Is theory of mind correlated with moral identity among primary school children?

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Abstract

The purpose of the research is to reveal the correlation between theory of mind (ToM) and moral identity (MI) among primary school children. A total of 148 primary school children were recruited into the research sample by using convenience sampling. The present research was designed as correlational research. The data about MI were gathered with the Moral Identity Test developed Coskun and Kara (2019) and the data about ToM were collected by using battery of theory of mind tasks consisting of eight ToM tasks. Data were analysed and it was observed that there was neither significant nor robust correlation between ToM and MI. Based on these results, it was concluded that this absence of correlation between the research variables may stem from differences between the focal point of MI and that of ToM.

Keywords: Keyword, keyword, keyword

INTRODUCTION

Human beings have always needed to establish social ties with others and avoided social isolation and loneliness. Therefore, they sought out principles which allow them to build social ties. People have tried to predict each other's behaviours by inferring relationships between their emotions, thoughts and actions in order to provide harmony between them. Living together and avoidance of isolation and loneliness, inferring human behaviour from thoughts and emotions requires a deep internal process.

These social processes were discovered and conceptualized. Living together and avoiding isolation and loneliness highlight morality. Morality is described as the set of mental beliefs which enable determination of what is good or bad, what is right or wrong, what is justice and injustice. Human skills about morality were conceptualized through observation of human behaviours by clustering them in terms of morality. As a result, there are several concepts such as moral development, moral reasoning, moral character, and moral socialization used to explain human behaviour according to morality. Moral identity (MI) is one of these concepts. Moral identity is self-regulation which enables humans to be motivated toward moral action (Aquino & Reeds, 2002; Blasi, 1984; Damon & Hart, 1992). MI is viewed as a kind of self-identification that humans use to construct their self-definitions related to morality (Aquino & Reed, 2002). Moral self-identification instils a belief in children that they are a good child by behaving based on parents' expectations and family rules. The child will help whoever needs help, and apologise for their faults to others around them as a result of this kind of moral self-identification (Kochanska, 2002). MI is also seen as a self-commitment which implies coherence between a sense of self and action (Atkins, Hart, & Donnelly, 2004). As a consequence of a wide range of features of MI, it is the unity between self-systems such as self-identification, self-commitment and morality (Colby & Damon, 1992). MI functions as the basis of moral motivation thanks to the coherent unity between the self-system and morality (Hardy & Carlo, 2011). This function makes moral identity a seminal predictor of moral actions and commitment (Damon & Hardy, 1992; Hertz & Krettenauer, 2016).

On the other hand, moral identity consists of a complex structure involving moral values, traits, and behavioural scripts (Aquino & Reeds, 2004; Lapsley & Narvaez, 2004). Learning plays a key role in this complex structure. Learning requires life experiences and

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comprises knowledge structure based on moral judgement and moral behaviour (Aquino & Reed, 2002, Blasi, 2004; Lapsley & Narvaez, 2004). The knowledge structure based on these life experiences functions as an obligatory basis for behaviour. Feeling obligation to participate in moral actions is related to moral identity due to maintaining the self-system (Freeman, Reed, Lim, & Felps, 2009; Blasi, 1990; 1993). Therefore, MI allows avoidance of self-condemnation. MI is viewed as a bridge between moral judgement and action. Incoherency or failure in behaving in accordance with moral judgement evokes some emotions which are known as moral emotions such as shame, guilt, and regret. Therefore, MI is a composite structure including reason, judgement, behaviour, and emotion (Blasi, 1999; Stets & Carter, 2012).

Moral judgement, moral emotions, and moral behaviour entail social interaction because none of them can be realized or felt without social interaction. Social interaction allows a child to observe other's behaviours and form a judgement about what moral action is. On the other hand, social interaction makes receiving feedback about their behaviour possible. This feedback triggers an emotional process in the person based on the nature of the feedback. As a consequence of social interaction, moral behavioural scripts and moral-mental schemas develop about what is moral or what is immoral (Narvaez, Lapsley, Hagele, and Lasky, 2006).

One of the concepts that enables harmony among human beings, along with moral identity, is theory of mind (ToM). It refers to the ability to attribute mental states to others and to predict others' behaviour thanks to these mental states (Sodian 2005). Attribution of mental states to others requires observation of the self and others along with mental states such as emotions, desires, intention, and beliefs (Wellman, Cross & Watson, 2001). Attributing mental states highlights the ability to gain insight into others' minds and establish relationships between mental states and behaviour (Imuta, Slaughter, Ruffman, and Selcuk, 2010; Perner,1991; Wellman, 1990). Therefore, Perner (1991), and Wellman and Woolley (1990) viewed ToM as the conduct of reasoning about how mental states impact behaviour. Ruffman (2014) noted that ToM is a social insight into others' mental states and behaviours. Hence, ToM is a way of constructing a relationship between our inner world and the outer world. The relationship requires representation of the outer world in a conceptual network (Sodian, 2005). ToM encompasses perspective taking, mental simulation of what the other person can think and do, and prediction of action. These functions of ToM may underlie the basis of social interaction with others and understanding of others' behaviours and adaptation of behaviour according to changes in the outer world (Crowley, 2014). Therefore, ToM is fundamental social cognitive skill in order to develop good harmony with others and cooperation with them.

Moral identity and ToM depend on social interaction because they reveal moral emotion and moral judgement which are closely related to moral identity and offer the opportunity to attribute mental states to others and predict others' behaviours based on their mental states. Social interaction involves a wide range of variables, which influence the form of social interaction and its quality. Socioeconomic status (SES) is one of these variables. Generally, SES consists of three indicators. These indicators are parental education, parental income and parental occupation (Duncan, Featherman, & Duncan, 1972). Better parental education means better social interaction between a child and parents. For instance, human cognitive development follows a path from imitation to manipulation and observing, and imitating a parent with higher education makes the transition from imitation to manipulation easier. This transition, in turn, facilitates social, affective, and cognitive development. Theoretically speaking, respected parental occupation reduces parental working hours and this reduction, in turn, leads to increased home time and parental interaction with the children. Better parental interaction with higher education and respected jobs brings about better social emotional development and cognitive skills such as math, reading, and comprehension (Barr, 2015; Hart & Risley, 2003; Jones, Greenberg & Crowley, 2015).

Due to the importance of SES for child-parent interaction and its role in moral identity and ToM, the following two hypotheses were tested in the research:

H1: ToM is a significant predictor of moral identity.

H2: SES has a moderating role in the correlation between ToM and MI

METHOD

Design of the Research

The present research aims to explore the corelation between ToM and moral identity and their moderator variables so it was designed as correlational research.

Recruitment of the Participants

Ethical considerations were dealt with before recruitment of the participants. A research proposal consisting of information about the purpose of the research, data collection process and analytical procedures was submitted to the local education authority in Artvin, Turkey. The board of the local education authority examined the proposal in terms of ethical considerations and found it appropriate and gave official and ethical approval.

Owing to financial, time, and travel constraints sampling strategies, which are thought to represent the entire population of the research, were used. Due to impossibility of listing of all potential participants whose ages vary between 7 and 10 years, their random assignment into research sample was not possible. Therefore, convenience sampling was employed to collect data. Primary schools were visited, and the purpose and process of the research were explained to headteachers. Three headteachers accepted that the research would be conducted in their primary schools. After approval of the headteachers, primary school teachers were met who were employed in the three primary schools. They were informed about the purpose and procedures of the research. Eight primary school teachers consented for their students to participate in the research. A letter was prepared which encompassed the purpose and

procedures of the research, questions about children's socioeconomic status such as parental education level, parental job, family income, number of siblings, and daily internet usage of the children. The letter was printed and given to the teachers to send to their students' parents. A total of 158 parents accepted their children's participation in the research, responded to the questions, and signed the letter. Parents who consented returned the letter. Of the children whose parents approved, were female and 82 were male children.

Measurements

Moral Identity

Moral identity of the participant children was assessed with the Moral Identity Test (MIT) developed by Coskun and Kara (2019). The MIT consists of 10 items with one factor solution. Its internal consistency coefficient was .93. The items have three response actions of "*I warn*", "*I abstain*", and *"I do not care"*. The response of "*I warn*" is considered to indicate the presence of moral desire, willpower, and integrity, which are fundamental components of moral identity. Response of "*I abstain*" indicates the existence of moral desire but lack of willpower and integrity. Response of "*I do not care*" is proof of lack of moral desire, willpower, and integrity. Therefore, the response of "*I warn*" was given three points, 2 points were assigned to "*I abstain",* and 1 point was given to *"I do not care*".

Measures of ToM

ToM of the participant children was assessed through the battery of ToM tasks which was developed by Coskun, Kara, and Coskun (2020). The battery includes eight tasks about explicit false belief, real versus apparent emotion, real versus disclosed intention, implicit false belief, diverse beliefs, knowledge access, and diverse desires. The tasks in the battery don't depend solely on narration. They entail real or lifelike objects. Therefore, the battery's reliability coefficient was.98. Moreover, its separation index is 7. Consequently, it was decided that the battery can produce reliable results for measuring the ToM skills of the participant children.

Measure of SES

SES backgrounds of the participant children were measured through Hollingshed (1965)'s two-factor index. Hollingshed's two-factor index encompasses maternal education and occupation and paternal education and occupation. The mean scores for maternal education and occupation, and paternal education and occupation are calculated and SES is turned into a composite and continuous variable. As a result, scores from Hollingshed's two-factor index comprised a composite score based on maternal education and occupation, and paternal education and occupation. Then scores from maternal backgrounds and paternal backgrounds were used as continuous variables in the correlational model.

Procedures

Forms about demographic information questions were sent to the parents with their children and addressed ethical considerations. The form encompassed questions about parental education level, parental profession, family income, number of siblings, and daily internet usage of their children. The parents who approved their children's participation in the research responded to these questions. As a result, demographic information about the participant children were obtained. Then MIT was administered to the participant children. It took about ten minutes to respond to the items on the MIT. After data for moral identity had been collected, an environment was organised for the tasks of the ToM. The headteachers allocated a spare room where there was no furniture which could distract the participant children. The tasks in the battery include real or lifelike objects. Organization of the tasks were aligned with the protocols developed by Coskun, Kara, and Coskun (2020). Therefore, standardization of the testing conditions was possible. All of the participant children responded to the tasks in about 10 minutes.

Analytic Procedure

Even though the research was designed as correlational research, the aim goes beyond correlation between ToM and MI and is to detail the moderating role of SES. Consequently, moderation analysis (Model 1) developed by Hayes (2018) was used. Moderation analysis is an analytical procedure which allows exploration of how the effect of ToM as independent variable on MI as dependent variable is moderated by SES (Hayes & Norwood, 2017).

Results

Sample Characteristics

Data for 158 participants were analysed. The sample consisted of 82 male (51.90%) and 76 female (49.10%) Turkish primary school students. The age of the sample ranged from 7 to 10 years. The average age was 8.24 (SD = 1.13). Descriptive findings were determined for the families of the children. Accordingly, the sample was composed of 16 (10.1%) single children, 59 (37.3%) older children, 22 (13.9%) median children and 61 (38.6%) younger children. The monthly income of the families varied between 2020 Turkish Liras (TL) and 16000 Turkish Liras (TL) (1$ = 8.33 TL). As another descriptive finding addressed within the scope of the research, the status of children with digital devices was considered. Accordingly, only 7 children did not possess a digital device (4.4%). The rest of sample had digital devices. In other words, 151 children (95.6%) possessed digital devices and 37 (23.4%) children with digital devices received permission from their parents to use these devices. Descriptive statistics for the dependent and independent variables based on birth order were explored. Accordingly, it was determined that the mean scores for MI ($x^2_{(3)}$ = 7.60, p> .05) and ToM ($x^2_{(3)}$ = 5.43, p> .05) did not differ based on birth order.

Preliminary Analysis

To assess the associations among ToM, MI, and SES, the zero-order correlations were examined (Table 1). According to the correlation results, ToM was associated with MI (r = .17, $p <$

.05). Additionally, SES was not associated with ToM ($r = -.10$, $p > .05$) and MI ($r = -.06$, $p > .05$).

