



Gender-Typical Appearance in Early Childhood: Role of Parental Gender-Typical Appearance and Children's Gender Similarity

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Abstract

The emergence of gender-typical appearance in childhood appears to have important implications not only for child and adolescent social-emotional functioning but also for later working life. In the current study, we examined how parents' gender-typical appearance and children's gender similarity (to same- and other-gender peers) were related to young children's gender-typical appearance. We also explored differences in these associations between boys, girls, mothers, and fathers. Home visits were conducted with 74 Dutch two-parent (mother, father) families with both a son and daughter between the ages 3–6 years (96.6% White, 2.0% Asian, 1.4% other ethnicity). The gender-typical appearance of all four family members was assessed by trained and reliable coders in the videotaped observations from the home visits. As a measure of children's gender similarity, both parents reported on the similarity of their son and daughter to same-gender and other-gender peers. Generalized estimating equations showed that more gender-typical appearance of parents was associated with more gender-typical appearance of girls, but not of boys. No differences were found between mothers and fathers for the association between parent and child appearance. Moreover, children's gender similarity, evident in parents' perceived similarity of their child to peers of the same gender and dissimilarity to peers of the other gender, was associated with more gender-typical appearance in children. To conclude, both children's gender similarity and parents' gender-typical appearance appear to play a role in the gender-typical appearance of young children.

Keyword Gender similarity · Parental gender socialization · Gender-typical appearance · Early childhood

It only takes a quick look at a children's clothing section in a department store to notice that there are gender norms for boys' and girls' appearance. For preschool- and school-aged boys it is considered typical and desirable to wear blue, loose-fitting clothes and appear strong, whereas for girls it is typical and desirable to wear pink, tight-fitting clothes and look pretty (Koenig, 2018). Not surprisingly, gender-typical

appearance in clothing, hair style, and accessories has been observed in children from age 2 onwards in US samples with different ethnic backgrounds as well as in samples from Hong Kong (Gutierrez et al., 2020; Halim et al., 2013, 2014, 2018a, b). Children's gender-typical appearance tends to increase between the ages of 2 and 4 years old, followed by a decrease until age 6 (Kuchirko et al., 2021). Similarly, some research indicates that children's insistence on wearing gender-typical clothes is stronger for preschoolers than for school-aged children, especially for girls, and appears to be unrelated to parental preferences for how their children dress (Halim et al., 2013, 2014, 2016). This developmental pattern of rigidity followed by more flexibility in appearance has also been demonstrated for children's gender stereotype development, although gender stereotypes seem to peak somewhat later at 5 to 6 years of age (Miller et al., 2009; Trautner et al., 2005).

It is important to study possible correlates of young children's gender-typical appearance, given that a person's

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appearance can have pivotal consequences for current and later social-emotional functioning and working life. For instance, gender typicality has been associated with better psychosocial adjustment in children (Egan & Perry, 2001; Martin et al., 2017). However, both a highly gender-typical appearance (e.g., feminine-looking girl) and a highly atypical gender appearance (e.g., masculine-looking girl) increased the risk of being bullied in high school for boys as well as girls (Gordon et al., 2018). Along a different vein, more feminine-looking female scientists were judged by adults as significantly less likely to be a scientist, whereas a more feminine appearance was unrelated to judgments about being a scientist for male scientists (Banchefsky et al., 2016). Furthermore, more masculine appearance has been associated with higher perceived leadership competence for both men and women (Sczesny & Kühnen, 2004; Sczesny et al., 2006). Yet, for women a more masculine appearance creates a double bind as it has also been associated with a higher risk of being harassed in the workplace (Leskinen et al., 2015). Thus, examining the emergence of gender-typed appearance might have important implications not only in childhood but also later in life.

The current study examined parents' gender-typical appearance and children's gender similarity as correlates of the emergence of gender-typical appearance in early childhood. Most research on gender typical appearance in a family context has been conducted in WEIRD (Western, Educated, Industrialized, Rich, Democratic) samples from the US, Europe, and Australia. For cited studies, the background of the sample is only highlighted when it is not a WEIRD sample.

Parental Socialization via Parents' Own Gender-Typical Appearance

Social learning theories (Bandura, 1977; Bussey & Bandura, 1999) highlight the key role of social context in children's gender development. Central to these theories is the concept of observational learning and imitation of available models in the child's environment. Parents can be models for gender-typical (or atypical) appearance by the way they dress, style their hair, and whether they wear make-up or jewelry. By observing the physical appearance of mothers and fathers (and possible differences between them), children will learn how to shape their own appearance in a way that fits with prevailing gender norms about appearance. Social learning theory would also suggest that observing parents getting rewarded for gender-(a)typical appearance, for instance by receiving compliments from others, would increase children's motivation to also adopt a similar gender-(a)typical appearance. Conversely, social learning would predict that observing others sanctioning their parents for

their gender-(a)typical appearance, such as through negative reactions or stares, would motivate children to avoid a similar appearance.

Yet, parents might also play a more active role in shaping the gender-typical appearance of their children, especially with young children, by rewarding or rejecting children's appearance choices, or by making choices for them. According to previous research, parents view their children as an extension of their own appearance, an accessory to reflect the values, beliefs, and position of the family (Andersen et al., 2007). As such, both parent and child appearance might reflect parents' beliefs about gender. Similarly, mothers who were buying clothes for their children reported that they were, in a way, consuming for themselves, as the clothing choices they made mirrored their own taste and personality (Åberg & Huvila, 2019). Hence, parents' gender-typical appearance might be linked to children's gender-typical appearance via active "channeling or shaping" of children's appearance by the provision of clothes, jewelry, and make-up, and by making choices about their child's hair style (Endendijk et al., 2018). Or parents might be rewarding children's appearance choices that match their own appearance and reject choices that do not match their own appearance.

