

Gender Stereotypes in Preschool Children and Relevant Interventions

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Abstract. Previous research has focused on gender development mainly from a theoretical perspective, which can provide a general understanding of children's development in certain fields. The cognitive-developmental, gender-schema, and social cognitive theories were utilised as the dominant frameworks for understanding gender development. Another notion known as theory of dynamic systems interprets gender development from a more complicated perspective with the consideration of multiple elements. All of these theories have the limitations to identify external cues that could result in children's development of gender stereotypes specifically. In light of these notions, the current study chose to focus on the impacts of external factors on preschoolers' development of gender stereotypes and relative interventions. The paper identified two types of external factors, including environmental cues and social interactions, which have significant correlations with children's stereotypic attitudes. In addition, two gendered pedagogies were discussed as effective interventions which could be applied in preschool. In terms of the limitation, some possible mediation and moderation aspects of external components that were found to be strongly associated with the development of gender stereotypes were not thoroughly evaluated and addressed. Future study should evaluate possible mediation and moderating effects in a more comprehensive way. The current review demonstrated the significance of implicit gendered characteristics that might be easily ignored in daily life. It can give direction for future research to uncover more specific implicit factors. In addition, it can provide some insights to parents and educators for creating a more varied and equitable environment for children's gendered development.

Keywords: Gender development; Gender stereotypes; Preschool; Developmental psychology.

1. Introduction

Gender development has been discussed in several psychological disciplines. The term "development" refers to both physical and cognitive changes that occur in response to the social and cultural environmental stimuli. Consequently, both nature and nurture should be taken into account to understand the growth process. Philosopher and social researcher Judith Butler stated that gender is a socially created reality, as all gendered behaviours are viewed and learned to conform to current social norms [1]. Any behaviour that deviates from the norm carries the risk of being marginalised and criticised. All of these occurrences are the result of gender stereotypes that have developed over time. Formation of gender stereotypes begins in early childhood, and preschoolers are thought to be at a crucial period of gendered development. The preschool years have been highlighted as the crucial period for children's cognitive, emotional, physical, and linguistic development, which informs their future learning and growth. Understanding the development of gender stereotypes among preschool-aged children is essential for decreasing gender inequity over the long term.

Previous studies provided evidence of children's ability of recognising gendered differences and understanding sex-related stereotypes since early period of childhood. A variety of theories have been developed to explain the early emergence of gendered perspectives and behaviours. West evaluated three theories of gender development, including cognitive-developmental theory, gender schema theory, and social cognitive theory [2]. All of these theories evaluate children's gender development from both cognitive and social perspectives. Cognitive-developmental theory claims there are three distinct stages of gender development, which include recognising, stabilising, and flexibly identifying gender in uncertain conditions. Each stage of development is significantly correlated with

understanding gendered knowledge, such as gender stereotypes and prejudices. Gender schema theory, on the other hand, proposed the framework of children's gender development through the process of combining their thoughts and behaviours. In other words, children's gender-based self-identification is formed through the mutual influence of their own behaviours and environmental responses in order to conform to the socially acceptable gender schema. Social cognitive theory, which differs from the previous two theories, focuses more on environmental factors than on the personal and behavioural characteristics that are often connected with the development of self-cognition. This theory suggests that children's perception of gendered knowledge is mostly shaped by modelling and social interactions. Each of the three aforementioned theories considers the effect of both cognition and socialisation, albeit to differing degrees. West claimed that each theory can be supported by diverse contextual evidence, but each has a limited potential to be applied more broadly [2]. For instance, the effect of media and family on gender development gives empirical support for social-cognitive theory, since it demonstrates the significance of modelling and social interactions. However, social-cognitive theory cannot be directly applied to comprehend the development of children's gendered emotions, as it requires additional interpretation based on self-cognition.

Instead of focusing on understanding children's gender development with certain emphasis, Martin and Ruble's theory of dynamic systems focused on the complexity of gender development for both short-term and long-term patterns of change across time and fields [3]. To specify, this theory allows researchers to evaluate developmental differences among various timescales based on the methodology, which combines a range of cognitive and social processes related to gender development, such as motor, emotion, and stereotyping. One crucial step within the dynamic system theory is identifying relative variables of the topic of interest. For example, the study of gender segregation identified and evaluated factors of children's play patterns, socialisation, personality, and other biological development. The study examined variation in gender development amongst people across both short and long time periods. This study technique provides insights into the exploration of elements that may induce qualitative alterations in gender development, if they occurred for a short duration.

The prior theories have focused on general gender development across fields and ages, while there is a lack of evidence depicting the specific development of gender stereotypes. In order to fill in the research gap, current review specifically focused on preschool children's development of gender stereotypes, based on recent research findings. Children perceive gendered information from an early age and react accordingly in a socially established society, where male and female are categorically defined. Preschool is a vital time for gender development, and it is very likely for children at this age to acquire relative preconceptions. Many external elements, such as environmental signals and social interactions, contribute to the formation of gender stereotypes. The majority of environmental cues consist of things or goods that children encounter on a daily basis, such as media and food. In terms of social interactions, most children's encounters with other individuals or groups occur at home or at school, with family, teachers, and classmates. Identifying the effects of these external factors might aid in the development of potential approaches for creating a more equitable environment. The review can provide some guidance for future intervention studies in preschool aged children. In addition, interventions could be developed and applied to various preschool-related parties, such as teachers, parents, policymakers, and product manufacturers.

2. The Development of Gender Stereotypes

2.1 The Impact of Environmental Factors on Gender Stereotypes

It is widely accepted that explicit gendered information, such as colour of pink being depicted as a feminine colour, could have significant effects on children's gender stereotypes development. However, the question of whether a less salient gendered information could have effects on development of stereotypic attitudes remained unclear and was then examined by Seitz et al. in 2020 [4]. The study employed gendered labels and gendered contexts existing in the storybooks to indicate

explicit and implicit gendered information in succession. Gendered labels refer to gendered information that explicitly associates with the gender category, such as the feminine and masculine names used in storybooks, whereas gendered contexts allude to gendered information with comparatively lower consciousness, such as particular descriptions of protagonists. The experiment associated explicit and implicit gendered information in both congruent and incongruent conditions, with the former representing gendered labels and gendered contexts of the same gender category and the latter representing gendered labels of one gender category with gendered contexts of the other. Children's behavioural intentions and gendered perspectives were measured after the experiment. According to the study results, even though explicit gender labels had a greater influence than gendered context information, implicit information could also influence children's gender stereotypic beliefs. Therefore, the establishment of gender stereotypes in children is dependent not only on apparent gendered knowledge being directly learned by preschool kids, but also on less salient elements being gradually perceived with lower consciousness.

The widespread exposure of digital media has raised the prominence of media characters, which might also have effects on audience's development in gender stereotypes. For instance, Disney Princess images are considered to be gender-stereotypic, and their effects on young girls' gendered perspectives has been constantly discussed. Golden et al.'s study employed methods of play observation, semi-structured interview, and questionnaires to investigate preschool girls' gendered stereotypes developed upon Disney Princess images [5]. Thematic analysis was utilised for data analysis and four themes were defined: beauty, focus on clothing and accessories, princess body movement, and exclusion of boys. The study results suggested that preschool girls' feminine behaviours were highly influenced by mass exposure of Disney media, which could have impacts on reducing their creativity and strengthening biased perception of femininity. For instance, the girls' appreciation of beauty is restricted by the appearance of Disney Princess images, which have a lack of diversity and inclusiveness. This finding is consistent with the notion of social cognitive theory, which suggests the significance of environmental factors. According to the theory, modelling and social interactions impact young people's gendered perceptions. Media characters serve as image and behaviour models for youngsters, with some of them displaying a strong sense of gender stereotypes. Moreover, children's interactions with their peers based on their understanding of these gender-biased digital figures have the potential to amplify the stereotyping effect.

In addition to the gender stereotype development caused by media and education products, more implicit environmental factors, such as family meals, may also have gender-stereotypic implications. Graziani et al. therefore conducted a study to evaluate children's gender stereotypes reflected in foods [6]. In addition, mothers were seen as having a significant role in imparting dietary habit and gender-based information to their children. This research also sought to determine the influence of mothers in this discipline. A mixed-methods research design was utilised. Children were required to perform two tasks, with the first task measuring implicit association between food types and gendered information, and the second task evaluating explicit stereotyping by a role-play game, which asked children to allocate food to clients. Besides, a questionnaire was provided to the mother to collect information of their demographics, gender stereotypes about food, and their dietary habit. The study results suggested that gender stereotypes about food at an implicit level existed among 4-6 years old boys, while no significant associations were found in girls. A further finding based on the responses of mothers to a questionnaire suggested that children's implicit stereotypes could be influenced by their parents, while factors such as school education and cultural backgrounds might have a greater influence on the formation of biased associations between gender and foods. For instance, children and mothers with Asian backgrounds tend to exhibit less gender-stereotypical dietary attitudes. Therefore, it may be suggested that children's formation of gender stereotypes could be influenced by less evident elements, such as meals, which gradually shape and reinforce certain gender-biased preferences. Furthermore, the findings of the gendered influence of meals indicate that external elements from home settings could have important effects on the children's development.

The three environmental factors, including storybook, media characters, and food, suggest that both explicit and implicit gendered information could have effects on children's gender stereotype development. Many of the gendered characteristics, including both explicit and implicit factors, that may influence children's development are significantly correlated with the modelling and social interactions that are emphasised by social cognitive theory. However, implicit gendered information can be easily neglected because it is widely accepted as a social and cultural reality, even it is not empirically objective. In other words, the impact of implicit factors on children's gender-biased development is perceived with lower level of conscious awareness. Future study should focus not just on evaluating obvious gendered information, but also on identifying more implicit gendered aspects from various settings, as they also play key roles in shaping children's gendered perspectives throughout time. In addition, media producers, policymakers, and other relevant parties are encouraged to create less stereotyped products and surroundings and to achieve more sustainable, healthy, and inclusive outcomes.

2.2 The Effects of Social Interactions on Gender Stereotype

Interactions with others are believed to have a substantial impact on the development of children across disciplines. For instance, the favourable impact of fathers on their children's academic achievement, physical health, and attitudes toward certain topics, such as gender, has been studied frequently. Yagan Güder and Ata carried out a study that investigated correlations between fathers' gender perceptions and involvement, and preschool children's gender stereotypes. The data was collected through surveys and interpreted by multiple regression model [7]. The results of the study revealed a significant correlation between fathers' engagement in their children's development and their own gendered perceptions. To be more specific, the more egalitarian the dads are, the greater the likelihood of engagement in interactions with children. Factors including occupation, income, age, and children's gender were identified to have influence on fathers' involvement. In addition to that, the formation of gender stereotypes in children in relation to their dads' participation was analysed, with the results indicating that fathers' strong engagement with their children would promote a sense of gender equality. One probable explanation was that fathers' greater involvement diminished the prevalent notion that moms are better at nursing. Consequently, children's interaction patterns with their family members may give them with gendered information indicating the roles of males and females in home settings, resulting in the establishment of gender stereotypes that may be further applied in the future.

Except for interactions taking place at home, children's interactions with peers at school also play an essential role in gender stereotype development. Providing and receiving responses within a social encounter allows for the representation and reinforcement of gender norms. In addition, it is widely discussed that the development of gender stereotypes may be impacted differently by distinct gender categories. Skocajic et al. carried out a study to evaluate whether gender stereotypes and relevant endorsement and sanctioning behaviours were asymmetrical between male and female preschool children [8]. Mixed designs were adopted within the study. Gender stereotype endorsement and sanctioning were measured with two separate activities that used photos as gendered cues for participants' responses. Each photograph within the experiment depicted a piece of either masculine or feminine information. Children's reactions to the pairing of a gender category with specific gendered information were evaluated to determine their endorsement and sanctioning attitudes toward gender stereotypes. The study results suggested that children at very young ages could already stereotypically relate gendered information with gender categories, with the phenomenon being more prevalent in male students. In addition, children's stereotyping toward various gendered cues differs in extent. For example, stronger sanctioning reactions were noticed when toys were counter-matched than when colours were counter-matched. Besides, it was suggested that children with stronger gendered stereotypical performance were more likely to react severely toward counter-stereotypical behaviours. Therefore, exposing preschool children to a fixed gendered environment that aligns

activities and behaviours to a certain gender category without flexibility and variation may result in interactions that are characterised by gender stereotypes.

Social interactions taken place based on gender stereotypes among preschool children could have more severe impacts. Preschoolers with strong attitudes against counter-gender behaviours and tight adherence to gender norms are referred to as gender norm enforcers. The characteristics of gender norm enforcers could develop gender-based aggression, which has negative influence on children's well-being and gender sense development. Xiao et al. investigated the features of gender enforcers in three domains: social-emotional behaviour, gender-related behaviour, and gender-related cognition [9]. In addition, the effects of gender enforcers on peers' gender perception development were evaluated. Data was collected through interviews with preschool children. The study results suggested that gender enforcing behaviours were developmentally normative among preschoolers. Relevant characteristics included being aggressive, having stronger adherence to gender norms. However, gender enforcers were evaluated to have similar level of gender stereotypes as the normal pupils. Therefore, it could be argued that children's gender cognition and explicit performance might not be significantly correlated. The aggression gender-based behaviours might be caused by other factors, such as personality. The study also concluded that the exposure to gender enforcers could have effects on children's development gender stereotypes and related behaviours, such as spending more time with same-gender peers. Therefore, peer influence in the growth of children's gender stereotypes may result in a series of stereotypical acts and behaviours, which may reinforce children's gender-biased perceptions.

The prior research provides evidence to support that children's development of gender stereotypes could be affected by social interactions, which mainly include interactions with family members and school peers. Their gendered attitudes might be strengthened or diminished through the interaction processes of providing and receiving responses. In other words, this idea is consistent with Judith Butler's notion of gender performativity, which indicates that gendered sense is developed through performing behaviours that fit into gendered social and cultural norms [1].

