

## THE ROLE OF MORALLY RELEVANT THEORY OF MIND AND PARENTS' EMOTIONAL EXPRESSION ON PROSOCIAL LYING CHILDREN AGED 7–9

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### Abstract

Prosocial lying refers to deceptive behavior performed for the benefit of others, which children may sometimes engage in to maintain positive relationships with peers and others. This research aims to identify the role of morally relevant theory of mind (MoToM) and parental emotional expression on prosocial lying behavior among children aged 7–9 years. The participants consisted of 66 parent-child pairs selected through the convenience sampling technique. The assessment of prosocial lying and MoToM was conducted through behavioral testing. Child participants (M=101.91 months; SD=8.36) were tested individually using the disappointing gift paradigm protocol and the MoToM. Meanwhile, parents were requested to respond to the SEFQ inventory. The results of the hierarchical logistic regression analysis revealed a significant relationship between MoToM and prosocial lying behavior, even after children's age was statistically controlled ( $\chi^2(2)=5.872$ ,  $p<0.01$ ). In contrast, no significant influence was observed concerning parental emotional expression and children's prosocial lying behavior. This study highlighted insights on the relationship between MoToM and prosocial lying behavior, revealing that understanding MoToM is an influential factor in prosocial lying. Children should understand moral judgment and the impact of their behavior on others before engaging in prosocial lying.

Keywords: middle childhood, morally relevant theory of mind, parents' emotional expression, prosocial lying, social cognition

### *Morally Relevant Theory of Mind, Ekspresi Emosi Orang Tua, dan Perilaku Bohong Prosocial Anak*

#### Abstrak

Perilaku bohong prososial adalah perilaku bohong untuk kepentingan orang lain yang terkadang dilakukan anak untuk menjaga hubungan anak dengan orang lain (terutama teman sebaya). Penelitian ini bertujuan untuk mengidentifikasi peran *morally relevant theory of mind* (MoToM) dan ekspresi emosi orang tua terhadap perilaku bohong prososial pada anak usia 7–9 tahun. Partisipan penelitian adalah 66 pasangan orang tua-anak, dipilih melalui metode *convenience sampling*. Asesmen perilaku bohong prososial dan MoToM dilakukan melalui pengujian perilaku. Partisipan anak (M=101,91 bulan; SD=8,36) mengikuti tes menggunakan protokol *disappointing gift paradigm* dan menyelesaikan tugas MoToM. Sementara itu, ekspresi orang tua diukur melalui inventori SEFQ. Hasil analisis regresi logistik hierarkis menunjukkan hubungan signifikan antara MoToM dan perilaku bohong prososial anak bahkan setelah usia anak dikontrol secara statistik ( $\chi^2(2) = 5,872$ ,  $p<0,01$ ). Sebaliknya, tidak ada pengaruh signifikan dari ekspresi emosi orang tua terhadap perilaku bohong prososial anak. Penelitian ini memberikan informasi baru mengenai hubungan MoToM dengan perilaku bohong prososial. Partisipan perlu memahami penilaian moral dan dampak perilaku mereka pada orang lain sebelum terlibat dalam perilaku bohong prososial.

Kata kunci: anak usia sekolah, bohong prososial, ekspresi emosi, kognisi sosial, penilaian moral

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### INTRODUCTION

As children develop within the family environment, parents impart universal values that are considered virtuous. One of these universal values is honesty, as parents teach their children from an early age not to lie and to speak truthfully, viewing dishonesty as a negative behavior that should be avoided. In

other words, parents prioritize their children's honesty and, conversely, tend to punish lying behavior (Talwar & Crossman, 2022). However, let us imagine a scenario where a child named Ani is approached by her close friend, Dita. Dita, with a joyful expression, shares with Ani that she bought a new pair of shoes and asks for Ani's opinion on them. Ani knows Dita has saved and worked hard to purchase the new

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shoes. To protect Dita's feelings, Ani says the new shoes look great on her, and Dita appears beautiful wearing them. However, in truth, Ani finds the shoes to be unattractive and unfashionable. What would happen if Ani honestly said she finds Dita's shoes unattractive and unfashionable?

Ani's behavior exemplifies prosocial lying, which is distinct from antisocial lying. Antisocial lying involves deceit to cover up wrongdoing or lying that may harm others (see, for example, Lavoie et al., 2018). Conversely, prosocial lying is carried out for the benefit of others. Its purpose is to preserve feelings and avoid hurting others emotionally (Levine & Lupoli, 2022). Perpetrators of prosocial lying do not gain any personal advantage from their deceit. At times, prosocial lying becomes necessary to maintain positive and harmonious relationships between children and their social environment.

As children grow and their social environment expands, they have to interact not only within their family but also with individuals outside the family circle. Children aged 7–9 years typically attend classes in grades 1 to 3 of elementary school. During this stage, they are required to interact with other people within the school setting, such as teachers and peers, as well as various individuals in their community (Papalia & Martorell, 2021). They develop prosocial abilities such as empathy and the ability to consider the feelings of others to maintain positive relationships with others (Papalia & Martorell, 2021). One of the prosocial abilities related to this is prosocial lying, where children may engage in preserving the feelings of others to keep harmonious social relationships (Williams et al., 2016). In order to engage in prosocial lying, children also need moral reasoning skills. By the age of 7–9 years old, children can already understand what is right and wrong based on intention (Kolhberg, 1971, as cited in Papalia & Martorell, 2021). For instance, breaking a mother's glass is wrong if done intentionally and not wrong if done accidentally.

Current studies conducted by O'Connor et al. (2020) and Lavoie et al. (2017) indicated that children's ability to lie begins to emerge during preschool age. These studies reveal that even since preschool age, children are capable of understanding and engaging in dishonest behavior. Research conducted by Williams et al. (2017) also found a similar phenomenon, where dishonest behavior can already be exhibited by children as young as 2.5 years old. As children mature, their perception of lies

broadens to include prosocial lies. For example, a study by Broomfield et al. (2002) indicates that 4-year-olds believe prosocial lies can protect others' feelings and are sometimes appropriate to tell. Later, around the age of 7 years, children judge lies based on their impact on others (Heyman et al., 2009). These findings suggest that children's comprehension of lies undergoes developmental changes from preschool to elementary school (Talwar & Crossman, 2011).

The findings of studies conducted by Leduc et al. (2017) indicate that prosocial lying is influenced by theory of mind (ToM) abilities. Theory of mind refers to a child's capacity to understand that others may have different desires, emotions, thoughts, knowledge, and beliefs than oneself (Welman, 2018). For instance, a child can recognize that they are feeling sad while their sibling is joyful, or they want to watch the movie "Frozen" while their sibling prefers to watch "Upin Ipin." Furthermore, one component of ToM is the understanding of intentions; that is, recognizing that others may have different intentions. Even from the age of three, children can differentiate between intentional and unintentional behaviors and their impact on others (Chandler et al., 2000). For example, they might grasp that when their younger sibling accidentally breaks their mother's favorite glass, their mother becomes saddened due to the glass being shattered by the sibling.

Furthermore, based on the understanding of the intentions behind behaviors and the consequences of these behaviors on others, children can engage in moral judgments, determining whether a particular behavior is right or wrong. The ability to consider intentions when making moral judgments is referred to as the Morally Relevant Theory of Mind (MoToM) by Killen et al. (2011). MoToM enables children to judge the impact of behaviors on others, contingent upon the intentions involved (Andrews & Talwar, 2023; D'Esterre et al., 2019). For instance, "My younger sibling may not be deemed at fault for accidentally breaking our mother's glass, even though our mother may feel saddened." Conversely, assessments of goodness or badness may also differ regarding behaviors with different intentions. For example, "My younger sibling may be considered guilty of intentionally breaking our mother's cherished glass."

