

Gender Constancy and Genital Knowledge in Filipino Preschool Children

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Abstract

In line with Jean Piaget's conservation concepts and Lawrence Kohlberg's work on gender constancy, a study was conducted among Filipino preschoolers to determine the development of their gender constancy and determine the relationship between gender constancy and genital knowledge. Age and gender differences were also determined. The 87 preschoolers, aged 3-5 years old, from three laboratory schools completed the following tests: the Own-gender constancy test, Other-Gender Constancy test, and the Genital Knowledge test. For own-gender constancy, sex was a significant variable. The mean score of male preschoolers was higher than female preschoolers. For other-gender constancy, age was a significant variable. There was a difference in mean scores across the three age groups. There was a positive but low correlation between own-gender constancy scores and other-gender constancy scores. This relationship was also observed for other-gender constancy and genital knowledge.

Key words: *preschoolers, gender constancy, gender conservation, genital knowledge*

Introduction

The development of the child's sex role and identity are important dimensions of the self-concept. These developments occur in the context of the family, which is a primary agent for cultural transmission. There are prescribed roles and expected be-

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haviors, even appearances, for males and females in the Filipino culture that are transmitted to children. As early as the birth of an infant, male or female, he/she is already subjected to the parents' sex-role socialization. Baby girls are clothed in pink dresses and gifted with soft toys and dolls, baby boys are clothed in blue shirts and given toy cars and animals. As the children grow up, the socialization process continues in the family and in the other agents of cultural transmission, the school and the community. The child is expected to master the developmental task of learning sex differences and sexual modesty during the early childhood years (Havighurst, in Bentzen, 2005). Children learn that they can be categorized by sex as a boy or girl and that there are different appearances, clothes, hairstyles, and behaviors appropriate for these two categories. In learning these, the child's cognitive and sexual aspects of development have to be considered, as they are daily influenced by the family, particularly the parents, the teachers, peer groups and the mass media.

Gender identity is a critical organizer for later adoption of sex-role behaviors and attitudes, more so when the child is certain of his/her gender's stability. Adoption of sex-role behavior entails the adoption of sex-appropriate behaviors and clothing and the avoidance of sex-inappropriate ones. This is necessary for a positive self-concept, which is continuously being formed in the early childhood years.

Jean Piaget looked into concepts of conservation like conservation of mass and volume. Conservation refers to the recognition that certain properties remain invariant in the face of certain transformations (Flavell, 1963). Kohlberg, inspired by Piaget's theory, elaborated on the conservation concept. In his original work, there were two stages only: gender identity and gender constancy (Wehren and De Lisi, 1983). The literature on gender constancy show that there are four stages which follow a general sequence (Eaton, 1981): gender identity or the labeling of self as "boy" or "girl"; gender stability or the recognition that gender is permanent despite time changes; gender motive or the knowledge that gender cannot be willfully changed; and gender constancy or the knowledge that gender is invariant despite superficial opposite sex transformations in features such as hairstyle, attire and activity. The invariance is due to gender being socially and biologically defined on the basis of the genitals than behavior (McConaghy, 1979). The genitals as the defining cues are emphasized over

the cultural cues of clothing, toys and hairstyle that are much more easily perceived.

Prior to gender constancy attainment is a transitional phase where the child focuses on the unchanging features of the body despite transformations and gives the correct judgment of gender but cannot state the correct explanations based on the genitals. The child's reasoning is influenced by the stimulus cues used in the transformation like changing the clothes or hairstyle. This transitional phase is called as psuedoconstancy (Emmerich,et.al., 1977).

Studies on gender constancy usually focused on age as a variable (Marcus and Overton, 1978; Wehren and DeLisi, 1983; Bhogle, 1992; Trautner, Gervai and Nemeth, 2003). Children in the concrete operational stage (7-11 years old) are capable of making correct judgments and explanations in conservation experiments. Only Bem (1989) reported that 40 percent of her 3-5 year old respondents showed gender constancy. Thus, there has been great interest in finding out if younger children in the Piaget's preoperational stage (2-7 years old) could conserve as well for gender.

Sex as a variable was considered in only two studies. In Bem's study (1989), the girls displayed higher gender constancy scores. On the other hand, Slaby and Frey (1975) reported that more boys gave correct judgments for gender constancy.

Only two studies related genital knowledge to gender constancy (McConaghy, 1979; Bem, 1989). The interest was in determining if genital knowledge preceded the capability for gender constancy or if gender constancy was independent of the child's knowledge about the genitals.

No study on Filipino children's level of gender constancy was located in the literature. Therefore, this study was conducted to determine Filipino preschoolers' understanding of own-gender and other-gender constancy. It aimed to answer the following questions:

1. What is the level of gender constancy attainment in Filipino preschoolers?
2. How is gender constancy attainment related to age of the respondents?
3. How is gender constancy attainment related to the sex of the respondents?
4. How is gender constancy attainment related to genital knowledge?

Methods

Sample

There were 120 preschoolers selected through stratified purposive random sampling. Due to unavoidable circumstances like not wanting to be interviewed again, only 87 preschoolers became the respondents. Of the 87 preschoolers, 42 were boys and 45 were girls. Their ages ranged from three years and six months to five years and 11 months. The preschoolers came from three laboratory schools attached to a university/college.

Instrument Development

There were three tests administered to the preschoolers: own-gender constancy, other-gender constancy, and genital knowledge. The first two were prepared based on gender constancy instruments, particularly, Slaby and Frey (1975), McConaghy (1979), Emmerich, et.al. (1977) and Bem (1989). The own-gender constancy test was adapted from Slaby and Frey's eight questions on this concept. However, in this study, the questions were made in such a way that there was a question for each of the four stages of gender constancy attainment. Also, a question pointing to and naming a body part that makes the respondent a boy or a girl was included. The final instrument was composed of seven questions.

Each stage of gender constancy attainment was also considered in developing the other-gender constancy test. A question on pointing to and naming a body part that makes the toddler in the photo a boy or girl was included. Bem's test using photographs of real toddlers was adapted because the other tests used schematic drawings only of boys and girls. However, Bem used six photos only, three each for the male and female toddler in three conditions: standing without clothing and with the genitals visible; wearing gender-consistent clothing with the genitals unseen; and wearing gender-inconsistent apparel with the genitals unseen. McConaghy's use of transparent clothing to be superimposed on the drawing for the purpose of superficial transformations was adapted. For this study, yellow transparent cellophane was cut into clothes for females and males. Additional drawings of toys and bags were made to "dress up" or transform the toddlers in the photos to look like the opposite sex. This

was done to follow Piaget's conservation experiments where one of the same stimuli is perceptually changed in front of the respondent to see if they can conserve on that concept.

The final instrument for the other-gender constancy test was composed of only four colored photos, 5×7 inches in size (two photos each of unclothed male and female toddlers standing), the transparent male and female clothing, and the drawings of male and female toys and objects. The toddlers photographed for this test were aged 12 to 18 months old. They were allowed to be photographed by their parents for the purpose of developing a test for this study.

The genital knowledge test in this study was based on the questions and tasks of Bem and McConaghy. Bem's use of photographs was adapted along with the tasks the preschoolers had to do in the four subtests. However, instead of 20 photos, the final instrument was composed of 22 colored photos, 5×7 in size. The photos were the following: six photos of three male and three female toddlers, all unclothed; and four photos each of four of the toddlers in the following conditions (a total of 16)-semi-clothed wearing a boy's shirt, semi-clothed wearing a girl's shirt, unclothed playing with boy's toys and unclothed playing with girl's toys. Eight of the photos showed the toddler with gender-consistent cues and the remaining eight showed gender-inconsistent cues. The genitals were visible in all the photos.

These were pretested to a group of preschoolers prior to the actual administration to determine if preschoolers can understand the questions and follow the instructions for the tests. After this, the tests were finalized for the study.

Administration of the Instruments

Own-gender Constancy Test

During the interview, the respondents were asked the following questions to assess own-gender constancy.

1. What are you, a boy or a girl? Why do you say so?
2. Is there a part of your body that tells you that you are a boy/girl? What do you call that part?
3. When you were a baby, were you a boy or a girl?

4. When you grow up, will you be a boy or a girl?
5. Can you become a [opposite sex] if you want to? If yes, how? If no, why?
6. If you wear clothes of the opposite sex, what are you, a boy or a girl?
7. What are you really when you wear clothes of the opposite sex? (This was asked if the child gave an incorrect answer to question 6 to probe for their concept of own-gender constancy).

Other-Gender Constancy Test

In the other-gender constancy test, there were four photos used—two photos of an unclothed male toddler and two photos of an unclothed female toddler. The male and female toddlers were given the names Child 1 and Child 2, respectively since these names are neutral.

In the first subtest, the respondent was shown the two photos of the unclothed male toddler simultaneously and it was ascertained to the child that the photos were of one and the same toddler. This format followed the equivalence conservation tasks of Piaget wherein two same stimuli are presented and one of these is perceptually changed in front of the respondent. Then, the respondent was asked to answer the following questions:

1. Is the baby a boy or a girl?
2. How do you know that it's a boy/girl? Point to the body part that shows that it is a boy/girl. What do you call that part?
3. When it grows up, will it still be a boy/girl?

The same procedure was done and the same questions asked for the two photos of the unclothed female toddlers.

In the second subtests, the respondent was told that they will play “dress up the photo.” The pair of photos of the unclothed male toddlers was presented and the set of sex-inappropriate transparent clothes of yellow cellophane were placed on one of the photos. This was done to represent the transformation. The respondent answered the following questions:

1. Is the baby a boy or a girl?
2. Why is it a boy/girl? What body part shows you that it is a boy/girl?

The same procedure was applied to the photos of the unclothed female toddler.

In the last subtest, the pair of photos of the unclothed male toddler was again presented. One photo of the male toddler was dressed up in sex-appropriate transparent clothes and toys/objects. The respondent was asked the same set of questions in the second subtest. The same procedure was done on the photos of the female toddler. Other-gender constancy was assessed by the number of correct answers the respondent gave to the 14 questions asked.

Genital Knowledge Test

There were four subtests for this test. In the first subtest, 16 photos of the semi-clothed toddlers were shown to the respondent one by one. The respondent was asked the following question: Is the baby a boy or a girl? Why is it a boy/girl? The respondent is said to manifest priority of genital cues if he/she was able to correctly identify the gender of the toddlers in the eight gender-inconsistent photos based on the visible genitals.

In the second subtest, the eight gender-inconsistent photos were again shown but in male-female pairs. The respondent was asked: Which photo shows the boy? the girl? The respondent is said to give priority to genital cues if he/she was able to correctly identify the boy and girl in the photos based on the genitals.

In the third subtest, the six photos of unclothed toddlers (three male-females pairs) were shown to the respondent one at a time and he was asked: Is the toddler in the photo a boy or a girl? Why? The respondent is said to manifest knowledge of genital differences if he/she identified the boy and girl correctly in the photo-pairings.

Lastly the photos of four of the unclothed toddlers were presented in male-female pairs and the respondent was asked: Which photo shows the boy? the girl? The respondent is said to manifest knowledge of genital differences if he identified correctly the boy and girl in the photo-pairings.

The first two subtests determine if the child gives priority to genital cues over cultural cues (e.g. clothing) while the third and fourth subtests determined the child's knowledge of genital differences between the sexes. For this test, the highest possible score is 26 points. The scores of the respondents were categorized as follows: low (1-8), average (9-18) and high (19-26).

Data Collection

The faculties-in-charge of each laboratory preschool were given letters requesting for permission to do the study. Their permission was obtained and all the interviews and test administrations were done in the school vicinity. The procedure was as follows: a) the children were first given the own-gender constancy test; followed by b) the other-gender constancy test; and c) the genital knowledge test. The genital knowledge test was given after the gender constancy tests so as to eliminate the possibility that the child will be primed to focus on the genitals and thus, seem to manifest gender constancy.

The researcher stayed in the classroom for one hour once or twice before the data gathering began. The teacher's permission was first obtained and only then did the interview/tests commence. All the tests were conducted within the classroom or in a room near the classroom during the free play periods of the children. The interview and testing length lasted from 20-30 minutes per child or five to six respondents per testing day.

Data Analyses

Descriptive statistics (e.g. means, standard deviations) were computed for the test scores of the respondents. The statistical procedures used were the following: 1) Pearson Correlation coefficient to determine the relationship between age and own-gender constancy, age and other-gender constancy, own-gender and other-gender constancy, and other-gender constancy and genital knowledge at $p=0.01$ (one-tailed) level of significance; and 2) Chi square test to determine if there was a significant difference in the mean scores of the respondents across the three age groups in the two gender constancy tests at $p=0.05$ level of significance; and 3) Levene's test to analyze the differences across the sex categories under two assumptions: with equal variances assumed and not assumed at $p=0.05$ level of significance.

Results

Characteristics of the Respondents

The distribution of the respondents by age and sex is shown in Table 1. There

were more four and five year old respondents than three year olds. The male and female respondents were nearly equal in number.

Table 1. *Distribution of Respondents by Age and Sex*

Age	Gender		Total
	Male	Female	
3 year olds	10	14	24
4 year olds	15	16	31
5 year olds	17	15	32
Total	42	45	87

Own-gender Constancy

Table 2 shows the percentage of respondents who manifested the four stages of gender constancy as applied to themselves.

When asked if they were a boy or a girl, all of the respondents accurately stated their gender category. The explanations they frequently stated for this was in relation to a) their knowledge of their gender identity/label as given by significant persons like their mothers and b) their knowledge of cultural cues like clothing, hairstyle or things which are associated either with males or females.

Table 2. *Percentage of Correct Responses to the Own-gender Constancy Test by Age and Sex of Respondents*

Stages of Own-gender constancy	Age of Respondents									Total
	3			4			5			% of n=87
	*M	F	Total	M	F	Total	M	F	Total	
Gender identity	100	100	100	100	100	100	100	100	100	100
Gender stability	100	93	96	100	100	100	100	100	100	99
Gender motive	100	86	92	100	94	97	94	93	94	94
Gender constancy	70	64	67	93	56	74	76	67	72	71

*M - Male ; F - Female

T - Total per age

In terms of gender stability, 99 percent said that since they were born a boy/girl, then they will remain that way when they are all grown up. One male respondent said

that his being a male was given to him by his father.

Of the preschoolers, 94 percent manifested gender motive or the knowledge that they cannot willfully change their gender when or if they want to. