

## **A cross-sectional study on gender traits, task preferences, and career aspirations among children and adolescents**

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### **Abstract**

Sustainable Development Goal 5 of the United Nations strongly advocates gender equality and women's empowerment. This goal aims to ensure equal access to education, healthcare, and economic opportunities. Using a cross-sectional design, this research examines the children's and adolescents' perceptions of gender traits, task preferences, and career aspirations. The chi-square test was employed to examine the difference, while a multinomial logistic regression analyzed the association between gender perceptions and demographics. Findings reveal significant developmental differences; adolescents demonstrated more gender-neutral views in their perceptions of gender roles. In terms of their specific task preferences, both groups acknowledged that many tasks are appropriate for both genders. Now, traditionally feminine tasks are widely accepted as gender-neutral, but there remains a highly masculine task, practical and DIY tasks. Significantly, adolescents expressed more inclusive attitudes toward career aspirations, challenging traditional gender norms, especially in fields like agriculture, machine trades, and structural work, which children still associate with males. Demographic analysis shows that females tend to hold more exclusive perspectives than males. In associating age with gender views, the peak of exclusivity is between 13-16, then declines at 17-20. This implies a progression of gender maturity and inclusiveness associated with age. Furthermore, more inclusive gender views emphasize the importance of family environments that are linked to parents' educational attainment and exposure to occupations. Given these findings, this study prescribes a multi-sector approach that families, communities, schools, and policymakers use to foster sustainable gender equality from early development through adolescence.

**Keywords:** Careers, equality, inclusivity, stereotypes, tasks, traits

### **Introduction**

Children and adolescents begin forming their ideas about gender at a very young age. This idea is influenced by their upbringing, home environment, peers, school, and the media they are exposed to. The World Health Organization (2019) defined gender as the characteristics of women, men, girls, and boys that are socially constructed, including norms, behaviors, and roles associated with being a woman, man, girl, or boy. Understanding how children and adolescents perceive gender

influences like gender traits, task preferences, and career aspirations is crucial in developing early, inclusive, and equitable policies, programs, and career development.

Gender traits refer to personality characteristics associated with masculinity or femininity, such as the traditional views of leadership and assertiveness in men and humility and cooperation in women. According to gender schema theory (Bem, 1981), individuals develop gender based-schematic processing – that is, sex typing results from the individual’s self-concept integrated in its gender schema. This schema influences how children and adolescents view their gender traits in relation to culturally accepted norms. Previous studies define gender norms as learned social norms, acceptable and appropriate for women and men in a given society (Cislaghi & Heise, 2020). These cultural norms then continue to limit how people live their lives according to their personal preferences, interests, and talents (Rozenberg, 2023).

Task preferences refer to the activities or domestic roles performed by men and women that are often socially constructed and influenced by gender socialization. In the theory of “Doing Gender” by West and Zimmerman (1987), an individual’s performance of gender is intended to construct behavior as naturally occurring; this behavior is not an innate quality but a social construct that actively surfaces in human interactions. Consistent with this perspective, previous studies have shown that gender expectations influence task preferences. For instance, women are viewed as warm and caring for others, showing signs of greater communality among women, while men are seen as assertive (Ellemers, 2018), action-oriented, and confident (Byrnes et al., 1999; Ellemers, 2018).

Career aspirations refer to the profession or work associated with masculinity and femininity as shaped by cultural and social factors. Examples of these are men often seen in structural, mechanical, and technical fields, while women are aspiring in clerical and human-centered fields. As stated in the social cognitive career theory (Brown & Lent, 2023), career choice goals are influenced by self-efficacy beliefs and outcome expectations that are key driving forces behind educational and occupational aspirations. In relation to this, previous studies show a link between occupation and gender. In the study of Bonin et al. (2007) as cited by Cortes and Pan (2018), women likely end up being overrepresented in low-risk occupations that offer lower pay. Similarly, Hegewisch (2010) posited that occupation segregation and gender wage gap exist; average earnings tend to be lower in female workers in highly skilled occupations. At the same time, women have the likelihood of entering low-paying jobs, low-skilled occupations, and female-dominated jobs such as childcare.

People do not simply hold beliefs about what is expected from them, they hold beliefs about what is expected from them because of their sex and socially constructed rules of behaviour assigned to that sex. As men and women comply with these expectations, they adhere to those expectations and beliefs, and contribute to strengthening them in other people. We suggest the following definition of gender norms: Gender norms are social norms defining acceptable and appropriate actions for women and men in a given group or society.

In a study conducted in Finland, Spain, and the United Kingdom, using 2009-2015 time-diary data on gender differences in daily activities among children and adolescents, all three countries found that boys were significantly more involved in screen-based activities and exercising, while girls were involved in domestic work, non-screen educational activities, and personal care (Garcia et al., 2021). This shows that gender gaps exist in the countries where they are studied. In comparing the previous study to the current, this study differs in method as it analyzes the gender perceptions of the two groups of population, children and adolescents.

To address this gender gap issue, the United Nations established the Sustainable Development Goal (SDG), specifically SDG 5. This is focused on gender equality and women's empowerment. This goal aimed to achieve gender equality and empower all women and girls to have equal access to education, healthcare, and economic opportunities. This current study focuses on children and adolescents in the public rural institutions of the Philippines in elementary and secondary schools to identify early indicators of gender segregation in traits, task preferences, and career aspirations.

Generally, through this study, baseline data can be provided as a basis for the improvement of education programs in addressing the gender gap in the Philippines and promoting equality between children and adolescents.

### **Theoretical framework/Conceptual framework**

This study is grounded on the Social Role Theory by Eagly and Wood (2012) and the Gender Schema Theory by Bem (1981). At the core of the first theory are the societal stereotypes about gender. These gender social stereotypes, or gender beliefs, are formed as people observe the behavior of males and females. This includes the corresponding inference people make on the caretaking roles in employment and at home by women, creating a trait of being caring and communal. This inference lies primarily in human sex differences, specifically in the physical strength of men and the reproductive activities of women. Additionally, gender roles influence behavior by a biosocial set of processes like hormonal fluctuations, self-regulation, and social regulation. Thereby creating a biological work with sex differences and similarities with psychology to facilitate role performance. Concerning this study, the demographics of the respondents, like age, gender, parental educational background, and occupation of parents, are investigated as to how they correlate to their perception of gender.

In relation to the social role theory, an earlier theory of Circumscription and Compromise by Linda Gottfredson (2002) describes how young people develop the conception of gender through a cognitive map. There are four distinct developmental stages in this theory. The first stage is from age three to five, when children become aware that adults have roles in the world. The second is at the age of six to eight, when children begin to categorize the world around them. The third stage, between nine and thirteen years old, is when they encounter a wider range of roles and are capable of abstracting them. The fourth and final stage, which happens at age 14 and above, is when adolescents engage in a conscious search for the roles remaining in their social space.

