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**Parents' Internal Attributions about Misbehavior and Rule-Breaking
Behavior in Boys**

Master's thesis

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Abstract

Rule-breaking behaviors in boys are a precursor of juvenile delinquency and has negative consequences for perpetrators and victims. Therefore, it is essential to understand the underlying mechanisms that contribute to the development of rule-breaking behavior in boys. This study explored the association between parents' internal attributions about rule-breaking behavior in boys, and whether this association is mediated by parents' use of harsh discipline. Participants included 134 US parents of boys between 5 and 7 years old. Parents were recruited via Amazon Mechanical Turk (MTurk) and completed an online survey. Internal attributions and harsh discipline were assessed through different scenarios displaying child misbehavior in which parents were asked to imagine their child acted in the way illustrated in the scenarios. Rule-breaking behavior was assessed through the Child Behavior Checklist (CBCL). Overall, findings revealed a partial mediation effect. The more parents made internal attributions about their sons' misbehavior, the more this was associated with harsh discipline, which in turn was associated with more rule-breaking behavior in boys. Therefore, interventions might benefit from strategies aimed at promoting constructive attributions about misbehavior and more appropriate discipline practices that may lead to a healthier development in children.

Keywords: internal attributions, rule-breaking behavior, externalizing behavior, harsh discipline

Introduction

Juvenile delinquency in industrialized nations has reached its lowest point in decades (Van Dijk et al., 2007). Despite this decline, juvenile delinquency is still substantially more common among boys than girls (Mullis et al., 2004). This gender disparity in delinquency rates remains visible across all countries and historical periods (Junger-Tas et al., 2004). The term juvenile delinquent refers to a minor who is over the minimum age of criminal responsibility and has committed a criminal offence (Young et al., 2017). In the United States, the minimum age of criminal responsibility varies by state and ranges from 6 to 18 years old. Juvenile delinquency has substantial negative consequences for perpetrators and victims (Ferguson et al., 2009), such as more social economic difficulties and less emotional well-being in adulthood (Lanctôt et al., 2007). According to the dual developmental taxonomy of antisocial behavior (Moffitt, 1993), children's behavior problems are precursors of juvenile delinquency. The theory proposes that children who begin offending the law at a young age

have more extensive and serious delinquent careers (Loeber & Farrington, 2001). For example, a longitudinal study by Stanger et al. (1997) demonstrates that externalizing behavior, which consists of aggressive and rule-breaking behavior, appear to be a forerunner of delinquency (Moffitt, 1993). Therefore, rule-breaking behavior in early childhood can be considered as a precursor of delinquency. The current study aims to provide insight in predictors of rule-breaking behavior in boys, which is an element of externalizing behavior as reflected in the Child Behavior Checklist (CBCL; Achenbach, 1991). Given the higher prevalence of delinquency in boys (Mullis et al., 2004) and the negative consequences on juveniles and society (Ferguson et al., 2009), understanding the underlying mechanisms that contribute to the development of rule-breaking behavior in boys is crucial. Therefore, the potential role of parents' internal attributions and harsh discipline on rule-breaking behavior were examined to gain a deeper understanding for intervention in this area.

The relationship between parents' attributions of their child's behavior on the development of children has been a topic of growing interest (Miller, 1995). Parents' attributions refer to the inferences parents make about the causes of their child's behavior (Hastings et al., 2007). The attribution theory (Weiner, 1985) proposes that parents can make external and internal attributions about their children's behavior. By making external or situational attributions about a behavior, the behavior is considered as unique, accidental, provoked by the situation or external factors and transitory (Hastings & Coplan, 1999). By making internal attributions about a behavior, the behavior is considered as intentional, free from external influences, stable and typical for one's child. Parents that tend to make internal attributions about their child's behavior have shown to place less emphasis on the importance of parental practices (Himelstein et al., 1991) since behavior is considered as stable and dispositional (Compas et al., 1982). In addition, attributing a child's behavior to internal factors may serve to protect parents' self-esteem, since it minimizes parents own responsibility for their child's misbehavior (Morrissey-Kane & Prinz, 1999). For example, a study comparing mothers with and without sons exhibiting externalizing behavior demonstrate that mothers who attribute their child's externalizing behavior to internal causes, contribute to the continuation of child misbehavior over time (Johnston et al., 2009). Hence, parents' internal attributions about their child's misbehavior influence the development of behavioral problems (Dix, 1993; Johnston et al., 2009). However, it remains uncertain whether this association specifically applies to rule-breaking behavior, as rule-breaking behavior is frequently combined with aggressive behavior in a single variable. Consequently,

research is needed to determine the specific association of parents' internal attributions on rule-breaking behavior.

