD = 1.99$) using electronic devices (e.g., tables, cell phones, or video games) in bed.

Items from the Preschool-aged Children’s Physical Activity Questionnaire (Dwyer, Hardy, Peat, & Baur, 2011) and items about the child’s diet served as distractor measures. Example items from the physical activity questionnaire included “I encourage my child to play outside when the weather is suitable” and “I am physically active with or in front of my child” on a scale from 0 (never) to 7 (always). The diet items asked participants how much attention they paid to ensuring their child ate the recommended daily serving sizes of the food groups on a 7-point scale from 0 (no attention at all) to 7 (great deal of attention).

**Social comparison orientation.** Participants completed 6 items from ability dimension of the social comparison readiness scale to measure individuals’ tendencies to compare their own opinions and abilities with others (Gibbons & Buunk, 1999; Cronbach’s $\alpha = .85, M = 23.59, SD = 8.08$). The ability dimension may serve as a proxy for the whole scale when participants’ time is limited (Gibbons and Buunk, 1999). Participants indicated their agreement with items on a scale from 1 (completely disagree) to 7 (completely agree). An example item was “I always like to know what others in a similar situation would do.”

**Parenting style.** Items from the Parenting Style Dimensions Questionnaire (PSDQ; C. Robinson et al., 1995) were utilized to determine if participants engage in authoritative, authoritarian, or permissive parenting styles. The indulgent and neglectful
categories were collapsed into the permissive category in this scale as is common in research examining parenting styles (Lamborn, Mounts, Steinberg, & Dornbusch, 1991). Therefore, the research questions examining indulgent and neglectful parenting styles used the permissive style instead. Participants were asked to indicate how often they engaged in the following behaviors when interacting with their preschooler on a scale from 1 (*never*) to 7 (*always*). The scale is originally 62 items with the authoritative and authoritarian styles comprising four different factors and the permissive style containing three factors, but time constraints required a shortened version of the scale, which is detailed in the three sections below.

**Authoritarian behaviors.** For the current study, the authoritarian subscale consisted of two items with the highest factor loadings from each of the four factors identified by C. Robinson et al. (1995), resulting in eight items. However, the reliability of all eight items was not as high as expected. The item that weakened reliability was removed (i.e., “I tell my child what to do”). The resulting seven items comprised the authoritarian subscale (*M* = 20.75, *SD* = 7.89, Cronbach’s *α* = .82). An example item was “I use physical punishment as a way of disciplining my child.”

**Authoritative behaviors.** Similarly, the authoritative subscale contained four factors, and the two items with the highest factor loadings from each factor were used. Again, the reliability of this subscale was not as high as expected, so one item was removed (i.e., “I am aware of problems or concerns about my child in school”). Overall, this subscale was the least reliable (*M* = 36.51, *SD* = 5.13, Cronbach’s *α* = .61). An example item included “I give my child reasons why the rules should be obeyed.”
**Permissive behaviors.** With respect to the permissive items, the top three items with the highest factor loadings from the “lack of follow through” and “ignoring misbehavior” factors were used and two items with the highest factor loadings from the “self-confidence” factor. To maintain consistency, one item that weakened reliability was removed (e.g., I appear confident in my parenting abilities”). This subscale proved to be reliable ($M = 19.40$, $SD = 7.64$, Cronbach’s $\alpha = .81$). An example item was “I allow my child to interrupt others.”

**Reading times.** Qualtrics recorded how long participants spent on each page of the testimonial. If a participant spent longer than two or more standard deviations above the mean on a page, the value was replaced with the average reading time for that page since the participant appeared to be distracted. Participants spent 3.58 minutes ($SD = 1.14$) reading both testimonials, including 2.81 minutes ($SD = 2.13$) on CIO testimonials and 2.86 minutes ($SD = 2.43$) on GE testimonials. Time spent reading served as a control variable in some of the subsequent analyses.

**Social comparison motives.** Several items were used to capture participants’ social comparison motivations on a scale from 1 (strongly disagree) to 7 (strongly agree). For the self-evaluation motive, participants rated the following statements “I compared myself to the parent in the article to evaluate myself” and “I evaluated my own parenting actions based on the parent’s actions in the article.” Participants responded to these items after reading each testimonial. The scores for both testimonials were combined to create an overall self-evaluation score ($M = 38.73$, $SD = 6.22$, Cronbach’s $\alpha = .91$).
The following items measured inspiration social comparison motives: “I compared myself to the parent in the article for inspiration to improve myself” and “I compared my parenting actions with the parent’s actions in the article for inspiration. Participants completed both items after reading each testimonial, and these scores were combined to create an overall self-inspiration score ($M = 42.82$, $SD = 6.54$, Cronbach’s $\alpha = .91$).

**Assimilation.** The items “I felt connected to the parent in the article” and I felt different from the parent in the article” captured assimilation. Participants completed these items after reading each testimonial. The scores were combined to create one total assimilation score ($M = 24.42$, $SD = 4.94$, Cronbach’s $\alpha = .61$).

**Self-efficacy measures.** Participants indicated how certain they are that they could get themselves to engage in five behaviors related to improving their child’s sleep on a scale from 1 (*cannot do at all*) to 7 (*highly certain can do*) at baseline (T1), immediately after media exposure (T2), and one week later (T3). Various other health behaviors (i.e., physical activity and diet) were included as distractors in the self-efficacy measure. A factor analysis was conducted with the sleep self-efficacy items using principal component analysis with Varimax (orthogonal) rotation, producing two factors: general sleep hygiene self-efficacy and sleep training method self-efficacy. The two factors accounted for 77.41% of the variance (see table A.4). A repeated-measures ANOVA with general self-efficacy and method self-efficacy as within-subjects factors, and exposure condition and testimonial condition as between-subjects factors, was conducted to examine if the two dimensions could be combined in analyses. Dimension
interacted with exposure and testimonial, $F(2, 580) = 8.65, p < .005$, therefore all subsequent analyses treated general self-efficacy and method as two separate outcome variables.

**Sleep hygiene self-efficacy.** These two items included the same behaviors as the sleep hygiene outcome expectations except the self-efficacy measure assessed confidence in engaging in the behaviors. Items included “Create a soothing bedtime routine including bedtime stories for my child,” and “Prevent my child from using media devices before bedtime.” Reliabilities at each time point are reported: T1 (Cronbach’s $\alpha = .63$, $M = 11.91$, $SD = 2.29$), T2 (Cronbach’s $\alpha = .72$, $M = 12.19$, $SD = 2.15$), and T3 (Cronbach’s $\alpha = .71$, $M = 12.05$, $SD = 2.21$).

**Sleep training method self-efficacy.** Three items measured self-efficacy regarding the sleep training methods embedded in the testimonials at T1 (Cronbach’s $\alpha = .87$, $M = 12.66$, $SD = 4.90$), T2 (Cronbach’s $\alpha = .88$, $M = 14.13$, $SD = 4.97$), and T3 (Cronbach’s $\alpha = .84$, $M = 14.84$, $SD = 4.57$). These items were similar to the method outcome expectations, and example items were “Teach my child to self-soothe and fall back to sleep on his/her own” and “Ignore my child’s crying outbursts during the night.”

**Outcome expectations measures.** A measure assessed participants’ outcome expectations regarding the sleep hygiene behaviors and behavioral interventions embedded in the testimonials. This measure was completed at three time-points: baseline (T1), immediately after media exposure (T2), and one week later (T3). Distractor health behaviors (i.e., diet and physical activity) were also embedded in this measure. Participants were asked to rate their agreement that six assertions would lead to
improvements in their child’s sleep on a scale from 1 (strongly disagree) to 7 (strongly agree). These six items were factor analyzed using principal component analysis with Varimax (orthogonal) rotation. This analysis yielded two factors: general sleep hygiene outcome expectations and sleep training method outcome expectations, accounting for 75.78% of the variance (See Table A.3). Next, a repeated-measures ANOVA, with sleep hygiene and method outcome expectations as within-subjects variables and exposure condition and testimonial condition as between subjects variables, was conducted to examine if the outcome expectations measure could be analyzed as one variable. However, the two dimensions interacted with time and exposure condition, \( F(2, 580) = 3.63, p < .05 \); time and testimonial condition, \( F(4, 580) = 2.63, p < .05 \); and time, condition, and testimonial, \( F(2, 580) = 6.42, p < .005 \). These results indicated that the experimental impacts were not uniform across these two dependent measures. Therefore, the general self-efficacy and method outcome expectations were treated as two separate measures with reliability reported in the next subsection.

**Sleep hygiene outcome expectations.** Two items measured sleep hygiene-related outcome expectations at three time points. These items included “Avoiding media devices (e.g., TV or iPads) prior to bedtime will help my child fall asleep more quickly” and “Creating a soothing bedtime routine for my child will improve my child’s sleep.” The reliability scores are reported: T1 (Cronbach’s \( \alpha = .50, M = 11.43, SD = 2.31 \)), T2 (Cronbach’s \( \alpha = .60, M = 11.89, SD = 2.17 \)), and T3 (Cronbach’s \( \alpha = .62, M = 11.75, SD = 2.28 \)).
**Sleep training method outcome expectations.** Four items comprised the method outcome expectations measure, and participants completed these at three time points as well. Example items were “Ignoring my child’s crying outbursts during the night will help improve my child’s sleep” and “Waiting gradually longer intervals before checking on my child following a crying outburst will teach my child how to self-soothe.”

Reliability was consistent across the three time points: T1 (Cronbach’s $\alpha = .92$, $M = 15.52$, $SD = 6.46$), T2 (Cronbach’s $\alpha = .92$, $M = 18.77$, $SD = 6.67$), and T3 (Cronbach’s $\alpha = .91$, $M = 18.47$, $SD = 6.32$).

**Behavior change.** One week after exposure, five items measured how often participants’ engaged in the behaviors embedded in the testimonial on an 8-point scale from 0 (0 days) to 7 (7 days). Distractor health behaviors were embedded in this measure. Once again, these items were factor analyzed using principal component analysis with Varimax (orthogonal) rotation. This analysis yielded two factors: items related to sleep hygiene and method, accounting for 75.45% of the variance (see Table A.5). To maintain consistency with the other outcome variables, these dimensions served as two behavior change variables for subsequent analyses.

**Sleep hygiene behavior change.** One week after exposure, participants reported how often they engaged in general sleep hygiene behaviors. The two items measured were “Created a soothing bedtime routine including bedtime stories for my child” and “Prevented my child from using media devices before bedtime” ($M = 12.29$, $SD = 3.45$, Cronbach’s $\alpha = .55$).
**Sleep training behavior change.** Participants also completed items asking how often they engaged in three behaviors related to the sleep training methods ($M = 12.90$, $SD = 7.54$, Cronbach’s $\alpha = .87$). Example items were “Ignored my child’s crying outbursts during the night” and “Waited gradually longer intervals during the night before checking on my child following a crying outburst.”

**Analytical Approach**

H1 and H2 examine differences in outcome variables (self-efficacy, outcome expectations, and behavior) between the matched and mismatched tailored conditions both immediately after exposure and one week. Repeated-measures ANOVAs will be implemented with tailoring condition as independent variable and self-efficacy, outcome expectations, and behavior change variables as dependent variables. H3 predicts that mothers who identify as authoritarian will be more likely to select a narrative featuring an authoritarian parent, and H4 predicts that mothers who identify as authoritative will be more likely to select a narrative with an authoritative parent. Binary logistic regressions will be conducted to examine H3, H4, and RQ1, using parenting style as predictor and story selection as dependent variable with any important demographic differences serving as control variables in the model.

H5 and H6 predict that mothers in the narrative selective exposure condition who choose a narrative that aligns with their parenting style will experience greater changes in outcome variables compared to parents who select a narrative that does not match their parenting style. These two hypotheses, including RQ2 and RQ3, will be examined utilizing mediation analyses with PROCESS SPSS macro with number of GE or CIO
testimonials selected as mediator (Hayes, 2013). First stage dual moderated mediation analyses will be conducted to examine H7-11.
Chapter 4: Results

Effects of Tailoring Match vs. Mismatch

H1 and H2 examine differences in outcome variables (self-efficacy, outcome expectations, and behavior) between the matched and mismatched tailoring conditions both immediately after exposure (T1) and one week later (T2). Since the original scoring of parenting style placed too few participants in the authoritarian and permissive categories, the parenting style variable created from the cluster analysis was used for these hypotheses. It was also necessary to reconceptualize the notion of match and mismatch. Based on the cluster analysis, the first group of participants (i.e., Group 1) scored very high on authoritative behaviors and relatively lower on both authoritarian and permissive items. Thus, a match for Group 1 is the GE testimonial. On the other hand, the second group of participants scored high on authoritative behaviors but also engaged in authoritarian and permissive items more frequently (e.g., Group 2). Group 2 engages in more of a mix of all three parenting style behaviors, and therefore, may be more open to authoritarian behaviors. These participants don’t necessarily have a mismatch with the GE or CIO testimonials. Thus, the analyses investigate which testimonial works better for this Group 1 who engages in a mix of all three parenting styles. Repeated-measures ANOVAs with two between-group factors of parenting style (Group 1 vs. Group 2) and
testimonial condition (GE vs. CIO) and time as within-subjects factor were utilized to investigate H1 and H2. Correlations between study variables can be found in Table A.6.

**H1a & H2a: Self-efficacy outcomes.** A repeated-measures ANOVA examined the effect of parenting style and testimonial condition, as between-subjects factors, on participants’ sleep hygiene-related self-efficacy at three time points. The day participants completed the follow-up survey (i.e., weekday or weekend), social comparison orientation, participants’ age, participants’ work status, and the child’s bedtime behaviors measured at baseline served as control variables. The main effect of time was not significant, $F(2, 294) = .11, p = .90$. The interaction between time and parenting style was not significant $F(2, 294) = .68, p = .51$, and the interaction between time and testimonial condition was not significant, $F(2, 294) = .62, p = .54$. Finally, the three-way interaction was also not significant, $F(2, 294) = 1.38, p = .25$.

A second repeated-measures ANOVA investigated method self-efficacy as outcome variable. The same control variables as the general self-efficacy analysis were used. The main effect of time was significant across conditions, $F(2, 294) = 6.06, p < .005$, partial $\eta^2 = .04$. Regardless of parenting style or testimonial condition, post hoc comparisons with Sidak correction revealed that participants reported a significant increase in method self-efficacy between T1 and T2 and between T1 and T3 (see Figure B.2). Their method self-efficacy scores between T2 and T3 were not significantly different, demonstrating a lasting impact. Thus, participants who read GE and CIO testimonials both reported an increase in method self-efficacy across time.
Further, the interaction between time and testimonial condition was not significant, $F(2, 294) = .01, p = .99$, and the interaction between time and parenting style was not significant, $F(2, 294) = .96, p = .38$. Finally, the three-way interaction between time, testimonial, and parenting style was not significant, $F(2, 294) = 1.80, p = .17$. H1a and H2a do not receive support since parenting style and testimonial type did not seem to matter. Both GE and CIO testimonials increased participants’ method self-efficacy regarding sleep training method at T2 and T3.

**H1b & H2b: Outcome expectations outcomes.** A repeated-measures ANOVA examined the effect of parenting style and testimonial condition, as between-subjects factors, on parents’ sleep general hygiene-related outcome expectations at three time points. Control variables included the day participants completed the follow-up survey (i.e., weekday or weekend), social comparison orientation, and the child’s bedtime behaviors measured at the baseline. The main effect of time was not significant, $F(2, 296) = 1.01, p = .37$. Similarly, the interaction between time and parenting style was not significant, $F(2, 296) = .34, p = .71$. The interaction of time and testimonial was not significant, $F(2, 296) = .50, p = .61$, and the three-way interaction was not either, $F(2, 296) = .12, p = .89$.

Another repeated measures ANOVA investigated the method outcome expectations variable. These same control variables as the ANOVA examining general outcome expectations were used. The main effect of time was marginally significant, $F(2, 296) = 8.07, p = .07$, partial $\eta^2 = .02$. The interaction of parenting style and time was also significant, $F(2, 296) = 4.28, p < .05$, partial $\eta^2 = .03$. Post hoc comparisons with Sidak
correction indicated a significant difference between parenting groups at T1. Group 2 reported greater outcome expectations at T1 than Group 1 (see Figure B.3). This between-group effect was not significant at T2 and T3. Further, within Group 1, method outcome expectations scores were higher at T2 and T3 than at T1. They were not significantly different between T2 and T3, representing a lasting effect. Within Group 2, method outcome expectations were significantly greater between T1 and T2 but not between T1 and T3. As can be seen in Figure B.3, this Group 2’s method outcome expectations dropped back to scores similar to T1. Therefore, Group 1 experienced lasting positive impacts but Group 2 did not with their T3 scores not being different from T1.

The interaction between time and testimonial condition was not significant, $F(2, 296) = 1.46, p = .24$. Finally, the three-way interaction between time, testimonial, and parenting style was not significant, $F(2, 296) = .29, p = .82$. H1b and H2b were not supported since there were no testimonial by parenting style interactions. Group 1, the parents who engage in more authoritative parenting style behaviors demonstrated an increase in method outcome expectations regardless of which testimonials they read. On the other hand, Group 2, the parents who engage in a mixture of behaviors from all three parenting styles reported an increase in outcome expectations immediately after reading, but their outcome expectations scores dropped back to baseline levels one week later.

**H2c: Behavior change outcomes.** An ANOVA tested for direct effects, with parenting style and testimonial condition serving as between-subjects factors, on participants’ general sleep hygiene behavior change. Control variables were the day
participants completed the follow-up survey (i.e., weekday or weekend), social comparison orientation, and the child’s bedtime, waking, and daytime sleepiness behaviors measured at the baseline. The main effect of testimonial condition was not significant, $F(1, 154) = .13, p = .72$. The main effect of parenting style was significant, $F(1, 154) = 6.93, p < .01$, partial $\eta^2 = .05$, with Group 1 ($M = 6.26, SD = 1.47$) engaging in significantly more general sleep hygiene behaviors than Group 2 ($M = 5.46, SD = 1.79$). Finally, the interaction between testimonial and parenting style was not significant, $F(1, 154) = 2.30, p = .13$.