A previous study found no association between one aspect of parental gender socialization—namely, mothers' gender-role attitudes—and children's gender-typical appearance (Halim et al., 2018b). However, this study used a self-report measure to assess mothers' gender-role attitudes, which might be hampered by social desirability issues and lack of awareness of one's gender attitudes (White & White, 2006). Also, parental gender socialization is an umbrella term for all the direct and indirect ways in which children learn from their parents about the norms and expectations associated with gender. This includes role modeling (e.g., parents' gender-typical appearance), differential treatment of children based on gender, and conveying gender beliefs and attitudes (Endendijk et al., 2018). Therefore, we will now examine whether a more direct and explicitly visible aspect of parental gender socialization—modeling of parents' gender-typical appearance—is related to children's gender-typical appearance. We examine this possibility while controlling for parents' attitudes about gender. Further, we will not only examine gender socialization from mothers, but also from fathers (who are underrepresented in developmental research) by examining both mothers' and fathers' gender-typical appearances.

Children's Gender Similarity and Gender-Typical Appearance

Whereas social learning theories focus on modeling, reinforcement, and imitation, cognitive perspectives on gender development propose that children are not merely passive

recipients of all gender-related information and socialization from their environments, but instead play an active role in learning gender-typical behavior via their own beliefs and cognitions about gender (Cook et al., 2022; Martin et al., 2002). From a cognitive perspective, it is relevant to study children's gender similarity in relation to their gendered appearance because appearance is an important way in which people communicate and express their gender to the outside world (Barnes & Eicher, 1993; Tortora & Marcketti, 2021). Gender similarity is defined from a dual identity perspective as a process in which people could feel similar to, not only their same-gender group but also the other-gender group (Martin et al., 2017). In contrast to other more unidimensional gender identity concepts, such as gender typicality (Egan & Perry, 2001), the dual identity approach views similarity to same-gender and other-gender individuals as separate dimensions (Martin et al., 2017). Importantly, in the dual identity approach, appearance is a crucial element for feeling or being similar (or dissimilar) to individuals of the same gender or the other gender. Also, considering gender as a more dimensional concept allows for examining appearance more broadly than binary differences in how men (or boys) and women (or girls) dress (Michelman & Kaiser, 2000).

Cognitive perspectives on gender development assume that there would be a certain degree of congruence between children's gender similarity and the gender-typicality of their appearance (Martin et al., 2002) because children are motivated to make their appearance consistent with the behavior of the group they identify with or feel similar to (Martin & Dinella, 2012). This motivation is fueled by feelings of anxiety and discomfort when one violates the social norms associated with one's gender (Akerlof & Kranton, 2000). Additionally, the display of identity cues such as clothing is important for seeking self-verification because it gives people a sense of unity (Swann, 2012) as well as enhancing feelings of legitimacy and self-worth (Carter & Marony, 2018). Furthermore, for some gender-diverse individuals changing gender expression (e.g., appearance) to be consistent with their gender instead of their sex assigned at birth can alleviate feelings of gender dysphoria (Coleman et al., 2012) and can be a relevant element in their social gender-affirmation process (Medico et al., 2020). Similarly, for transgender and gender-nonconforming youth, less congruence between appearance and gender identity is associated with more depressive symptoms (Chodzen et al., 2019). These studies suggest that a certain degree of congruence between one's gender identity and appearance is favorable for well-being (Higgins, 1987).

The association between children's gender similarity and gender-typed appearance is likely bidirectional. Children who are similar to one's own gender group (or less similar to the other-gender group) might be more likely to choose

gender-typical clothing or ask their parents to buy gender-typical clothing (e.g., I am similar to girls and traditionally girls wear dresses, therefore I wear dresses to express my gender). Parents allow children as young as age 3 to express clothing preferences and to co-decide on the purchase of clothes (Tongue et al., 2010). On the other hand, when children start observing that their appearance is highly typical of their gender group, they might start to identify as more similar to that gender group (or less similar to the other gender) as well (e.g., I wear dresses, traditionally girls wear dresses, therefore I feel similar to girls). Although the direction of effects is not yet clear, research with toddlers and young children indeed found that several aspects of gender identity (i.e., ability to correctly label gender, understanding of gender stability, viewing one's gender as important and positive) were associated with more gender-typical appearance of children (Halim et al., 2014, 2018a, b). We now extend this research to another aspect of children's gender, their similarity to same-gender and other-gender peers according to parents.

Differences Between Boys, Girls, Mothers, and Fathers

When examining how gender-typical appearance of parents and gender similarity of children relate to children's gender-typical appearance, it is important to consider the genders of both parents and children. Child gender differences are relevant for the association between children's gender similarity their gender-typical appearance. Both parent and child gender differences are relevant for the association between parents' and children's gender-typical appearance.

Child Gender Differences in the Association Between Gender Similarity and Gender-Typical Appearance

The association between children's gender similarity and gender-typical appearance might be different for boys and girls. Appearance seemed to be a particularly central part of women's identity (Guy & Banim, 2000, for a review, see Johnson et al., 2014). In addition, women considered appearance to be a more important part of themselves than men (Åberg et al., 2020; Quittkat et al., 2019). Furthermore, for girls and women there is a wider range of available and acceptable clothes, hair styles, and accessories (e.g., high-heels as well as sneakers, dresses as well as pants) than for boys and men (Blakemore, 2003; Clarke, 2012). Therefore, girls might have more options to choose from to capture and express their gender than boys. For boys with more gender-atypical identities (e.g., more similarity to girls) it would require a strong effort and motivation to seek out feminine clothing and resist negative social reactions (Blakemore,

2003; Kane, 2006). In general, gender norms are more restrictive for boys and men than for girls and women (Leaper & Farkas, 2015). Not surprisingly, boys who look more feminine or behave in more stereotypically feminine ways elicit stronger social disapproval than girls who look more masculine or behave in more stereotypically masculine ways (Heinze & Horn, 2014; Kane, 2006; Koenig, 2018). As such, boys' appearance might be more a reflection of societal gender norms than of their identity. Moreover, historically, girls and women were judged in society primarily based on their appearance and way of dress, whereas they were not considered for other aspects of their personality, such as intelligence, leadership or creativity. Because of all aforementioned processes, gender similarity and appearance might be more strongly linked for girls than for boys.