In addition, parents' internal attributions can also exert an indirect influence on rule-breaking behavior, with harsh discipline potentially serving as an underlying mechanism. The Social Information Processing model (SIP; Milner, 1993; Milner, 2003) proposes that parents' internal attributions are important predictors of disciplinary actions and harsh parenting. Harsh discipline can be defined as corporal punishment, coercion and yelling or screaming in response child misbehavior (Bailey et al, 2009). The SIP model theorizes that parents who make internal attributions are at risk for using harsh disciplinary practices with their children (Milner, 1993; Milner, 2003). The theory posits that negative internal attributions about their child's misbehavior results in a failure to integrate potentially mitigating information to perpetuate negative biases. This in turn shapes disciplinary options parents perceive as appropriate to manage their child's misbehavior. In accordance with a Dutch study, findings demonstrate a significant relation between internal attributions and harsh discipline (Beckerman et al., 2017). Moreover, Mackinnon-Lewis et al. (1994) suggest that mothers' internal attributions about children's problem behavior were associated to mothers' coercion in observed interactions. Thus, previous studies have indicated an association between parents' internal attributions and harsh discipline.

Subsequently, harsh discipline is supposed to be associated with rule-breaking in children according to the social learning theory (Bandura, 1973). The theory proposes that children observe and adopt the interpersonal strategies exhibited by their parents. Parents who exhibit harsh discipline practices promote norms supportive of violence and aggression, which in turn contribute to the development of externalizing behavior in children (Catalano & Hawkins, 1996). In addition, children raised in aggressive households learned that physical violence is normal and often deemed justifiable (McCord, 1988). Consequently, a negative child-parent interaction emerge that illicit a coercive cycle, as both parent and child reinforce each other's negative behavior (Patterson, 1982). For example, when a child engages in rule-breaking behavior, it may provoke parents to respond with harsh language (i.e., scolding), which in turn results in an exacerbation of a child's rule-breaking behavior (Lunkenheimer et al., 2016). Gradually, children may become more resistant toward their parents' harsh discipline practices. To avoid further escalation, parents are less likely to persist harsh discipline practices (Verhoeven et al., 2010). Nevertheless, the resignation of harsh discipline may inadvertently reinforce rule-breaking behavior (Lunkenheimer et al., 2016) leading to

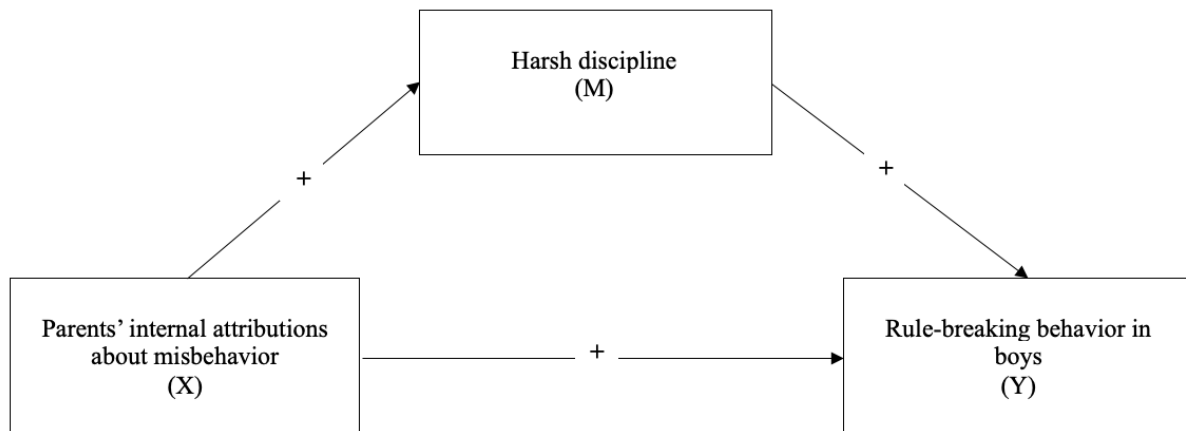
more rule-breaking behavior over time (Cole et al., 2003). Findings from a meta-analysis demonstrate that harsh discipline was positively related to externalizing behavior in children (Hoeve et al., 2009). Similarly, findings from a study among parents and their fifth and sixth grade indicated that harsh discipline were associated with child externalizing behavior problems (McKee et al., 2007). Consequently, parents' harsh discipline practices reinforce rule-breaking behavior in children (Patterson, 1982).