A second ANOVA examined the effects of testimonial condition and parenting style as between-subjects factors on participants’ reported method behavior change. The main effect of testimonial was not significant, $F(1, 154) = .25, p = .62$, and the main effect of parenting style was not significant, $F(1, 154) = .07, p = .79$. Further, the interaction between parenting style and testimonial was not significant, $F(1, 154) = 1.34, p = .25$. Therefore, H2c was not supported.

### Parenting Style’s Role in Story Selection

H3, H4, and RQ1 examined if the three parenting styles predicted story selection. Six separate binary logistic regressions were conducted to examine these predictions regarding participants’ first and second testimonial selections (0 = authoritarian/CIO testimonial and 1 = authoritative/GE testimonial). The ratio variables for parenting style were utilized as dependent variable. Preschoolers’ age and participants’ relationship status and highest educational degree served as control variables in all regression analyses since they were correlated with testimonial selection.
H3: Authoritarian participants’ selections. Authoritarian parenting style did not predict participants’ first testimonial selections $\chi^2 (4, N = 148) = 6.89, p = .14$, or their second selections $\chi^2 (4, N = 148) = 5.57, p = .23$. Thus, H3 was not supported since authoritarian parenting style did not predict authoritarian/CIO selection.

H4: Authoritative participants’ selections. On the other hand, authoritative parenting style did not influence participants’ first testimonial selections $\chi^2 (4, N = 148) = 6.76, p = .15$, but it did influence their second selections since the full model was significant $\chi^2 (4, N = 148) = 13.95, p < .05$. For second testimonial selection, the model as a whole explained between .09 (Cox & Snell R Square) and .121 (Nagelkerke R Square) of the variance in selecting an authoritative/GE testimonial and correctly identified 62.2% of the cases. As shown in Table A.7, the strongest predictor of selection of an authoritative/GE testimonial was authoritative parenting style, recording an odds ratio of 1.11 and providing partial support for H4.

RQ1: Permissive participants’ selections. With respect to RQ1, having a permissive parenting style did not predict participants’ first $\chi^2 (4, N = 148) = 7.33, p = .12$, or second testimonial selections, $\chi^2 (4, N = 148) = 5.97, p = .21$.

Impacts of testimonial selection on outcome variables

H5 and H6 predicted that mothers in the selective exposure condition who chose testimonials that more closely aligned with their parenting style (authoritative or authoritarian) would experience greater positive impacts on outcome variables. RQ2 and RQ3 examined how selection of GE and CIO testimonials influenced participants who engaged in more permissive parenting behaviors. These hypotheses and research
questions were examined utilizing mediation analyses (Model 3) with PROCESS SPSS macro version 2.13 (Hayes, 2013). A point estimate for an indirect effect (total or specific) was considered significant if zero was not included in the 95% bias-corrected confidence interval. The independent variables were the ratio-level variables regarding authoritative, authoritarian, and permissive parenting styles, the mediator was their testimonial selections (0 = two CIO, 1 = one of each, 2 = two GE) and self-efficacy, outcome expectations, and behavior served as dependent variables. Participants’ work status, participants’ age, social comparison orientation, reading time, the child’s bedtime, nighttime waking, and daytime tiredness behaviors, and the day participants completed the follow-up survey were control variables in all mediation analyses.

**H5a: Authoritative parenting style’s influence via testimonial selection on self-efficacy.** A mediation examining authoritative parenting style as independent variable, testimonial selection as mediator, and general self-efficacy as outcome variable produced no significant results. The mediation with authoritative parenting style (X) as independent variable, testimonial selection as mediator (M; 0 = two CIO, 1 = one of each, 2 = two GE), and method self-efficacy (Y) as dependent variable was significant (see Figure B.4). Baseline method self-efficacy also served as a control in this analysis.

Regarding the direct effects, authoritative parenting style (X) predicted GE testimonial selection (M; coeff. = .02, S.E. = .01, p < .05), since the effect was positive. This finding corroborates H4. However, the direct effect of testimonial selection (M) on T2 method self-efficacy (Y) was significant but negative (coeff. = -.33, S.E. = .16, p < .05). Selection of GE testimonials reduced participants’ method self-efficacy. Similarly the indirect
effect via testimonial selection was significant because the confidence intervals did not include zero, with a point estimate of -.0076, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of -.0222 to -.0004. The influence of authoritative parenting style through GE testimonial selection led to reduced method self-efficacy. Participants demonstrated greater method-related self-efficacy via exposure to two CIO testimonials. Thus, H5a was not supported with respect to authoritative parenting style since CIO testimonials proved to be more effective.

**H5a: Authoritarian parenting style’s influence via testimonial selection on self-efficacy** A mediation utilizing authoritarian parenting style as independent variable, testimonial selection as mediator, and general sleep hygiene self-efficacy as dependent variable yielded no significant results. Similarly, the mediation examining method self-efficacy immediately post exposure was not significant. Thus, H5a was not supported for authoritarian parenting style.

**H5b: Authoritative parenting style’s influence via testimonial selection on outcome expectations.** A mediation examining authoritative parenting style as independent variable, testimonial selection as mediator, and general sleep hygiene outcome expectations as dependent variable was not significant. But, the mediation with method outcome expectations as dependent variable was significant (see Figure B.5). Regarding direct effects, once again, authoritative parenting style (X) predicted selecting GE testimonials (M; coeff. = .02, S.E. = .01, p < .05). However, selecting GE testimonials (M) had a negative influence on participants’ T2 method outcome expectations (Y; coeff. = -.64, S.E. = .17, p < .005). The indirect effect via testimonial
selection was significant, with a point estimate of -.0153, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of -.0345 to -.0036. The influence of authoritative parenting style (X) through GE testimonial selection (M) led to reduced method outcome expectations (Y). Participants reported greater method-related self-efficacy via exposure to two CIO testimonials. Thus, H5b was not supported.

**H5b: Authoritarian parenting style’s influence via testimonial selection on outcome expectations.** A mediation analysis was conducted to examine authoritarian parenting style as independent variable, testimonial selection as mediator, and general outcome expectations immediately after media exposure as dependent variable. This mediation was not significant. Further, the mediation examining method outcome expectations was not significant. H5b was not supported.

**H6a: Authoritative parenting style’s influence via testimonial selection on T3 self-efficacy.** The mediation with authoritative parenting style as independent variable, testimonial selection as mediator, and general self-efficacy one week later was not significant. However, the mediation examining authoritative parenting style (X) as independent variable, testimonial selection (M) as mediator, and method self-efficacy one week later (Y) was significant (see Figure B.6). Baseline method self-efficacy was a control variable. Testimonial selection (M) directly influenced T3 method self-efficacy (Y; coeff. = -.37, S.E. = .13, p < .005), and the effect was negative. The indirect effect via testimonial selection was significant, with a point estimate of -.0085, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of -.0220 to -.0016. Again, authoritative parenting style negatively influenced T3 method self-efficacy through
selective exposure to GE testimonials. Participants reported greater method self-efficacy through selection of CIO testimonials. The predictions of H6a were not supported for authoritative parenting style.

**H6a: Authoritarian parenting style’s influence via testimonial selection on T3 self-efficacy.** A mediation analysis using authoritarian parenting style as independent variable, testimonial selection as mediator, and general sleep hygiene self-efficacy one week later as dependent variable produced no significant results. Further, the mediation examining method self-efficacy one week later was not significant. Thus, H6a was not supported regarding authoritarian parenting style and CIO testimonial selection.

**H6b: Authoritative parenting style’s influence via testimonial selection on T3 outcome expectations.** A mediation with authoritative parenting style as independent variable, testimonial selection as mediator, and T3 general sleep hygiene outcome expectations as dependent variable was not significant. The mediation with T3 method outcome expectations was significant and worked in a similar manner to the mediation at T2 with method outcome expectations. Testimonial selection (M) had a direct, negative effect on T3 method outcome expectations (Y; coeff. = -.47, S.E. = .15, p < .005). The indirect effect via testimonial selection was significant, with a point estimate of -.0112, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of -.0268 to -.0025 (see Figure B.7). Therefore, H6b was not supported for participants who engaged in more authoritative parenting behaviors and selected GE testimonials.

**H6b: Authoritarian parenting style’s influence via testimonial selection on T3 outcome expectations.** The mediations examining general outcome expectations and
method outcome expectations at T3 yielded no significant mediation effects. Thus, H6b received no support.

**H6c: Authoritative parenting style’s influence via testimonial selection on behavior.** The mediation examining authoritative parenting style as independent variable and general behavior change was not significant. Further, the mediation examining method behavior change was not significant. Therefore, H6c received no support.

**H6c: Authoritarian parenting style’s influence via testimonial selection on behavior.** The mediations examining general sleep hygiene behaviors and method-related behaviors were not significant for authoritarian parenting style as independent variable. Hence, H6c was not supported for authoritarian parenting style.

**RQ2: Permissive parenting style’s influence via testimonial selection on self-efficacy.** A mediation using permissive parenting style as independent variable, testimonial selection as mediator, and general self-efficacy was not significant. The mediation examining method self-efficacy as dependent variable yielded no significant results.

**RQ2: Permissive parenting style’s influence via testimonial selection on outcome expectations.** A mediation with permissive parenting style as independent variable, testimonial selection, and general outcome expectations as dependent variable produced no significant results. Similarly, the mediation using permissive parenting style as independent variable, testimonial selection, and method outcome expectations was not significant.
RQ3: Permissive parenting style’s influence via testimonial selection on T3 self-efficacy. The mediation examining permissive parenting style as independent variable, testimonial selection as mediator, and general self-efficacy one week later was not significant. Further, the mediation with method self-efficacy was not significant.

RQ3: Permissive parenting style’s influence via testimonial selection on T3 outcome expectations. A mediation examining parenting style as independent variable, testimonial selection as mediator, and general outcome expectations one week later was not significant. Similarly, the mediation examining method outcome expectations one week later produced no significant results.

RQ3: Permissive parenting style’s influence via testimonial selection on behavior. The mediation examining permissive parenting style as independent variable, testimonial selection as mediator, and general behavior change was not significant. Further, the mediation using method behavior change as dependent variable produced no significant results.

Effects of Tailoring vs. Selection

RQ4 asks whether tailoring (i.e., forced) or selective exposure to the testimonials will be more effective at influencing relevant outcome variables. These analyses were conducted using repeated-measures ANOVAs with two between-group factors of exposure condition (forced vs. selection) and testimonial condition (two GE testimonials only vs. two CIO testimonials only vs. one of each) and time as within-subjects factor.

General sleep hygiene self-efficacy. A repeated-measures ANOVA examined the effect of exposure condition and testimonial condition on participants’ general sleep
hygiene self-efficacy measured at three time points. Control variables for self-efficacy ANOVAS included parenting style, social comparison orientation, participants’ work status, the day the participant completed the follow-up survey, and the child’s baseline bedtime and nighttime wakening behaviors, and the child’s daytime tiredness. The main effect of time alone was not significant $F(2, 580) = 1.51, p = .22$. The interaction between time and exposure condition was marginally significant, $F(2, 580) = 2.39, p = .08$. As can be seen in Figure B.8, post hoc comparisons with Sidak correction demonstrated differences between the forced exposure and selective exposure conditions. In the forced condition, there were no significant differences in general sleep hygiene self-efficacy between T1, T2, and T3. On the other hand, in the selection condition, there were significant differences between T1 and T2, demonstrating an immediate effect with increased general sleep hygiene self-efficacy. However, this effect disappeared at T3 with general self-efficacy scores dipping back to the baseline.

The interaction between time and testimonial condition was not significant, $F(4, 580) = 1.31, p = .27$. Finally, the three-way interaction between time, exposure condition, and testimonial condition was not significant, $F(2, 580) = .24, p = .79$.

**Method self-efficacy.** Similarly, a repeated-measures ANOVA examined the effect of exposure condition and testimonial condition on participants’ self-efficacy regarding the sleep training methods across three time points. The main effect of time was significant, $F(2, 580) = 5.05, p < .01$, partial $\eta^2 = .02$. The interaction between time and exposure condition was not significant, $F(2, 580) = 1.88, p = .16$. 


However, the interaction of time and testimonial condition was significant, $F(4, 580) = 4.10, p < .005$, partial $\eta^2 = .03$. As can be seen in Figure B.9, participants who read two GE testimonials reported a significant difference in method self-efficacy between T1 and T2 and between T1 and T3. Further, there was no difference between T2 and T3 for participants who read 2 GE testimonials, representing a lasting effect. Similar effects were found for participants who read 2 CIO testimonials. However, the participants who read one of each testimonial did not report significant differences between T1 and T2. The difference in self-efficacy scores between T1 and T3 was marginally significant ($p = .054$). There was, however, a small lasting impact because the scores did not differ between T2 and T3.

Finally, the three-way interaction between time, exposure, and testimonial was not significant, $F(2, 580) = 1.88, p = .15$.

**General sleep hygiene outcome expectations.** The first repeated-measures ANOVA tested for direct effects of exposure condition and testimonial condition on participants’ general hygiene outcome expectations at T1, T2, and T3. Regarding the within-groups factors, the main effect of time was not significant $F(2, 580) = 2.09, p = .13$. The interaction of time and exposure condition was not significant $F(2, 580) = .59, p = .56$, and the interaction of time and testimonial condition was not significant $F(4, 580) = .20, p = .94$. Further, the three-way interaction between time, exposure, and testimonial was not significant, $F(2, 580) = 870, p = .42$.

**Method outcome expectations.** Another repeated-measures ANOVA examined the effect of exposure condition and testimonial condition on participants’ outcome
expectations regarding sleep training methods at three time points. The main effect of time was significant, $F(2, 580) = 7.63, p < .001$, partial $\eta^2 = .03$. The interaction between time and exposure condition was significant, $F(2, 580) = 4.88, p < .01$, partial $\eta^2 = .02$. As displayed in Figure B.10, post-hoc comparisons revealed a marginally significant difference between the forced and selective exposure conditions at T1 (i.e., baseline) with the selection condition reporting lower method outcome expectations scores than the forced exposure condition. This difference was not found in T2 or T3. Further, post hoc comparisons with Sidak correction indicated that both the forced and selection conditions reporting a significant difference in method outcome expectations between T1 and T2 and between T1 and T3. There was no difference between T2 and T3, representing a lasting effect.

The interaction between time and testimonial condition was significant, $F(4, 580) = 2.40, p = < .05$, partial $\eta^2 = .02$. Post hoc comparisons with Sidak correction demonstrated a marginally significant difference ($p = .10$) between participants who read two CIO testimonials and those who read two GE testimonials at T2, with participants who read two CIO testimonials reporting slightly greater method outcome expectations (see Figure B.11). Further, all three testimonial conditions experienced a similar significant increase in outcome expectations from T1 to T2 and from T1 to T3. Similarly, in all three conditions, there was not a significant difference between T2 and T3, indicating a lasting impact.

Finally, the three-way interaction was significant, $F(2, 580) = 9.53, p < .001$, partial $\eta^2 = .03$. There were several notable interactions. First, at T2, there was a
significant difference in reported method outcome expectations by participants who read two CIO or two GE stories in the selection condition only. According to post hoc comparisons with Sidak correction, in the selection condition, participants who read two CIO testimonials reported significantly greater outcome expectations than participants who read two GE testimonials (see Figure B.12), and this effect was also significant at T3. This effect was not found in the forced exposure condition. In the selection condition at T2, there was also a significant difference in method outcome expectations between participants who read two CIO testimonials and participants who read one of each with those who read two CIO testimonials reporting significantly higher outcome expectations. This effect was only marginally significant at T3 ($p = .13$).

There was also a significant difference when participants read two CIO stories between the forced and selection conditions at T2 and T3 with the selection condition reporting greater method outcome expectations than the forced condition (see Figure B.13). On the other hand, if participants read two GE stories, the effect was the opposite with the forced condition reporting higher outcome expectations scores than the selection group at T2, but this effect approached significance ($p = .06$) and was not evident at T3 (see Figure B.14).

**Sleep hygiene behavior change.** An ANOVA tested for direct effects of exposure condition and testimonial condition on participants’ general sleep hygiene behavior change. Control variables were the day participants completed the follow-up survey (i.e., weekday or weekend), parenting style, social comparison, participant work status, participant age, and the child’s bedtime, waking, and daytime sleepiness behaviors.
measured at the baseline. The main effect of exposure condition was not significant, $F(1, 290) = 2.66, p = .10$, and the main effect of testimonial was not significant, $F(2, 290) = 1.32, p = .27$. Further, the interaction between testimonial and exposure was not significant, $F(1, 290) = 2.14, p = .14$.

**Method behavior change.** Similarly, another ANOVA examined the effects of exposure condition and testimonial condition on participants’ behavior change related to sleep training method with the same control variables as above analyses. The main effect of exposure condition was not significant, $F(1, 290) = .17, p = .68$. However, the main effect of testimonial condition was significant, $F(2, 290) = 3.36, p < .05$, partial $\eta^2 = .02$. Participants who read two CIO stories ($M = 4.71, SD = 2.50$) reported more method-related behavior change than participants who only read one CIO story ($M = 3.64, SD = 2.61$). There was no significant difference between participants who read two CIO and two GE testimonials.

Finally, the interaction between testimonial and exposure was not significant, $F(1, 290) = .20, p = .65$.

**Interaction of testimonial selection and assimilation on self-evaluation as mediator of persuasive effects**

First stage dual moderated mediation analyses were conducted to examine H7-H9 using Model 11 from the PROCESS SPSS macro version 2.13 (Hayes, 2013). In these analyses, testimonial condition (0 = CIO, 1 = GE) was independent variable, and only participants who read two GE or two CIO testimonials were included. In this model, there are two moderators (i.e., assimilation with the testimonial mothers and exposure
condition) on the effect of testimonial condition on the mediator of self-evaluation social comparison (see Figure B.15 as an example). A point estimate for an indirect effect (total or specific) was considered significant if zero was not included in the 95% bias-corrected confidence interval. Control variables in these analyses included parenting style, the day participants completed the follow-up survey, child’s bedtime and nighttime wakening behaviors, and the child’s daytime tiredness at baseline.

The interaction shown in Figure B.16 plots the conditional effects of testimonial condition on self-evaluation for various values of assimilation in the forced and selection conditions and applies to H7-H9. As can be seen in the selection condition, higher levels of assimilation in the GE condition led to increased levels of self-evaluation, and this relationship is not as strong for participants who read two CIO testimonials. In the forced exposure condition, the differences between CIO and GE testimonials were not as pronounced.