To determine the necessity of engaging in prosocial lying, children need to possess ToM abilities (especially understanding of intentions, false beliefs, and feelings of others) and

MoToM, which involve assessing whether a behavior is right or wrong based on its underlying intentions. On the other hand, current research on prosocial lying remains primarily associated with ToM, for example, differentiating between good and bad intentions and examining the impact of behavior on others' feelings (Grazzani et al., 2018; Williams et al., 2016). However, studies exploring the relationship between MoToM (judging right or wrong based on intentions) and prosocial lying behavior are still scarce. Therefore, the present research aims to investigate the relationship between MoToM and prosocial lying behavior.

The development of children's Morally relevant Theory of Mind (MoToM) is intricately linked to the development of Theory of Mind (ToM) abilities. Typically, by the end of a child's first year, children start recognizing themselves and others as intentional beings with internal experiences like desires and goals. Subsequently, at around 12–18 months of age, they begin to understand that human behavior is influenced by both true and false beliefs (Wellman, 2018). At the age of 4–5 years, children achieve first-order ToM, which involves considering the thoughts and feelings of others. Later, around age 7, second-order ToM emerges, where children start to contemplate what others think or feel about the thoughts and feelings of others (Westby & Robinson, 2014). This development phase includes interaction and emotional sharing with caregivers (Gallagher & Hutto, 2008). Understanding the developmental progression of the ToM and MoToM is crucial for comprehending children's moral reasoning and their ability to understand and respond to moral dilemmas. As children progress through these stages, they gain a more sophisticated understanding of other's mental states and moral behaviors, significantly influencing their social interactions and moral decision-making.

Researchers in developmental psychology unanimously agree that, aside from being influenced by internal factors within an individual, behavior is also influenced by external factors or environmental factors. Within a child's behavior, one of the most influential factors is parents. Parents constitute a fundamental component in a child's microsystem. The role of parents in developing a child's social cognition has been extensively studied by Pavarini et al. (2013), particularly in her systematic review of parental practices and ToM development. In the Indonesian setting, research also summarized that parents play a significant impact in cognitive, language, and

emotional development (see, for example, Sarifudin et al., 2020; Satrianingrum & Andriyanti, 2020).

In the family context, parents' emotional expression (PEE) plays a crucial role in shaping children's emotional development. Through parental interactions, children learn about emotional display rules, comprehend others' emotional expressions, acquire skills for expressing emotions, interpret underlying messages, and develop emotional regulation strategies (Morris et al., 2017; Zimmer-Gembeck et al., 2022). PEE significantly impacts the emotional climate within the family, which, in turn, influences children's emotional reactivity and their relationships with family members (Chen et al., 2022). This emotional expression encompasses both verbal and non-verbal behaviors, distinguishing between expressions of positive affect and expressions of negative affect (Halberstadt et al., 1995). Understanding the role of PEE can provide valuable insights into children's emotional development and family dynamics.

The interaction between children and parents influences children's lying behavior (Dodd & Malm, 2023; Larsen, 2020; Prodan et al., 2022) and their ability to morally evaluate lying behavior (Popliger et al., 2011). Additionally, through interaction with the environment (especially parents), children learn that certain lying behaviors are socially acceptable. In other words, not all lying behaviors are considered negative (Lavoie et al., 2016). In this context, parental emotional expression plays a significant role in helping children understand their own emotions and the emotions of others (Hajal & Paley, 2020).

Children's understanding of emotions is important as it facilitates the ability to recognize emotions, understand the causes of emotions, and comprehend that lying can alter emotions (Demedardi et al., 2021). Therefore, children who can grasp what others are feeling are more likely to engage in prosocial lying to assist those individuals. PEE helps children regulate emotions, as they also need to apply inhibitory control to incline in prosocial lying (Williams et al., 2016). In short, in prosocial lying, children need to restrain themselves from revealing the truth they wish to hide and express false information they want to convey (Carlson et al., 2016).

Prior research conducted by Williams et al. (2016) has shed light on the association between prosocial lying and the theory of mind

(see also Lavoie et al., 2017). Additionally, investigations by Leduc et al. (2017) have demonstrated a link between prosocial lying and moral judgment. Nonetheless, the exploration of the correlation between MoToM and prosocial lying remains limited. Moreover, the relationship between prosocial lying and parents' emotional expressiveness has not been thoroughly examined. Therefore, the primary objective of this study is to address this research gap and answer the following research question: To what extent do morally relevant theory of mind and parents' emotional expression contribute to prosocial lying behavior in children aged 7–9?