In the context of the present study, these theories provide a framework for understanding the interaction between the biological and social influences in the formation of gender. Children begin to understand gender by observing the roles performed by adults. This understanding deepens by gradually associating traits, tasks, and careers with particular sexes (masculine and feminine) as they integrate with social expectations. As they are about to enter adulthood (adolescence stage), a more complex concept is developed. Since gender perception begins forming as early as age three and continues to develop throughout childhood and adolescence, examining these age groups provides insights into the early formation of gender traits, tasks, and career aspirations.

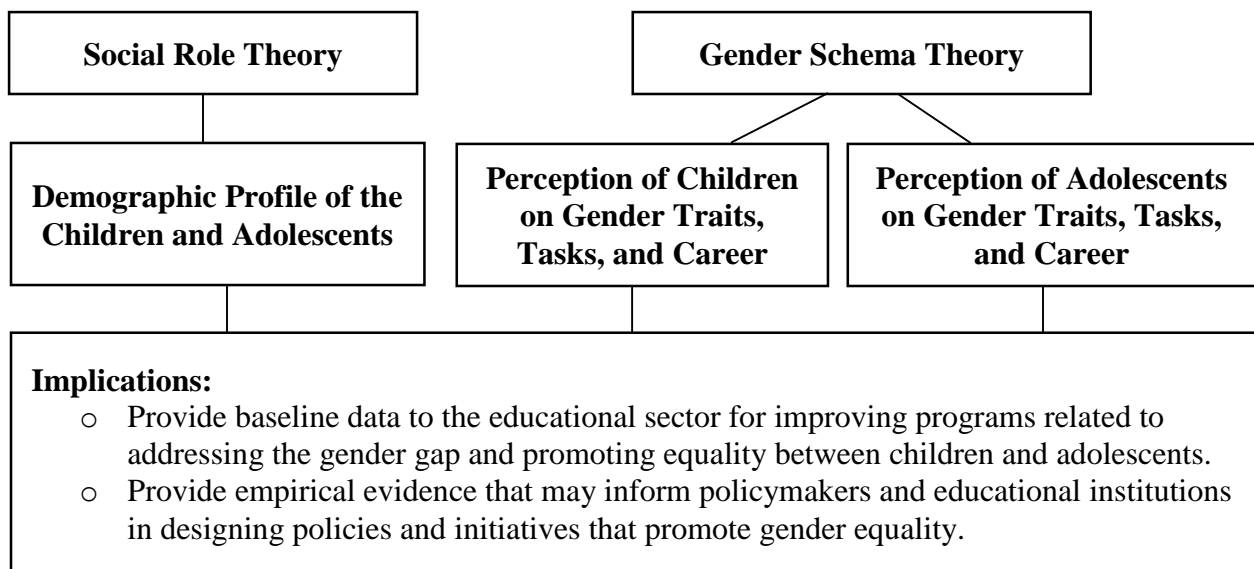
The second theory on the gender schema proposes that the phenomenon of sex typing derives, in part, from gender-based schematic processing, which is a generalized readiness to process information on the basis of the sex-linked associations that constitute the gender schema.

The theory proposes that sex typing results from the self-concept assimilated in the gender schema. It asserted that children learn about males and females from the culture in which they live. Accordingly, children adjust their behavior to align with the gender norms of their culture from the earliest stages of social development.

This gender schema, learned by children through their interaction, influences how they interpret masculine and feminine traits and roles and eventually shapes their understanding of gender appropriate and inappropriate traits, tasks, and careers. According to Martin (2025), once children attain their own gender identity (they are a girl or a boy), they become more attentive to gender related information and tend to model behaviors associated with their own gender. This increased awareness, in combination with their early exposure to multiple socialization, leads to consequences of favoring their own gender and discriminatory to the opposite gender.

In relation to the current study, the respondents, being children and adolescents, are in developmental stages where their cognitive structures about gender are actively shaped by cultural roles and preferences. These developing gender schemas influence their gender perception related to traits, tasks, and careers. Examining these perceptions among children and adolescents, therefore, provides valuable insights into the similarities and differences of early gender perceptions.

Guided by these theoretical perspectives and research direction, it is hoped that baseline data can be provided to the educational system for improving their programs related to addressing the gender gap and promoting equality of men and women, boys and girls. Furthermore, the data can serve as a basis for policy making and implementation regarding gender equality to narrow down the gender disparities in traits, task preferences, and career aspirations.



**Figure 1.** Conceptual model of the study

## Objectives

The primary purpose of this study is to investigate the perceptions of the two groups of population, children and adolescents, on gender traits, task preferences, and career aspirations, and determine

whether significant differences and associations exist across demographics. The specific objectives are:

1. To determine the demographic profile of the children and adolescent respondents.
2. To examine whether differences exist between children's and adolescents' gender perception and their demographics.
3. To examine the differences in gender perceptions between children and adolescents.
4. To determine the association between gender perceptions and the demographic characteristics among children and adolescents.
5. To provide implications for educational programs and the enhancement of policy to address the gender gap among young individuals.

## **Research methodology**

### *Population and samples*

The total sample size of this study is 600, of which 300 participants are from the intermediate elementary level or the children's group and 300 from the secondary level or the adolescents' group. The intermediate group from 9 years old to 13 years old (grades 4-6) is where children begin to classify jobs according to gender or sex type. Junior high school, from 14 to 20 years old (grades 7-10), or the adolescent group, is a stage where students are eventually thinking of the career they will pursue in college. The sample procedure was obtained using stratified random sampling from the different grades that best represent the studied population.

### *Research instrument*

The instrument is a modified instrument wherein some items are removed, added, and changed to fit the nature of the respondents. It consists of 90 items distributed across 30 gender traits, task preferences, and career aspirations. The list of careers was taken from the Dictionary of Occupational Titles. However, common occupations in the country (Philippines) were also considered. Each item is measured using categorical responses, allowing respondents to identify traits, tasks preferences, and career aspirations to whether they were for males, females, or both. The responses were then thematically grouped within each domain. Gender traits were classified into six, namely, emotional and interpersonal skills, leadership and confidence, adaptability and resilience, humility and self-awareness, compliance and cooperation, and youthful energy. The task preferences were also categorized as to caregiving and nurturing, household management, practical and DIY tasks, financial and administrative management, and shopping and provisions. The career aspirations were also grouped based on their career group in the DOT.