**H7a: Self-efficacy outcomes.** A first stage dual moderated mediation analysis with testimonial condition as (X) independent variable, self-evaluation social comparison (M) as mediator, assimilation (W) as moderator, selection (Z) as second moderator, and T2 general self-efficacy as outcome variable was conducted. The direct effects and interaction effects are displayed in Table A.8. Further, the mediator variable effects are the same for subsequent analyses for H7-H9 and will only be included in Table A.8 for space considerations. The conditional indirect effect of testimonial condition (X) via self-evaluation (M) on general self-efficacy (Y) was only significant at high levels of assimilation (W) in the selective exposure condition (Z), with a point estimate of .09, and
a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of .01 to .26. The effect was positive, so participants reported increased general self-efficacy through increased self-evaluation with the characters in the GE testimonials if they selected the GE testimonials thus increasing their assimilation.

The first stage dual moderated mediation with method self-efficacy produced similar results. Direct effects on T2 method self-efficacy can be found in Table A.9. Again, the conditional indirect effect of testimonial condition (X) via self-evaluation (M) on method self-efficacy (Y) was only significant at high levels of assimilation (W) in the selective exposure condition (Z), with a point estimate of .35, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of .06 to .76. The effect was positive, so participants reported increased method self-efficacy through increased self-evaluation with the characters in the GE testimonials if they selected the testimonials, thus increasing their assimilation. Therefore, H7a was supported.

**H7b: Self-efficacy outcomes at one week follow-up.** The first stage dual moderated mediation with testimonial condition as independent variable, self-evaluation social comparison as mediator, assimilation as moderator, selection as second moderator, and T3 general self-efficacy produced no significant results.

However, the first stage dual moderated mediation examining T3 method self-efficacy was significant. The direct effects on T3 method self-efficacy are reported in Table A.10. As in the previous self-efficacy analyses, the conditional indirect effect of testimonial condition (X) via self-evaluation (M) on T3 method self-efficacy (Y) was only significant at high levels of assimilation (W) in the selective exposure condition (Z),
with a point estimate of .30, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of .06 to .65. The effect was positive, so participants reported increased method self-efficacy through increased self-evaluation with the characters in the GE testimonials if they selected the testimonial thus increasing their assimilation. H7b was partially supported regarding method self-efficacy but not general self-efficacy.

**H8a: Outcome expectations outcomes.** A first stage dual moderated mediation analysis with testimonial condition (X) as independent variable, self-evaluation social comparison (M) as mediator, assimilation (W) as moderator, selection (Z) as the second moderator, and T2 general outcome expectations (Y) as dependent variable was examined. The direct effects on T2 general outcome expectations are reported in Table A.11. The dual moderated mediation was only significant at high levels of assimilation with the GE testimonial characters in the selective exposure condition, with a point estimate of .13, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of .025 to .35. The effect was positive, so participants reported increased general outcome expectations through increased self-evaluation with the characters in the GE testimonials if they selected the testimonial, thus increasing their assimilation.

Then, a first stage dual moderated mediation analysis with testimonial condition (X) as independent variable, assimilation (W) as moderator, selection (Z) as second moderator, and T2 method outcome expectations as dependent variable was conducted. The direct effects on T2 method outcome expectations can be seen in Table A.12. The conditional indirect effect of testimonial condition on method outcome expectations was only significant at high levels of assimilation in the selective exposure condition, with a
point estimate of .44, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of .08 to .91. The effect was positive, so participants reported increased method outcome expectations through greater self-evaluation with the characters in the testimonials if they selected the testimonial, which increased their assimilation. Thus, H8a was supported.

**H8b: Outcome expectations outcomes at one week follow-up.** Another first stage dual moderated mediation used testimonial condition as independent variable, self-evaluation social comparison as mediator, assimilation as moderator, selection as the second moderator, and T3 general outcome expectations as dependent variable. There were no significant indirect effects of testimonial condition on T3 general outcome expectations one week later. Therefore, this effect was not lasting.

However, the first stage dual moderated mediation examining testimonial condition (X) as independent variable, self-evaluation social comparison (M) as mediator, assimilation as moderator (W), selection (Z) as a second moderator, and T3 method outcome expectations as dependent variable produced significant results. The direct effects on T3 method outcome expectations are found in Table A.13. The results were similar to method outcome expectations at T2 where the conditional indirect effect of testimonial condition on method outcome expectations was only significant at high levels of assimilation in the selective exposure condition, with a point estimate of .33, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of .06 to .70. The effect was positive, so participants reported increased method outcome expectations at T3 through increased self-evaluation with the characters in the GE testimonials if they
selected the testimonial thus increasing their assimilation. Therefore, H8b received partial support for method outcome expectations but not general outcome expectations.

**H9: Behavior change.** The first stage dual moderated mediation with testimonial condition as independent variable, self-evaluation social comparison as mediator, assimilation as moderator, selection as second moderator, and general sleep hygiene behavior change produced no significant results.

However, the first stage dual moderated mediation with method behavior change as dependent variable produced significant results. The direct effects on method behavior change can be found in Table A.14. Once again, the conditional indirect effect of testimonial condition on general behavior change was significant at high levels of assimilation in the selective exposure condition, with a point estimate of .33, and a 95% BCa (bias-corrected and accelerated) bootstrap confidence interval of .06 to .83. The effect was positive, so participants reported greater method-related behavior change through increased self-evaluation with the characters in the GE testimonials if they selected the testimonials, which increased their assimilation. Therefore, H9 received partial support in method behavior change but not general behavior change.

**Interaction of testimonial selection and self-efficacy on self-inspiration as mediator of persuasive effects**

First stage dual moderated mediation analyses were conducted to examine H10 and H11 using Model 11 from the PROCESS SPSS macro, version 2.13 (Hayes, 2013). Once again in these analyses, testimonial condition (1 = CIO, 2 = GE) was independent variable, and only participants who read two GE or two CIO testimonials were included.
There are two moderators (i.e., T2 self-efficacy and exposure condition) of the effect of testimonial condition on the mediator of self-inspiration social comparison (see Figure B.17 as an example). A point estimate for an indirect effect (total or specific) was considered significant if zero was not included in the 95% bias-corrected confidence interval. Control variables in these analyses included parenting style, the day participants completed the follow-up survey, child’s bedtime and nighttime wakening behaviors, and the child’s daytime tiredness at baseline.

**H10: Outcome expectations.** A first stage dual moderated mediation analysis examined testimonial condition (X) as independent variable, self-inspiration (M) as mediator, T2 general self-efficacy (W) as moderator, selection condition (Z) as second moderator, and T3 general outcome expectations as dependent variable. A graph of the interaction effects can be found in Figure B.18, and the direct and interaction effects can be seen in Table A.15. As can be seen in Figure B.18, differential effects were found in the selection condition. For the most part, participants were highly confident in their reports of general self-efficacy. When participants chose two CIO testimonials, higher general self-efficacy scores led to greater self-inspiration. On the other hand, participants who selected two GE condition reported lower self-inspiration as their general self-efficacy scores increased.

The conditional indirect effect of testimonial condition on T3 general outcome expectations was significant at several values of the moderators (see Table A.15). In the selection condition, the dual moderated mediation was only significant at more moderate levels of T2 general self-efficacy, with a point estimate of .11, and a 95% BCa (bias-
corrected and accelerated) bootstrap confidence interval of .01 to .33. When looking at Figure B.18, this makes sense because participants reported lower self-efficacy in the GE condition as T2 general self-efficacy increased. On the other hand, the conditional indirect effect of testimonial condition on participants’ T3 general outcome expectations was significant at higher levels of T2 general self-efficacy in the forced exposure condition (see Table A.15 for point estimates and confidence intervals). The effects were positive, so participants reported increased general outcome expectations at T3 through increased self-inspiration with the characters in the GE testimonials.

A first stage dual moderated mediation examined testimonial condition (X) as independent variable, self-inspiration social comparison as mediator (M), T2 method self-efficacy (W) as moderator, selection condition (Z) as second moderator, and T3 method outcome expectations as dependent variable. Figure B.19 depicts a graph of the interaction effects on self-inspiration as the mediator, and the direct and interaction effects can be seen in Table A.16. As can be seen in Figure B.19, there was a difference in the selective exposure condition based on participants’ selection of CIO or GE testimonials. When reading GE testimonials, participants who reported greater T2 method self-efficacy engaged in more self-inspiration social comparison with the parent characters in the GE testimonials. This effect was not as pronounced for participants in the selective exposure condition who read two CIO testimonials.

Hence, the conditional indirect effect of testimonial condition on T3 method outcome expectations was only significant at moderate to high levels of T2 method self-efficacy in the selective exposure condition (see Table A.16 for point estimates and
confidence intervals). Therefore, H10 received support for method outcome expectations and partial support general outcome expectations since high levels of T2 self-efficacy reduced self-inspiration in the selection condition.

**H11: Behavior change.** A first stage dual moderated mediation was conducted with testimonial condition (X) as independent variable, self-inspiration social comparison as mediator (M), T2 general self-efficacy (W) as moderator, selection condition (Z) as second moderator, and general behavior change (Y) as outcome variable. The interaction effects on the mediator can be found in Table A.15, and Figure B.18 can be referenced. The direct effects on general behavior change can be found in Table A.17. The conditional indirect effects of testimonial condition on general behavior change were significant at several values of the moderators. Similar to the dual moderated mediation for T3 general outcome expectations, the mediation was only significant for participants at the moderately high scores on T2 general self-efficacy in the selective exposure condition (see Table A.17). For participants in the forced exposure condition, the conditional indirect effects were significant when participants reported higher T2 general self-efficacy scores.

Another first stage dual moderated mediation examined method behavior change as outcome variable. The interaction effects of the mediator are represented in Table A.16, and Figure B.19 demonstrates the interactions. Further, the direct effect on method behavior change can be found in Table A.18. The conditional indirect effects of testimonial condition on method behavior change were significant moderate to high levels of T2 method self-efficacy in the selection condition only (see Table A.18 for point
estimates and confidence intervals). H11 received support for method behavior change and partial support general behavior change since high levels of T2 self-efficacy reduced self-inspiration in the selection condition.
Chapter 5: Discussion

The current study investigated how tailoring and selective exposure to personal testimonials featuring two sleep training methods (i.e., cry-it-out vs. graduated extinction) influenced mothers’ outcome expectations, self-efficacy, and behaviors in handling their children’s bedtime routines and nighttime wakings both immediately following media exposure and one week later. Participants were randomly assigned to one of three conditions where they were read two testimonials that matched their reported parenting style, read two testimonials that were opposite of their reported parenting style, or they were able to freely select two testimonials they were interested in reading. This section will first examine results regarding direct effects in the tailoring component (e.g., match vs. mismatch) of the study, direct effects comparing forced (i.e., tailored) and selective exposure conditions, mediations examining selection of testimonials, and finally social comparison mechanisms. Limitations and future directions for further research are then provided.

It was originally expected that participants who read testimonials that matched their parenting style, as reported in the baseline, would experience higher self-efficacy, outcome expectations, and behaviors than participants who read testimonials that did not match their parenting styles (H1 and H2). These hypotheses had to be reconceptualized since an overwhelming majority reported the highest scores on the authoritative parenting
scale items compared to the permissive and authoritarian ones. There were not enough parents in the authoritarian groups to allow for comparisons. A cluster analysis revealed two types of parents in the sample: (Group 1) those who engaged in almost all authoritative parenting behaviors and (Group 2) those who engaged in a mix all three behaviors but still favoring authoritative ones slightly more. For parents in Group 1, the tailoring hypotheses examining match vs. mismatch could be examined. For Group 2, a match vs. mismatch is less clear since they are engaging in more of a mix of the styles.

With respect to self-efficacy as an outcome, there were no interactions between parenting style and testimonial condition on self-efficacy as both the CIO and GE testimonials increased participants’ method self-efficacy immediately after media exposure and one week later. Further, there were no interactions of parenting style and testimonial condition on method outcome expectations, however, there were differences between the two parenting groups. Participants who engaged in more of a mix of parenting styles (i.e., Group 2) reported higher method outcome expectations immediately at the baseline than the participants who engaged in more authoritative behaviors (i.e., Group 1). Group 1 reported significantly higher scores immediately after media exposure and one week later. On the other hand, Group 2 demonstrated an initial increase in method outcome expectations immediately after media exposure but their method outcome expectations were not lasting as their scores dipped back to baseline one week after exposure. There were no significant effects regarding general sleep hygiene self-efficacy or general sleep hygiene outcome expectations. In this case, the testimonials
were more effective at influencing method-related self-efficacy and outcome expectations.

For behavior change outcomes, Group 1 engaged in significantly more general sleep hygiene behaviors than Group 2 regardless of the testimonial they read. The results regarding method behavior change were not significant.

Although H1 and H2 were not supported since matching a testimonial to participants’ authoritative parenting style seemed to have no effect, these results provide useful information nonetheless. In the current study, it was difficult to categorize parents into different parenting styles. They all engaged in authoritative parenting behaviors the most, and a second group engaged in more of a mix but also still favored authoritative strategies. Participants who used a mix of parenting styles (i.e., Group 2) reported increased method self-efficacy one week later but saw no lasting effects on improved method outcome expectations or behavior. It is possible that the permissive strategies these parents are using could make it difficult to implement a soothing bedtime routine for their children and to use sleep training strategies to handle nighttime wakings. Permissive parents are more responsive, less demanding, and are more likely to allow their children to get away with negative behaviors to avoid confrontation (Baumrind, 1971). Thus, these parents reported an increase in their ability to engage in these behaviors but believing that they would be effective with their own child if implemented is an entirely different matter. Both the CIO and GE methods require parents to set strict guidelines that must be adhered to or else it would send confusing messages to the child about appropriate bedtime behaviors. The need to be strict and consistent using both
methods could explain why parents who use a mix of strategies reported increased self-efficacy but not outcome expectations or behavior.

On the other hand, parents who engaged in mostly authoritative parenting behaviors (i.e., Group 1) reported increased method self-efficacy and method outcome expectations but not method behavior one week later, which is disappointing. They did utilize significantly more general sleep hygiene behaviors than the mixed parenting behaviors group. It is surprising that these effects did not differ based on reading the CIO or GE testimonials. There may be a slippage between parenting style and sleep training method to account for these unexpected results where parenting styles do not perfectly match a specific sleep training method. The current study argues that the authoritarian style aligns better with CIO because characteristics of authoritarian parents may make implementing the CIO method easier. In reality, parents will be able to implement either method regardless of parenting style but may possibly face more or less emotional distress in using the CIO method.

When considering the effects of exposure (forced vs. selective) and which testimonials participants read, some notable differences existed (RQ4). At the immediate post-test, participants who selected the testimonials they wished to read reported significantly higher general sleep hygiene self-efficacy than participants who did not get to choose testimonials. This effect was not significant one week later, but participants’ had high general sleep hygiene self-efficacy at baseline, so there was not much room for improvement on a 7-point measurement scale. With respect to method self-efficacy, there were no significant differences between the forced and selective exposure conditions.
When examining the influence of time and testimonial condition on method self-efficacy, reading two of the same type of testimonial was better than choosing one of each since the effect between baseline and one week later was marginally significant. Participants who read two GE or two CIO testimonials demonstrated improved method self-efficacy one week later. Here, we do not see that the ability to select testimonials has an impact on self-efficacy except among participants who selected one GE and one CIO testimonial.

There were no significant differences between exposure conditions for general sleep hygiene outcome expectations. There were several notable interactions between exposure condition, time, and testimonial on method outcome expectations. In the selective exposure condition, participants who read two CIO testimonials reported significantly higher method outcome expectations one week later than participants who read two GE testimonials at both time points. Regarding exposure condition, participants who selected to read two CIO testimonials reported significantly higher method outcome expectations than participants who were assigned to read two CIO testimonials. For the CIO testimonials, it appears that selection has an influence on method outcome expectations. On the other hand, there were no differences between participants assigned to read 2 GE testimonials or those who selected them. A marginally significant effect existed immediately after media exposure with the forced condition reporting slightly higher outcome expectations scores but this was not significant one week later.

Finally, with respect to behavior change, there were no significant differences between exposure conditions. In the selection condition, participants who selected one of each testimonial reported significantly less method behavior change than participants
who read two CIO or two GE testimonials. Considering these results, it appears that having the ability to select testimonials was most important with respect to method outcome expectations. Further, in the selection condition, participants reported a positive change in outcome variables when they were consistent in their selections rather than if they selected one of each testimonial. This is not surprising since participants who read one of each received conflicting messages on how to best treat nighttime wakings.

Based on the SESAM model, it was expected that participants’ parenting style would predict their testimonial selections in the selective exposure condition (H3, H4, and RQ1). Participants’ parenting style did not predict their first testimonial selection, but authoritative parenting style influenced participants’ second selection. Participants who rated themselves as engaging in more authoritative parenting style behaviors were more likely to select the authoritative (i.e. GE testimonials) in their second testimonial selection. Therefore, the first selection may have been “testing the waters” to see what specific information was presented in the testimonials. Participants then selected according to their activated self-concepts (i.e., authoritative parenting style) in the second selection, perhaps because the CIO method did not align with an authoritative participants’ preferred parenting style. The CIO method does not permit the parent to be responsive to the child’s needs and allow for input from the child, which are key aspects in authoritative parenting. Therefore, it could be difficult for an authoritative parent to implement a method that does not allow them to be responsive to their child’s feelings and provide comfort and has been documented as a reason why parents experience difficulties with the CIO method (e.g., Mindell et al., 2006; Stevens, 2015).
It is not surprising that authoritarian and permissive parenting styles had no influence on selection because almost all parents in the sample reported engaging in more authoritative parenting styles than any other style. Further, a parent who is more authoritarian may be accepting of the GE method as well. Implementing timed check-ins may not go against their parenting style principles, and they may be less comforting than an authoritative parent during a check-in. Finally, permissive parenting style may not have predicted selection because these parents are not confident about their parenting actions and may have felt unsure about which testimonial to select in their second choice because they are unsure if they can implement either method.