## METHODS

This study employed a non-experimental within-subject design to investigate the relationship between morally relevant theory of mind and parents' emotional expression with children's prosocial lying behavior. The data collection took place at participants' respective schools under the supervision of teachers and/or headmasters. The data collection started from November 2022 to January 2023. The duration of testing was approximately 20–25 minutes for each child.

The participants of this study were children and their parents; they were recruited from state-owned primary schools in the Jakarta Metropolitan (Jabodetabek) area. The sample size was determined using GPower, resulting in a total of 64 samples ( $1-\beta=0.8$ ). The researchers invited schools to participate in this study. The children participant was nominated and selected by the teachers and/or school principals based on the following criteria: 1) aged 7–9 years with normal language development; 2) having no history of intelligence or academic problems; 3) living in intact families; and 4) willing to participate in the research with parental consent.

Before the data collection, the researchers were granted Ethical Clearance Letter Number 169/FPsi.Komite Etik/PDP.04.00/2022 from the Ethics Committee at the Faculty of Psychology, Universitas Indonesia. Formal written consent was also obtained from the parents before testing the children. Data collection was conducted by two researchers alternately after formal written consent from parents was obtained. To ensure the standard data collection procedure, both researchers were required to follow the standardized and prepared script. The general description of the script was as follows: 1) The first researcher

(R1) entered the room to introduce themselves to the child and establish rapport, 2) The R1 requested the child's assent by asking the child to mark a sticker if they agreed to participate, 3) R1 asked the child to rank items from most liked to least liked to determine the disappointing gift to be given, 4) R1 left the room and was replaced by the second researcher (R2), who tested children with MoToM, 5) After the child finished the test, R2 presented the disappointing gift to the child, 6) R2 left the room after obtaining the child's response, 7) The R2 was replaced by R1, who asked about the gift and if the child wanted to exchange it. If the child wanted to exchange the gift, R1 gave a coupon for exchanging the gift, which can be redeemed on the last day of the research, 8) R1 will conduct a debriefing (play origami) to ensure that the preceding behavioral testing did not have any negative impact on the child.

This study employed three instruments, namely: 1) the disappointing gifts paradigm to measure prosocial lying behavior, 2) MoToM to assess the ability for moral judgment based on ToM/intentions, and 3) SEFQ to measure the level of parental emotional expressiveness towards the child.

*The disappointing gift paradigm* was utilized to assess the children's prosocial lying. In this present study, we employed the definition of prosocial lying developed by Williams et al., (2016). The prosocial lying was the score children got if he/she stated that they liked the gift and/or did not want to exchange it. The disappointing gift paradigm was administered by two researchers. The first researcher presented a set of gifts, asked the child to rank them from most liked to least liked, and assigned a task. The second researcher then presented the child with a gift that was ranked as the least-liked choice by the child. Afterward, the second researcher left, and the first researcher entered. The first researcher then asked whether the child liked the gift given by the second researcher. Subsequently, the first researcher also inquired about Semantic Leakage Control or what the children will be doing with the gift or what the gift will be used and finally asked if they would like to exchange it. The responses given by the children were recorded and coded according to the following criteria: point 0 was assigned to Truth-Tellers (children directly stated that they did not like the gift to the first researcher); point 1 was assigned to Prosocial Lie-Tellers (children who stated they liked the gift to the first researcher but did not like it when asked by the second researcher and wanted to exchange it); and points 2 was

assigned to Prosocial Lie-Tellers and Semantic Leakage Control (when the child not only expressed liking the gift to the first researcher but also maintained their lying by stating that they did not want to change the gift to the second researcher). Semantic leakage control is an additional score when the child can sustain prosocial lying behavior. Responses from children were scored and then analyzed by other raters. The inter-rater reliability analysis yielded a high coefficient of  $\alpha = 0.98$ .