The classification of the gender traits into subthemes aligns with Costa and McCrae (2010), organizing human personality into broader domains that influence behavior and interaction. The words or trait adjectives (facets) are then defined by groups (cluster or domain) through intercorrelation of traits. The thematic classification of gender task preferences was aligned with the study of Farago et al. (2021), classifying activities into themes like caring, practical work, or repair. With regards to career aspirations, it was aligned with the categorization of the Dictionary

of Occupational Titles, which classifies careers into nine major occupational groups. However, in relation to this study, it was reduced to six themes to better suit the study environment. For instance, the careers requiring higher education and specialized training, such as medicine, law, engineering, and education, were classified in the professional group, whereas work like welding and construction were classified as structural work occupations (DOT, 1991).

For each theme, a cumulative score was derived by summing the number of items identified as male, female, or both. Statistical analyses were then conducted to assess the significant differences in gender perceptions between children and adolescents and the association between gender perception and demographic profile.

The validity and reliability of the instrument were established before data collection. Content validity was ensured through experts' review in the field of Gender and Development. Construct validity was run using exploratory factor analysis, wherein the output revealed moderate to strong factor loadings in almost all the items. The instrument was pilot tested among elementary pupils and high school students of the same grade level but from a different school to avoid contamination of data and comparability of respondents. The instrument used both English and the native language to facilitate better comprehension. Additionally, for the elementary level, the instrument included both statements and pictures to further enhance the pupils' understanding of the items.

The reliability of the instrument was established with the following results: Pearson Product-Moment Correlation Coefficient 0.60, indicating moderate reliability, and Split-Half Method 0.77, suggesting acceptable consistency.

### *Collection of data*

To uphold the ethical integrity of the research and the confidentiality of the responses, clearance from the institution was obtained to ensure the protection of the respondents' rights and dignity. Informed consent from the respondents, signed by their parents, was also secured. To ensure that random sampling was observed, the lottery method was used according to the section for each grade level. The results were then tallied, grouped, and statistically analyzed to summarize and draw conclusions from the data. The comparison of results between the two groups and their demographic profile was examined, and correlations were determined.

### *Data analysis*

The researcher utilized descriptive statistics using frequency and percentage distribution through Microsoft Excel to organize the profile of the participants and determine their perceptions on gender traits, task preferences, and career aspirations. The data were then analyzed using Jamovi statistical software and interpreted to draw similarities and differences between the groups. A chi-square test was used to analyze significant differences, while a multinomial logistic regression was used to analyze the association of the respondents' demographic profile and their perceptions of gender traits, task preferences, and career aspirations.

## **Results and discussion**

This section presents the results of children's and adolescents' perceptions of gender traits, task preferences, and career aspirations across several variables. A total of 600 participants were

included, evenly split between children (n=300) and adolescents (n=300), allowing for a comparative exploration between age cohorts.

**Table 1.** Participants' demographics and significant differences

Demographic profile	Overall	Children	Adolescents	Gender perceptions	Chi-square	p-value
	N = 600	(n=300)	(n=300)			
<b>Sex</b>				Traits	0.10	0.95
Male	279	146	133	Tasks	0.05	0.97
Female	321	154	167	Careers	0.25	0.88
<b>Age</b>						
9-12	257	257	0	Traits	34.9	<.001
13-16	292	43	249	Tasks	15.4	0.004
17-20	51	0	51	Careers	142	<.001
<b>Family structure</b>						
Living with both parents	464	232	232	Traits	3.51	0.48
Living with father	37	19	18	Tasks	0.08	0.99
Living with mother	69	34	35	Careers	13.1	0.001
Living with a guardian	30	15	15			
<b>Parents' educational background</b>		[Father]	[Father]			
		(Mother)	(Mother)			
Elementary Level	[63] (36)	[32] (18)	[31] (18)	Traits	9.89	0.04
Elementary Graduate	[47] (34)	[24] (17)	[23] (17)	Tasks	0.59	0.96
High School Level	[124] (132)	[62] (67)	[62] (65)	Careers	42.3	<.001
High School Graduate	[145] (142)	[72] (71)	[73] (71)			
Vocational Degree	[5] (0)	[3] (0)	[2] (0)			
College Level	[60] (67)	[30] (33)	[30] (34)			
College Graduate	[156] (189)	[77] (94)	[79] (95)			
<b>Parents' occupation</b>		[Father]	[Father]			
		(Mother)	(Mother)			
Professional, technical, and managerial	[140] (114)	[69] (52)	[71] (62)	Traits	754	<.001
Clerical and sales	[63] (143)	[31] (66)	[32] (77)	Tasks	241	<.001
Service occupation	[59] (343)	[30] (182)	[29] (161)	Careers	5.52	0.94
Agricultural, fishery, forestry, and related occupations	[79] (0)	[39] (0)	[40] (0)			
Machine trades	[9] (0)	[5] (0)	[4] (0)			
Structural work	[122] (0)	[61] (0)	[61] (0)			
Miscellaneous occupation (Driving)	[128] (0)	[65] (0)	[63] (0)			

Table 1 shows the participants' demographics and significant differences in gender perceptions between children and adolescents. The data revealed no notable differences in perceptions of gender traits ( $\chi^2 = 0.10$ ,  $p = 0.95$ ), task preferences ( $\chi^2 = 0.05$ ,  $p = 0.97$ ), or career aspirations ( $\chi^2 = 0.25$ ,  $p = 0.88$ ) based on sex. These results suggest that children and adolescents' gender views are the same regardless of their biological sex. This finding is aligned with the previous study, stating that significant differences may be observed, but very small gender differences were found among girls and boys in showing their emotions, which would affect their perception of gender (Chaplin & Aldao, 2012). As to adolescents, it was also found that males were not significantly different from females on career aspirations (Uka, 2015).

However, age played a significant role in shaping gender perceptions. There were highly significant differences in perception of gender traits ( $\chi^2 = 34.9$ ,  $p = <.001$ ), task preferences ( $\chi^2 = 15.4$ ,  $p = 0.004$ ), and career aspirations ( $\chi^2 = 142$ ,  $p = <.001$ ). These results point to an age factor perception difference between children and adolescents in understanding gender roles. This pattern can be explained through the developmental theory of Kohlberg, stating that critical stages in the development shape gender identity. As children grow older, they recognize gender differences and then strive to comply with the gender accepted norms (Bussey & Bandura, 1999). Their exposure to the environment further reinforced these gendered expectations and identity. Moreover, this gender identity becomes more rigid as they engage with the same sex playmate that results in increasing rigidity of gender behavior during childhood and adolescence (Martin et al., 2002; Ruble et al., 2006)

Family structure did not show a significant difference in perception of gender traits ( $\chi^2 = 3.51$ ,  $p = 0.48$ ) or task preferences ( $\chi^2 = 0.08$ ,  $p = 0.99$ ). However, there is a significant difference in career aspiration ( $\chi^2 = 13.1$ ,  $p = 0.001$ ). This may imply that the presence or absence of parental figures makes no difference in their gender perception of traits and tasks, but is a factor for their different perception of career aspirations. Based on the developmental contextual perspective, the family of origin influences career development. Across the lifespan, family structure variables were found to influence career constructs. Thus, families can serve as a positive influence in facilitating their children's career development (Whiston & Keller, 2004).