Selective exposure to the testimonials did not function as predicted by the SESAM model (H5-H6, RQ2-RQ3). We expected that participants who selected testimonials that more closely aligned with their currently activated self-concept (i.e., their parenting style) would experience greater positive changes in outcome variables than participants who selected testimonials that did not align with their self-concepts (i.e., parenting style). The mediations were only significant with authoritative parenting style as independent variable. Since the authoritative style was the only predictor of testimonial selection in H3-H4, it is not surprising that the mediations with permissive and authoritarian styles yielded no significant results. The authoritative mediations were significant for method self-efficacy at T2 and T3 and for method outcome expectations at T2 and T3. However, the mediations with authoritative parenting style did not function as originally predicted. The more highly authoritative parents selected CIO testimonials, the
greater their reported method self-efficacy and outcome expectations both immediately after media exposure and one week later.

Recall that in RQ4, participants who selected CIO testimonials reported greater outcome expectations than participants who were assigned to read CIO testimonials. It is clear that selection of testimonials is important. When participants selected the CIO testimonial, they reported greater method related self-efficacy and outcome expectations. The CIO testimonials may have been more effective for several reasons, even though it was expected that a testimonial that aligned with parents’ self-concepts would be more effective. Preschoolers’ age may have been one reason why the CIO method did not encounter the expected resistance in the current study. Parents of infants are more likely to oppose the CIO method because they believe the infant may be psychologically harmed from the effects of crying alone and that parent-infant attachment would be disrupted (Genthin & Macgregor, 2007). Infants are not able to understand why their parents are ignoring them at night when they’re crying. However, the CIO method may be more appealing for parents of preschoolers who can explain to their child why they are being ignored at night and reinforce that they still love their child. Thus, this study may find different results if conducted with parents of infants who may be more opposed to the CIO method.

Further, CIO titles and testimonial descriptions may have been more effective because they signaled empowerment for mothers in the study. Preschooler parents may be frustrated that their child is experiencing sleep issues at a later age and may feel as though they lack control in resolving their child’s sleep issues. The CIO testimonials may
have been appealing as a method to “take control of bedtime for parents who are desperate for a solution. Second, there is some research available that parenting style may be different based on situation factors (Carter & Welch, 1981; Grusec & Goodnow, 1994), and that parents can vary on how authoritarian or authoritative they may be at times (Coplan, Hastings, Lagacé-Séguin, & Moulton, 2002; Sternberg, 1994). Dealing with bedtime issues and nighttime wakings may be one circumstance where the CIO method is more acceptable even though parents generally engage in authoritative strategies. By bedtime, parents are very tired and may have less patience for dealing with the demands of a child. Thus, the CIO method may be more appealing since it limits interaction with the child that could possibly be stressful. Further, the CIO method may sound like the “quicker” option to successfully ending nighttime wakings since GE requires scheduled check-ins that gradually become less frequent until they stop.

Another possible reason is the differences in complexity between the CIO and GE method. The CIO method is relatively simple and involves one step: put your child to bed and ignore his/her crying all night. On the other hand, the GE method is more complex with developing a schedule for how long a parent will wait before she checks in on the child. Further, there were instructions for what to say to the child so that the child is calmed but not overly comforted. The GE method may have been less effective because of its complexity, and parents would not have had the steps available to browse through again unless they took a screenshot of the testimonial or searched the Internet for additional information.
The ability to select testimonials was also critical in the role of social comparison as a mechanism of persuasion. It was predicted that assimilation moderates the indirect effect of testimonial condition (GE or CIO) on outcome variables through self-evaluation, and that this relationship depended on participants’ ability to select testimonials (H7-9). Interestingly, the conditional indirect effect of testimonial condition on outcome variables through self-evaluation was only significant for participants in the selection condition who chose GE testimonials and reported high levels of assimilation. This relationship held true for T2 general and method outcome expectations and T2 general and method self-efficacy. However, at T3, only method outcome expectations and method self-efficacy were significant, indicating lasting effects. Selection appears to influence both assimilation and self-evaluation social comparison.

It was also expected that T2 self-efficacy would moderate the indirect effect of testimonial condition on outcome variables through self-inspiration, and this relationship would depend on the ability to select testimonials (H10-H11). These predictions were also examined using first stage dual moderated mediations. The mediations were significant for T3 general and method outcome expectations and general and method behavior change for participants who read two GE testimonials.

In these analyses, significant effects were found in both the forced and selection conditions. General outcome expectations functioned a bit differently. Participants’ T2 self-efficacy scores were very high, and participants in the selection condition with the highest self-efficacy scores reported lower scores of self-inspiration. Therefore, the conditional indirect effects in the selection condition were only significant at more
moderate levels of self-inspiration. In the forced condition, participants who reported greater T2 self-efficacy engaged in more self-inspiration with the GE testimonial characters and reported higher general outcome expectations. The first stage dual moderated mediation examining general behavior change worked in the same manner. Participants who were assigned testimonials reported greater general outcome expectations and general behavior change in the GE testimonial condition when they reported high levels of assimilation through self-evaluation social comparison. On the other hand, participants who selected two GE testimonials experienced greater general outcome expectations and general behavior change at mid levels of self-efficacy through self-inspiration. However, the first stage dual moderated mediations examining method-related outcome expectations and method behavior change were only significant for participants who selected GE testimonials and engaged in more self-inspiration. These mediations operated in a similar manner to the self-evaluation ones. It is interesting that the GE testimonials were more effective via greater levels of social comparisons, both self-evaluation and self-inspiration. The results from the first stage dual moderated mediations support predictions from the SESAM model.

Several limitations must be acknowledged for the current study. First, the parenting scale used (C. Robinson et al., 1995) was not able to separate permissive parenting into neglectful and indulgent categories which are included in the demandingness and responsiveness dimensions in the parenting style literature (e.g., Maccoby & Martin, 1983). Although, it is common to collapse neglectful and indulgent parenting styles into one permissive category in the literature although it is not always
recommended (see Lamborn et al., 1991). Nonetheless, the C. Robinson et al. (1995) scale is heavily cited in the parenting literature with 222 citations in the Institute for Scientific Information (ISI) Web of Science Core Database, and the scale is one of the few that collects parents’ responses of their own style rather than adolescents’ reports of their parents’ styles. While the family communication patterns scale measures the conversation and conformity dimensions, the adolescent child is the individual intended to complete the scale (Ritchie & Fitzpatrick, 1990). A preschooler would be unable to respond to the scale items, and the items are directed at more sophisticated aspects of a conversation that would not likely be occurring between a preschooler and parent. For example, an item from the scale is “my parents and I often have long, relaxed conversations about nothing in particular.” Future research could use a different parenting scale that captures the indulgent and neglectful styles to understand how testimonials featuring sleep training methods influence these parents. It may be helpful to use or design a parenting style based on the dimensions of demand and responsiveness rather than using one such as the PSDQ, which identifies different dimensions for each parenting style. Using a scale that focuses on the demandingness and responsiveness dimensions may permit more parents to be categorized in different styles than the PSDQ used in the current study.

Further, due to time limits in completing the survey, the scale was shortened from 62 items to eight items with the highest factor loadings from C. Robinson et al. (1990). Subsequently, the authoritative subscale was not very reliable in the current study. The authoritarian items in the subscales were also rather harsh, and parents may not have
responded honestly to the authoritarian items that involved physical punishment or verbal abuse since they are not socially desirable behaviors. This may have influenced the low means on the authoritarian subscale resulting in fewer participants to be categorized as highly authoritarian.

There were also differences between the samples used for development of the PSDQ scale and the participants in the current study. The participants in the sample of C. Robinson and colleagues’ study were parents of preschool and school-age children, so the study was validated with a wider range of children’s ages. In their study, parents filled out the scale regarding their spouse’s behaviors with their child. For the current study, mothers filled out the scale with respect to their own behaviors. Participants in the C. Robinson et al. study may have been more willing to answer questions honestly since they were completing the items based on their spouse’s behaviors rather than their own as in the current study. Further, there may be gender differences where fathers are more likely to engage in authoritarian behaviors and the current study could not capture this in the same manner as the C. Robinson et al. study. In addition, the scale was developed in the 90s where physical punishment may have been more acceptable than it is now. These differences may have attributed to the surprising results this study found with respect to parenting style. Parenting style may also vary across ethnic groups, and future research should consider these implications in study design.

The issue of study attrition must also be acknowledged since there was a 28% attrition rate. Participants who were less interested in the study may have not completed the follow-up one week later and are not represented in the results. Participants who
completed both sessions may have been especially interested in improving their children’s sleep behaviors, reflected in positive results one week later. The differences between these two groups may have shaped the current study’s results. Another limitation of the study was that the population varied in respect to race and ethnicity. Although the testimonials were not specific with regard to the race of the mothers and children, the names of the characters were American. A future study should also match race of the characters in the testimonials to the race reported by parents as race is an important aspect of self-concept and is especially salient for individuals who are not Caucasian (Appiah, Knobloch-Westerwick, & Alter, 2013; Phinney, 1992). Matching based on race or ethnicity could thus enhance social comparisons.

The current study examined one context in narrative persuasion to examine mechanisms of influence when individuals intentionally seek health information from a narrative. Future research should examine if transportation and identification are also mechanisms of persuasion in NSE. Studies should also measure behavior change at different time points to capture true behavior change. The current study only measured it at the one week follow-up and could not compare pre and post-test behavior change. However, the present study contributes to both tailoring and selective exposure research as well as narrative persuasion in general. Based on the results from this study, reading a testimonial that aligned with parenting style was not as influential as predicted. The CIO testimonial was more effective for participants who reported engaging in more authoritative parenting behaviors. It is possible that the CIO method is more appealing for bedtime and sleep issues related to preschool children because the parents are exhausted.
and stressed by the end of the day. Future research should examine if other aspects of self-concepts may enhance participants’ self-efficacy, outcome expectations, and behavior change related to bedtime struggles and nighttime wakings. Ethnicity was previously mentioned, but future research could also tailor testimonials based on mothers’ occupation or self-efficacy in dealing with their child’s nighttime disturbances. Self-efficacy may be particularly important for participants who engage in more permissive parenting styles. It would also be interesting to examine this study’s theoretical propositions with other health behavior topics for children to see if parenting style as an important aspect of self-concept functions in a similar manner. Topics that could be explored include physical activity for children or creating a well-balanced diet. Finally, a prolonged exposure study using testimonials is necessary to truly understand the dynamic processes over time that the SESAM model predicts.
References


http://dx.doi.org/10.1207/S1532785XMEP0201_4


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Retrieved from


Robinson, M. J., & Knobloch-Westerwick, S. (in prep). Instilling belief in the ability to change for the better: Narrative persuasion for sleep hygiene self-efficacy.


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Appendix A: Tables
Table A.1.  
*Pretest Results for Titles and Descriptions*

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<td>Stepping Up: Mom Takes Control of Bedtime</td>
<td>5.08$^a$ (1.13)</td>
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<td>Battling Nighttime Crying: My Sleep Training Experience</td>
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<td>Maggie Takes Control to Battle Nighttime Wakings</td>
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<td>Teamwork Resolved My Child’s Lingering Sleep Anxieties</td>
<td>3.68$^b$ (1.46)</td>
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<td>5.72$^b$ (1.31)</td>
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<td>Parenting in Moments: Easing Skylar’s Bedtime Worries</td>
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<td>Improving Jamie’s Sleep Through Teamwork and Love</td>
<td>3.30$^b$ (1.73)</td>
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<td>6.04$^b$ (1.02)</td>
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<td>Letting Morgan Create a Bedtime Routine Worked</td>
<td>2.92$^b$ (1.59)</td>
<td>6.21$^b$ (.93)</td>
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*Note.* Means in a column with different superscripts differ at $p < .05$ in Student-Newman-Keuls test.
Table A.2.

*Pretest Results for Testimonials*

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<th>Authoritative Testimonials</th>
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<tr>
<td>Teamwork Resolved My Child’s Lingering Sleep Anxieties</td>
<td>3.28\textsuperscript{b} (1.67)</td>
<td>6.00\textsuperscript{b} (1.19)</td>
<td>4.24\textsuperscript{abc} (2.07)</td>
<td>5.76\textsuperscript{b} (1.51)</td>
</tr>
<tr>
<td>Parenting in Moments: Easing Skylar’s Bedtime Worries</td>
<td>3.83\textsuperscript{b} (1.74)</td>
<td>5.92\textsuperscript{b} (1.21)</td>
<td>5.50\textsuperscript{c} (1.64)</td>
<td>5.83\textsuperscript{b} (1.37)</td>
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<td>Letting Morgan Create a Bedtime Routine Worked</td>
<td>3.47\textsuperscript{b} (1.21)</td>
<td>5.91\textsuperscript{b} (1.14)</td>
<td>5.29\textsuperscript{c} (1.38)</td>
<td>5.88\textsuperscript{b} (1.04)</td>
</tr>
<tr>
<td>Improving Jamie’s Sleep Through Teamwork and Love</td>
<td>3.74\textsuperscript{b} (1.63)</td>
<td>5.81\textsuperscript{b} (1.22)</td>
<td>5.10\textsuperscript{c} (1.83)</td>
<td>6.00\textsuperscript{b} (1.00)</td>
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</table>

*Note.* Means in a column with different superscripts differ at $p < .05$ in Student-Newman-Keuls test.
Table A.3.

*Items and Factor Loadings for Outcome Expectations Measure.*

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<thead>
<tr>
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<th>Loadings</th>
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<tbody>
<tr>
<td>1. Waiting gradually longer intervals before checking on my child will improve my child’s sleep</td>
<td>.90</td>
</tr>
<tr>
<td>2. Ignoring my child’s crying outbursts during the night will help improve my child’s sleep</td>
<td>.89</td>
</tr>
<tr>
<td>3. Ignoring my child’s crying outbursts during the night will teach my child how to self-soothe</td>
<td>.89</td>
</tr>
<tr>
<td>4. Waiting gradually longer intervals before checking on my child following a crying outburst will teach my child how to self-soothe</td>
<td>.88</td>
</tr>
<tr>
<td>5. Creating a soothing bedtime routine for my child will improve my child’s sleep</td>
<td>.84</td>
</tr>
<tr>
<td>6. Avoiding media devices (e.g., TV or iPads) prior to bedtime will help my child fall asleep more quickly</td>
<td>.81</td>
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<tr>
<td><strong>Eigenvalue</strong></td>
<td>3.26</td>
</tr>
<tr>
<td><strong>% of Total Variance</strong></td>
<td>54.36</td>
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</tbody>
</table>

**Total Variance** 75.78

*Note.* The results displayed in this table were measured at T1, T2 and T3 measurements loaded onto the same two factors as well.
Table A.4.

*Items and Factor Loadings for Self-Efficacy Measure.*

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<thead>
<tr>
<th></th>
<th>Factor 1: Method</th>
<th>Factor 2: General</th>
</tr>
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<tr>
<td>1. Wait gradually longer intervals during the night before checking on my child following a crying outburst</td>
<td>.92</td>
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</tr>
<tr>
<td>2. Ignore my child's crying outbursts during the night</td>
<td>.89</td>
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</tr>
<tr>
<td>3. Teach my child to self-soothe and fall back to sleep on his/her own</td>
<td>.85</td>
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<tr>
<td>4. Create a soothing bedtime routine including bedtime stories for my child</td>
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<tr>
<td>5. Prevent my child from using media devices before bedtime</td>
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<table>
<thead>
<tr>
<th>Loadings</th>
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<td>% of Total Variance</td>
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<td>Total Variance</td>
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*Note.* The results displayed in this table were measured at T1. T2 and T3 measurements loaded onto the same two factors as well.
Table A.5.

*Items and Factor Loadings for Behavior Measure.*

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<th>Loadings</th>
<th>Factor 1: Method</th>
<th>Factor 2: General</th>
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<tr>
<td>Waited gradually longer intervals during the night before checking on my child following a crying outburst</td>
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<tr>
<td>Ignored my child's crying outbursts during the night</td>
<td>.87</td>
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<tr>
<td>Taught my child to self-soothe and fall back to sleep on his/her own</td>
<td>.86</td>
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<tr>
<td>Created a soothing bedtime routine including bedtime stories for my child</td>
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</tr>
<tr>
<td>Prevented my child from using media devices before bedtime</td>
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<td>.81</td>
</tr>
</tbody>
</table>

| Eigenvalue | 2.57 | 1.20 |
| % of Total Variance | 51.37 | 24.07 |
| Total Variance | 75.45 |
Table A. 6

Correlations between Study Variables.

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Note: N = 303, *p < .10, **p < .05, ***p < .01, ****p < .005
Table A.7.

Logistic Regression Predicting Likelihood to Select GE testimonial in Second Selection.

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<th>Wald</th>
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<th>p</th>
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Table A.8.

First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), Assimilation (W), and Exposure Condition (Z) via Self-Evaluation Social Comparison (M) on T2 General Self-Efficacy.

<table>
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<tr>
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<td>Testimonial x Assimilation x Selection</td>
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<td>0.36</td>
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Model Summary $R^2 = .26$, $F(12, 210) = 6.09$, $p < .005$

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<tbody>
<tr>
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Model Summary $R^2 = .17$, $F(7, 215) = 6.06 p < .005$

Conditional Indirect Effects of X on Y at Values of the Moderators

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<th>Selection</th>
<th>Effect</th>
<th>Boot SE</th>
<th>95% CI</th>
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<td>Selection</td>
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Table A.9.

First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), Assimilation (W), and Exposure Condition (Z) via Self-Evaluation Social Comparison (M) on T2 General Self-Efficacy.

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<th>p-Value</th>
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Model Summary $R^2 = .20$, $F(7, 215) = 7.84$, $p < .005$

Conditional Indirect Effects of X on Y at Values of the Moderators Boot 95% CI

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<th>CI</th>
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Table A.10.

*First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), Assimilation (W), and Exposure Condition (Z) via Self-Evaluation Social Comparison (M) on T3 Method Self-Efficacy.*

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Model Summary $R^2 = .25$, $F(7, 215) = 10.17$, $p < .005$

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Table A.11.