The current research contributes to the literature in several ways. First, previous research has primarily focused on parental predictors of externalizing behavior as a whole (e.g., Nix et al., 1999; Stanger et al., 2004). However, only a small body of research has solely examined rule-breaking behavior. Second, little is known about the developmental root of rule-breaking behavior of children prior to the minimal age of criminal responsibility (Remschmidt & Walter, 2010). Third, previous research has predominantly focused on studying boys and girls together, overlooking potential gender differences. However, the development of externalizing behavior differs between boys and girls (Maschi et al., 2008). Additionally, research on boys separately is crucial to gain a more comprehensive understanding, since juvenile delinquency is more prevalent among boys (Mullis et al., 2004). The current study sought to expand on these prior results, focusing on internal attributions and rule-breaking behavior in boys between the age of 5 to 7 years old. Understanding the course of rule-breaking behavior and the underlying mechanisms is important to identify risk factors and prevent serious behavioral problems and delinquency (Loeber & Burke, 2011). Furthermore, knowledge of the predictors of rule-breaking behavior is highly relevant for assessment and interventions.

The study aims to examine whether parents' internal attributions about misbehavior are associated with rule-breaking behavior in boys, and whether this association is mediated by parents' use of harsh discipline. Based on prior research, it is hypothesized that (1) more internal attributions of parents about misbehavior are associated with more rule-breaking behavior in boys (Dix, 1993; Johnston et al., 2009); (2) more internal attributions of parents about misbehavior in boys are associated with more harsh discipline of parents (Beckerman et al., 2017; Mackinnon- Lewis et al., 1994; Milner, 1993; Milner, 2003); (3) more harsh discipline of parents is associated with more rule-breaking behavior in boys (Hoeve et al., 2009); (4) more internal attributions of parents about misbehavior are associated with more rule-breaking behavior in boys via harsh discipline of parents (Nix et al., 1999; see Figure 1).

Figure 1

Mediation Model with Parents' Internal Attributions about Misbehavior (X), Harsh Discipline (M) and Rule-Breaking Behavior (Y)



Note. X refers to the predictor. M refers to the mediator. Y refers to the outcome.

Method

Sample

The present study was part of a larger study, the Gendered Attribution Study, among US parents which started in December 2021 (Endendijk & Portengen, 2022). Participants were recruited via Amazon Mechanical Turk (MTurk) and consisted a total of $N = 262$. MTurk is an online platform that supplies an on-demand, scalable and human workplace to complete research tasks. Workers can perform tasks in return for payment. According to Huff and Tingley (2015), MTurk samples were found to be high in data quality when appropriate (attention) checks are in place. Moreover, MTurk samples are more demographically representative compared to convenience samples. We included participants who (1) were parents of at least one son between the ages of 5 and 7 years old, (2) had a U.S.-based IP-address and (3) a 65% approval rating from other requesters for prior surveys. We excluded participants who (1) were parents of only girls between the ages of 5 and 7 years old and (2) failed more than one attention checks in the survey (e.g., "Click on the response option completely agree"). Thirty-nine participants were excluded in the current study due to not meeting the attention checks. Furthermore, one participant was excluded due to not providing an informed consent. Three participants were excluded because of their residence in Armenia, Georgia and Morocco, which was beyond the scope of the current study. Finally, 103 participants were excluded due to not meeting the eligibility criteria of having a son. The final sample of the current study consisted of $N = 134$.

Procedure

Parents gave their informed consent prior to the study. Each parent completed an online survey via Qualtrics. Participants had to complete an online questionnaire estimating the causes parents attribute to their children's misbehavior. The questions consisted of a series of scenarios, parental cognitions, parental practices and child problem behavior. Furthermore, parents were asked if they had a child between 5 and 7 years. Participants with more than one child in this age group were asked to answer the questions for the oldest child. Regular attention checks were implemented throughout the survey to verify respondents' attentiveness. The duration of the survey was approximately 30 to 45 minutes. Participant received a 5 USD compensation for participation. This study is part of a larger study of research that obtained approval of the Ethics Committee of the Faculty of Social and Behavioral Sciences at Utrecht University.

Instruments

Scenarios

A quasi-experimental approach was taken, as often utilized in attribution literature (Miller, 1995). Parents were presented with different scenarios that illustrate a child and parents were asked to imagine their child acted in the way illustrated in the scenarios. Five scenarios that depicted child misbehavior derived from the Parental Attributions of Child behavior Task were used (Beckerman et al., 2017). Following each scenario, parents were asked to answer four questions (Morrongiello et al., 2010; Root & Rubin, 2010): (1) why they think their child behaves this way; (2) what they would feel when they see their child act in this way; (3) how they would respond if their child would find himself in that situation; and (4) how often this scenario occurs in their family. Questions (1) and (2) were the exclusive focus of this study.

Internal attributions

When parents were asked why they think their child behaves in this way, parents had to respond to two internal attributions: (1) typical behavior for the child and (2) child did it on purpose. Parents rated on a 5-point Likert scale (1 = very unlikely, 5 = very likely) how likely they thought their child's misbehavior had such internal causes. Items were combined across the scenarios into mean scores (Cronbach's $\alpha = .83$). A higher mean score indicated more internal attributions.

Harsh discipline

When parents were asked about how likely they would respond if their child would find himself in that situation, they had to indicate whether they would use harsh discipline: (1) physically punish the child (e.g., slapping, spanking). Parents rated on a 5-point Likert scale (1 = very unlikely, 5 = very likely) how likely they would react this way. Items were combined across the scenarios into mean scores (Cronbach's $\alpha = .90$). A higher mean score indicated more harsh discipline.

Rule-breaking behavior

To measure rule-breaking behavior, parents were asked to fill in the Child Behavior Checklist 1,5-5 (CBCL; Achenbach, 1991). The CBCL is a widely used standardized instrument to assess the behavioral problems and social competencies in children between the ages 6 to 18 years. The subscale rule-breaking behavior, comprising a total of 17 items, was used in this study. An example item was "Doesn't seem to feel guilty after misbehaving". Parents indicated to what extent an item about their child is true ranging from (0) not true, (1) somewhat true, (2) very true. Items of rule breaking behavior were combined to into mean scores (Cronbach's $\alpha = .88$). A higher mean score indicated that parents reported higher levels of rule-breaking behavior for the child.