A notable finding was that perceptions of gender traits were significantly different with parents' educational background ( $\chi^2 = 9.89$ ,  $p = 0.04$ ), while task preferences were not ( $\chi^2 = 0.59$ ,  $p = 0.96$ ). However, career perceptions were highly significant ( $\chi^2 = 42.3$ ,  $p = <.001$ ), indicating that parental education is a factor in determining the differences in perception of children and adolescents on gender traits and career possibilities, but not different for the task preferences. These findings are consistent with the previous research indicating that parental education plays an important role in shaping their children's occupation. In the study of Uka (2015), it was found that among different variables, parental education level significantly contributed to the development of their children's occupational aspirations (Uka, 2015).

The parents' occupations differed significantly in their perception of gender traits ( $\chi^2 = 754$ ,  $p = <.001$ ) and task preferences ( $\chi^2 = 241$ ,  $p = <.001$ ). However, when it came to career aspirations, there was no significant difference ( $\chi^2 = 5.52$ ,  $p = 0.94$ ). This suggests that while perceptions of gender traits and task preferences were perceived differently by the two groups, as influenced by the occupation of their parents, but the occupational roles their parents' model shows no significant difference in their views towards career aspirations. A parallel result was found suggesting that parents' careers play an important role in how children envision family roles and their future work. Hence, children internalize these parental roles that translate to how they view gender (Endendijk & Portengen, 2022).

**Table 2.** Differences of gender perceptions grouped by age cohort

<b>Gender perceptions</b>	<b>Children</b>			<b>Adolescents</b>			<b>p-value</b>
<b>Gender traits</b>	Male	Female	Both	Male	Female	Both	<.001
Emotional and interpersonal skills	13.00	28.10	59.34	13.09	27.40	59.50	
Leadership and confidence	25.45	22.45	52.10	20.25	22.73	57.01	
Adaptability and resiliency	28.03	26.81	45.16	18.90	27.44	53.70	
Humility and self-awareness	15.34	27.67	57.00	17.34	22.84	59.84	
Compliance and cooperation	22.30	30.50	47.20	16.67	28.84	54.50	
Playful and youthful energy	14.22	24.33	61.44	12.33	25.56	62.11	
<b>Task preferences</b>							<.001
Caregiving and nurturing	16.00	24.83	59.12	14.71	29.53	55.75	
Household maintenance and management	15.78	37.45	46.72	15.25	38.36	46.39	
Practical and DIY task	50.25	14.45	35.40	44.93	15.00	40.07	
Financial and administrative management	25.67	24.34	50.02	20.41	25.62	53.97	
Shopping provisions	12.56	34.95	52.43	13.24	39.64	47.12	
<b>Career aspirations</b>							<.001
Professional, technical, and managerial	22.40	18.51	59.09	17.20	17.08	65.71	
Clerical and sales operations	18.52	26.40	55.08	13.88	23.74	62.37	
Service occupations	28.16	28.62	43.22	21.21	21.68	57.1	
Agricultural, fishery, and related occupations	45.70	14.00	40.00	34.66	12.33	53.01	
Machine trades occupation	57.30	15.00	28.00	43.56	12.16	43.84	
Structural work occupation	54.12	13.98	31.90	36.16	13.70	50.14	
Miscellaneous occupations	56.09	16.49	27.42	42.65	12.97	44.38	

Table 2 presents a deeper look into the differences in children’s and adolescents’ perceptions of gender traits, task preferences, and career aspirations. The findings provide meaningful insight into how young people’s views on gender evolve, offering a glimpse of the ways they interpret and navigate gender roles as they grow.

The perception of children and adolescents on gender traits revealed highly significant differences between children and adolescents ( $p = <.001$ ). Interestingly, more than 50% of children

and adolescents view gender as appropriate for both attributes, especially on the traits of playful and youthful energy, emotional and interpersonal skills, humility and self-awareness, and leadership and confidence. However, an obvious gap exists between the two groups in viewing gender as appropriate for both, especially in the areas of leadership and confidence, adaptability and resilience, and compliance and cooperation, indicating a greater shift in the adolescent group. Hence, the developmental stage or maturity is a factor in developing gender-neutral trait views.

These results align with the literature, indicating a maturity in the adolescents' perception of gender attributes. This maturity is influenced by the cognitive development of adolescents and their ability to think flexibly and accept non-traditional gender attributes as appropriate for either gender. Supporting these results is the cognitive-developmental approach, showing a flexibility in gender beliefs of older children or when gender knowledge is well established (Trautner, 2005). Similarly, Katz and Ksanskak (1994) posited that gender role flexibility has a correlation with age; hence, the ability to see traits as neutral generally increases as children transition from childhood to adolescence.

Significant differences also emerged in the perception of children and adolescents on task preferences ( $p = <.001$ ). Surprisingly, more than 50% of children and adolescents perceived caregiving and nurturing tasks and financial and administrative management tasks as regarded for both genders. However, practical and DIY tasks are viewed as attributed to the male gender, with a decrease in the adolescent perception (50.25% vs. 44.93%), and a slight increase for both genders, implying a greater gender maturity of adolescents in viewing this task. Conversely, shopping provision tasks are viewed for both genders (52.43% vs. 47.12%), which is traditionally strictly viewed as a female task, implying gender equality for this task. The results imply a mixed perception between children and adolescents; there are tasks where children show greater non-stereotypical views than adolescents, like caregiving and shopping, while adolescents show greater gender neutrality in their preferences for financial management.