3. Relevant Interventions for Gender Stereotypes

To prevent children from further developing gender stereotypes, relevant interventions were explored and designed. Preschool teachers are urged to implement the strategies that will upgrade their teaching techniques and provide students with a more inclusive and respectful environment for gender development. It was suggested that the views of preschool instructors about gender and science might have significant effects on children's future schooling and career decisions. As scientific courses such as chemistry and physics have traditionally been considered as more suitable for boys than girls, teachers may hold distinct attitudes toward male and female pupils with interests in the same field; thus, gender-stereotyped cultural norms performed by teachers may either encourage or inhibit children's innate interests in specific disciplines. Gullberg et al. then conducted a study to evaluate the effect of preschool teachers' gendered views toward science subjects on children's gender development and proposed a pedagogy as an intervention to correct teachers' stereotypical teaching methods. The study's findings indicated two dominant teachers' beliefs: one that students have diverse interests and potentials, and the other that youngsters have possessed initial and stable development qualities [10]. These ideas exist implicitly inside instructors and have the potential to open or close doors for children. Teachers who assume that children are born with specific characteristics to achieve in certain fields tend to be more gender stereotypical and are more likely to motivate boys than girls to thrive in science subjects. This preconception of integration between gender and science was proved to be gender-unaware, which could limit children's future development and possibilities. In order to provide children with greater opportunities, gender-aware pedagogy was promoted as an effective intervention. The foundation of the approach consisted of gender detection, self-reflection, and counteraction, which might collaborate to increase children's participation in wider disciplines. Each component of the gender-aware model contains guidelines

that enable both educators and students to comprehend themselves and others without being constrained by gendered societal conventions. Explorations in different subjects without gender stereotypes allow children to have greater chance of finding their intrinsic interests and generating their motivations of creativity. In addition, gender-aware pedagogy has the potential to generate an egalitarian learning environment for students to realize and embrace the flexibility and diversity of gendered career preferences.

In addition to the model that might be used to combat the traditionally established gendered norms that influence children's learning preferences, practical activities could also have positive impact on reducing gender stereotypes. Karabay et al.'s study aimed to investigate the effects of gender equality activities on children's gender stereotypes and relative interventions were suggested based on study findings [11]. The research employed an experimental design. The participants were divided into two groups, with the experimental group receiving equality-focused educational activities and materials and the control group receiving standard activities without gender-equality designs. Pre- and post-tests were assigned to students for evaluating their gender stereotypical attitudes. The study findings revealed the effectiveness of counter-stereotypical educational pedagogy and materials in children's development of gender perceptions. The rapid cognition construction period can be properly coped with external materials, which should be carefully learned and developed by preschool teachers with critical thinking ability in order to increase students' awareness of gender equality. Gender stereotypes could be reflected in various aspects, including children's emotions, hobbies, colour preferences, and other gendered attributions. Gender equality pedagogy can be applied to various gendered situations that involve different factors. More equalitarian gender development can be achieved through using this intervention as it can not only weaken gender stereotypes as an external force, but also encourage children to hold a more open-minded and respectful perspective in different contexts.

4. Conclusion

In conclusion, this paper revealed both environmental cues and social interaction occasions as external factors that could lead to preschool children's gender stereotype development. It also discussed two effective interventions, i.e., gender-aware pedagogy and gender equality pedagogy. The influence of all the external factors, including storybook, media images, food, interactions with family members, and peers, support the theory of social cognitive theory, which emphasises the significance of environment and social interactions for children's gender development. Besides, implicit gendered elements that are generally seen with less conscious awareness were proven to have considerable influence on children's development of gender stereotypes. For instance, components within the storybook, such as character descriptions that do not clearly express gendered labels but still imply gendered information might encourage children to identify particular information with specific gender categories. Therefore, more detailed implicit factors should be addressed by future studies, in order to develop more effective and applicable interventions.

Although recent studies have focused on children's development of gender stereotypes from multiple perspectives with well-represented details, they still have a few limitations that need to be uncovered. Firstly, the mediators and/or moderators of some external factors could not be thoroughly recognised simply by analysing the associations between children's development and certain environmental cues. For instance, except the usage of masculine or feminine terms, children's preferences for characters of their own gender may serve as a trigger for the effects of storybooks on gender development. Identifying effects of mediation and moderation allows researchers to develop interventions in a more effective way and should be incorporated in future research. In addition, the interventions discussed in current study only focused on practices that mainly take place at school. As family occasions are also significant, future studies should explore this area in family settings. All relative early educational parties, including teachers, parents, media producers, policymakers, and product manufacturers, are encouraged to design a more gender-inclusive environment through being

aware of elements that can potentially have an impact on children's development of gendered sense. This review can provide some suggestions to the design of effective interventions at school and family settings.

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