*The MoToM.* In this study, children's understanding of MoToM abilities was assessed using a 4-item scale developed by Killen et al. (2011) that has been translated into Indonesian by Kuntoro et al. (2018). The operationalization of the MoToM was the score obtained by children on the MoToM task. The inter-rater reliability analysis showed a coefficient of  $\alpha = 0.98$ . The analysis was carried out using the total score obtained by the children. The MoToM consists of stories depicting a moral violation and its victim, which evaluated the children's understanding of false content, false location, moral judgment, accidental intention, and accidental evaluation. The example of the story was: There was a child named Dian. One day, Dian brought a packet of snacks in a black plastic bag and placed it on the table in the classroom. Dian then went outside to play. Later, another child named Tini came in to clean the classroom. Tini saw the black plastic bag with snacks inside and threw it in the trash. The researcher asked the child: "Does Tini know what was inside Dian's black plastic bag? What did Tini think was inside the plastic bag?" For the false belief theory of mind - false content and false location, a score of 1 is given for a correct answer and a score of 0 for an incorrect answer. For moral understanding, accidental intention, and accidental evaluation, a score of 1 is given for a correct answer, along with the justification for the answer.

*The Self-Expressiveness in the Family Questionnaire (SEFQ).* This self-report inventory was developed by Halberstadt et al. (1995) and adapted into the Indonesian by Wandansari (2021). The scale measured the frequency of emotional expression within the family context. Operationalization of parental emotional expression variable was the score obtained from the Self-expressiveness Family Questionnaire. This scale consisted of statements on how both parents expressed their emotions to children, spouses, and relatives. The SEFQ consists of 40 items representing various emotions experienced in different family situations, using a Likert-like

scale ranging from 1 to 6 for both positive and negative emotions. The example of expressing positive emotions (e.g., "Praising someone for good work") and expressing negative emotions (e.g., "Quarreling with family members"). The reliability analysis indicated the SEFQ is reliable with  $\alpha$  coefficient = 0.875.

## RESULTS

### *General Description of Participants*

There were 66 (26 boys and 40 girls) nominated by teachers/headmasters who agreed to participate in this study. The age range was 84-108 months ( $M=101.91$  months;  $SD=8.36$ ); most children (74.2%) were aged over 8 years. Furthermore, most fathers completed up to the high school level (69.7%), and mothers completed the high school level (65.2%). The detailed description of the research participants is presented in Table 1.

*Table 1 Descriptive statistics for children and parent participants (n=66)*

Demographic	n	Percentage
<b>Children's gender</b>		
Male	26	39.4
Female	40	60.6
<b>Children's aged</b>		
7	17	25.8
8	25	37.9
9	24	36.4
<b>Father's education</b>		
Bachelor's	9	13.6
High school	46	69.7
Middle school	6	9.1
Elementary school	5	7.6
<b>Mothers' education</b>		
Bachelor's	10	15.2
High school	43	65.2
Middle school	7	10.6
Elementary school	6	9.1

Table 2 Model hierarchical logistic regression for prosocial lying and MoToM (n=66)

	$\beta$	SE	Wald	OR	$\chi^2$
<b>Step 1</b>					1.344
Age (in months)	-0.037	0.032	1.294	0.964	
<b>Step 2</b>					5.872**
MoToM Total	0.782	0.344	5.167	2.186	

Note. Step 1 Nagelkerke  $R^2 = 0.028$ , Step 2 Nagelkerke  $R^2 = 0.142$ ; \*  $p < 0,05$ ; \*\*  $p < 0,01$

Further, before regression analysis was conducted, descriptive statistics of research variables were also examined. Descriptive statistics analysis revealed that only 36.4 percent of the participants are truth-tellers. Moreover, the majority (63.6%) of participants engaged in prosocial lying, while 53 percent of the participants were truth-tellers, and 10.6 percent of children could maintain their lies (semantic leakage control). For MoToM, only 19.7 percent of participants could answer all the questions correctly. It was easier for the children to complete the false belief task than the moral judgment task. Descriptive statistics analysis also shows that parents who participated in this study mostly tend to express their positive emotions ( $M=46.64$ ,  $SD=8.902$ ) rather than expressing their negative emotions ( $M=26.73$ ,  $SD=9.838$ ).

*The Regression Analysis between Prosocial lying and MoToM.* Before conducting regression analysis between prosocial lying and MoToM, correlation analysis among prosocial lying, MoToM, and age was observed. The result indicated that age exhibited a positive correlation solely with MoToM, while no significant correlation was observed between age and prosocial lying. Specifically, age showed a positive correlation with MoToM ( $r=0.217$ ), suggesting that as children grow older, their MoToM understanding may increase. Furthermore, MoToM exhibited a positive correlation with prosocial lying ( $r=0.360$ ), indicating that higher MoToM ability in children is associated with a greater likelihood of engaging in prosocial lying. After observing the association between age and MoToM through correlation analysis, a subsequent hierarchical logistic regression analysis was performed (presented in Table 2).

The hierarchical logistic regression analysis was conducted in two stages, first with age and then with MoToM as predictors for prosocial lying behavior. The results of the analysis revealed significant findings in the second stage ( $\chi^2(2)=5.872$ ,  $p<0.01$ ). This indicates that 14.2 percent of the variation or changes in children's prosocial lying behavior can be attributed to MoToM, even after accounting for age as a covariate. The remaining 85.8 percent of the variation is likely influenced by other unmeasured factors or variables not included in the analytical model.

*The Regression Analysis between Prosocial lying and parental emotional expressiveness (PEE).* The correlation analysis was also conducted to examine the relationships between PEE, prosocial lying, and age before commencing into regression analysis between prosocial lying and PEE. The results indicated that age was not significantly associated with PEE [ $r(66)=-0.5$ ,  $p<0.05$ , two-tailed] or prosocial lying [ $r(66)=0.1$ ,  $p<0.05$ , two-tailed]. This result informs us that parent emotional expression was not related to both children's age and prosocial lying. Subsequently, hierarchical logistic regression was conducted to examine the relationship between PEE and prosocial lying. The analysis involved two stages, first with age as a predictor, followed by PEE, while prosocial lying served as the dependent variable. However, the results of the hierarchical logistic regression model indicated no significant findings in the second stage ( $\chi^2(2)=1.472$ ,  $p>0.05$ ). The components of PEE accounted for only 5.7 percent of the variance in prosocial lying and accurately predicted prosocial lying behavior (see Table 3).

Table 3. Model hierarchical logistic regression for prosocial lying and parent emotional expression (n=66)

	$\beta$	SE	Wald	OR	$\chi^2$
<b>Step 1</b>					1.344
Age (in months)	-0.037	0.032	1.294	0.964	
<b>Step 2</b>					1.472
PEE Total	-0.022	0.018	1.423	0.978	

Note. Step 1 Nagelkerke  $R^2 = 0.028$ , Step 2 Nagelkerke  $R^2 = 0.057$ ; \*  $p < 0,05$ ; \*\*  $p < 0,01$

In summary, the analysis demonstrated that age showed an association with MoToM but not with parents' emotional expressiveness and prosocial lying. Moreover, MoToM exhibited a positive correlation with prosocial lying. Subsequently, the hierarchical logistic regression analysis yielded significant findings indicating that 14.2 percent of the variation or changes in children's prosocial lying behavior could be explained by MoToM, even after controlling for age. In contrast, the parents' emotional expressiveness regression analysis with prosocial lying showed a different outcome, as the hierarchical logistic regression revealed no significant findings in the second stage. Parents' emotional expressiveness accounted for only 5.7 percent of the variance in prosocial lying.