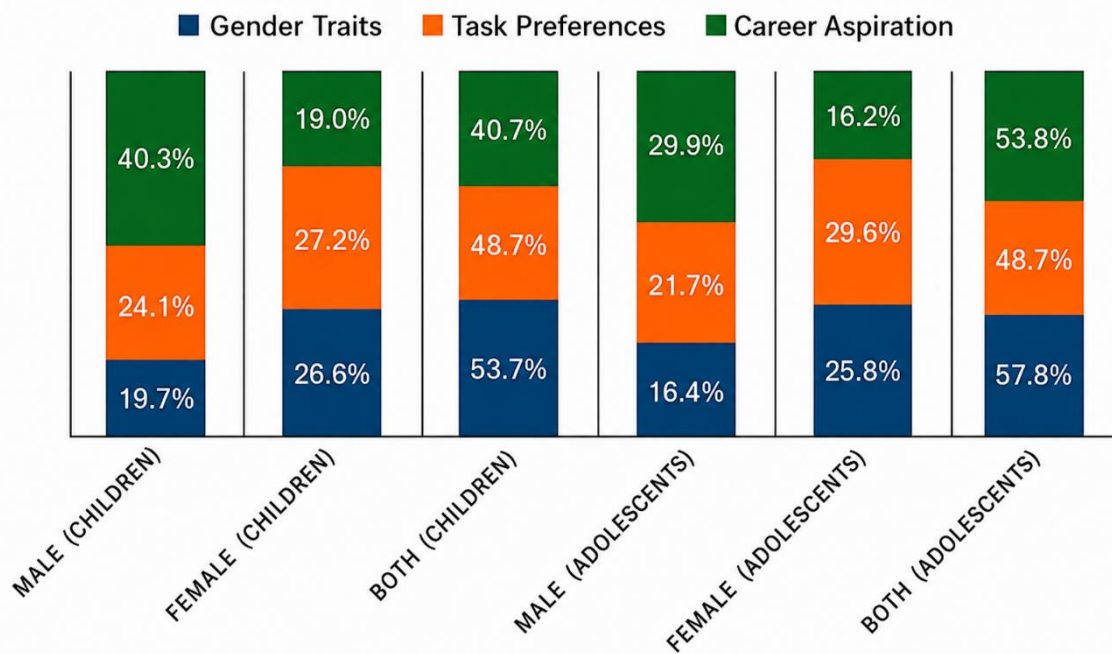
These results aligned with studies, acknowledging that both genders can perform various household tasks. An earlier study investigating a similar theme found that many domestic works, like cooking, caregiving, and maintenance, were frequently rated as gender neutral. However, some domestic chores, like washing plates, were often seen as feminine, while practical and manual tasks were seen as masculine (Farago, 2021). This illustrates how culture and society make people view gender roles in a more flexible and open-minded way. In another study comparing the development of spontaneous stereotyping among children aged 5, 8, and 11, found that stereotype flexibility strongly increases from age 5 to 11 (Banse et al., 2009). The findings suggest that age plays a role in the gradual reduction of rigid gender stereotyping.

Among the three gender perceptions, a dramatic shift is in career aspirations ( $p = <.001$ ). Adolescents significantly favored the view that most careers could be aspired to by both genders, marking a notable departure from more traditional views of children regarding career aspirations. The shift is very visible for professional and managerial careers (59.09% vs. 65.71%) and clerical and sales operations (55.08% and 62.37%). The same trend for service occupations (43.22% vs. 57.1%), like domestic service, protective services, and building and related services. There is also a shift in the views of adolescents when compared to children in their views of careers like agriculture, fishery, and related occupations, wherein adolescents view this career as gender-neutral (40% vs. 53.01%), while children perceive this as a male career (45.70% vs. 34.66%). A parallel finding emerges for the adolescents' views on structural work occupation and miscellaneous occupation (driving), wherein these careers are viewed as for both genders (50.14% vs 31.90%; 44.38% vs. 27.42%), while children view these careers as for the male gender (54.12%

vs. 36.16%; 56.09% vs. 42.65%). However, the machine trades occupation is viewed by children as a male field (57.30% vs. 43.56%), but somehow leans towards both genders for adolescents (28% vs. 43.84%). The findings indicate not only statistical shifts but also a generational attitude shift, indicating that adolescents are becoming more open to challenging long-held occupational stereotypes. This shift is potentially due to changing societal narratives, increasing access to media, and educational messages evolving around gender equality.

Analogous studies suggest that adolescents view careers as more gender neutral than children, like driving and structural work, indicating more flexible thoughts on careers as compared to children. A longitudinal study of US teenagers found a progressive move towards gender parity (Barrett, 2021). Similarly, it was found that stronger career preferences for a certain gender are observed in children due to conformity pressure or gender segregation in the workforce, which can only be addressed through occupational knowledge at an earlier age (Master & Barth, 2022). Overall, the current study shows that age plays a critical role in viewing career aspirations. While children often rely on a binary understanding of gender in terms of career aspirations, adolescents shift to a more inclusive view of careers that were previously classified as appropriate to males or females only.

**FIGURE 2**



**Figure 2.** Comparison of gender traits, task preferences, and career aspirations among children and adolescents

Figure 2 presents a parallel overview of gender traits, task preferences, and career aspirations among children and adolescents. The data shows a recognizable trend towards more inclusive and non-binary views of both groups. Nearly half (48.7%) of task preferences and more than half of children and adolescents (53.7% and 57.8%, respectively) recognized gender traits as applicable to both genders. A visible change is also observed in career aspirations, wherein 53.8% of adolescents perceived that career aspirations should not be limited by gender. However, somewhat similar results for children’s views on classifying careers for males and for both genders,

indicating a more traditional, male-dominating perception of career aspirations. Overall, the figure reflects a growing mindset of both groups, especially adolescents, on their views of gender roles.

This trend is consistent with the findings in Table 2, where adolescents showed a higher proportion for both genders in the areas of leadership and confidence, adaptability and resilience, humility and self-awareness, and compliance and cooperation as compared to children. This implies that age, along with culture and environmental contexts, plays a role in the flexibility of gender trait perception.

When it comes to task preferences, similar results can be observed in both children and adolescents (48.7%) in viewing tasks appropriate for both genders. However, as shown in Table 2, practical and DIY tasks are still more commonly associated with males. Generally, the figure reflects a growing gender-unbiased perspective across both age groups. This suggests that socio-environmental factors may be playing a significant role in shaping more gender neutral attitudes toward task perception.

One of the most striking findings emerges from the comparison of career aspirations between children and adolescents (40.7% vs. 53.8%). The graph illustrates a clear shift that when individuals grow older, their views on career aspirations become more inclusive. In comparison to Table 2, careers in structural work, driving, agriculture, and fishery were associated by children as careers for males, while adolescents perceived these as suitable for all genders. There is also a strong shift for adolescents identifying professional, technical, clerical, and service occupations as gender neutral, showing a broader and more open career outlook. This shift implies that, coupled with young people's maturity, implies a change in their perspective to being more gender neutral, offering a hopeful trajectory that the future generation will continue to embrace greater gender inclusivity in career aspirations.

Taken together, these results match what earlier studies demonstrate that as individuals mature, they become less restricted by traditional views in their perception of gender roles. However, among the children's group, age continues to play a significant role in shaping gendered views wherein they remain susceptible to stereotyping, especially when it comes to career aspirations. This underscores the need for a more comprehensive gender-inclusive program in elementary education. Findings from a large-scale study of over 13,000 UK primary pupils revealed that children begin to form their career aspirations at a young age, with relatively little change in aspirations from age 7 to age 17 (Education and Employer, OECD, & UCL Institute of Education, 2018). Consistent with this study, while adolescents were significantly more likely than children to view careers as gender neutral, a considerable proportion of participants in the children's group still held gender-stereotyped views. This suggests that although progress is being made as to age or maturity, traditional gender norms remain among the younger group.