*First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), Assimilation (W), and Exposure Condition (Z) via Self-Evaluation Social Comparison (M) on T2 General Outcome Expectations.*

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Model Summary $R^2 = .10$, $F(7, 215) = 3.24$, $p < .005$

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<td>.05</td>
<td>-.02 to .15</td>
</tr>
<tr>
<td></td>
<td>5.01</td>
<td>Forced</td>
<td>.06</td>
<td>.06</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td>5.01</td>
<td>Selection</td>
<td>.13</td>
<td>.08</td>
<td>.35</td>
</tr>
</tbody>
</table>
Table A.12.

First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), Assimilation (W), and Exposure Condition (Z) via Self-Evaluation Social Comparison (M) on T2 Method Outcome Expectations.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Dependent Variable Model (DV= T2 Method OE)</th>
<th>b</th>
<th>SE</th>
<th>t-Value</th>
<th>p- Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Evaluation</td>
<td></td>
<td>.45</td>
<td>.06</td>
<td>7.04</td>
<td>.000</td>
</tr>
<tr>
<td>Testimonial Condition</td>
<td></td>
<td>-.39</td>
<td>.20</td>
<td>-1.99</td>
<td>.05</td>
</tr>
</tbody>
</table>

Model Summary \( R^2 = .24, F(7, 215) = 9.57, p < .005 \)

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Assimilation</th>
<th>Selection</th>
<th>Effect</th>
<th>Boot SE</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Evaluation</td>
<td>2.52</td>
<td>Forced</td>
<td>-.04</td>
<td>.25</td>
<td>-.34 to .26</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>2.52</td>
<td>Selection</td>
<td>-.25</td>
<td>.27</td>
<td>-.84 to .21</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>3.76</td>
<td>Forced</td>
<td>.08</td>
<td>.11</td>
<td>-.12 to .33</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>3.76</td>
<td>Selection</td>
<td>.09</td>
<td>.15</td>
<td>-.23 to .33</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>5.01</td>
<td>Forced</td>
<td>.20</td>
<td>.17</td>
<td>-.11 to .56</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>5.01</td>
<td>Selection</td>
<td>.44</td>
<td>.21</td>
<td>.08 to .91</td>
</tr>
</tbody>
</table>
Table A.13.

*First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), Assimilation (W), and Exposure Condition (Z) via Self-Evaluation Social Comparison (M) on T3 Method Outcome Expectations.*

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Dependent Variable Model (DV= T2 Method OE)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>b</td>
<td>SE</td>
<td>t-Value</td>
</tr>
<tr>
<td>Self-Evaluation Testimonial Condition</td>
<td></td>
<td>.34</td>
<td>.07</td>
<td>5.22</td>
</tr>
<tr>
<td>Model Summary $R^2 = .18$, $F(7, 215) = 6.77, p &lt; .005$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Assimilation</th>
<th>Selection</th>
<th>Effect</th>
<th>Boot SE</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Evaluation</td>
<td>2.52</td>
<td>Forced</td>
<td>-.03</td>
<td>.12</td>
<td>-.27 to .19</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>2.52</td>
<td>Selection</td>
<td>-.19</td>
<td>.20</td>
<td>-.65 to .16</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>3.76</td>
<td>Forced</td>
<td>.06</td>
<td>.09</td>
<td>-.10 to .26</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>3.76</td>
<td>Selection</td>
<td>.07</td>
<td>.12</td>
<td>-.17 to .30</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>5.01</td>
<td>Forced</td>
<td>.15</td>
<td>.13</td>
<td>-.08 to .45</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>5.01</td>
<td>Selection</td>
<td>.33</td>
<td>.16</td>
<td>.06 to .70</td>
</tr>
</tbody>
</table>
Table A.14.

First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), Assimilation (W), and Exposure Condition (Z) via Self-Evaluation Social Comparison (M) on Method Behavior Change.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Dependent Variable Model (DV= Method Behavior)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>.34</td>
</tr>
<tr>
<td>Testimonial Condition</td>
<td>-.54</td>
</tr>
</tbody>
</table>

Model Summary $R^2 = .13, F(7, 215) = 4.48, p < .005$

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Assimilation</th>
<th>Selection</th>
<th>Effect</th>
<th>Boot SE</th>
<th>CI</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Evaluation</td>
<td>2.52</td>
<td>Forced</td>
<td>-.03</td>
<td>.12</td>
<td>-.30 to .19</td>
<td></td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>2.52</td>
<td>Selection</td>
<td>-.19</td>
<td>.21</td>
<td>-.73 to .14</td>
<td></td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>3.76</td>
<td>Forced</td>
<td>.06</td>
<td>.12</td>
<td>-.15 to .34</td>
<td></td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>3.76</td>
<td>Selection</td>
<td>.07</td>
<td>.12</td>
<td>-.15 to .34</td>
<td></td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>5.01</td>
<td>Forced</td>
<td>.14</td>
<td>.14</td>
<td>-.05 to .51</td>
<td></td>
</tr>
<tr>
<td>Self-Evaluation</td>
<td>5.01</td>
<td>Selection</td>
<td>.33</td>
<td>.18</td>
<td>.06 to .83</td>
<td></td>
</tr>
</tbody>
</table>
Table A.15.

First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), T2 General Self-Efficacy (W), and Exposure Condition (Z) via Self-Inspiration Social Comparison (M) on T3 General Outcome Expectations.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Mediator Variable Model (DV = Self-Inspiration)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
<td>$SE$</td>
<td>t-Value</td>
<td>$p$-Value</td>
</tr>
<tr>
<td>Testimonial Condition</td>
<td>-.30</td>
<td>1.39</td>
<td>-.21</td>
<td>.83</td>
</tr>
<tr>
<td>T2 General S.E.</td>
<td>.30</td>
<td>.16</td>
<td>1.91</td>
<td>.06</td>
</tr>
<tr>
<td>Exposure Condition</td>
<td>.13</td>
<td>1.78</td>
<td>.07</td>
<td>.94</td>
</tr>
<tr>
<td>Testimonial x T2 General S.E.</td>
<td>.15</td>
<td>.23</td>
<td>.65</td>
<td>.51</td>
</tr>
<tr>
<td>Testimonial x Selection</td>
<td>3.95</td>
<td>3.15</td>
<td>1.25</td>
<td>.21</td>
</tr>
<tr>
<td>T2 General S.E. x Selection</td>
<td>-.04</td>
<td>.29</td>
<td>-.13</td>
<td>.89</td>
</tr>
<tr>
<td>Testimonial x T2 General S.E. x Selection</td>
<td>-.64</td>
<td>0.49</td>
<td>-1.29</td>
<td>.20</td>
</tr>
</tbody>
</table>

Model Summary $R^2 = .17$, $F(12, 210) = 3.57, p < .005$

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Dependent Variable Model (DV= T3 General O.E.)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
<td>$SE$</td>
<td>t-Value</td>
<td>$p$-Value</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>.09</td>
<td>.05</td>
<td>1.90</td>
<td>.06</td>
</tr>
<tr>
<td>Testimonial Condition</td>
<td>.07</td>
<td>.15</td>
<td>.48</td>
<td>.63</td>
</tr>
</tbody>
</table>

Model Summary $R^2 = .11$, $F(7, 215) = 7.00, p < .005$

<table>
<thead>
<tr>
<th>Mediator</th>
<th>T2 General S.E.</th>
<th>Selection</th>
<th>Effect</th>
<th>Boot SE</th>
<th>Boot 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Inspiration</td>
<td>5.05</td>
<td>Forced</td>
<td>.04</td>
<td>.03</td>
<td>-.002 to .14</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>5.05</td>
<td>Selection</td>
<td>.11</td>
<td>.08</td>
<td>.004 to .33</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>6.12</td>
<td>Forced</td>
<td>.05</td>
<td>.04</td>
<td>-.001 to .16</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>6.12</td>
<td>Selection</td>
<td>.06</td>
<td>.05</td>
<td>.002 to .20</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>7.00</td>
<td>Forced</td>
<td>.07</td>
<td>.05</td>
<td>-.04 to .21</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>7.00</td>
<td>Selection</td>
<td>.02</td>
<td>.05</td>
<td>.17</td>
</tr>
</tbody>
</table>
Table A.16.

First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), T2 Method Self-Efficacy (W), and Exposure Condition (Z) via Self-Inspiration Social Comparison (M) on T3 Method Outcome Expectations.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>$b$</th>
<th>$SE$</th>
<th>t-Value</th>
<th>$p$-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testimonial Condition</td>
<td>.50</td>
<td>.71</td>
<td>.70</td>
<td>.49</td>
</tr>
<tr>
<td>T2 Method S.E.</td>
<td>.40</td>
<td>.10</td>
<td>4.03</td>
<td>.0001</td>
</tr>
<tr>
<td>Exposure Condition</td>
<td>.37</td>
<td>1.05</td>
<td>.36</td>
<td>.72</td>
</tr>
<tr>
<td>Testimonial x T2 Method S.E.</td>
<td>-.01</td>
<td>.14</td>
<td>-.09</td>
<td>.93</td>
</tr>
<tr>
<td>Testimonial x Selection</td>
<td>-1.10</td>
<td>1.39</td>
<td>-.79</td>
<td>.43</td>
</tr>
<tr>
<td>T2 Method S.E. x Selection</td>
<td>-.14</td>
<td>.20</td>
<td>-.72</td>
<td>.47</td>
</tr>
<tr>
<td>Testimonial x T2 Method S.E. x Selection</td>
<td>.31</td>
<td>0.27</td>
<td>1.14</td>
<td>.26</td>
</tr>
</tbody>
</table>

Model Summary $R^2 = .27$, $F(12, 210) = 6.40$, $p < .005$

<table>
<thead>
<tr>
<th>Predictors</th>
<th>$b$</th>
<th>$SE$</th>
<th>t-Value</th>
<th>$p$-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Inspiration</td>
<td>.37</td>
<td>.06</td>
<td>5.79</td>
<td>.000</td>
</tr>
<tr>
<td>Testimonial Condition</td>
<td>-.35</td>
<td>.20</td>
<td>-1.72</td>
<td>.09</td>
</tr>
</tbody>
</table>

Model Summary $R^2 = .20$, $F(7, 215) = 7.74$, $p < .005$

Conditional Indirect Effects of X on Y at Values of the Moderators

<table>
<thead>
<tr>
<th>Mediator</th>
<th>T2 Method S.E</th>
<th>Selection</th>
<th>Effect</th>
<th>Boot SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Inspiration</td>
<td>3.11</td>
<td>Forced</td>
<td>.17</td>
<td>.13</td>
<td>-.04 to .45</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>3.11</td>
<td>Selection</td>
<td>.12</td>
<td>.19</td>
<td>-.23 to .53</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>4.75</td>
<td>Forced</td>
<td>.16</td>
<td>.10</td>
<td>-.006 to .40</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>4.75</td>
<td>Selection</td>
<td>.30</td>
<td>.12</td>
<td>.10 to .58</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>6.40</td>
<td>Forced</td>
<td>.15</td>
<td>.15</td>
<td>-.12 to .49</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>6.40</td>
<td>Selection</td>
<td>.48</td>
<td>.21</td>
<td>.14 to .99</td>
</tr>
</tbody>
</table>
**Table A.17.**

*First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), T2 General Self-Efficacy (W), and Exposure Condition (Z) via Self-Inspiration Social Comparison (M) on General Behavior Change.*

<table>
<thead>
<tr>
<th>Predictors</th>
<th>b</th>
<th>SE</th>
<th>t-Value</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Inspiration Testimonial Condition</td>
<td>.15</td>
<td>.07</td>
<td>2.20</td>
<td>.03</td>
</tr>
<tr>
<td>Model Summary R² = .11, F(7, 215) = 3.72 p &lt; .005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mediator</th>
<th>T2 General S.E.</th>
<th>Selection</th>
<th>Effect</th>
<th>Boot SE</th>
<th>Moderators Boot 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Inspiration</td>
<td>5.05</td>
<td>Forced</td>
<td>.07</td>
<td>.06</td>
<td>-.01 to .23</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>5.05</td>
<td>Selection</td>
<td>.18</td>
<td>.12</td>
<td>.02 to .51</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>6.12</td>
<td>Forced</td>
<td>.09</td>
<td>.06</td>
<td>.26 to .001</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>6.12</td>
<td>Selection</td>
<td>.10</td>
<td>.08</td>
<td>.32 to .0004</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>7.00</td>
<td>Forced</td>
<td>.11</td>
<td>.08</td>
<td>.33 to -.08</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>7.00</td>
<td>Selection</td>
<td>.04</td>
<td>.08</td>
<td>.27</td>
</tr>
</tbody>
</table>
Table A.18.

First stage dual moderated mediation: Conditional Indirect Effect of Testimonial Condition (X), T2 Method Self-Efficacy (W), and Exposure Condition (Z) via Self-Inspiration Social Comparison (M) on Method Behavior Change.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Dependent Variable Model (DV= Method Behavior)</th>
<th>b</th>
<th>SE</th>
<th>t-Value</th>
<th>p- Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Inspiration</td>
<td>.45</td>
<td>.10</td>
<td>4.56</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Testimonial Condition</td>
<td>-.67</td>
<td>.31</td>
<td>-2.15</td>
<td>.03</td>
<td></td>
</tr>
</tbody>
</table>

Model Summary $R^2 = .17$, $F(7, 215) = 5.98$ $p < .005$

Conditional Indirect Effects of X on Y at Values of the Moderators Boot 95% CI

<table>
<thead>
<tr>
<th>Mediator</th>
<th>T2 General S.E.</th>
<th>Selection</th>
<th>Effect</th>
<th>Boot SE</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Inspiration</td>
<td>3.11</td>
<td>Forced</td>
<td>.21</td>
<td>.16</td>
<td>-.05 to .57</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>3.11</td>
<td>Selection</td>
<td>.15</td>
<td>.24</td>
<td>-.28 to .67</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>4.75</td>
<td>Forced</td>
<td>.20</td>
<td>.13</td>
<td>.50</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>4.75</td>
<td>Selection</td>
<td>.37</td>
<td>.16</td>
<td>.11 to .73</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>6.40</td>
<td>Forced</td>
<td>.19</td>
<td>.19</td>
<td>-.15 to .61</td>
</tr>
<tr>
<td>Self-Inspiration</td>
<td>6.40</td>
<td>Selection</td>
<td>.59</td>
<td>.27</td>
<td>.15 to 1.26</td>
</tr>
</tbody>
</table>
Appendix B: Figures
Please select an article you would like to spend some time reading. When you have made your selection, please click the ">>" button.

<table>
<thead>
<tr>
<th>Stepping Up: Mom Takes Control of Bedtime</th>
<th>Teamwork Resolved My Child's Lingering Sleep Anxieties</th>
</tr>
</thead>
<tbody>
<tr>
<td>My young child is refusing to go to bed on time. So, I developed a structured bedtime routine to control my child's troublesome bedtime behaviors.</td>
<td>It is common for preschoolers to delay their bedtimes with distractions. My child and I created a bedtime routine to ease my child into sleeping.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Battling Nighttime Crying: My Sleep Training Experience</th>
<th>Parenting in Moments: Easing Skylar's Bedtime Worries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your child may not want to be alone at night to sleep. Sleep training lets mom stand her ground when her child refuses to sleep.</td>
<td>Skylar loves reading before bedtime, but when it's time to sleep, Skylar throws a fit! So, I listened to Skylar's worries to fix this problem.</td>
</tr>
</tbody>
</table>

*Figure B.1. Example Index Page for Selective Exposure Condition*
**Figure B.2.** Method Self-Efficacy Increase Across Time.

*Note.* Estimated marginal means. Means within a data series with different a/b letters differ significantly at \( p \leq .005 \) in subsequent one-sided tests with Sidak correction.
Figure B.3. Method Outcome Expectations by Parenting Style.

Note. Estimated marginal means. Means within a data series with different letters differ significantly at $p < .05$ in subsequent tests with Sidak correction. If means from the same time point both have an asterisk, they differ at $p < .05$ in subsequent tests with Sidak correction.
Authoritative Parenting Style → GE Testimonial Selection → T2 Method Self-Efficacy

-.0076 (.0053), 95% CI [-.0222, -.0004]

Figure B.4. Impact of Authoritative Parenting Style on T2 Method Self-Efficacy via GE Testimonial Selection.

Note. One asterisks indicates $p < .05$. 
Authoritative Parenting Style $\rightarrow$ GE Testimonial Selection $\rightarrow$ T2 Method Outcome Expectations

$-.0153 (.0077)$, 95% CI [-.0345, -.0036]

*Figure B.5. Impact of Authoritative Parenting Style on T2 Method Outcome Expectations via GE Testimonial Selection.*

*Note.* One asterisk indicates $p < .05$, and three asterisks indicates $p < .005$. 
Authoritative Parenting Style → GE Testimonial Selection → T3 Method Self-Efficacy

-0.0085 (.0049), 95% CI [-0.0220, -.0016]

Figure B.6. Impact of Authoritative Parenting Style on T3 Method Self-Efficacy via GE Testimonial Selection.

Note. One asterisks indicates $p < .05$, and three asterisks indicates $p < .005$. 
Authoritative Parenting Style $\rightarrow$ GE Testimonial Selection $\rightarrow$ T3 Method Outcome Expectations

$-.0112 (.0059), 95\% \text{ CI } [-.0268, -.0025]$

*Figure B.7. Impact of Authoritative Parenting Style on T3 Method Outcome Expectations via GE Testimonial Selection.*

*Note.* One asterisks indicates $p < .05$, and three asterisks indicates $p < .005$. 
Figure B.8. Interaction of Time and Exposure on General Self-Efficacy

Note. Estimated marginal means. Means within a data series with different a/b letters differ significantly at $p \leq .05$ in subsequent one-sided tests with Sidak correction.
Figure B.9. Interaction between Time and Testimonial on Method Self-Efficacy

Note. Estimated marginal means. Means within a data series with different letters differ significantly at $p < .05$ in subsequent tests with Sidak correction.
Figure B.10 Interaction of Time and Exposure on Method Outcome Expectations

Note. Estimated marginal means. Means within a data series with different letters differ significantly at $p < .05$ in subsequent tests with Sidak correction. If means from the same time point both have an asterisk, they differ at $p < .07$ in subsequent tests with Sidak correction.
Figure B.11 Interaction of Time and Testimonial on Method Outcome Expectations

Note. Estimated marginal means. Means within a data series with different letters differ significantly at $p < .05$ in subsequent tests with Sidak correction. If means from the same time point both have an asterisk, they differ at $p < .05$ in subsequent tests with Sidak correction.
Figure B.12 Interaction of Time and Testimonial in Selective Exposure Condition on Method Outcome Expectations

Note. Estimated marginal means. Means within a data series with different a/b letters differ significantly at $p \leq .05$ in subsequent one-sided tests with Sidak correction. If means from the same time point have different x/y letters, they differ at $p \leq .05$ in subsequent one-sided tests with Sidak correction.
Figure B.13. Interaction of Time and Exposure on Method Outcome Expectations in CIO Condition.