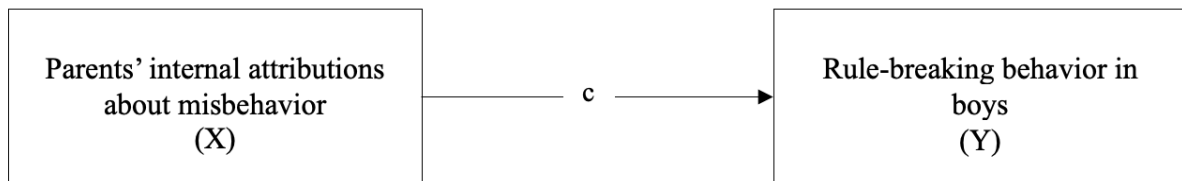
Analyses

The data was analyzed using IBM SPSS Statistics version 28. The relationship between parents' internal attributions about misbehavior and rule-breaking behavior was examined and whether this relationship was mediated by the use of harsh discipline. Mediation was tested using PROCESS. The independent variable is parents' internal attributions about misbehavior. The dependent variable is rule-breaking behavior in boys and the mediator is harsh discipline. A hierarchical multiple regression was performed to assess this model, assuming a statistical significance of $p < .05$. First, the relationship between parents' internal attributions about misbehavior and rule-breaking behavior in boys was examined in path c (see Figure 2). Second, the relationship between parents' internal attributions about misbehavior and harsh discipline was examined in path a (see Figure 3). Third, the relationship between parents' internal attributions about misbehavior, harsh discipline and rule-breaking behavior in boys was examined in path b and c' (see Figure 4). If (1) the difference of the R-square between the model depicted in Figure 2 and the model depicted in Figure 4 was significant and (2) the mediator resulted in a reduction of the

standardized beta coefficient of parents' internal attributions about misbehavior, it was stated that there was evidence of mediation.

Figure 2

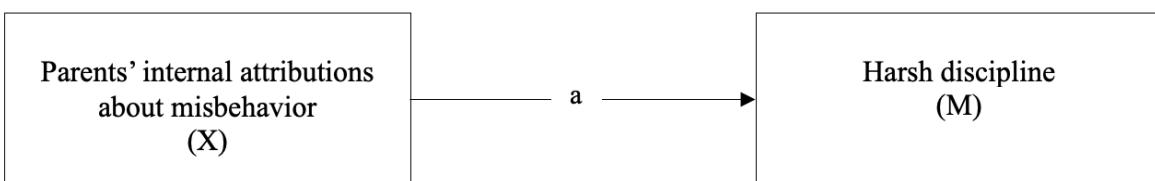
Path c: Total Effect



Note. Path c refers to the total effect of the independent variable (X) on the dependent variable (Y), without considering the mediator.

Figure 3

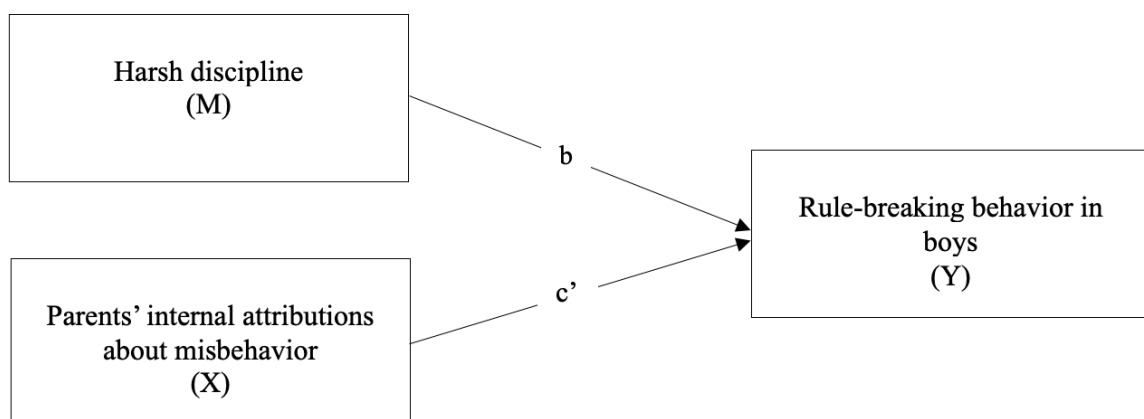
Path a: Effect of X on M



Note. Path a refers to the effect of the independent variable (X) on the mediator (M).

Figure 4

Path c' and b: Effect of M on Y and X on Y



Note. Path b refers to the indirect effect of the mediator (M) on the dependent variable (Y). Path c' refers to the direct effect of the independent variable (X) on the dependent variable (Y), while controlling for the mediator (M).

Results

Data Inspection & Descriptive Statistics

Assumptions were examined to ensure the validity of the study. First, a visual inspection using a scatterplot confirmed a linear association between the dependent variable and each of the independent variables. Second, all variables were examined for possible outliers and influential cases, using standardized residuals, Mahalanobis distance and Cook's distance. Results revealed no outliers and influential cases. Third, a scatterplot confirmed that the assumption of homoscedasticity was met. Fourth, a residual plot revealed that the residuals were normally distributed. Finally, multicollinearity was assessed by examining the tolerance and variance inflation factor (VIF) tests. Results from the multiple regression analysis revealed a tolerance value of 0.70 and VIF value of 1.43, indicating that no significant multicollinearity was present in the current data. Therefore, all assumptions of the multiple regression model were met. The demographic statistics of the participants are presented in Table 1.