## DISCUSSION

This study aimed to answer the research question regarding what extent the morally relevant theory of mind and parents' emotional expression contribute to prosocial lying behavior in children aged 7–9 years old. The regression analysis indicated that children's MoToM is significantly related to prosocial lying behavior. Children's understanding of intentions and emotions, false beliefs, moral decision-making, and comprehension of the impact of their behavior on others contributed significantly to their ability to engage in prosocial lying. These abilities enable children to safeguard the feelings of others and prevent them from hurting others, thus encouraging them to engage in prosocial lying. The significant association between moral understanding and children's prosocial lying behavior indicated in this study is consistent with the findings summarized by Popliger et al. (2011) as well as by Vendetti et al. (2019).

In this study, we also examined the role of parents' emotional expression in children's prosocial lying behavior, expecting it to have an influence based on our initial hypothesis. Our investigation involved measuring the frequency of emotional expression displayed by parents, whether towards the children directly or indirectly, at the partner or other family members. Surprisingly, our findings indicate that neither direct nor indirect emotional expression from parents appears to determine a child's propensity for engaging in prosocial lying. It seems that parents' emotional expression might be more related to how children understand their own and others' emotions (Chen et al., 2015). When children possess a better comprehension of emotions,

especially those of others, they are better equipped to discern whether to engage in prosocial lying to assist others (Demedardi et al., 2021).

Another observed result is that children's age does impact their MoToM abilities. As children get older, their social cognitive ability is also developing, which enables them to have better moral judgment and, in turn, influences their MoToM abilities. These results align with Williams' findings (2016) and Kim et al. (2020) yet differ from the study by Talwar et al. (2017). Unlike Xu et al.'s findings (2010), our study did not show a correlation between age and prosocial lying behavior. This could be due to the relatively limited participants' age range involved in the study.

This study had some limitations that should be addressed. Firstly, the age range of participants in this study is limited, comprising only 7-9 years. This might not fully capture significant developments in children's prosocial lying and semantic leakage control abilities. Secondly, the demographic profile of the participants mainly consisted of children with parents who had completed education up to high school and had a middle socioeconomic status (SES). These factors possibly impact children's cognitive abilities due to their close association with verbal and cognitive stimulation (Hackman et al., 2014). Thirdly, the study revealed that most children aged 7–9 years could engage in prosocial lying; it did not provide further information on the reasons behind their prosocial lying. Finally, regarding parents' emotional expression, the study focused on the frequency of parents expressing their emotions. However, after conducting the study, the researchers considered that the intensity of parents' emotional expression might also influence children's prosocial lying (Demedardi et al., 2021). This should be investigated in future studies. To obtain a more comprehensive understanding of the relationship between parents' emotions and children's prosocial lying behavior, a study with children 7 to 12 years from middle SES in urban and rural areas should be further conducted.

To enhance the understanding of prosocial lying motives, future studies may explore the factors motivating children to engage in such behavior. Additionally, a more in-depth examination of parents' emotional expressions, considering indicators such as frequency and intensity, could further enrich the understanding of their impact on children's prosocial lying behavior. Furthermore, for more comprehensive

analyses, it is suggested that future research consider controlling or comparing parental education and socioeconomic status (SES) of the participants to better account for potential influences on prosocial lying behaviors. By addressing these recommendations, future studies can further contribute to understanding the intricate dynamics between MoToM, parents' emotional expression, and prosocial lying behavior in children.

### CONCLUSION AND SUGGESTION

This study aimed to answer the main research question and explore the connections between morally theory of mind (MoToM) and parents' emotional expressions concerning prosocial lying. This research highlighted a novel insight that children aged 7–9 years consider both the intention and the impact of the lie on others while engaging in prosocial lying. The study, in contrast, reveals that parents' emotional expression, including both positive and negative emotions, did not exhibit a significant influence on predicting prosocial lying behavior.

The ability to engage in prosocial lying is one component of social cognition that plays a role in safeguarding the feelings of others and maintaining harmonious relationships. Engaging in prosocial lying is sometimes necessary to avoid hurting the feelings of others. Parents must distinguish between prosocial and antisocial lying and recognize that proficiency in prosocial lying is underpinned by robust moral judgment abilities. Parents should work on developing their children's moral reasoning and emotional regulation abilities to ensure that children possess strong social skills for enhancing their acceptance within peer circles.

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