Note. Estimated marginal means. Means within a data series with different letters differ significantly at $p < .05$ in subsequent tests with Sidak correction. If means from the same time point both have an asterisk, they differ at $p < .05$ in subsequent tests with Sidak correction.
Figure B.14 Interaction of Time and Exposure Condition on Method Outcome Expectations in GE Testimonial Condition.

Note. Estimated marginal means. Means within a data series with different letters differ significantly at $p < .05$ in subsequent tests with Sidak correction. If means from the same time point both have an asterisk, they differ at $p = .06$ in subsequent tests with Sidak correction.
Figure B.15. Example moderated mediation model utilized for H7-9
Figure B.16. Conditional effects of testimonial condition on self-evaluation social comparison at various levels of assimilation for forced and selective exposure.
Figure B.17. Example moderated mediation model utilized for H10-11
Figure B.18. Conditional effects of testimonial condition on self-inspiration social comparison at various levels of T2 general self-efficacy for forced and selective exposure
Figure B.19. Conditional effects of testimonial condition on self-inspiration social comparison at various levels of T2 method self-efficacy for forced and selective exposure.
Appendix C: Testimonial Titles and Descriptions
Stepping up: Mom takes control of bedtime
My young child is refusing to go to bed on time. So, I developed a structured bedtime routine to control my child’s troublesome bedtime behaviors.

Improving Jamie’s sleep through teamwork and love
Jamie was resisting bedtime and engaging in stalling techniques. With Jamie’s help, Mom came up with a plan to transform Jamie into a better sleeper.

Letting Morgan create a bedtime routine worked
Morgan cries at night until Mom comes for comfort and attention. Mom asks for Morgan’s suggestions, and they can work together to improve Morgan’s sleep.

Maggie takes control to battle nighttime wakings
Everyone in Maggie’s household is exhausted. Her preschooler wakes up crying at night. Maggie sets clear bedtime rules to fix her child’s worrisome nighttime behaviors.

Teamwork resolved my child’s lingering sleep anxieties
It is common for preschoolers to delay their bedtimes with distractions. My child and I created a bedtime routine to ease my child into sleeping.

Battling nighttime crying: My sleep training experience
Your child may not want to be alone at night to sleep. Sleep training lets Mom stand her ground when her child refuses to sleep.

Putting mom back in command for bedtime
Even preschool age children may resist bedtime. This mom decided that putting her foot down when her child refuses to sleep is the best solution.

Parenting in moments: Easing Skylar’s bedtime worries
Skylar loves reading before bedtime, but when it’s time to sleep, Skylar throws a fit! So, I listened to Skylar’s worries to fix this problem.
Appendix D: Testimonials
1. Stepping Up: Mom Takes Control of Bedtime

Drew, my 2-year-old, started to develop a pattern of waking several times after being put to bed and just crying his poor little face off. To get him to go back to sleep, I would go into his room and rub his belly, which would sometimes take 2 or 3 tries for it to do the trick! After a couple weeks, the belly rubs stopped working, and Drew and I were very tired during the day. We were not getting the full night of sleep that we desperately needed. I was looking for a solution that would put Drew back on track.

The problem was that I just didn’t know where to start in searching for a solution. I read several books on sleep training, but I wasn’t sure which method was best. I decided to talk to a few friends about their experience with sleep training. I learned from them that every child is different and what works best for one child may not work for another. They shared their stressful experiences in sleep training, but they reminded me that the better sleep Drew and I would be having was worth a few nights of crying.

After talking to my friends about sleep training methods, I felt more confident that I could sleep train. I decided to try the cry it out method. It was the method that allowed me to be firm in setting bedtime rules that would end the nighttime crying and make Drew sleep better. This was important to me because I just hate hearing him cry! Here’s how it works: when your child starts crying after being put to bed, you have to literally let him “cry it out.” There’s a method to this madness…

Here are the specifics:

- First, plan a routine your child must use each night. A relaxing bedtime routine will make your child tired enough for bedtime. It should include soothing activities like taking a bath, brushing his teeth, and reading a bedtime story.

- Turn off all media devices since the light from the screens can actually keep your child up longer!
Put your child to bed when he is awake but drowsy. This is important to teach him how to fall asleep on his own.

The cry it out method helps with the nighttime temper tantrums. The purpose of the method is to teach your child how to self-soothe when he is upset so he can fall back to sleep on his own. Consistency is very important for making the cry it out method work. So, when you’re child cries at night, you have to ignore it so he falls back to sleep on his own. If you slip up and go in to comfort him during the night, you are reinforcing the crying behaviors. Instead of learning how to self-soothe, your child would learn that mom will come into his room if he cries long enough. This will only make the crying and sleep training process last even longer.

I decided to try it out a few nights ago. This is how we cried it out…

I got Drew to do his bedtime routine. I gave him a bath, brushed his teeth, and we read a storybook together. At 8pm, I gave him a pat and left the room. As soon as I left, Drew started to cry and call out for me. To follow the cry it out method, it’s pretty simple. I didn’t go into his room at all. I watched the monitor to make sure he was okay. He cried for 20 minutes. After that, he fell asleep for a couple hours and woke up again crying. This time, he cried about 17 minutes and then slept.

Overall, Drew woke up crying 5 times that night, and he probably cried for an hour total. I felt bad hearing him cry, but I kept my eye on the goal. The crying was a part of the process and it was not hurting him.

I kept at the method for 3 more nights. I stayed focused on the desired outcome — a child who can go to bed awake and put himself to sleep! The thing is, each night it’s taken less and less time for him to give in and go to sleep AND he is waking up less. On the third night, he only woke up twice and cried for 15 minutes total. I felt confident that he would be sleeping the whole night soon.

It looks like sleep training really does work. Drew is learning to fall asleep on his own, which makes me feel good. He’s a much happier child during
the day now that he isn’t exhausted. I’m also not exhausted anymore. This sleep training story has a happy ending!

**Battling Nighttime Crying: My Sleep Training Experience**

My 2-year-old, Morgan, has never been a good sleeper. He would resist going to bed and ask for one more storybook or one more snack. On a good night, he would wake up crying 2 or 3 times. On a bad night, he would wake up 6 to 8 times. Needless to say, we were all VERY tired. Morgan was pretty grumpy during the day, and I was absolutely exhausted as well. I couldn’t carry a conversation, and my marriage was reduced to stolen naps and grumpy grunts. We couldn’t go on living like this. I really needed to fix Morgan’s disruptive sleep issues now.

The only problem was that I wasn’t sure how to help Morgan with his sleep problems. I read several sleep training books, but I wondered if I could complete the steps without messing up. Feeling nervous, I turned to a few good friends. Luckily, they had really good advice to give me. My friends reminded me that every family goes through rough patches with sleep training. It isn’t easy, but they said to keep grinding through until Morgan is sleeping through the night.

Feeling better after this encouragement, I chose the cry it out method because it allowed me to set a strict schedule for Morgan during the sleep training process. This will help him.

The steps look like this:

1. Create a bedtime routine your child has to complete each night. A soothing bedtime routine will make your child tired before bedtime. A routine should include things like taking a bath, brushing his teeth, and reading a storybook together.

2. Avoid media devices before bed because the light from screens will keep children up longer.
3. Put your child to bed when he is awake so he learns to fall asleep on his own. After you finish the bedtime routine, give him a few kind words, and leave the room.

4. Use the cry it out method if your child cries after being put to bed. The point of this method is to teach your child how to fall asleep on his own. He needs to learn how to self-soothe during the night without needing your comfort. The ultimate goal is to eliminate nighttime crying altogether. It is important to be consistent in following these instructions. When your child cries after being put to bed or during the night, you have to ignore these behaviors. You can’t provide comfort because you would be reinforcing the crying behaviors. You definitely DON’T want to teach your child that if he cries a little longer, mom will come in. You have to let your child “cry it out.” Eventually, he will cry for a few minutes (if necessary) and be able to fall asleep on his own.

What did crying it out look like for us?

I made sure Morgan started his bedtime routine around 7pm. I helped him take a bath, brush his teeth, and read a storybook. At 8:30pm, I put a tired Morgan in his bed, told him goodnight and to sleep tight, and then I left. He cried, and I had to ignore it according to the cry it out method. He started crying about 30 minutes after I put him to bed, and I watched him on the video monitor to make sure he was not hurting himself. He cried for about 25 minutes before falling asleep. It was rather stressful, and I almost cracked and went into his room a couple times. BUT, I kept reminding myself that a few nights of crying is worth it if he learns how to sleep through the night.

The first night, there was a lot of crying, but I was determined to make this work. I think he cried for an hour total. On the second night, he cried 3 times for about 45 minutes in all. I continued to ignore his attention-seeking behaviors. On the fourth night, he cried once for 15 minutes right after I put him to bed. But by the fourth night, he fussed for only a few minutes before falling asleep, and he slept the whole night through with no crying!

Over the course of a few days, Morgan went from being a child who struggled to fall asleep, despite my soothing, to a child that went to sleep easily on his own. He was more cheerful and engaged during the day, and he...
cried less overall. I was finally getting some sleep, too, and I no longer had that horrible feeling of resentment that sometimes crept into my heart. I don’t doubt that sleep training was stressful to Morgan for a few nights. It was rather difficult for me to hear Morgan upset in his room, but for us, the benefits to our entire family were beyond measure.

**Putting Mom Back in Command for Bedtime**

I’ve struggled to get Hayden, my 3-year old, to sleep throughout the night for many months. He did not want to go to bed at his bedtime, he would cry after I left the room, and even throughout the night. We were both exhausted, and I didn’t know how to help him. I’d seriously been thinking about these issues for a long time. I needed to come up with a plan to manage these negative behaviors.

I read several sleep training books, but I still was unsure of which method I wanted to use. I asked my friends, looking for personal stories on how to sleep train. For a long time, I couldn’t decide which sleep training method to use. There are so many of them out there and people swear by each and every one.

I came across the cry it out method. It allowed me to do what was best for Hayden while giving me the reigns of control. At that time, it was exactly what I needed to hear.

Here is how this method works:

- Create a relaxing bedtime routine that your child must obey. I decided that his routine would include a bath, brushing his teeth, and reading a storybook before being tucked in.

- Stay away from all media devices since the light given off by screens can delay falling asleep.

- I would put Hayden to bed when he is awake but drowsy. This will help him to learn how to fall asleep on his own. So, after we finished the bedtime routine, I would tuck him in and leave the room.
Then, I follow cry it out method if Hayden cries or fusses after he’s put to bed or during the night. Here is the plan: if Hayden cries either immediately after I put him to bed or throughout the night, I just have to let him “cry it out” until he falls back to sleep. I can’t go in to check on him, not even one time. If I do check on Hayden after he begins crying, I am teaching him that he just needs to cry a little bit longer before mom will come in to make everything better. This will only make the sleep training process painfully longer, which nobody wants. But, the purpose of the cry it out method is that the child learns to self-soothe himself back to sleep. In other words, Hayden has to learn how to fall asleep without me as a comforting aid.

The first night was not very easy. I completed the bedtime routine I developed for Hayden. I bathed him, brushed his teeth, and then we read a picture book. At 8:30pm, I told Hayden “Nighty night, I will see you in the morning,” and I gave him a goodnight pat. Hayden was quiet for about 20 minutes, and then he began to cry. He cried for about 20 minutes before he finally fell back to sleep. I glanced at the video monitor every so often to make sure he wasn’t hurting himself.

He woke up again at 10pm, 12:30am, and then again at 3:30am. Hayden cried for 20 minutes again the first time, 15 minutes the second time, and maybe 12 minutes the last time he woke up. It was very difficult not going into his room to quiet him. I kept reminding myself that going to him would make the sleep training process last longer. I dreamed of the silent nights I would have when this was over. He quieted, calmed, and eventually went to sleep. And then he slept until morning.

I did not keep a detailed record since then, but the next night, Hayden woke up three times. I stood my ground and didn’t check on him when he cried. He cried when I put him down the third night, but for three minutes. Nothing more. He slept the entire night last night.

Hayden has been in a better mood since sleep training began. He needed to be sleep trained. It has helped him be well rested, which has allowed him to learn to do cool new things. And now I know the #1 reason sleep training
has worked for him so far is because he was ready for it. Like I said, there will be some setbacks and I’m well aware of that, but Hayden is getting some quality sleep. We can sleep train again as necessary.

It’s not perfect, it’s not (and never will be) done, but I must say – sleep training Hayden was the best decision I ever made. I’ve come out of hiding and put a summary of how it went down here, in case there’s anyone out there who is spending their sleepless nights doing exactly what I did – looking for help.

Maggie Takes Control of Nighttime Wakings
By the time Toby was two years old, we were all pretty stressed…

Like most young kids, Toby woke up several times a night. But since he didn’t know how to fall back asleep, whenever he stirred, he’d cry out for us to comfort him back to sleep. Of course, we adored our sweet little boy, but waking up many times a night was SO tough. Sleep deprivation makes you feel like a walking zombie, and waking up multiple times a night is an actual form of torture, no joke! During the day, I also wasn’t able to be the energetic mother I hoped to be, since I was cross-eyed with exhaustion. It was time for me to take charge of Toby’s sleep problems immediately.

The sad thing was, Toby was tired, too. At even the smallest annoyance, he would burst out crying.

I was desperate to find a solution for all of us, but I wasn’t sure where to start and if we could even help Toby sleep better. My friend suggested several books on sleep training to me, and I started weighing out the different methods. Figuring out how to encourage your child to sleep can be very emotional. Everyone seems to handle it differently, and of course, every child is unique. But after a lot of thinking, I chose to give the cry it out method a try because it gave the parent the most control.

HOW IT WORKS
1. I made a bedtime routine Toby had to follow to help him wind down. Bedtime routines should include relaxing activities like taking a bath, brushing teeth, and reading a bedtime story.

2. Avoid all media devices before bed as these can actually disrupt children’s sleep routines.

3. Next, Toby would be put to sleep while still awake to teach him to fall asleep on his own. So, after the last storybook is read, put your child to bed, say goodnight, and leave the room.

4. Then, if Toby starts crying, the cry it out method starts. The purpose of the cry it out method is to teach your child to fall asleep on his own. He needs to learn how to self-soothe himself back to sleep. When your child cries after you leave the room or throughout the night, you have to ignore it no matter how long he cries. You can’t go into his room to comfort him, because if you do, you’re reinforcing the negative, attention-seeking behaviors. If you do go into his room, you are teaching him that crying for an even longer time will mean mom will eventually come to comfort him. You use a video monitor to make sure your child is not in any danger and allow him to fall asleep on his own.

So, our first night of sleep training, I made sure Toby followed his new bedtime routine and said “Night night, be a good boy, Toby,” patted his head twice, and told him to go to sleep now. Then, I walked out of the room and shut his door. But then, Toby started crying. I followed the cry it out rules, and I went to the video monitor to make sure Toby was only crying and not causing himself any potential danger. He cried for about 20 minutes before finally falling asleep, and I could sleep now, too.

That first night of sleep training was not terrible, but I kept telling myself that I was helping my child get the sleep he desperately needs. Toby cried four more times, and I did not go into his room because I knew doing so would only lengthen the time it took to break him of his troubling sleep issues. The last time he woke up was around 4am, and then he slept for the rest of the night.
Toby cried for an hour the first night. The next night, he cried for 30 minutes, and then the third night, he cried for about 15 minutes before falling asleep. And after that, he barely cried at all! I couldn’t believe how quickly it happened.

**HOW SLEEP TRAINING CHANGED OUR LIVES**

Now that Toby knows how to sleep, he loves his bed. And he adores his bedtime routine. I’m well rested, too. We also have grown-up time in the evening once Toby is asleep, which we really cherish (even if we’re just making pasta and watching *Mad Men* reruns). So, not only did sleep training turn out to be a good choice for Toby, it was also good for us. And I really think it’s ok to look after yourself as well as your child. When you want to be a great and energetic parent, it helps to take care of and nourish yourself, as well as your children, don’t you think?

**Teamwork Resolved My Child’s Lingering Sleep Anxieties**

Drew, my 2-year-old, started to develop a pattern of waking several times after being put to bed and just crying his poor little face off. To get him to go back to sleep, I would go into him room and rub his belly, which would sometimes take 2 or 3 tries for it to do the trick! After a couple weeks, the belly rubs stopped working, and Drew and I were very tired during the day. We were not getting the full night of sleep that we desperately needed, so I was looking for a solution that will benefit Drew and me.

The problem was that I just didn’t know where to start in searching for a solution. I read several books on sleep training, but I wasn’t sure which method was best. I decided to talk to a few friends about their experience with sleep training. I learned from them that every child is different and what works best for one child may not work for another. They also shared their stressful experiences in sleep training, but they reminded me that the better sleep Drew and I would be having was worth a few nights of crying.

After talking to my friends about sleep training methods, I felt more confident that I could sleep train. I decided to try the graduated extinction method. It was the method that allowed me to be both firm in setting bedtime rules, but it also allowed for time to comfort Drew when he was
upset during the night. This was important to me because I hate hearing my
girl cry! Here’s how it works: when your child starts crying after being put
to bed, you set up time intervals before checking in on him.

Here are the specifics:

❖ First, plan a bedtime routine with suggestions from your child. A
relaxing bedtime routine will make your child tired enough for
bedtime. It should include soothing activities like taking a bath,
brushing his teeth, and reading a bedtime story.

❖ Turn off all media devices since the light from the screens can
actually keep your child up longer!

❖ Put your child to bed when he is awake but drowsy. This is important
to teach him how to fall asleep on his own.