Additionally, while the patterns in Figure 2 offer promising indications of more gender-equitable perspectives on gender traits, task preferences, and career aspirations among children and adolescents, the data still reveal somewhat stereotypical views of children on career aspirations leaning towards male preferences rather than for both genders. This suggests the need for sustainable efforts in all sectors, especially for children, to foster truly inclusive gender norms.

**Table 3.** Association between gender perceptions and demographic characteristics among children and adolescents: Results from a multinomial logistic regression analysis

Demographics comparison	Gender traits OR [95%CI] (p-value)		Task preferences OR [95%CI] (p-value)		Career aspirations OR [95%CI] (p-value)	
	Male vs. Both	Female vs. Both	Male vs. Both	Female vs. Both	Male vs. Both	Female vs. Both
<b>Sex</b>	12.22	8.61	2.47	2.07	2.06	2.34
Female vs. Male	[1.82-8.69] (0.01)	[1.38-5.55] (0.02)	[1.16-5.27] (0.02)	[1.06-4.03] (0.03)	[0.97-4.39] (0.06)	[1.02-5.36] (0.04)
<b>Age</b>	2.39	2.12	1.94	1.66	1.89	2.13
9-12 vs. 17-20	[1.33-4.29] (0.004)	[1.19-3.79] (0.01)	[1.10-3.41] (0.02)	[0.94-2.91] (0.08)	[1.07-3.34] (0.03)	[1.20-3.76] (0.01)
13-16 vs. 17-20	2.69 [1.50-4.81] ( $<.001$ )	2.32 [1.25-3.98] (0.01)	2.18 [1.24-3.86] (0.01)	1.72 [0.98-3.03] (0.06)	1.99 [1.13-3.53] (0.02)	2.35 [1.32-4.17] (0.003)
<b>Family Structure</b>						
Living with one parent vs. with both parents	1.53 [3.85-6.05] ( $<.001$ )	2.70 [1.08-6.78] ( $<.001$ )	8.05 [6.78-9.54] ( $<.001$ )	0.03 [0.02-4.50] ( $<.001$ )	0.02 [0.02-3.49] ( $<.001$ )	6.86 [0.59-7.91] ( $<.001$ )
<b>Parents' Educational Background</b>						
Elementary vs. College Education	0.39 [0.27-0.59] ( $<.001$ )	0.38 [0.26-0.56] ( $<.001$ )	0.58 [0.44-0.77] ( $<.001$ )	0.58 [0.44-0.77] ( $<.001$ )	0.54 [0.38-0.77] ( $<.001$ )	0.54 [0.37-0.78] ( $<.001$ )
High School vs. College Education	8.87 [5.28-14.90] ( $<.001$ )	4.88 [3.02-7.87] ( $<.001$ )	4.31 [2.99-6.22] ( $<.001$ )	2.27 [1.64-3.14] ( $<.001$ )	2.42 [1.61-3.64] ( $<.001$ )	4.75 [3.02-7.48] ( $<.001$ )
<b>Parents' Occupation</b>						
Clerical and Sales vs. Professional, Technical, and Managerial	0.25 [0.16-0.39] ( $<.001$ )	0.35 [0.23-0.53] ( $<.001$ )	0.35 [0.23-0.53] ( $<.001$ )	0.77 [0.53-1.12] (0.17)	0.13 [0.07-0.25] ( $<.001$ )	0.26 [0.14-0.49] ( $<.001$ )
Service vs. Professional, Technical, and Managerial	0.37 [0.23-0.59] ( $<.001$ )	0.53 [0.34-0.82] 0.005	0.54 [0.35-0.83] (0.01)	1.06 [0.73-1.54] (0.76)	0.11 [0.06-0.22] ( $<.001$ )	0.25 [0.13-0.46] ( $<.001$ )
Agriculture, Fishery, Forestry vs. Professional, Technical, and Managerial	0.27 [0.17-0.43] ( $<.001$ )	0.33 [0.22-0.52] ( $<.001$ )	0.25 [0.17-0.38] ( $<.001$ )	0.67 [0.46-0.98] (0.04)	0.20 [0.10-0.39] ( $<.001$ )	0.35 [0.19-0.64] ( $<.001$ )
Machine Trades vs. Professional, Technical, and Managerial	0.04 [0.02-0.07] ( $<.001$ )	0.08 [0.05-0.13] ( $<.001$ )	0.11 [0.07-0.17] ( $<.001$ )	0.51 [0.35-0.76] ( $<.001$ )	0.02 [0.11-0.05] ( $<.001$ )	0.11 [0.05-0.22] ( $<.001$ )
Structural work vs. Professional, Technical, and Managerial	0.35 [0.22-0.55] ( $<.001$ )	0.48 [0.31-0.73] ( $<.001$ )	0.38 [0.25-0.57] ( $<.001$ )	0.80 [0.56-1.16] (0.24)	0.62 [0.31-1.21] (0.16)	0.73 [0.40-1.32] (0.30)
Miscellaneous (driving) vs. Professional, Technical, and Managerial	0.40 [0.26-0.63] ( $<.001$ )	0.54 [0.35-0.82] (0.004)	0.41 [0.27-0.62] ( $<.001$ )	0.82 [0.57-1.18] (0.29)	0.74 [0.37-1.45] (0.38)	0.81 [0.44-1.46] (0.49)

Table 3 presents the association between gender perceptions (including gender traits, task preferences, and career aspirations) and demographic characteristics among children and

adolescents, as analyzed using multinomial logistic regression. The analysis uses odds ratios (ORs), 95% confidence intervals (CIs), and p-values to determine the strength and significance of observed associations.

In the sex demographic, multinomial logistic regression reveals the likelihood of selecting gender traits as exclusive to one gender rather than both. The analysis also reveals that female respondents are significantly more likely than males to associate gender traits as exclusive to males or females rather than to both genders. The odds ratio is 12.22 and 8.61 (CI: 1.82-18.69,  $p = 0.01$ ; CI: 1.38-15.55,  $p = 0.02$ ), highlighting a gender-biased trait perception of females. The gender stereotyping extends to task preferences as well. Females are over twice as likely as males to view task preferences as suitable to one sex rather than to both sexes, as indicated by significant odds ratios of 2.47 (CI 1.16-5.27,  $p = 0.02$ ) and 2.07 (CI: 1.06-4.03,  $p = 0.03$ ), reflecting traditional gender-specific roles. In terms of career aspirations, the trend continues; female respondents remain more likely to see careers as open to a specific sex rather than both. While the p-value for males vs. both is marginally above the conventional threshold ( $p = 0.06$ ), it still indicates a trend worth noting; the female comparison is significant (OR = 2.34,  $p = 0.04$ ). Overall, female gender perception is leaning towards more stereotypical views rather than the gender inclusivity shift.