Table 1. Correlations among variables					
Variables	Mean	SD	1	2	3
ToM (1)	6.41	1.90	1		
MI (2)	26.34	4.05	.17*	1	
SES (3)	8.64	2.68	-.10	-.06	1

Note. *$p < .05$; ToM = Theory of Mind, MI = Moral Identity, SES = Socio Economic Status

Moderation Analysis

Hypothesis 2 was related to the moderating effect of SES in the association between ToM and MI. The procedures recommended by Hayes (2018) were adopted to explore the interaction effect. The moderation analysis was performed with the SPSS Process Macro (Model 1) application. Age was included as a covariate in the moderation analysis. Results of the moderation analysis were indicated in Table 2.

Table 2. Testing the moderation effect of ToM and SES on MI					
Variables	b	SE	t	LLCI	ULCI
Constant	28.12	4.28	6.56	19.66	36.59
Age	.03	.29	.10	-.55	.61
ToM (X)	-.25	.59	-.42	-1.42	.92
SES (W)	-.55	.41	1.33	-1.38	.26
Interaction (X*W)	.07	.06	1.25	-.04	.20

Note. ToM = Theory of Mind, MI = Moral Identity, SES = Socio Economic Status

The results revealed that none of the variables was a predictor of MI. In other words, ToM ($b = -.25$, $p > .05$) and SES ($b = -.55$, $p > .05$) did not have an exploratory role in MI. Finally, ToM and SES (moderation effect) did not have significant interaction effects on MI ($b = .07$, $p > .05$).

Discussion

The results of the research revealed that there is weak but positive and significant relationship between MI and ToM. Results also indicated that SES did not moderate the correlation between MI and ToM, even though both MI and ToM are theoretically related to SES.

ToM and MI have social dimensions. ToM is rooted in behavioural outcomes of mental states and attribution of those mental states to others because it enables children to acquire a representational understanding of how feelings, intentions, beliefs, and thoughts influence human behaviour (Wellman, 2014; Peterson & Wellman, 2019). Therefore, ToM is the basis of social reasoning and social competence. Besides, ToM is an understanding which allows children to establish associations with friendship (Fink, Begeer, Peterson, Slaughter, & Rosnay, 2014), leadership (Slaughter, Imuta, Peterson, & Henry, 2015), loneliness (Devine & Hughes, 2013), persuasion (Slaughter,

Peterson, & Moore, 2013), and deception (Ding, Wellman, Fang, & Moore, 2013) so ToM requires them to operate with mental state attributions by taking the context of others into consideration. Children are included in a community of minds through conversation and communication with parents who hold different opinions, views, and perspectives (Nelson, 2004). Interaction with parents and other people with different opinions, beliefs, and thoughts enables children to participate in the community of minds. Establishing a behavioural association with a specific intention, belief, or thought makes children more adept in social adjustment and peer relations and other relationships with a more skilled person in a culture (Hayes & Frith, 2014). When children, a new and less skilled member of the society, acquire ToM and improve it, they focus on others to attribute mental states to them. As a consequence, ToM develops by reference to others so it can be noted that it is other-directed.

Morality refers to the set of beliefs which allow humans to make distinctions between good or bad, right or wrong while taking actions (APA, 2015). Morality has two dimensions: judgement and action. MI is a kind of self-identification of morality that bridges the gap between judgement and action (Blasi, 1984). MI is conceived as a significant predictor of moral actions (Hardy & Carlo, 2011; Hertz & Krettenauer, 2016). Furthermore, choosing actions according to what is wrong or right, what is fair or unfair rests on two different paradigms so MI stems from two different cultures: guilt and shame. Moral identity rooted in a shame culture views morality as an external demand that urges people to behave based on what other people expect. Moral identity built upon avoidance of shame depends on the assumption that humans need to imagine what other people think. On the other hand, moral identity constructed on a guilt culture views morality as a voice within our conscience. This inner voice tells us whether the action that was done is right or wrong. As a result, MI arising from guilt culture is inner-directed while MI stemming from shame culture is other-directed (Sacks, 2020). The weak correlation found between MI and ToM can be considered as proof of primary school children's morality orientations. ToM is fostered by focusing on others so ToM is other-directed. The fact that ToM is other-directed and weakly correlated with MI reveals a contrast between the operation of ToM and that of MI. Based on the weak correlation, it was concluded that the participant primary school children's orientations of moral identity may be rooted in guilt culture which is inner-directed.