Table 1

Demographic Statistics

Variable		Frequency (<i>N</i>)	Percentage (%)
Age child (years)	5 years	42	31.30
	6 years	76	56.70
	7 years	16	11.90
Family composition	Only son(s)	93	69.40
	Both son(s) and daughter(s)	41	30.60
Marital status	Married	127	94.80
	Single parent	4	3.00
	Divorced	2	1.50
	Other	1	0.70
Education level	High school	13	9.70
	Some college	11	8.20
	Undergraduate degree	47	35.10
	Graduate degree	63	47.00

Table 2 displays correlations and descriptive statistics for the study variables. Attributing child misbehavior more to internal causes was significantly correlated with more harsh

discipline and rule-breaking behavior. In addition, more harsh discipline by parents was significantly associated with more rule breaking behavior.

Table 2

Correlation and Descriptive Statistics

Variable	1.	2.	<i>M</i>	<i>SD</i>
1. Internal attributions			3.42	0.68
2. Harsh discipline	.541*		2.89	0.11
3. Rule-breaking behavior	.556*	.571*	1.87	0.43

Note. Bootstrap $N = 5000$. Unstandardized coefficients are shown. 95% confidence interval.

* $p < .01$.

Harsh Discipline Mediating the Association Between Internal Attributions and Rule-Breaking Behavior

First, path c presented in Figure 5 was tested to examine the relationship between the parents' internal attributions and rule-breaking behavior in boys (Hypothesis 1). Parents' internal attributions accounted for 31% of the variance ($R^2 = .31, p < .01$) in rule-breaking behavior in boys. Results showed a significant positive correlation. The more parents make internal attributions about their sons' misbehavior, the more this was associated with rule-breaking behavior in their sons.

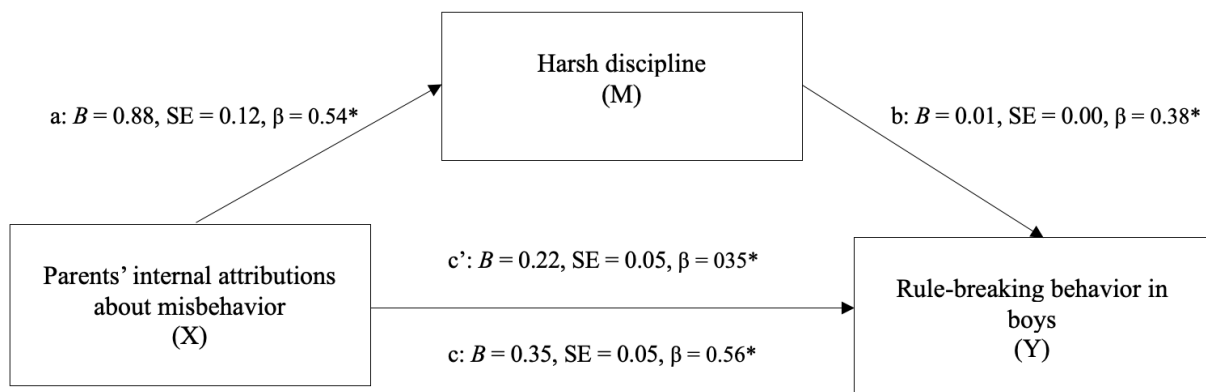
Second, path a presented in Figure 5 was tested to examine the relationship between parents' internal attributions and harsh discipline (Hypothesis 2). Parents' internal attributions accounted for 29% of the variance ($R^2 = .29, p < .01$) in harsh discipline. Results showed a significant positive correlation. Therefore, the more parents make internal attributions about their sons' misbehavior, the more this was associated with the use of harsh discipline practices.