In contrast, when women make choices about their appearance, they also report actively negotiating between what clothing means to their identity and societal gender norms about appropriate feminine appearance (Goodman et al., 2007). In addition, women generally experience stronger societal appearance pressures than men, in both US and Chinese samples (Luo et al., 2020; Mahalik et al., 2005), and appearance is a principal component of stereotypes about girls (Miller et al., 2009). Therefore, women's and girls' appearance might be a less authentic reflection of their identity (i.e., perceived gender similarity), and more a reflection of societal gender norms, compared to men. As such, gender similarity and appearance might be less strongly linked in girls than in boys.

There is one previous study that examined differences between boys and girls in the association between gender identity and gendered appearance (Halim et al., 2018b). This study showed that in toddlerhood, boys and girls did not differ in the association between one aspect of gender identity, i.e., the ability to correctly label gender of the self and/or others, and gender-typical appearance (Halim et al., 2018b). It remains to be tested whether child gender differences in the link between gender similarity and appearance might become more pronounced in older children, when children's view of themselves in terms of gender becomes more complex and multidimensional (Halim & Ruble, 2010).

Gender Differences in Parental Socialization of Gender-Typical Appearance

The parental socialization of children's gender-typical appearance might be different depending on the gender of the child and the gender of the parent. Regarding child gender differences, appearance is more important for girls and women than for boys and men (Quittkat et al., 2019). Therefore, girls might be more likely to actively search their environment, for instance by observing their parents, for clues

about what constitutes a gender-typical or atypical appearance. Consequently, parents' gender-typical appearance might be more strongly associated with girls' appearance than with boy's appearance. Parental appearance socialization has indeed been found to be more strongly associated with body image aspects in adolescent girls than in boys (McCabe & Ricciardelli, 2001). Research also suggests, more broadly, that social pressures to conform to appearance norms, such as thinness and looking attractive, impact girls to a greater extent than boys (Hargreaves & Tiggemann, 2004; Jones et al., 2004). Although less studied, specific appearance ideals and norms (e.g., being muscular) can negatively impact boys' body image as well (Tylka, 2011). One previous study did not find differences in the association between mothers' traditional gender-role attitudes and children's gender-typical appearance based on the child's gender (Halim et al., 2018b). However, this study used a parent-report questionnaire to assess gender-role attitudes, whereas we focus on a more direct way of parental gender socialization that is less susceptible to social desirability concerns, i.e., parents' gender-typical appearance. Specifically, we explore whether child gender might moderate the association between parents' gender-typical appearance and children's gender-typical appearance (while controlling for parents' gender attitudes).

Regarding differences between mothers and fathers, feminine appearance in most Western cultures could be considered more explicit, diverse, and outspoken than masculine appearance, in terms of colors, options, make-up, and details (Clarke, 2012). Therefore, mothers' gender-typical appearance might be more salient than fathers' appearance for providing children with information about what is considered an appropriate appearance for women or girls, and not for men or boys. In a related vein, mothers are more often solely responsible for buying clothes for their children, with fathers only sometimes providing feedback on mothers' choices (Åberg & Huvila, 2019; Hughes et al., 2015). For these reasons, the association between mothers' gender-typical appearance and children's gender-typical appearance might be stronger than for fathers.

Finally, according to the same-gender modeling hypothesis one could argue that children might be more likely to model the appearance of the parent with the same gender (or gender identity) as their own, because same-gender models provide information about what is appropriate behavior for one's own gender (Bandura, 1977). Therefore, associations between the gender-typical appearance of parents and children might be stronger for same-gender parent-child dyads (mother-daughter, father-son) than for mixed-gender parent-child dyads (mother-son, father-daughter). Importantly, this rationale assumes a gender binary or gender-typical identity of parents and children. In line with the same-gender modeling hypothesis, fathers' attitudes about appearance (i.e.,

body size) have been found to be particularly important for appearance attitudes of sons, whereas mothers' appearance socialization (i.e., dietary restraint) was associated with the appearance attitudes of daughters (Damiano et al., 2015).

Current Study

The aim of this study was to increase understanding of the roles that parental gender socialization (i.e., gender-typical appearance) and child gender similarity play in children's gender-typical appearance. Therefore, we examined whether parents' gender-typical appearance and children's gender similarity (to same-gender and other-gender peers, perceived by parents) were associated with children's gender-typical appearance. We controlled for parents' gender attitudes in these associations. The following hypotheses were tested: (1) More gender-typical appearance of parents would be related to more gender-typical appearance of children; (2) Higher same-gender similarity and lower other-gender similarity would be associated with more gender-typical appearance of children. In addition, we explored whether these associations were different for boys or girls, for mothers or fathers, and for different parent-child dyads (mother-daughter, mother-son, father-daughter, father-son). No directional hypotheses were formulated because of the mixed and limited evidence for these gender differences.

Method

Participants

Dutch families with a son and daughter between the ages 3 and 6 years were invited to participate in this study. Families were recruited through the researchers' personal networks, via information posters at child daycare centers and primary schools, and by using social media advertisements. Parents could express their interest in participating in the study via email or through an online application form, after which they received an information letter containing detailed information about the procedures and privacy regulations of the study. A total of 74 families consisting of both a mother and a father, with one daughter and one son (parents indicated their own gender [man/woman] and their children's gender [girl/boy]) within the target age range, were included (96.6% White, 2.0% Asian, 1.4% other ethnicity). Data was collected for all four family members. Thus, the total sample consisted of 74 mothers, 74 fathers, 74 sons, and 74 daughters. This design enabled us to make within-family comparisons between boys and girls, and mothers and fathers (Endendijk et al., 2018; McHale et al., 2003). Exclusion criteria were a neurological disease (e.g., Parkinson's disease, multiple sclerosis), a history of epileptic seizures, and not having

sufficient knowledge of the Dutch language to complete the questionnaires. The first two exclusion criteria stemmed from the fact that this study was part of a larger project on the neuro-cognitive processes underlying parental gender socialization. All participating parents were living together at the time of data collection. See Table 1 for background characteristics of the families.