As a result of testing H2, it was observed that SES does not moderate the correlation between MI and ToM. When developing H2, it was thought that MI and ToM were closely related to SES. MI and ToM are facets of human development. Human development in all domains follows a path from imitation of parents and other older persons to manipulation, which means producing mental representations and using and updating those mental representations through experience (Goswami, 2014). Hence social interaction plays a key role in the transition from imitation to manipulation. Both social interaction with skilled or wiser parents expedites the transition and leads to better social and cognitive skills. SES is one of the constructs which presents remarkable information about the

quality of parental, social and cognitive skills and is a predictor of characteristics of social interaction between child and parents (Sirin, 2005). Similarly, Carr, Slade, Yuill, Sullivan, & Ruffman, (2018), Hughes, Deater-Deckard, & Cutting (1999), Hughes & Ensor (2005), Hughes et al., (2005), Murray, Wolgar, Briers, & Hipwell (1999), and Pears & Mess (2003) reported that SES is a predictor of ToM. However, MI was not found to be correlated with SES in the relevant literature. Krettenauer & Casey (2015) and Sengsavang (2018) found that SES was not significantly correlated with MI among adolescents and children. In the research it was observed that SES does not moderate the relationship between MI and ToM which is very weak. ToM is an other-directed concept that is influenced by SES. On the contrary, MI is related to a set of beliefs about what is right or wrong, what is fair or unfair and these beliefs have more universal and stable characteristics. Moreover, MI is an inner-directed concept because of the fact that an individual makes more judgements. Therefore, MI might not be easily influenced by SES. Because of the common and inner-directed characteristics of MI, SES could not moderate the correlation between MI and ToM.

Conclusions

The present research, conducted with 177 children through correlational research, found that there is weak but significant correlation between MI and ToM and that SES does not moderate the correlation between these variables. The lack of moderation was attributed to the more universal, stable, and inner-directed features of MI.

As for limitations of the research, it was applied to Turkish children whose demographic and familial backgrounds were shaped by the culture and consequently the study should be replicated with children from other cultures. On the other hand, convenience sampling was used to collect the data, future research with more robust sampling procedure can be implemented.

REFERENCES

American Pscyhological Association (2015). *Apa dictionary of pscyhology*. Washington: American Pscyhological Assocation

Aquino, K., & Reed, I. I. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, 83(6), 1423–1440. https://doi:10.1037//0022-3514.83.6.1423

Aquino, K., Freeman, D., Reed II, A., Lim, V. K., & Felps, W. (2009). Testing a social- cognitive model of moral behavior: The interactive influence of situations and moral identity centrality. *Journal of Personality and Social Psychology*, 97(1), 123–141. https://doi: 10.1037/a0015406

Atkins, R., Hart, D., & Donnelly, T. T. (2004). Moral identity development and school attachment. In D. K. Lapsley, & D. Narvaez (Eds.), *Moral development, self, and identity*, (pp. 65–82). Mahwah: Lawrence Erlbaum

Barr, A. B. (2015). Family socioeconomic status, family health, and changes in students' math achievement across high school: A mediational model. *Social Science & Medicine*, *140*, 27-34. https://doi.org/10.1016/j.socscimed.2015.06.028

Blasi, A. (1980). Bridging moral cognition and moral action: A critical review of the literature. *Psychological Bulletin*, 88, 1–45. https://doi.org/10.1037/0033-2909.88.1.1

Blasi, A. (1984). Moral identity: Its role in moral functioning. In W. M. Kurtines, & J. L. Gewirtz (Eds.), *Morality, moral behavior, and moral development*, (pp. 128– 139). New York: Wiley

Blasi, A. (1993). The development of identity: Some implications for moral functioning. In G. G. Noam, T. E. Wren, G. Nunner-Winkler, & W. Edelstein (Eds.), *Studies in contemporary German social thought*, (pp. 99–122). Cambridge: MIT Press.

Blasi, A. (1999). Emotions and moral motivation. Journal for the Theory of Social Behaviour, 29, 1–19. https://doi.org/10.1111/1468-5914.00088

Blasi, A. (2004). Moral functioning: Moral understanding and personality. In D. K. Lapsley, & D. Narvaez (Eds.), *Moral development, self, and identity*, (pp. 335– 347). Mahwah: Erlbaum

Carr, A., Slade, L., Yuill, N., Sullivan, S., & Ruffman, T. (2018). Minding the children: A longitudinal study of mental state talk, theory of mind, and behavioural adjustment from the age of 3 to 10. *Social Development*, *27*(4), 826-840. https://doi.org/10.1111/sode.12315

Colby, A., & Damon, W. (1992). *Some do care: Contemporary lives of moral commitment*. New York: Free Press

Coskun, K., & Kara, C. (2019). Moral identity test (MIT) for children: reliability and validity. *Psicologia: Reflexão e Crítica*, *32*(1), 1-8. https://doi.org/10.1186/s41155-019-0120-9

Coşkun, K., Kara, C., & Coskun, M. (2020). New scaling of theory of mind tasks: Where can the intentional aspect be scaled?. *Activitas Nervosa Superior*, *62*(3), 78-87. Doi: https://doi.org/10.1007/s41470-020-00072-2.

Crowley, K. (2014). *Child development*. London: Sage Publications

Damon, W., & Hart, D. (1992). Self-understanding and its role in social and moral development. In M. H. Bornstein, & M. E. Lamb (Eds.), *Developmental psychology: An advanced textbook*, (3rd ed., pp. 421–464). Hillsdale: Erlbaum

Devine, R. T., & Hughes, C. (2013). Silent films and strange stories: Theory of mind, gender, and social experiences in middle childhood. Child Development, 84, 989–1003. https://doi.org/10.1111/cdev.12017

Ding, X. P., Wellman, H. M., Wang, Y., Fu, G., & Lee, K. (2015). Theory-of-mind training causes honest young children to lie. Psychological Science, 26, 1812–1821. https://doi.org/10.1177/0956797615604628

Duncan, O. D., Featherman, D. L., & Duncan, B. (1972). Socio-economic background and achievement. NY: Seminar Press

Fink, E., Begeer, S., Peterson, C. C., Slaughter, V., & Rosnay, M. (2014). Friendlessness and theory of mind: A prospective longitudinal study. British Journal of Develop- mental Psychology. https://doi.org/10.1111/bjdp.12080

Goswami, U. (2014). *Child development*. London: Oxford University Press.

Hardy, S. A., & Carlo, G. (2011). Moral identity: What is it, how does it develop, and is it linked to moral action? *Child Development Perspectives*, 5(3), 212–218. https://doi.org/10.1111/j.1750-8606.2011.00189.x

Hart, B., & Risley, T. R. (2003). The early catastrophe: The 30 million word gap by age 3. *American Educator*, *27*(1), 4-9

Hayes, A. F., & Rockwood, N. J. (2017). Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour Research and Therapy*, *98*, 39-57. https://doi.org/10.1016/j.brat.2016.11.001

Hayes, A.F. (2018). *Methodology in the Social Sciences* (2nd ed.). New York: The Guilford Press

Hertz, S. G., & Krettenauer, T. (2016). Does moral identity effectively predict moral behavior?: A meta-analysis. Review of General Psychology, 20, 129–140. https://doi.org/10.1037/gpr0000062

Hertz, S. G., & Krettenauer, T. (2016). Does moral identity effec- tively predict moral behavior?: A meta-analysis. *Review of General Psychology*, *20*, 129–140. doi:10.1037/gpr0000062

Heyes, C. M., & Frith, C. D. (2014). The cultural evolution of mind reading. *Science*, 344, 1357. doi:10.1126/science.1243091

Hollingshead, A.B. (1965). *Two-factor index of social position*. New Haven: Yale University Press.

Hughes, C., & Ensor, R. (2005). Executive function and theory of mind in 2 year olds: A family affair?. *Developmental Neuropsychology*, *28*(2), 645-668. https://doi.org/10.1207/s15326942dn2802_5

Hughes, C., Jaffee, S. R., Happé, F., Taylor, A., Caspi, A., & Moffitt, T. E. (2005). Origins of individual differences in theory of mind: From nature to nurture?. *Child Development*, *76*(2), 356-370. https://doi.org/10.1111/j.1467-8624.2005.00850_a.x

Imuta, K., Henry, J. D., Slaughter, V., Selcuk, B., & Ruffman, T. (2016). Theory of mind and prosocial behavior in childhood: a meta- analytic review. *Developmental Psychology*, 52(8), 1192. https://doi.org/10.1037/dev0000140

Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early social-emotional functioning and public health: The relationship between kindergarten social competence and future wellness. *American Journal of Public Health*, *105*(11), 2283-2290

Kochanska, G. (2002). Committed compliance, moral self, and internalization: A mediational model. Developmental Psychology, 38(3), 339- 351. https://doi.org/10.1037/0012-1649.38.3.339

Krettenauer, T., & Casey, V. (2015). Moral identity development and positive moral emotions: Differences involving authentic and hubristic pride. *Identity*, *15*(3), 173-187

Lapsley, D. K., & Narvaez, D. (2004). A social-cognitive approach to the moral identity theory. In D. K. Lapsley, & D. Narvaez (Eds.), *Moral development, self, and identity*, (pp. 189–212). Mahwah: Lawrence Erlbaum

Murray, L., Woolgar, M., Briers, S., & Hipwell, A. (1999). Children's social representations in dolls' house play and theory of mind tasks, and their relation to family adversity and child disturbance. *Social Development*, *8*(2), 179-200 https://doi.org/10.1111/1467-9507.00090

Narvaez, D., Lapsley, D. K., Hagele, S., & Lasky, B. (2006). Moral chronicity and social information processing: Tests of a social cognitive approach to the moral personality. Journal of Research in Personality, 40(6), 966–985. https://doi.org/10.1016/j.jrp.2005.10.003

Nelson, K. (2004). Toward a collaborative community of minds. *Behavioral and Brain Sciences*, 27(1), 119–120

Pears, K. C., & Moses, L. J. (2003). Demographics, parenting, and theory of mind in preschool children. *Social Development*, *12*(1), 1-20. https://doi.org/10.1111/1467-9507.00219

Perner, J. (1991). *Learning, development, and conceptual change. Understanding the representational mind*. Cambridge: The MIT Press

Peterson, C. C., & Wellman, H. M. (2019). Longitudinal theory of mind (ToM) development from preschool to adolescence with and without ToM delay. *Child Development*, *90*(6), 1917-1934. https://doi.org/10.1111/cdev.13064

Ruffman, T. (2014). To belief or not belief: Children's theory of mind. *Developmental Review*, 34(3), 265–293. https://doi.org/10.1016/j.dr.2014.04.001

Sacks, J. (2020). *Morality: Restoring common good in divided times*. London: Basic Books

Sengsavang, S. (2018). *Moral identity development across middle childhood and adolescence* [Unpublished doctoral dissertation]. Wilfrid Laurier University. Retrieved from: https://scholars.wlu.ca/cgi/viewcontent.cgi?article=3203&context=etd

Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, *75*(3), 417-453. https://doi.org/10.3102/00346543075003417

Slaughter, V., Imuta, K., Peterson, C. C., & Henry, J. D. (2015). Meta-analysis of theory of mind and peer popularity in the preschool and early school years. *Child Development, 86,* 1159–1174. https://doi.org/10.1111/cdev.12372

Slaughter, V., Peterson, C. C., & Moore, C. (2013). I can talk you into it: Theory of mind and persuasion behavior in young children. *Developmental Psychology, 49*, 227–231. https://doi.org/10.1037/a0028280

Sodian, B. (2005). Theory of mind: The case for conceptual development. In W. Schneider, R. Schumann-Hengsteler, & B. Sodian (Eds.), *Young children's cognitive development: Interrelationships among executive functioning, working memory, verbal ability and theory of mind* (pp. 95–130). Mahwah, NJ: Lawrence Erlbaum Associates

Wellman, H. (1990). *Children's theory of mind*. Cambridge, MA: MIT Press

Wellman, H. M. (2014). *Making minds: How theory of mind develops*. London: Oxford University Press

Wellman, H. M., & Woolley, J. D. (1990). From simple desires to ordinary beliefs: the early development of everyday psychology. *Cognition*, 35(3), 245–275. https://doi.org/10.1016/0010-0277(90)90024-E

Wellman, H. M., Cross, D., & Watson, J. (2001). Meta-analysis of theory-of-mind development: The truth about false belief. *Child Development*, 72, 655–684. doi:10.1111/1467-8624.00304