Third, path b and c' presented in Figure 5 were tested to examine the relationship between the parents' internal attributions, harsh discipline and rule-breaking behavior in boys (Hypotheses 3 and 4). Mediated effects were tested to determine significance by estimating bias-corrected 95% confidence intervals (CI) using bootstrapping. The CI for the indirect effect from internal attributions via harsh discipline on rule-breaking behavior did not include zero (CI = 0.06 – 0.22) and had a positive sign. The direct effect from parents' internal attributions on rule-breaking behavior in boys when controlling for harsh discipline was

significant ($p < .01$) and had a positive sign. These results indicate a significant positive association. Mediation accounted for 41% the variance ($R^2 = .41, p < .01$) in rule-breaking behavior in boys. This indicates a significant large proportion of variance in the rule-breaking behavior in boys explained by harsh discipline. The inclusion of the mediator resulted in a significant improvement in the R-square value ($\Delta R^2 = .10, p < .01$). Therefore, the inclusion of the harsh discipline enhances the model's ability to explain variance in rule-breaking behavior in boys. Furthermore, the addition of the harsh discipline resulted in a reduction of the standardized beta coefficient of parents' internal attributions. The partially standardized indirect effect was $\beta = .30$ and the CI did not include zero (CI = .16 – .50), indicating a significant positive association. The completely standardized indirect effect was $\beta = .21$ and the CI did not include zero (CI = .11 – .34), indicating a significant positive association. These findings demonstrate a partially mediated effect, indicating that harsh discipline accounted for a portion of the effect of internal attribution on rule-breaking behavior. Consequently, the more parents make internal attributions about their sons' misbehavior, the more this was associated with harsh discipline, which in turn was associated with more rule-breaking behavior in boys.

Figure 5

Total Effect and Mediation Model with Direct and Indirect Effect



Note. * $p < .01$.

Discussion

The goal of this study was to examine whether parents' internal attributions about misbehavior were associated with rule-breaking behavior in boys, and whether this association was mediated by parents' use of harsh discipline. First, the more parents make internal attributions about their sons' misbehavior, the more this was associated with rule

breaking behavior in boys. Second, the more parents make internal attributions about their sons' misbehavior, the more this was associated with the use of harsh discipline practices. Finally, mediation analysis revealed a partial mediation effect. The association between parents' internal attributions about their sons' misbehavior and rule-breaking behavior in boys, was partially mediated by harsh discipline. The more parents make internal attributions about their sons' misbehavior, the more this was associated with harsh discipline, which in turn was associated with more rule-breaking behavior in boys.

The current study confirmed the hypothesis that more internal attributions of parents about misbehavior are associated with more rule-breaking behavior in boys. Findings revealed a strong association. Overall, these findings are consistent with previous studies demonstrating that mothers who hold internal attributions of their sons' externalizing behavior, contribute to the persistence of the misbehavior (e.g., Johnston et al., 2009). An explanation might be that parents who attribute misbehavior internally may place less emphasis on parenting aimed at modifying their child's outcome (Himmelstein et al., 1991). Minimizing parental responsibility on child misbehavior can be seen as a coping mechanism, mitigating feelings of self-blame. In turn, denial of responsibility hinder the involvement of parents to diminish their child's rule-breaking behavior.

As expected, findings revealed that more internal attributions of parents about misbehavior in boys are associated with more harsh discipline practices. A strong association was found. These findings align with prior research (e.g., Beckerman et al., 2017; Mackinnon- Lewis et al., 1994). The SIP model (Milner, 1993; Milner, 2003) provides an explanatory framework for the association between parents' internal attributions and harsh discipline. Cognitive processes within parents, which involve a selective attention to information that supports preexisting beliefs while disregarding contradictory evidence, increase the risk of harsh discipline. As a result, parents may harshly evaluate their child's misbehavior which might decrease the likelihood of parents considering more appropriate (i.e., less harsh) disciplining practices.