❖ The graduated extinction method helps with the nighttime temper
tantrums. The purpose of the method is to teach your child how to
self-soothe when he is upset so he can fall back to sleep on his own.
You set time intervals before providing comfort with the purpose of
ending the crying altogether. So, the first time your child cries, you
may wait 5 minutes before going into his room. The check-ins should
be brief—no more than 1 minute—and they should not reinforce
crying behaviors. Try not to give him excessive attention or coddling.
Then, the next time your child cries, you may wait 10 minutes before
checking in. If he cries again, you may wait 15 minutes before
checking.

I decided to try it out a few nights ago. Here is how the first night went:

Drew and I completed the bedtime routine together. I gave him a bath,
brushed his teeth, and we read a storybook together. At 8pm, I gave him a
kiss and left the room. As soon as I left, Drew started to cry and call out for
me. To follow the graduated extinction method, I waited 5 minutes before
going back in. I kept my encounter with him brief, simply saying he was fine
and needed to go back to sleep. After that, he fell asleep for a couple hours
and woke up again crying. This time, I waited 10 minutes before checking on him.

Overall, Drew woke up crying 5 times that night, and I gradually worked up to 20-minute intervals for checking-in. I liked the graduated extinction method because I didn’t have to leave Drew alone in his room crying bloody murder for long periods of time.

I kept at the method for 3 more nights. I stayed focused on the desired outcome — a child who can go to bed awake and put himself to sleep! The thing is, each night it’s taken less and less time for him to give in and go to sleep AND he is waking up less. On the third night, he only woke up twice. I worked up to the 10-minute interval for the second check-in that night, Drew was asleep before I even got there!

It looks like sleep training really does work. Drew is learning to fall asleep on his own, which makes me feel good. He’s a much happier child during the day now that he isn’t exhausted. I’m also not exhausted anymore. This sleep training story has a happy ending!

**Letting Morgan Create a Bedtime Routine Worked**

I’ve struggled to get Hayden, my 3-year old, to sleep throughout the night for many months. He did not want to go to bed at his bedtime, he would cry after I left the room, and even throughout the night. We were both exhausted, and I didn’t know how to help him. I’d seriously been thinking about these issues for a long time. I knew Hayden and I needed to come up with a plan ASAP.

I read several sleep training books, but I still was unsure of which method I wanted to use. I asked my friends, looking for personal stories on how to sleep train. For a long time, I couldn’t decide which sleep training method to use. There are so many of them out there and people swear by each and every one.
I came across the graduated extinction method. It allowed me to do what was best for Hayden without letting him cry for a long time. At that time, it was exactly what I needed to hear.

Here is how this method works:

- Create a soothing bedtime routine with your child’s help. Hayden and I agreed that his routine would include a bath, brushing his teeth, and reading a storybook before being tucked in.

- Stay away from all media devices since the light given off by screens can delay falling asleep.

- I would put Hayden to bed when he is awake but drowsy. This will help him to learn how to fall asleep on his own. So, after we finished the bedtime routine, I would tuck him in and leave the room.

- Then, I follow graduated extinction method if Hayden cries or fusses after he’s put to bed or during the night. Here is the plan: if Hayden cries, I wait 5 minutes before going into his room to check on him. I’m supposed to keep the check-ins brief (no more than 1 minute) and uneventful. No excessive attention, since I could end up reinforcing the attention-seeking behaviors. The second time he cries, I will check on him after 10 minutes. Then, if he cries a third time during the night, I will check on him after 15 minutes, gradually lengthening the time before check-ins with the hope of eliminating the crying and check-ins completely. It is important to be consistent in following the method to avoid reinforcing crying behaviors that could make the sleep training process take longer. The steps for checking in are repeated every night until the crying ends.

The first night was not very easy. Hayden and I followed the routine we developed together. I bathed him, brushed his teeth, and then we read a picture book. At 8:30pm, I told Hayden “Nighty night, Mommy loves you very much,” and I gave him a goodnight kiss. Hayden was quiet for about 20 minutes and then he began to cry. I waited 5 minutes before going into his
room. I told him he was alright and that he should go back to sleep. Then, I left the room.

He woke up again at 10pm d, 12:30am, and then again at 3:30am. I increased the time periods before I went in each time, starting again at 5 minutes, 10 minutes, and then 15 minutes. Each time, going in there was the right move for him. I stayed for less than 1 minute, and it made me feel better that he knew I was there, that I had not abandoned him, and would always be coming back. He quieted, calmed, and eventually went to sleep. And then he slept until morning.

I have not kept a detailed record since then, but the next night, Hayden woke up three times. I waited 10 minutes and 15 minute intervals before checking in. He cried when I put him down the third night, but for three minutes. No checks, all night long. He slept the entire night last night.

Hayden has been in a better mood since sleep training began, and he needed to be sleep trained. It has helped him be well rested, which has allowed him to learn to do cool new things. And I know the #1 reason sleep training has worked for him so far is because he was ready for it. Like I said, there will be some setbacks and I’m well aware of that, but Hayden is getting some quality sleep. We can sleep train again as necessary.

It’s not perfect, it’s not (and never will be) done, but I must say – sleep training Hayden was the best decision I ever made. I’ve come out of hiding and put a summary of how it went down here, in case there’s anyone out there who is spending their sleepless nights doing exactly what I did – looking for help.

**Parenting in Moments: Easing Skylar’s Bedtime Worries**

My 2-year-old, Morgan, has never been a good sleeper. He would resist going to bed and ask for one more storybook or one more snack. On a good night, he would wake up crying 2 or 3 times. On a bad night, he would wake up 6 to 8 times. Needless to say, we were all VERY tired. Morgan was pretty grumpy during the day, and I was absolutely exhausted as well. I couldn’t carry a conversation, and my marriage was reduced to stolen naps
and grumpy grunts. We couldn’t go on living like this. Morgan and I needed to fix his sleep issues together. The only problem was that I was not sure how to help Morgan with his sleep problems. I read several sleep training books, but I wondered if I could complete the steps without messing up. Feeling nervous, I turned to a few good friends. Luckily, they had really good advice to give me. My friends reminded me that every family goes through rough patches with sleep training. It isn’t easy, but they said to keep grinding through until Morgan is sleeping the whole night.

Feeling better after this encouragement, I chose the graduated extinction method because it allowed me to set limits for Morgan but also provide some reassurance to him during the sleep training process.

The steps look like this:

1. Allow your child to give input in creating a bedtime routine. A soothing bedtime routine will make your child tired before bedtime. A routine should include things like taking a bath, brushing his teeth, and reading a storybook together.

2. Avoid media devices before bed because the light from screens will keep children up longer.

3. Put your child to bed when he is awake so he learns to fall asleep on his own. After you finish the bedtime routine, give him a few kind words, and leave the room.

4. Use the graduated extinction method if your child cries after being put to bed. The point of this method is to gradually increase the time you wait before checking on your child when he is crying. At the first outburst, you may wait 5 minutes before going into his room. You are supposed to keep check-ins to under 1 minute and be sure not to provide excessive attention that may reinforce the crying behaviors. On the second outburst, you may wait 10 minutes before checking-in, and increase the interval to 15 minutes on the third outburst. The goal is to eliminate the outbursts altogether. Eventually, he will cry for a few minutes and be able to fall back asleep on
his own. This method teaches your child to self-soothe without needing your comfort. It is important to be consistent in following these steps.

**What did sleep training look like in our house?**

Morgan and I started his bedtime routine together around 7pm. I helped him take a bath, brush his teeth, and read a storybook. At 8:30pm, I put a tired Morgan in his bed, told him I loved him very much, and then I left. He cried, and I returned periodically to reassure him with a gentle voice and touch. He started crying about 30 minutes after I put him to bed, and I waited 5 minutes before checking on him. He woke up 3 more times that night, and I gradually increased the time intervals before check-ins: from 5 minutes, to 10 minutes, 15 minutes, and finally 20 minutes. It was difficult to hear Morgan crying, but the check-ins made it less stressful. That is what I really liked about the graduated extinction method.

The first night, there was a lot of crying, but I was determined to make this work. On the second night, he cried 3 times. I waited 10 minutes before checking on him the first time he cried, and then I increased to 15 minutes, and finally 20 minutes. On the fourth night, he cried once, and I waited 10 minutes before checking in. But by the fourth night, he fussed for only a few minutes before falling asleep, and I didn’t even have to check on him!

Over the course of a few days, Morgan went from being a child who struggled to fall asleep, despite my soothing, to a child that went to sleep easily on his own. He was more cheerful and engaged during the day, and he cried less overall. I was finally getting some sleep, too, and I no longer had that horrible feeling of resentment that sometimes crept into my heart. I don’t doubt that sleep training was stressful to Morgan for a few nights. It was rather difficult for me to hear Morgan upset in his room, but for us, the benefits to our entire family were beyond measure.

**Improving Jamie’s Sleep through Teamwork and Love**

Like most young kids, Devin woke up several times a night. Since she didn’t know how to fall back asleep, whenever she stirred, she’d cry out for us to comfort her back to sleep. Of course, we adored our sweet girl, but waking up many times a night was SO tough. Sleep deprivation makes you
feel like a walking zombie, and waking up multiple times a night is an actual form of torture, no joke! During the day, I also wasn’t able to be the energetic mother I hoped to be, since I was cross-eyed with exhaustion. It was time for Devin and I to work on this problem together.

The sad thing was, Devin was tired, too. At the smallest annoyance, she would burst out crying.

I was desperate to find a solution for all of us, but I wasn’t sure where to start and if we could even help Devin sleep better. My friend suggested several books on sleep training to me, and I started weighing out the different methods. Figuring out how to encourage your child to sleep can be very emotional. Everyone seems to handle it differently, and of course, every child is unique. But after a lot of agonizing, I chose to give the graduated extinction method a try because it allowed me to comfort Devin as necessary.

**HOW IT WORKS**

1. I made a bedtime routine with little Devin’s input to help her wind down. Bedtime routines should include relaxing activities like taking a bath, brushing teeth, and reading a bedtime story.

2. Avoid all media devices before bed as these can actually disrupt children’s sleep routines.

3. Next, Devin would be put to sleep while still awake to teach her to fall asleep on her own. So, after the last storybook is read, put your child to bed, say goodnight, and leave the room.

4. Then, if Devin starts crying, the graduated extinction method kicks in. When your child starts to cry after being put to bed or throughout the night, you wait 5 minutes the first time before checking in on your child. Then, you gradually increase the time before checking in on him. You may start at 5 minutes, increase to 10 minutes, and then 15 minutes, with the hope that your child will eventually soothe himself back to sleep. The sleep training teaches your child how to self-soothe. For the check-ins, keep them very
brief with minimal interaction that would reinforce the attention seeking behaviors. So, no excessive attention or coddling. Go into your child’s room, tell her that she is fine and that she needs to go back to sleep. Consistency is important for making sleep training work.

So, our first night of sleep training, Devin and I did the bedtime routine thing together. I said “Night night, I love you, sweet Devin,” patted her belly twice, and gave her a kiss for good measure. Then, I walked out of the room and shut her door. But then, Devin started crying. I followed the graduated extinction method rules, and I waited outside Devin’s door for 5 minutes before I went back in. I kept my visit very brief, and I told Devin everything was okay, and she needed to be a good girl and sleep now.

That first night, my heart was in my throat, but I kept telling myself that I was helping my child get the sleep she desperately needs. Devin cried four more times, and I gradually increased time intervals before I checked on her, making it up to 15 minutes for her last check-in and giving her small reassurances every time. The last time she woke up was around 4am, and then she slept for the rest of the night.

The next night, she cried four times, and I checked in at 10 and then 15 minutes. The third night, she cried two times and my intervals were 15 minutes. And after that, she barely cried at all! I couldn’t believe how quickly it happened.

HOW SLEEP TRAINING CHANGED OUR LIVES

Now that Devin knows how to sleep, she loves her bed. And she adores her bedtime routine. I’m well rested, too. We also have grown-up time in the evening once Devin is asleep, which we really cherish (even if we’re just making pasta and watching Mad Men reruns). So, not only did sleep training turn out to be a good choice for Devin, it was also good for us. And I really think it’s ok to look after yourself as well as your child. When you want to be a great and energetic parent, it helps to take care of and nourish yourself, as well as your children, don’t you think?
Appendix E: Pretest Measures
Please complete the survey on a computer for proper formatting of questions!
Prescreen questions before consent form:

What is your gender?
Man  Woman  Transgender  Other

Do you have a child between the ages of 6 months and 10 years old? ______________

First, we would like to ask you some questions about you and your child.

What is your ethnicity?
African American/Black  Asian  White  Hispanic/Latino  Other

What is your child’s ethnicity?
African American/Black  Asian  White  Hispanic/Latino  Other

What is your gender?
Man  Woman  Transgender  Other

What is the gender of your child participating in the study?
Man  Woman  Transgender  Other

Do both parents currently live in the same household? Yes or No

If no: does the child spend time at both parents’ households? Yes or No

What is your current relationship status?
Married  Divorced  Separated  Widowed  Single  Engaged
Steady relationship  Dating

How old are you in years? ______________

How old is your spouse/partner in years? ______________

How many children do you have? ______________

What is your highest educational degree?
High school (grades 9-12), no degree
High school graduate (or equivalent)
Some college (1-4 years, no degree)
Associate’s degree (including occupational or academic degrees)
Bachelor’s degree (BA, BS, AB, etc)
Master’s degree (MA, MS, MENG, MSW, etc)
Professional school degree (MD, DDC, JD, etc)
Doctorate degree (PhD, EdD, etc)

What is your spouse’s/partner’s highest educational degree?

High school (grades 9-12), no degree
High school graduate (or equivalent)
Some college (1-4 years, no degree)
Associate’s degree (including occupational or academic degrees)
Bachelor’s degree (BA, BS, AB, etc)
Master’s degree (MA, MS, MENG, MSW, etc)
Professional school degree (MD, DDC, JD, etc)
Doctorate degree (PhD, EdD, etc)
Not applicable

What is your work status?
Currently not working
Part-time work only
Full-time work only
Full-time and part-time work
Student

What is your spouse’s/partner’s work status?
Currently not working
Part-time work only
Full-time work only
Full-time and part-time work
Student
Not applicable

Do you or your partner work shifts? Yes or No

If yes: Please check all the shifts you or your partner typically work.
Dayshift
Afternoon shift
Nightshift

What are your typical work hours? ________________

Who typically gets your child ready for bed?
Mother
Father
Grandparent
Nanny
Sibling
Other

Who typically gets your child ready for pre-school or daycare in the morning?
Mother
Father
Grandparent
Nanny
Sibling
Other

What is your combined family income? ____________________________

**Parenting Style**
Please rate how often you engage in the different parenting practices, listed below. Scores range from “Never” to “Always” on a 7-point scale. At the end of each section, add up the scores and divide it by the number of questions in that section. The calculated score is your total score for that category. The highest score indicates your preferred parenting style.

1. I encourage my child to talk about the child’s troubles.
2. I guide my child by punishment more than by reason.
3. I know the names of my child’s friends.
4. I find it difficult to discipline my child.
5. I praise when my child is good.
6. I spank when my child is disobedient.
7. I joke and play with my child.
8. I withhold scolding and/or criticism even when my child acts contrary to our wishes.
9. I show sympathy when my child is hurt or frustrated.
10. I punish by taking privileges away from my child with little if any explanations.
11. I spoil my child.
12. I give comfort and understanding when my child is upset.
13. I yell or shout when my child misbehaves.

14. I am easy going and relaxed with my child.

15. I allow my child to annoy someone else.

16. I tell child my expectations regarding behavior before the child engages in an activity.

17. He scolds and criticizes] [I scold and criticize] to make my child improve.

18. I show patience with my child.

19. I grab my child when he/she is being disobedient.

20. I state punishments to my child and does not actually do them.

21. I am responsive to my child’s feelings or needs.

22. I allow my child to give input into family rules.

23. I argue with my child.


25. I give my child reasons why rules should be obeyed.

26. I appear to be more concerned with own feelings than with my child’s feelings.

27. I tell my child that we appreciate what the child tries or accomplishes.

28. I punish by putting my child off somewhere alone with little if any explanations .

29. I help our child to understand the impact of behavior by encouraging my child to talk about the consequences of his/her own actions.

30. I am afraid that disciplining my child for misbehavior will cause the child to not like his/her parents.

31. I take my child’s desires into account be fore asking the child t o do something.

32. I explode in anger towards my child.

33. I am aware of problems or concerns about our child in school.

34. I threaten my child with punishment more often than actually giving it.
35. I express affection by hugging, kissing, and holding my child.
36. I ignore my child’s misbehavior.
37. I use physical punishment as a way of disciplining my child.
38. I carry out discipline after my child misbehaves.
39. I apologize to my child when making a mistake in parenting.
40. I tell my child what to do.
41. I give into my child when the child causes a commotion about something.
42. I talk it over and reason with my child when the child misbehaves.
43. I slap my child when the child misbehaves.
44. I disagree with my child.
45. I allow my child to interrupt others.
46. I have warm and intimate times together with my child.
47. When two children are fighting, I discipline children first and asks questions later.
48. I encourage my child to freely express (himself)(herself) even when disagreeing with parents.
49. I bribe my child with rewards to bring about compliance.
50. I scold or criticize when my child’s behavior doesn’t meet our expectations.
51. I show respect for my child’s opinions by encouraging our child to express them.
52. I set strict well-established rules for my child.
53. I explain to my child how we feel about the child’s good and bad behavior.
54. I use threats as punishment with little or no justification.
55. I take into account my child’s preferences in making plans for the family.
56. When my child asks why (he)(she) has to conform, I state: because I said so, or I am your parent and I want you to.
57. I appear unsure on how to solve my child’s misbehavior.
58. I explain the consequences of the child’s behavior.

59. I demand that my child does/do things.

60. I channel my child’s misbehavior into a more acceptable activity.

61. I shove my child when the child is disobedient.

62. I emphasize the reasons for rules.

Then participants will either read and rate 20 magazine article titles and short leads or read and rate 4 magazine articles.

Now, we ask you to read the following magazine article leads (or magazine articles)

They then will respond to the following items.

We are interested in your evaluations of the people in the magazine lead (or article) you just read. Please indicate your agreement with each of the following statements from (1 = strongly disagree to 7 = strongly agree).