Procedure

Data collection took place between August 2020 and June 2022. If parents agreed to participate in this study, an appointment was made for a home visit. Written informed consent was obtained from both parents at the beginning of the home visit. Parents also gave consent for their participating children. The home visit consisted of an EEG examination, a behavioral observation, and the completion of a set of questionnaires. For the current study only the videotapes of the behavioral observation and the mother- and father-reported questionnaires were used. The videotapes were used to code the gender-typical appearance of each family member (participants were not informed that appearance was going to be assessed). At the end of the home visit, families received a gift card (25 euros) for participation and the children received a small gift. Ethical approval was granted by the ethical review board from the Faculty of Social Sciences, Utrecht University (number 19-232). This study was not pre-registered.

Measures

Parental Gender Socialization: Gender-Typical Appearance of Parents and Children

The videotapes from the behavioural observation were used to code gender-typical appearance of both parents and children. Using a previously validated coding system from the US (Halim et al., 2013, 2018a, b) boys' and fathers' masculine appearance and girls' and mothers' feminine appearance were coded. Each scale consisted of several elements. See Table 2 for an overview and examples of these elements. The examples in the coding manual were adjusted to the Dutch context and included both child-typical and adult-typical aspects. The same scales were used for parents and children to allow for comparison. Each element was coded as present (1) or absent (0) and averaged across all elements. The resulting gender-typical appearance variables ranged from 0 to 1 regardless of whether feminine or masculine appearance was coded. This proportion of maximum scaling (POMS) is preferred over standardization (z-scores) as it does not change the multivariate distribution and covariance matrix of the variables (unlike standardization) (Moeller, 2015). Three of

Table 1 Sample Characteristics

Family Characteristics		Full sample	
Birth order, <i>n</i> (%)			
Girl oldest-Boy youngest		32 (43)	
Boy oldest-Girl youngest		33 (45)	
Twins		9 (12)	
Child Characteristics		Girls	Boys
Age, <i>M</i> (<i>SD</i>)		4.19 (1.17)	4.30 (1.16)
Enrolled in child care ^a , <i>n</i> (%)		38 (51)	37 (50)
Enrolled in primary school, <i>n</i> (%)		45 (61)	48 (65)
Gender-typical appearance, <i>M</i> (<i>SD</i>)	Range: 0–1	.44 (.17)	.37 (.12)
Same-gender similarity, <i>M</i> (<i>SD</i>)	Range: 1–5		
Mother-report		4.19 (.57)	4.27 (.57)
Father-report		4.14 (.56)	4.32 (.57)
Other-gender similarity, <i>M</i> (<i>SD</i>)	Range: 1–5		
Mother-report		2.64 (.71)	2.48 (.66)
Father-report		2.60 (.64)	2.36 (.66)
Parent Characteristics		Mothers	Fathers
Age, <i>M</i> (<i>SD</i>)		35.70 (3.50)	37.40 (4.71)
Education ^b , <i>n</i> (%)			
Primary education		0 (0)	0 (0)
Lower secondary education		2 (3)	2 (3)
Higher secondary education		13 (17)	24 (32)
Higher vocational education		22 (30)	22 (30)
University		37 (50)	26 (35)
Work hours, <i>n</i> (%)			
0		7 (10)	0 (0)
1–10		1 (1)	0 (0)
11–20		13 (17)	1 (1)
21–30		33 (45)	3 (4)
31–40		19 (26)	60 (81)
40+		1 (1)	10 (14)
Gender-typical appearance, <i>M</i> (<i>SD</i>)	Range: 0–1	.31 (.14)	.31 (.09)
Gender attitudes, <i>M</i> (<i>SD</i>)	Range: 1–5	1.67 (.33)	1.81 (.33)

^aChild care refers to day care or after school care; enrollment in child care and primary school were not mutually exclusive.

^bEducational levels are sorted from lowest to highest level.

the authors coded the data. Double coding was done for 25 of the parents and 25 of the children, indicating good to excellent agreement between coders (intraclass correlation coefficient range: .75–.93). Discrepancies between coders were discussed until consensus was achieved.

Gender-atypical appearance was coded as well (i.e., boys’/fathers’ feminine appearance, girls’/mothers’ masculine appearance), but variables were highly skewed (occurred very infrequently) and had too little variation for all family members to be included in the analyses (see Table S1 in the online supplement).

Parents’ Perceptions of Child Gender Similarity to Same- and Other-Gender Children

Parents’ perceptions of child gender similarity were assessed with a parent-report adaptation of Martin and colleagues’ child-reported dual gender identity measure (Martin et al., 2017) with dual scales for child similarity to same-gender and other-gender children. In each family, both mother and father completed this questionnaire for their son as well as their daughter. Parents responded to 10 items indicating how similar they thought their children

Table 2 Overview and Examples of the Coding System for Masculine and Feminine Appearance

Masculine scale	Feminine scale
- Dark colors (e.g., black, navy blue) - Masculine logos (e.g., superheroes, trucks) - Masculine formal wear (e.g., tie, dress pants) - Masculine fabric and fit (e.g., baggy fit, sweat fabric) - Sports related (e.g., sports logo, team shirt) - Masculine costumes (e.g., pirate, knight) - Masculine grooming (e.g., short hair with gel, quiff/crest)	- Dresses and skirts - Feminine colors (e.g., pink, purple, pastel) - Feminine fabric (e.g., satin, velvet, frilled) - Feminine patterns (e.g., hearts, bows, flowers) - Fashionable clothing (e.g., animal print, leggings) - Feminine formal wear (e.g., cocktail dress, tights) - Jewelry (e.g., necklaces, bracelets, earrings) - Feminine costumes (e.g., tutu, princess) - Feminine grooming (e.g. ponytail, nail polish)

were to boys (e.g., “How similar is your daughter to boys?”, “How much does your daughter like to do the same things as boys?”, “How much does your daughter like to spend time with boys?”) and girls (e.g., “How similar is your daughter to girls?”, “How much does your daughter like to do the same things as girls?”, “How much does your daughter like to spend time with girls?”). Responses ranged from 1 (*not similar at all*) to 5 (*very similar*). The original scale presents a two-factor solution in which similarity to same-gender and similarity to other-gender are distinct variables. Parents’ responses on the five same-gender and five other-gender items were averaged separately. In the current study, reliability of the two scales was good (same-gender similarity: Cronbach’s alphas = .72–.84; other-gender similarity: Cronbach alphas = .76–.82). All items clearly loaded on two scales (same-gender and other-gender similarity) for both father-report and mother-report (see Table S2 in the online supplement). Father- and mother-reported similarity variables were both included in the analyses.

Parent-report of children’s gender similarity was used because this is the most common method to assess gender identity of children younger than five years of age (Bloom et al., 2021). Children at this age are less able to verbalize their gender identity. There is evidence that parents are accurate reporters of children’s gender identity. For instance, large cross-national studies showed that children diagnosed with gender identity disorder scored higher (large effect sizes) on a parent-report measure of child gender identity than children without this diagnosis (Cohen-Kettenis et al., 2006; Johnson et al., 2004). In another study, children with different self-reported gender identities displayed scoring profiles on a parent-report measure of gender identity that differed meaningfully from each other (e.g., children with a masculine identity scored at the masculine end of the scale, children with a feminine identity scored at the feminine end of the scale, non-binary children and children who were unsure scored in the middle of the scale) (Hoq et al., 2023).

Parents’ Gender Attitudes as Indirect Measure of Parental Gender Socialization

We considered parents’ gender attitudes as a potentially important covariate in the analyses. Both parent and child appearance might reflect parents’ beliefs about gender (Andersen et al., 2007). Also, parents’ gender attitudes can be considered a more indirect way of parental gender socialization (Endendijk et al., 2018). The Child Rearing Sex Role Attitude Scale (Freeman, 2007) was used to assess parents’ gender attitudes about boys and girls. The questionnaire consisted of 19 items (e.g., “Boys who exhibit ‘sissy’ behavior will never be well adjusted”; “Girls who are ‘tomboys’ will never be well adjusted”) that were completed on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Items were recoded so that higher mean scores referred to more traditional attitudes about roles, characteristics, and behaviors of boys and girls (Cronbach’s alphas: mother = .72; father = .64).

Data Analytic Plan

To answer our research questions, Generalized Estimating Equations (GEE) (Homish et al., 2010) in SPSS (version 24) were used. GEE models are regression-based models that consider dependency between variables, which is the case with our family data (Homish et al., 2010). Advantages of GEE over multilevel models include easier model computation and interpretation, more robustness to model misspecification, and no need to model random effects that are not of interest for the research question (McNeish et al., 2017). In addition, in cases where there is a small number of observations in each cluster (i.e., sparse data), GEE is a more robust alternative to multilevel modeling (McNeish, 2014). The family data in the current study could be considered as sparse data because the number of observations per family (i.e., family members) was four. GEE has been successfully used to analyze family data in samples as small as 47 families (Abraham et al., 2021).

A GEE model was examined with children's gender-typical appearance as the dependent variable. The following predictors were added: child gender, parent gender, parent gender-typical appearance (mother and father separately), child same-gender similarity, and child other-gender similarity. In addition, interactions between child gender and the predictors of interest were added to the model to examine whether the associations were different for boys and girls. An interaction between parent gender and parents' gender-typical appearance was also included to examine whether the association was different for mothers or fathers. Finally, an interaction between child gender, parent gender, and parents' gender-typical appearance was included to test whether the association differed across parent-child dyads. Non-significant interactions were deleted to arrive at the most parsimonious final model.

The GEE model was specified with a Gaussian distribution with an identity link for each family, as the dependent variable was continuous (Homish et al., 2010). Family ID number and dyad (mother-daughter, mother-son, father-daughter, father-son) were included as subject variables to define the dependency among family members in the dataset. An exchangeable correlation structure was most appropriate for family data (Homish et al., 2010; McNeish et al., 2017). Robust standard errors (Hubert/White Sandwich Estimators) were computed to ensure valid estimations even in case of a mis-specified correlation structure. Parameter estimates were presented as regression coefficients, so that the analysis could be interpreted as a general regression model.

We tested whether different covariates needed to be included in the model based on the change-in-estimate method, > 5% change criterion (Rothman et al., 2008). The following covariates were examined: age of parent, education level of parent, work hours of parent, age of child, enrollment of child in school, daycare attendance of child, birth order, and parent gender attitudes. See Table 1 for how the background variables were assessed. None of the covariates changed the estimates of interest by more than 5% or were significantly associated with children's gender-typical appearance (see Table S3 in the online supplement). Therefore, to arrive at the final most parsimonious model (Table 3) all non-significant covariates were excluded.

Results

Descriptive Statistics

Table 1 displays means and standard deviations for the study variables (i.e., gender-typical appearance of children and parents, children's same-gender and other-gender similarity). Paired-samples *t*-tests for testing differences between boys and girls revealed that girls scored higher than boys on gender-typical appearance, $t(73) = 2.90$, $p = .005$, $d = .34$, and other-gender similarity (mother-reported: $t(73) = 2.25$, $p = .028$, $d = .26$; father-reported: $t(73) = 3.03$, $p = .003$, $d = .35$). Boys scored higher than girls on father-reported same-gender similarity, $t(73) = -2.96$, $p = .004$, $d = -.34$, but not on mother-reported same-gender similarity, $t(73) = -1.24$, $p = .218$, $d = -.15$. Paired samples *t*-tests for testing differences between mothers and fathers revealed no significant differences between mothers and fathers on any of the study variables, $t(73) < 1.28$, $p > .21$. Paired samples *t*-tests also revealed that both boys, $t(73) = -3.25$, $p = .002$, $d = -.38$, and girls, $t(73) = -5.72$, $p < .001$, $d = -.67$, were more gender-typical in their appearance than their fathers and mothers respectively.

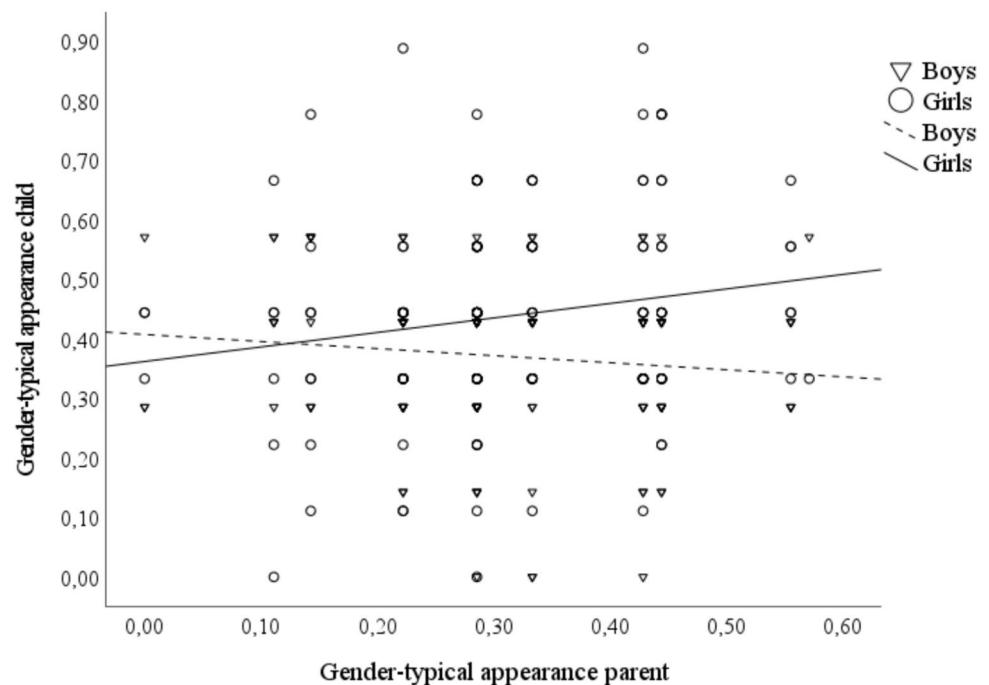
Pearson correlations were computed to examine the association between children's same-gender and other-gender similarity and associations with the covariate parents' gender attitudes (other associations were examined in the GEE models). Same-gender similarity was not associated with other-gender similarity for boys (mother-reported: $r(74) = -.02$, $p = .867$; father-reported: $r(74) = .01$, $p = .904$) or for girls (mother-reported: $r(74) = -.05$, $p = .656$; father-reported: $r(74) = -.20$, $p = .093$). Parents' gender attitudes were not significantly associated with children's same-gender similarity (mother: $r(74) = .06$, $p = .473$; father: $r(74) = -.03$, $p = .725$), other-gender similarity (mother: $r(74) = -.12$, $p = .154$; father: $r(74) = -.11$, $p = .177$), nor with parents' gender-typical appearance (mother: $r(74) = -.04$, $p = .707$; father: $r(74) = -.01$, $p = .910$) or children's gender-typical appearance (father: $r(148) = .02$, $p = .828$; mother: $r(148) = -.04$, $p = .667$).

Table 3 Generalized Estimation Equation Predicting Children's Gender-Typical Appearance

Variable	<i>B</i>	<i>SE</i>	95% <i>CI</i>	<i>Wald</i>	<i>p</i>
Intercept	.21	.08	[.06, .37]	7.45	.006
Child gender ^a	.03	.04	[-.06, .12]	.44	.509
Parents' gender-typical appearance	.22	.11	[.01, .43]	4.17	.041
Child same-gender similarity	.05	.02	[.02, .09]	11.78	<.001
Child other-gender similarity	-.03	.01	[-.05, -.003]	4.97	.026
Child gender*parents' gender-typical appearance ^a	-.35	.14	[-.63, -.08]	6.43	.011

^aGirls are reference category

Fig. 1 Simple Slopes for Boys and Girls for the Association Between Gender-Typical Appearance of Parents and Children



Parent and Child Correlates of Children's Gender-Typical Appearance

Table 3 displays the results of the final GEE model for children's gender-typical appearance. Child gender was no longer significantly associated with children's gender-typical appearance when other variables of interest were included in the model. First, there was a positive association between parents' gender-typical appearance and children's gender-typical appearance that was subsumed by an interaction between child gender and parents' gender-typical appearance. The interaction was decomposed in Fig. 1. More gender-typical appearance of parents was associated with more gender-typical appearance in girls ($B = .21$, $SE = .11$, 95% CI [.004, .42], Wald = 4.00, $p = .045$), whereas for boys this association was not significant ($B = -.13$, $SE = .09$, 95% CI [-.30, .04], Wald = 2.17, $p = .141$). This finding for girls partially supports Hypothesis 1 which stated that more gender-typical appearance of parents would be related to more gender-typical appearance of children.

In addition, children's same-gender similarity and other-gender similarity were significantly related to their gender-typical appearance, with *more* same-gender similarity and *less* other-gender similarity being associated with more gender-typical appearance. This finding was consistent with Hypothesis 2 which stated that higher same-gender similarity and lower other-gender similarity would be associated with more gender-typical appearance of children. None of the other two-way interactions

or three-way interactions with child gender and parent gender were significant (see Table S3 in the online supplement), which indicated that associations were not different for mothers or fathers, and for different parent-child dyads (mother-daughter, mother-son, father-daughter, father-son).

Discussion

This study examined how parental gender socialization (i.e., parents' gender-typical appearance, gender attitudes) and children's gender similarity (i.e., to same-gender and other-gender peers) were related to young children's gender-typical appearance. Additionally, differences between boys, girls, mothers, and fathers were explored for these relations. Important strengths of the study are 1) the within-family approach, capturing the richness and complexity of the family system and considering dependency between family members, and 2) the multi-method approach, including video observations of parent and child appearance and questionnaires assessing children's gender similarity. Regarding parental socialization, more gender-typical appearance of parents was associated with more gender-typical appearance of girls (partially confirming Hypothesis 1), but not of boys. Regarding children's gender similarity, parents' perceived similarity of their child to peers of the same gender and dissimilarity to peers of the other gender, was associated with more gender-typical appearance in children (confirming Hypothesis 2).

Parental Socialization of Children's Gender-Typical Appearance

That we only found an association between parents' and daughters' gender-typical appearance, and not with sons' appearance, fits with the idea that appearance is more important for women than for men (Quittkat et al., 2019) and that girls experience more social pressures to conform to appearance norms, such as the thin-ideal and looking attractive, than boys (Hargreaves & Tiggemann, 2004; Jones et al., 2004). Therefore, parents with more gender-typical appearance might desire to clearly communicate their daughters' gender to others through their daughter's appearance. Perhaps parents might emphasize other dimensions of gender to express their sons' gender (e.g., enrolling sons in sports). In addition, parental modeling of specific masculine appearance ideals and norms (e.g., being muscular) and imitation of those elements of parental appearance by boys might become more important in adolescence (Tylka, 2011).

Further, girls might be more motivated to search their environment for information about how to look gender-typical. Girls have been found to compare their appearance more to the appearance of others than boys (Jones, 2001). These processes might also explain the more gender-typical appearance of girls compared to boys that was found in the current study and in previous research with samples from the US and Hong Kong (Gutierrez et al., 2020; Halim et al., 2014). Finally, girls' attraction to pink frilly dresses (Halim et al., 2014) might also influence especially mothers to make more gender-typical wardrobe choices for themselves (Kestler & Paulins, 2014).

The association between parents' and daughters' gender-typical appearance can be interpreted through social learning theory (Bandura, 1977; Bussey & Bandura, 1999). Girls might look to both mothers and fathers for clues about how men and women typically dress or style their hair, and shape their own appearance based on this gender information, by imitating how mother dresses and refrain from what father wears. For boys' appearance this parental modeling process might be less important. Importantly, in the current study, the association between parents' appearance and daughters' appearance was found regardless of parents' gender attitudes (see Table S4 in the online supplement), and parents' gender attitudes were unrelated to both parent and child appearance. So, the association between parents' and daughters' gender-typical appearance might be more likely due to parental modeling than to parents' gender beliefs influencing both parents' own appearance and that of their daughters (Åberg & Huvila, 2019; Andersen et al., 2007). However, as the self-report measure of parents' gender attitudes might have been hampered by social desirability issues, future research is warranted with more implicit measures of parental gender beliefs. Also, the association between the gender-typical

appearances of parents and their daughters was modest, which suggests girls' gender-typical appearance is determined by other factors additional to their parents' appearance. To shed more light on the mechanisms underlying the link between the gender-typical appearance of parents and children, future research could consider the degree to which parents and children are involved in making decisions about children's appearance.

We did not find an association between a more indirect aspect of parental gender socialization, that is parents' gender attitudes, and children's gender-typical appearance. The lack of association between parents' gender attitudes and children's gender-typical appearance is in line with an earlier study with toddlers in which mothers' traditional gender-role attitudes were unrelated to both boys' and girls' gender-typical appearance (Halim et al., 2018b). This finding might be attributable to social desirability issues or lack of insight of parents' into their own gender attitudes. Additionally, parents' gender attitudes in itself might be a too indirect measure of gender socialization, as these gender attitudes need to be conveyed to children via gendered parenting practices to have an effect on children's gender development. It seems like the more prominent role of parental gender socialization for girls' appearance might become evident at preschool and school age and is only evident for parents' gendered behavior and not for their self-reported gender attitudes.

Children's Gender Similarity and Their Gender-Typical Appearance

Cognitive perspectives on gender development (Cook et al., 2022; Martin et al., 2002) can shed light on the link that was found between children's gender similarity (as perceived by parents) and their gender-typical appearance. Based on these theoretical approaches, a certain degree of congruence between children's gender similarity and behavior is expected. This has been corroborated in many studies and has been attributed to gender cognitions, like gender identity and similarity, being important motivators for the adoption of gendered behaviors (Cook et al., 2022). Unsurprisingly, incongruence between one's gender and gender expression has been argued to foster feelings of anxiety, discomfort, or depression in cisgender individuals (Akerlof & Kranton, 2000; Higgins, 1987) and transgender or gender-nonconforming individuals (Chodzen et al., 2019). On the other hand, expressing oneself in a way that is congruent with one's gender is supposed to be important for self-verification, a sense of unity (Swann, 2012), and feelings of legitimacy and self-worth (Carter & Marony, 2018).

Like adults (Barnes & Eicher, 1993; Tortora & Marcketti, 2021), for young children gender-typical appearance might already be an important way to communicate and express their gender and specifically their similarity to same-gender

peers and dissimilarity to other-gender peers. Indeed, previous research showed that children as young as age 3 are allowed by parents to express clothing preferences and to co-decide on the purchase of clothes (Tongue et al., 2010). On the other hand, appearance is a crucial element of feeling or being similar to own-gender and/or other-gender peers (Martin et al., 2017). Therefore, children might also start to identify as more similar to the own-gender group and less similar to the other-gender group when they dress in a gender-typical way, either by personal choice or because of parental provision. Furthermore, since mothers and fathers reported on children's gender similarity, it is also possible that when a child's appearance was more gender-typical, parents also perceived their child as being more similar to same-gender peers and less similar to other-gender peers. Importantly, only two of the 10 items of the gender similarity measure asked for a direct comparison of the appearance of parents' own child with the appearance of same-gender and other-gender peers (other items assessed similarity in interests, activities, etc.). Findings were the same when these two appearance items were excluded from the gender similarity measure (see Table S4 in the online supplement). Moreover, both mothers and fathers reported separately on children's gender similarity, providing a broader and nuanced view of children's gender similarity, compared to reports from a single parent. Longitudinal or experimental research is necessary to disentangle the precise direction of effects in the association between children's gender similarity and their gender-typical appearance.

Differences Between Boys, Girls, Mothers, and Fathers

Few within-family differences were found between girls, boys, fathers, and mothers in the associations between children's gender similarity or parents' gender-typical appearance with children's gender-typical appearance. The lack of child gender differences in the link between gender similarity and gender-typical appearance fits with previous research in toddlers (Halim et al., 2018a, b) and indicates that gendered appearance is an important part of one's gender for both boys and girls. This finding could also imply that boys and girls to a similar extent are able to express their gender via their appearance, even though there are strong societal norms about appropriate feminine and masculine appearance (Koenig, 2018). The type of processes underlying the link between gender similarity and appearance might however differ between boys and girls. For instance, expressing femininity in their appearance would require boys to navigate more restrictive gender norms for boys and men, a more limited repertoire of clothing options, and strong disapproval of peers and parents (Heinze & Horn, 2014; Kane, 2006; Leaper & Farkas,

2015). Expressing a masculinity in their appearance would require girls to resist stronger societal appearance pressures for girls and women (Luo et al., 2020; Mahalik et al., 2005) and to violate stereotypes about girls (Miller et al., 2009) and their appearance (Faragó et al., 2022).