Moreover, findings confirmed the hypothesis that more harsh discipline of parents is associated with more rule-breaking behavior in boys. A strong association was found. These findings are consistent with previous studies that have reported similar results (e.g., Hoeve et al., 2009; McKee et al., 2007). In addition, the findings provide support for the social learning theory (Bandura, 1973) and the coercion theory (Patterson, 1982). Parents who employ harsh discipline practices inadvertently reinforce norms that support violence and aggression

(Catalano & Hawkins, 1996). This in turn contribute to the normalization and justification of violence in the minds of their children (McCord, 1988), leading to the development of rule-breaking behavior (Catalano & Hawkins, 1996). While harsh discipline practices may temporarily suppress rule-breaking behavior in children (Nix et al., 1999), excessive use of harsh disciplinary practices in response to rule-breaking behavior may lead to a coercive cycle (Patterson, 1982). However, when parents discontinue harsh discipline practices to avoid further escalation, it may inadvertently reinforce rule-breaking behavior and contribute to maintaining children's rule-breaking behavior over time (Cole et al., 2003).

As hypothesized, findings of the current study demonstrate that more internal attributions of parents about misbehavior are associated with more rule-breaking behavior in boys, with harsh discipline as an underlying mechanism. Additionally, the partial mediation model provides a stronger association between parents' internal attributions and rule-breaking behavior, compared to the non-mediation model. These findings align with prior findings (e.g., Nix et al., 1999). An explanation might be that parents with internal attributions are less able to think of alternative explanations for their child's rule-breaking behavior (Milner, 1993; Milner, 2003). Subsequently, these beliefs may influence parents' behavioral responses leading to harsh discipline. However, as children observe harsh discipline practices, children might imitate these behaviors leading to the development of rule-breaking behavior (Bandura, 1973). Ultimately, these negative parent-child interactions may lead to reinforcing each other's behavior contributing to a coercive cycle (Patterson, 1982).

The findings from this study demonstrate several significant strengths and limitations that may guide future research. The inclusion of attention checks in the questionnaires that serve as a control measure to assess participants' attentiveness adds a significant strength to the findings (Aguinis et al., 2021). Furthermore, the quasi-experimental design provided valuable insight into parents' internal attributions by presenting them various scenarios of misbehavior in everyday settings. Nevertheless, the cross-sectional design restricts the ability to establish causal associations regarding the directionality of effects between parents' internal attributions and rule-breaking behavior in boys (Nelson et al., 2013). A longitudinal or experimental approach is needed to examine the causal nature of these associations. Furthermore, the study was conducted solely within the United States and the majority of participants were parents with higher education levels, reducing the generalizability of the results to more diverse educational and ethnic backgrounds (Endendijk et al., 2023). Future studies should aim to include a diverse range of participants to ensure the generalizability of

the research findings. Finally, the study specifically examined the mediating effect of harsh discipline. However, there may be other mediators or confounding variables (e.g., hostility, stress) for the association between parents' internal attributions and rule-breaking behavior in boys (Rodriguez & Richardson, 2007). Additional research, such as randomized controlled trials, is needed to minimize the influence of confounding variables.

Despite the limitations, the current study provides implications and directions for future research. The current study provides support for the attribution theory (Weiner, 1985) and for the link between parents' attributions and the behavior of their children (Dix, 1993; Miller, 1995; Strassberg, 1995). Understanding the role of parents' internal attributions can influence the design and provide targets for prevention and intervention programs. The current findings suggest that interventions might benefit from strategies aimed at altering parents' attributions about their child's misbehavior to reduce rule-breaking behavior (Johnston et al., 2009; Sawrikar & Dadds, 2018). Preliminary research suggests that such interventions are associated with positive changes in parenting practices and child outcomes (e.g., Bugental et al., 2002). For example, research on the Triple P-positive parenting program found that parents treated with attributional retraining and anger management showed significant lower levels of internal attributions about misbehavior and decreased harsh discipline practices (Sanders et al., 2004). These findings highlight the importance of advancing interventions aimed at improving parent-child relationships in order to promote healthier parenting practices.

To conclude, this quasi-experimental research demonstrates that when parents make more internal inferences about the causes of their sons' misbehavior, this is associated with more harsh discipline in response to their sons' misbehavior. In turn, harsh discipline is associated with eliciting more rule-breaking behavior in boys. The current findings provide valuable insight into the complex dynamics that influence the development of rule-breaking behavior in boys. These findings shed light on the importance of promoting constructive attributions about misbehavior to promote more appropriate discipline practices and ultimately a healthier development in children.

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