The parent was very strict with her child.
The parent controlled the child’s behavior.
The parent was warm and comforting to her child.
The parent was responsive to her child’s feelings and needs.
The parent allowed the child to give input into the bedtime routine.
The parent told her child what to do.
I liked the parent very much.
I liked the child very much.
The parent in the article and I are very similar.
The child in the article and my own child are very similar.
I paid very close attention while reading the article.
I enjoyed reading this article.
The article was interesting.
The article was informative.
Appendix F: Main Session Measures
Please complete the survey on a computer for proper formatting of questions!

First, we would like to ask you some questions about you and your child.

Parents to fill out at baseline:

What is your ethnicity?
African American/Black   Asian   White   Hispanic/Latino   Other

What is your child’s ethnicity?
African American/Black   Asian   White   Hispanic/Latino   Other

What is your gender?
Man   Woman   Transgender   Other

What is the gender of your child participating in the study?
Man   Woman   Transgender   Other

Do both parents currently live in the same household? Yes or No

If no: does the child spend time at both parents’ households? Yes or No

What is your current relationship status?
Married   Divorced   Separated   Widowed   Single   Engaged
Steady relationship   Dating

How old are you in years? ______________

How old is your spouse/partner in years? ______________

How old is your child involved in this study in months? ______________

How many children do you have? ______________

What is your highest educational degree?
High school (grades 9-12), no degree
High school graduate (or equivalent)
Some college (1-4 years, no degree)
Associate’s degree (including occupational or academic degrees)
Bachelor’s degree (BA, BS, AB, etc)
Master’s degree (MA, MS, MENG, MSW, etc)
Professional school degree (MD, DDC, JD, etc)
Doctorate degree (PhD, EdD, etc)

What is your spouse’s/partner’s highest educational degree?

High school (grades 9-12), no degree
High school graduate (or equivalent)
Some college (1-4 years, no degree)
Associate’s degree (including occupational or academic degrees)
Bachelor’s degree (BA, BS, AB, etc)
Master’s degree (MA, MS, MENG, MSW, etc)
Professional school degree (MD, DDC, JD, etc)
Doctorate degree (PhD, EdD, etc)
Not applicable

What is your work status?
Currently not working
Part-time work only
Full-time work only
Full-time and part-time work
Student

Do you or your partner work shifts? Yes or No

If yes: Please check all the shifts you or your partner typically work.
Dayshift
Afternoon shift
Nightshift

What are your typical work hours? ________________

Who typically gets your child ready for bed?
Mother
Father
Grandparent
Nanny
Sibling
Other

Who typically gets your child ready for pre-school or daycare in the morning?
Mother
Father
Grandparent
Nanny
Sibling
What is your spouse’s/partner’s work status?
Currently not working
Part-time work only
Full-time work only
Full-time and part-time work
Student
Not applicable

What is your combined family income? ____________________________

Distractor: National Institutes of Health Eating at America’s Table Study Quick Food Scan (2000) (Adapted some questions)

1. On an average day, how many servings of fruit does your child consume? _____________

2. On an average day, how many servings of vegetables does your child consume? __________

3. On an average day, how many servings of meat or fish does your child consume? __________

4. On an average day, how many servings of dairy products does your child consume?__________

5. On an average day, how many servings of grains does your child consume? __________

Distractor: Preschool-aged Children’s Physical Activity Questionnaire

Please indicate how much you agree with the following statements on a scale from 0 = never to 10 = all the time.

I encourage my child to play outside when the weather is suitable.

I am physically active with or in front of my child.

I limit what my child does as I worry that he/she may injure themselves.

I focus upon my child developing their basic learning skills such as numbers or letters.

My work schedule or other commitments limit the time I have to play with my child.
**Family Literacy Activities Inventory (Wu & Honig, 2010)**

Items are rated on a 4-point Likert-type scale with responses ranging from “never—not done this at all” “seldom—about once a month” “sometimes—about 2 to 3 times a month” “often—4 or more times a month.”

I teach my child how to read words.
My child and I look at or read picture books/storybooks/magazines together.
I teach my child how to write words, such as his or her name, or simple words like dog or cat.
My child is scribbling, attempting to write or pretending to write.
My child looks at books or magazines by him/herself.
My child and I read informational materials (menus, advertisements) together.
My child asks to be read to or look at books.
I do sustained writing on paper for at least 10 minutes in my child’s presence.
I do sustained writing on electronic devices for at least 10 minutes in my child’s presence.
I read a textbook or report for myself in my child’s presence.
I buy storybooks for my child.
I buy books for myself.
I take my child to the bookstore.
I read a book for leisure in the child’s presence.
My child asks to go to the library.
I take my child to the library.

**Home Reading Behavior and Interest Measure (Yeo, Ong, & Ng, 2014)**

Participants complete this measure on a 4-point Likert type scale from “never” to “always.”

When being read a book, my child appears to be interested.
My child looks at books by him/herself.
My child asks to be read or to look at books.
My child asks me questions when he or she reads.
My child expresses his/her opinions when being read to.
When my child has free time, reading is an activity he/she does.

**Social Comparison Orientation**

Most people compare themselves from time to time with others. For example, they may compare the way they feel, their opinions, their abilities, and/or their situation with those of other people. There is nothing particularly 'good' or 'bad' about this type of comparison, and some people do it more than others. We would like to find out how often
you compare yourself with other people. To do that we would like to ask you to indicate how much you agree with each statement below, by using the following scale from 1 = completely disagree to 7 = completely agree.

I often compare how my loved ones (boy or girlfriend, family members, etc.) are doing with how others are doing.

I always pay a lot of attention to how I do things compared with how others do things.

If I want to find out how well I have done something, I compare what I have done with how others have done.

I often compare how I am doing socially (e.g., social skills, popularity) with other people.

I am not the type of person who compares often with others.

I often compare myself with others with respect to what I have accomplished in life.

At parties or other social events, I compare how I am dressed to how other people are dressed.

I often like to talk with others about mutual opinions and experiences.

I often try to find out what others think who face similar problems as I face.

I always like to know what others in a similar situation would do.

If I want to learn more about something, I try to find out what others think about it.

I never consider my situation in life relative to that of other people.

**Parenting Style**

Please rate how often you engage in the different parenting practices, listed below. Scores range from “Never” to “Always” on a 7-point scale. At the end of each section, add up the scores and divide it by the number of questions in that section. The calculated score is your total score for that category. The highest score indicates your preferred parenting style.

10. I encourage my child to talk about the child’s troubles.

11. I guide my child by punishment more than by reason.

12. I know the names of my child’s friends.
13. I find it difficult to discipline my child.
14. I praise when my child is good.
15. I spank when my child is disobedient.
16. I joke and play with my child.
17. I withhold scolding and/or criticism even when my child acts contrary to our wishes.
18. I show sympathy when my child is hurt or frustrated.
10. I punish by taking privileges away from my child with little if any explanations.
11. I spoil my child.
12. I give comfort and understanding when my child is upset.
13. I yell or shout when my child misbehaves.
14. I am easy going and relaxed with my child.
15. I allow my child to annoy someone else.
16. I tell child my expectations regarding behavior before the child engages in an activity.
17. He scolds and criticizes] [I scold and criticize] to make my child improve.
18. I show patience with my child.
19. I grab my child when he/she is being disobedient.
20. I state punishments to my child and does not actually do them.
21. I am responsive to my child’s feelings or needs.
22. I allow my child to give input into family rules.
23. I argue with my child.
25. I give my child reasons why rules should be obeyed.
26. I appear to be more concerned with own feelings than with my child’s feelings.
27. I tell my child that we appreciate what the child tries or accomplishes.

28. I punish by putting my child off somewhere alone with little if any explanations.

29. I help our child to understand the impact of behavior by encouraging my child to talk about the consequences of his/her own actions.

30. I am afraid that disciplining my child for misbehavior will cause the child to not like his/her parents.

31. I take my child’s desires into account before asking the child to do something.

32. I explode in anger towards my child.

33. I am aware of problems or concerns about our child in school.

34. I threaten my child with punishment more often than actually giving it.

35. I express affection by hugging, kissing, and holding my child.

36. I ignore my child’s misbehavior.

37. I use physical punishment as a way of disciplining my child.

38. I carry out discipline after my child misbehaves.

39. I apologize to my child when making a mistake in parenting.

40. I tell my child what to do.

41. I give into my child when the child causes a commotion about something.

42. I talk it over and reason with my child when the child misbehaves.

43. I slap my child when the child misbehaves.

44. I disagree with my child.

45. I allow my child to interrupt others.

46. I have warm and intimate times together with my child.

47. When two children are fighting, I discipline children first and asks questions later.

48. I encourage my child to freely express (himself)(herself) even when disagreeing with parents.
49. I bribe my child with rewards to bring about compliance.

50. I scold or criticize when my child’s behavior doesn’t meet our expectations.

51. I show respect for my child’s opinions by encouraging our child to express them.

52. I set strict well-established rules for my child.

53. I explain to my child how we feel about the child’s good and bad behavior.

54. I use threats as punishment with little or no justification.

55. I take into account my child’s preferences in making plans for the family.

56. When my child asks why (he)(she) has to conform, I state: because I said so, or I am your parent and I want you to.

57. I appear unsure on how to solve my child’s misbehavior.

58. I explain the consequences of the child’s behavior.

59. I demand that my child does/do things.

60. I channel my child’s misbehavior into a more acceptable activity.

61. I shove my child when the child is disobedient.

62. I emphasize the reasons for rules.

Sleep Questions

Is there a TV in your child’s bedroom? Yes or No

Does your child watch TV before he/she goes to bed in his/her bedroom? (Likert 0-7 days a week)

Children’s Sleep Habits Questionnaire (CSHQ, Owens, Spirito, & McGuinn, 2000)

The following statements are about your child’s sleep habits and possible difficulties with sleep. Think about the past week in your child’s life when answering the questions. If last week was unusual for a specific reason (such as your child had an ear infection and did not sleep well or the TV set was broken), choose the most recent typical week. Answer USUALLY if something occurs 5 or more times in a week; answer SOMETIMES if it occurs 2-4 times in a week; answer RARELY if something occurs never or 1 time
during a week. Also, please indicate whether or not the sleep habit is a problem by circling “Yes,” “No,” or “Not applicable (N/A).”

**Bedtime**

Write in child’s bedtime: ____________________

Child goes to bed at the same time at night
Child falls asleep within 20 minutes after going to bed
Child falls asleep alone in own bed
Child falls asleep with rocking or rhythmic movements
Child needs special object to fall asleep (doll, special blanket, etc.)
Child needs parent in the room to fall asleep
Child is ready to go to bed at bedtime
Child resists going to bed at bedtime
Child struggles at bedtime (cries, refuses to stay in bed, etc.)

**Sleep Behavior**

Child’s usual amount of sleep each day: ____________ hours and __________ minutes
(Combining nighttime sleep and naps)

Child sleeps about the same amount each day
Child wets the bed at night
Child talks during sleep
Child is restless and moves a lot during sleep
Child sleepwalks during the night
Child moves to someone else's bed during the night (parent, brother, sister, etc.)
Child complains about problems sleeping
Child awakens during night screaming, sweating, and inconsolable

**Waking during the night**

Child awakens once during the night
Child awakens more than once during the night
Child returns to sleep without help after waking

Write the number of minutes a night waking usually lasts: ____________________

**Morning waking**

Write in the time of day child usually wakes in the morning: ____________________

Child has difficulty getting out of bed in the morning
Child takes a long time to become alert in the morning
Child wakes up very early in the morning
Child has a good appetite in the morning

**Daytime sleepiness**

Child naps during the day
Child suddenly falls asleep in the middle of active behavior
Child seems tired

During the past week, has your child has appeared very sleepy or fallen asleep during the following (check all that apply): (Scale is 1 = not sleepy, 2 = very sleepy, 3 = falls asleep)

- Play alone
- Watching TV
- Riding in car
- Eating meals

*Then participants will read an article and answer the following items in the Immediate Post-session measures. Then they will read a second article and fill out the items again.*

**Manipulation Check Items**

We are interested in your evaluations of the people in the magazine lead (or article) you just read. Please indicate your agreement with each of the following statements from (1 = strongly disagree to 7 = strongly agree).

The parent was very strict with her child.

The parent punished her child for misbehaving.

The parent praised her child for good behavior.

The parent was warm and comforting to her child.

The parent criticized her child’s behavior.

The parent was responsive to her child’s needs.

The parent withheld emotional expressions such as kisses and cuddles from her child.

The parent tried to control the child’s behavior. (did control)

I liked the parent very much.
I liked the child very much.

I paid very close attention while reading the article.

I enjoyed reading this article.

**Immediate Post-Session Measures**

**Perceived Similarity, Liking, and Social Comparison Motives Measures**

We are interested in your evaluations of the individuals in the article you just read. Please indicate your agreement with each of the following statements from (1 = *strongly disagree* to 7 = *strongly agree*).

The parent in the article and I are very similar.

The child in the article and my own child are very similar.

I liked the parent in the article very much.

I liked the child in the article very much.

The parent in the article made a very positive impression on me.

I compared myself to the parent in the article to evaluate myself.

I evaluated my parenting actions with the parent’s actions in the article.

I compared myself to the parent in the article for inspiration to improve myself.

I compared my parenting actions with the parent’s actions in the article for inspiration.

I felt connected to the parent in the article.

I felt different from the parent in the article.

I felt my parenting decisions were better than the parent’s decisions in the article.

I felt my parenting decisions were worse than the parent’s decisions in the article.

I paid very close attention while reading the article.
Outcome Expectations (adapted from Prodaniuk, Plotnikoff, Spence, & Wilson, 2004 and Resnik, Itkin Zimmerman, Orwig, Furstenberg, & Magaziner, 2000)

Please indicate your agreement with the following statements regarding your child engaging in healthy behaviors on a scale from (1= strongly disagree to 7 = strongly agree).

Avoiding media devices (e.g., TV or iPads) prior to bedtime will help my child fall asleep more quickly.

Creating a soothing bedtime routine for my child will improve my child’s sleep.

Giving my child a light snack before bedtime will help my child fall asleep.

(Unmodified extinction item) Ignoring my child’s crying outbursts during the night will teach my child how to self-soothe.

(Unmodified extinction item) Ignoring my child’s crying outbursts during the night will help improve my child’s sleep.

(Graduated extinction item) Waiting gradually longer intervals before checking on my child following a crying outburst will teach my child how to self-soothe.

(Graduated extinction item) Waiting gradually longer intervals before checking on my child following a crying outburst will improve my child’s sleep.

Having my child engage in 60 minutes of physical activity every day will improve my child’s health.

Reading books with my child will improve my child’s reading skills.

Reading books with my child will improve my child’s vocabulary.

Feeding my child a serving of fruit at each meal will prevent my child from becoming overweight.

Feeding my child a serving of vegetables at each meal will prevent my child from becoming overweight.

Health-related Self Efficacy Scale (compiled by researchers, adapted from Bandura, 2006)

Please rate how certain you are that you can get yourself to engage in the following behaviors on a scale from (1 = cannot do at all to 7 = highly certain can do).
Prevent my child from using media devices before bedtime.

Create a soothing bedtime routine including bedtime stories for my child.

Give my child a light snack before bedtime.

(Unmodified extinction item) Ignore my child’s crying outbursts during the night.

(Graduated extinction item) Wait gradually longer intervals during the night before checking on my child following a crying outburst.

Teach my child to self-soothe and fall back to sleep on his/her own.

Have my child engage in 60 minutes of physical activity every day.

Read books with my child daily.

Feed my child a serving of fruit at each meal.

Feed my child a serving of vegetables at each meal.
Appendix G: Follow-Up Session Measures
Outcome Expectations (adapted from Prodaniuk, Plotnikoff, Spence, & Wilson, 2004 and Resnik, Itkin Zimmerman, Orwig, Furstenberg, & Magaziner, 2000)

Please indicate your agreement with the following statements regarding your child engaging in healthy behaviors on a scale from (1 = strongly disagree to 7 = strongly agree).

Avoiding media devices (e.g., TV or iPads) prior to bedtime will help my child fall asleep more quickly.

Creating a soothing bedtime routine for my child will improve my child’s sleep.

Giving my child a light snack before bedtime will help my child fall asleep.

(Unmodified extinction item) Ignoring my child’s crying outbursts during the night will teach my child how to self-soothe.

(Unmodified extinction item) Ignoring my child’s crying outbursts during the night will help improve my child’s sleep.

(Graduated extinction item) Waiting gradually longer intervals before checking on my child following a crying outburst will teach my child how to self-soothe.

(Graduated extinction item) Waiting gradually longer intervals before checking on my child following a crying outburst will improve my child’s sleep.

Having my child engage in 60 minutes of physical activity every day will improve my child’s health.

Reading books with my child will improve my child’s reading skills.

Reading books with my child will improve my child’s vocabulary.

Feeding my child a serving of fruit at each meal will prevent my child from becoming overweight.

Feeding my child a serving of vegetables at each meal will prevent my child from becoming overweight.

Health-related Self Efficacy Scale (compiled by researchers, adapted from Bandura, 2006)

Please rate how certain you are that you can get yourself to engage in the following behaviors on a scale from (1 = cannot do at all to 7 = highly certain can do).
Prevent my child from using media devices before bedtime.

Create a soothing bedtime routine including bedtime stories for my child.

Give my child a light snack before bedtime.

(Unmodified extinction item) Ignore my child’s crying outbursts during the night.

(Graduated extinction item) Wait gradually longer intervals during the night before checking on my child following a crying outburst.

Teach my child to self-soothe and fall back to sleep on his/her own.

Have my child engage in 60 minutes of physical activity every day.

Read books with my child daily.

Feed my child a serving of fruit at each meal.

Feed my child a serving of vegetables at each meal.

**Behavior Change Measure**

In the past three days, how often did you engage in the following behaviors on a scale from (0 = not at all) to (3 = everyday).

Prevented my child from using media devices before bedtime.

Created a soothing bedtime routine including bedtime stories for my child.

Gave my child a light snack before bedtime.

(Unmodified extinction item) Ignored my child’s crying outbursts during the night.

(Graduated extinction item) Waited gradually longer intervals during the night before checking on my child following a crying outburst.

Taught my child to self-soothe and fall back to sleep on his/her own.

Had my child engage in 60 minutes of physical activity every day.

Read books with my child daily.
Fed my child a serving of fruit at each meal.

Fed my child a serving of vegetables at each meal.