Similarly, no differences were found between mothers and fathers in the role their own gender-typical appearance played in their children's appearance. No evidence was found for the same-gender modeling hypothesis (Bandura, 1977) that children would be more likely to model the appearance of the parent with the same gender (or gender identity as their own) compared to the other-gender parent. In the broader gender development literature, the evidence for same-gender modeling is scarce (Endendijk et al., 2018) and only found for modeling of parental smoking and drinking (Vanassche et al., 2014) or parental jobs and work-family involvement (Fulcher & Coyle, 2011; Oliveira et al., 2020). It seems that the appearance of both mothers and fathers might provide children with information about societal gender norms about appearance.

Another noteworthy finding of the current study is that girls scored higher on parent-reported other-gender similarity and lower on same-gender similarity than boys, despite their more gender-typical appearance. This finding conceptually replicates the higher other-gender and lower same-gender similarity reported by girls (compared to boys) in middle childhood (Antoniucci et al., 2023; Martin et al., 2017). Although the gender similarity measure (Martin et al., 2017) has been validated as self-report gender identity measure for children aged five and upwards, it has not previously been used as a parent-report measure of children's gender identity. Additional research linking parent- and child-reports of children's gender similarity and identity is needed to further validate the use of the dual gender identity measure as parent-report measure of the gender similarity/identity of younger, preliterate children.

Limitations and Future Directions

Regarding limitations, the design of the present study was correlational, which precluded drawing conclusions about the direction of effects. Second, our sample was too small to optimally utilize the dual identity approach and examine how different gender similarity typologies (e.g., being similar to both genders, being similar to neither gender, being similar only to same-gender peers) in children are related to their gender-typical appearance. Third, as gender similarity refers to a personal sense of feeling similar to same-gender and other-gender peers, children's gender similarity might have been captured more fully by also inviting children to report on this. Because it is difficult to assess gender similarity as well as gender identity in preliterate children, parent-reports provide a reliable and valid alternative

(Cohen-Kettenis et al., 2006; Wallien et al., 2009). Relatedly, we only examined children's perceived similarity to same-gender and other-gender individuals, even though gender identity is a multidimensional construct (Egan & Perry, 2001). An interesting direction for future research could be to examine multiple aspects of gender identity and similarity together to determine the differential importance of each aspect for children's gender-typical appearance and behavior in different developmental periods.

Furthermore, both gender similarity and appearance were conceptualized in a rather gender binary way, creating a distinction between gender-typical and atypical appearance and between same-gender and other-gender similarity. The dual gender identity measure used in the current study has been found to acknowledge experiences of transgender youth who are dissimilar to peers of their own biological sex and more similar to peers of the other sex (Olson & Gülgöz, 2018). Yet, more is necessary to acknowledge the identity and appearance of non-binary or gender-diverse individuals (Adomaitis et al., 2021). Future research on how gender might be symbolized in one's appearance should also specifically assess non-binary or gender-neutral appearance (i.e., clothes, accessories, hair styles that can be worn by anyone at any time, Adomaitis et al., 2021) in samples of parents and children with diverse gender identities and in non-traditional family structures (e.g., LGBTQ parents, single parents).

Moreover, by observing the gender-typical appearance of parents and children during a single home visit, we only captured a momentary snapshot of their appearance. Appearance can fluctuate greatly from day to day, depending on an intricate interplay between a desire to fit in, dressing appropriately for the occasion, and looking and feeling like yourself (Woodward, 2007). Therefore, future research could also incorporate questionnaires (e.g., Halim et al., 2014) to get a broader view of parents' and children's gender expression via their appearance. Finally, our sample consisted predominantly of White families, which limits the generalizability of our findings to other racial/ethnic populations.

Practice Implications

First, it is important to make parents aware of the importance of gender-typical (or atypical) appearance for their children's identity and social functioning. With greater awareness, parents can better intervene to protect their children against appearance-related bullying or harassment and advocate for interventions to increase the acceptance of gender diverse appearances. Second, to allow children to express their gender freely by themselves without parental or societal pressure, parents could actively involve children in the decision-making process during the purchase of clothes. In addition, parents could encourage children to explore a range of masculine, feminine, and gender-neutral clothing and hair style

options, regardless of parents' own gender-typical appearance. Moreover, we found a stronger link between parents' and daughters' gender-typical appearance, as well as evidence for the more gender-typical appearance of girls compared to boys. These findings highlight that girls especially might need to be encouraged by parents or other socializing agents to freely explore a range of clothes, hair styles, and accessories instead of solely adhering to prevailing gender norms about appearance. For example, parents and teachers could promote the knowledge and exploration of different ways to "be a girl", "a boy", or "break the gender binary", offering broader representations of bodies, characters and gender expression through children's books, toys, and media.

Conclusion

In line with social learning theories and cognitive perspectives on gender development both parental gender socialization and children's gender similarity appear to play a role in the gender-typical appearance of young children. Importantly, the extent to which the appearance of mothers and fathers is gender-typical is important as a model for children's, especially girls', own gender-typical appearance. Both mothers' and fathers' appearance can convey information about societal norms for masculine and feminine appearance. For both boys and girls, their similarity to peers of the same gender and the other gender is also reflected in their gender-typical appearance. So, in their gender expression children do not seem to be merely passive imitators of the gendered information they receive from their environment, but identity processes might play a role as well. More research is needed specifically on the active role children play in the way they express their gender through their appearance. Subsequently, parents can support their children in this active role via stimulating active exploration and diverse expression of their gender, which ultimately could contribute to later social-emotional functioning and well-being.

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Compliance with Ethical Standards

Ethics Approval The Ethics Committee of the Faculty of Social Sciences at Utrecht University approved the study (number FETC19-232).

Informed Consent All adult participants provided informed consent at the beginning of the study.

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