In terms of age demographics, there is also a significance in viewing gender traits, task preferences, and career aspirations. Younger respondents, aged 9-12 and 13-16, show a likelihood of viewing gender roles as exclusive to one gender. For gender traits, children and middle adolescents showed more than twice the odds of viewing traits as exclusively applicable to a specific gender rather than both (ORs = 2.39, 2.69, 2.12, and 2.32). In task preferences, the 9-12 and 13-16 age groups were nearly twice as likely to view tasks as gender specific rather than for both sexes (OR = 1.94,  $p = 0.02$ ; OR = 2.18,  $p = 0.01$ ).

While the association of viewing tasks as exclusive for males or females rather than both was not statistically significant, the data still reveal a result within the threshold. Hence, a positive trend (OR = 1.66,  $p = 0.08$ ; OR = 1.72,  $p = 0.06$ ) still shows that younger age is almost twice as likely to view the task as for females rather than both. A similar pattern is also revealed for career aspirations, younger groups (9-12 and 13-16 years old) showing higher odds of viewing gendered career choices. These findings suggest a developmental shift wherein children and early adolescents are more gender exclusive in their views than older adolescents.

There is also a significant association between the demographics of family structure and gender perceptions, implying the likelihood of selecting gender exclusivity of those children living with one parent rather than with both. Children raised by single parents expressed more exclusive gender views than those living with their mother and father. For gender traits, between 1.5 to 2.7 times more likely that children in single-parent households associate traits exclusively with one gender (OR = 1.53,  $p = <.001$ ; OR = 2.70,  $p = <.001$ ) than with both genders. Notably, they are eight times more likely to view tasks as gender-exclusive for males (OR = 8.05,  $p = <.001$ ). On the other hand, task preferences for females vs. both had significantly lower odds (OR = 0.03,  $p = <.001$ ) with similar results for career aspirations of male vs. both (OR = 0.02,  $p = <.001$ ). This indicates a strong negative association for children living with one parent to prefer female-typed tasks and male-typed career aspirations than those living with both parents. As to career aspirations for females vs. both, living with one parent is almost seven times more likely to choose female careers than both (OR = 6.86,  $p = <.001$ ), which indicates gender exclusivity. Overall, the trend is clear that single-parent households indicate stronger gender exclusivity than children living with both parents.

In terms of the educational background of parents, a mixed association was observed. With respect to children whose parents completed elementary education rather than college education, a reversed trend of negative association for gender traits (OR = 0.39,  $p < .001$ ; OR = 0.38,  $p < .001$ ), task preferences (OR = 0.58,  $p < .001$ ), and career aspirations (OR = 0.54,  $p < .001$ ). This indicates that children of parents with an elementary educational background are more inclusive than those of parents with a college education. Interestingly, a contrary trend emerged for children of high school-educated parents, wherein they exhibited the most exclusive views across all domains, nearly nine times more likely to adopt exclusive gender traits (OR = 8.87,  $p < .001$ ), and substantially more likely to view gender-biased task preferences (OR = 4.31,  $p < .001$ ) and career aspirations (OR = 4.75,  $p < .001$ ). These findings suggest that college education promotes more gender equality in their views towards traits, tasks, and career aspirations as compared to children of parents with a high school education. These gender norms may likely be due to exposure of children to a variety of experiences outside their home.

In the demographic of parental occupation, there is also a significantly negative association. For gender traits, a significantly lower odds for machine trades (OR = 0.04,  $p < .001$ ; OR = 0.08,  $p < .001$ ) with weak to moderate negative associations for the rest of the occupation vs. professional, technical, and managerial. Similarly, a negative association is also observed for task preferences and career aspirations. This means that children raised by parents who are professionals, technicians, and managers are conservative in their views of gender, making them more gender exclusive than those children raised by parents from other careers.

These findings likely reflect the cultural norms and gender dynamics present in different work environments. Professional, technical, and managerial fields often emphasize more rigid views than other occupations. This means that despite the effort of the country towards gender equality, exclusivity still exists.

Collectively, it is revealed in Table 3 that diverse factors contribute to gender perceptions. Females (girls), in particular, appear to be more traditional in their views than males (boys). This is perhaps influenced by the culture of the Filipinos, wherein traditional gender norms and expectations remain widespread and continue to shape the young generation. Another factor that contributes to the developmental progression of gender is the factor of age. This factor is non-linear in process, indicating that gender exclusivity is more observable among young children and peaks at middle adolescence. Steinberg (2017) best explained this through adolescents' cognitive development, wherein egocentrism peaks in early adolescence, making them feel more unique and empowered to challenge gender norms. At the same time, gender role attitudes during adolescence are also shaped by the family socialization process. Studies indicate that maternal gender role attitudes and the parental division of housework influence adolescent beliefs about gender roles. Hence, fathers' participation in household tasks is very important, as well as maternal gender attitudes, to significantly shape young adults' attitude formation toward gender roles (Cunningham, 2001).

Another influential factor is the family structure, whether the child is raised by both parents or only one parent. It seems that children raised by only one parent were found to hold more exclusive gender views. A study by Chen et al. (2024) revealed that parental gender roles and the family gender composition of single-parent families significantly influence the transmission of gender attitudes and the development of gender roles. Specifically, certain parent-child gender pairings, such as father – daughter and mother – son families, were found to predict whether children adopt sex-typed, undifferentiated, or reversed gender roles. Additionally, Shaffer (1996) asserted that children construct their own gender by observing and imitating their parents. Hence,

the absent parent in single – parent families makes it easy for teenagers to lose the direct opportunity to understand gender differences and to imitate gender roles.

On the contrary, parental education has a mixed association with gender perception, wherein children of elementary-educated parents develop more inclusive views than children of college-educated parents, while children of high school-educated parents adopt a more traditional gender perception than college-educated parents. Hence, those parents who are highly educated have children who are most likely to adopt diverse and egalitarian views of gender roles (Bronfenbrenner, 1994). However, this study indicates that parents' educational level does not have a uniform effect on children's gender perception, suggesting that broader social and cultural context plays a role in shaping young generations' views on gender. But, generally, individuals with higher education levels tend to hold more equal and flexible gender attitudes (Dotti Sanni & Quaranta, 2017).

In terms of parents' occupational background, a negative association was observed for all occupations vs. professional, technical, and managerial. Hence, children whose parents work in professional, technical, and managerial roles tend to exhibit more gender-exclusive views. These findings support existing evidence on the importance of parents' education and career in shaping their children's gender perception. As found in previous studies, parents' gender-typical careers are associated with children's views about future careers (Oliveira et al, 2020; Endendijk & Portengen, 2022).

Overall, these results demonstrate the role of the larger social context in influencing children's and adolescents' gender perception. This wide context includes family structure, parental education, occupations, and age-related development, appealing for more holistic and contextualized programs in education and developmental environments to create a long-lasting effect of gender inclusivity.

In the Philippines, several legal initiatives have been implemented to address gender equality, including the provision in the 1987 Constitution (Article II, Section 14: The role of women in nation-building and the fundamental equality before the law of women and men) and national laws such as Republic Act 9710 (Magna Carta for Women), Republic Act 6725 (An Act Strengthening the Prohibition on Discrimination Against Women with Respect to Employment), and Republic Act 7192 (Women in Development and Nation Building Act) and General Appropriations Act that allocates gender responsive activities. These policies have contributed to addressing the gender gap, which translates to the rise of women in male dominated profession and men in female dominated profession. However, gender stereotyping continues to persist, particularly in the field of media, such as television, where children often engage for entertainment. For instance, a study on gender representation in Philippine Television Advertisement found a high prevalence of gender differences and stereotypical portrayals (Prieler & Centeno, 2025).

This indicates that despite the presence of laws and policy initiatives promoting gender equality, such as the United Nations and the Philippine Commission on Women, to address gender gaps, there is still strong evidence of gender inequality, calling for an earlier program that would design policies and initiatives that promote gender equality as early as elementary levels, where gender perceptions and attitudes begin to develop.

## Conclusion

The perception of children and adolescents on gender traits, task preferences, and career aspirations significantly differs, yet it is less pronounced when analyzed as to biological sex. This points to the critical role of psychosocial factors in shaping gender perceptions. Interestingly, age, family structure, parents' educational background, and parents' occupation emerge as key factors in gender perception differences between children and adolescents. Additionally, the developmental age of the individual, which theoretically tells them their maturity and cognitive ability, is a factor in their understanding of gender-neutral perspectives. Equally influential factors are the family structure, parents' educational level, and parents' occupational status, and their influence on their children's perception of gender. The data underscores that socioenvironmental conditions mold gender beliefs of children. Therefore, this study supports the existing theories that gender perceptions and inclusivity are complex constructs of social environmental realities and upbringing.

In investigating deeper into the differences in gender perceptions by age cohort, a significant developmental shift in views toward greater gender inclusivity is revealed. Significantly, there is an apparent gap between the perception of children and adolescents in terms of gender traits, particularly in leadership and confidence, adaptability and resilience, and compliance and cooperation. This suggests that individuals' cognitive maturity is a factor in becoming more open to non-stereotypical gender roles. Further, the task preferences of caregiving and nurturing, and financial and administrative, are strongly viewed by the children and adolescents as being for both genders. This indicates a greater move on the gender task perceptions of the young individuals towards gender equity. However, the traditionally male-viewed tasks, which are practical and DIY, remain largely perceived as male tasks, reflecting the persistence of certain traditional views.

The most pronounced shift is seen in career aspirations, where adolescents, guided by age and cognitive development, show a strong tendency to challenge gender norms – an implication aligned with the existing theories of relating cognitive development to greater gender awareness. However, children's perception remains stereotypical, especially in the male-dominated fields like agriculture, fishery, machine trades, structural work, and miscellaneous occupations. Although adolescent data is encouraging, it does not completely denote that teenagers are fully inclusive. The percentage of 40-50 of adolescent respondents classifying gender roles as suitable for both genders meaningfully indicates that a significant proportion still adheres to gender-specific views, underscoring that the journey to greater gender inclusiveness is ongoing and far behind.

Exploring further into the association between children and adolescents' gender perceptions and demographic characteristics reveals diverse patterns shaped by social experience and biological sex. Despite not being significantly different in the views of children and adolescents between biological sex and gender perception, data still point to a strongly positive association of biological sex with certain patterns of gender perception. Specifically, the study suggests a likelihood of females to choose towards traditional gender views. Another factor that contributes to gender perception among the young is their age. It is evident that young to middle adolescents perceive gender exclusivity more than the older group. This reflects that as individuals progress through age and reach the developmental stage of late adolescence (17-20 years old), they begin to question established/traditional norms. An interesting note is that this progression of gender equality in later adolescence is possibly a result of maturity, societal exposure, and cognitive progression.

Another important factor that affects the gender perception of children and adolescents is the family environment. Children raised in a one-parent household often display more gender exclusivity, possibly due to witnessing only one parental role. At the same time, concerning parents' educational level, a negative association exists for elementary education vs. college education, implying a likelihood of gender inclusivity of children raised by elementary-educated parents. However, high school-educated parents show a strong positive association, implying their views towards gender exclusivity. This means that parents' educational level does not follow a uniform pattern in influencing their children's gender views. As to parents' occupation, a similar trend exists, wherein children raised by other occupations are more inclusive in their views than children raised by professionals or technical occupation parents.

Overall, this study implies that gender perceptions and inclusivity are shaped more by social and developmental factors than by biology. As children grow into adolescence, their gender views tend to become more inclusive, especially when nurtured and reinforced with an inclusive gender attitude from an early age in their household. A supportive family environment, such as a two-parent household, makes the children less rigid in their gender views. On the other hand, although the associations of parental education and occupation were mixed, the result still highlights the importance of creating inclusive spaces at home, in the community, and in school to help young people develop more equitable gender perceptions.

## **Recommendations**

Based on the findings and conclusions, the following recommendations are drawn to highlight the importance of a multi-sector approach involving families, schools, communities, and policymakers in order to nurture gender inclusivity among children and adolescents.

In the educational sector, there is a need to integrate inclusive gender education early into the curricula. Gender-sensitive and inclusive content may be embedded into early childhood and early adolescent education by incorporating lessons that challenge traditional gender roles and encourage critical thinking around gender equality. There is also a need for the schools to create inclusive environments that actively promote safe spaces where learners feel empowered to express non-stereotypical interests and traits. This can be facilitated through career talks that open discussion on anti-discrimination and inclusivity about gender roles and identities. This discussion may include empowering families as agents of gender perceptions. They may include talks focusing on educating parents on how to model inclusive behaviors and challenge gender norms in everyday roles.

The community sectors and organizations may also create platforms through mentorship programs, internships, and exposure to gender-diverse role models across the industry to open the perceptions of children and adolescents in pursuing careers that are traditionally male-dominated. There is also a need to create age-appropriate programs aimed at promoting gender equality while accounting for the child's developmental stage, family structure, and background. The media community also plays a critical role in shaping young minds. They may come up with national campaigns, ads, and youth-targeted content that portray diverse and non-traditional gender roles to help normalize equality and dismantle long-standing stereotypes.

Also, policymakers may promote laws and allocate resources that promote gender diversity. Lastly, a mechanism to regularly evaluate children's and adolescents' perceptions regarding gender equality and equity through school-based surveys may be conducted as a basis

for policy decisions and accountability. Through intentional policies and inclusive practices, there remains a strong hope of building an environment where young people are empowered to see beyond gender roles and reach their full potential.

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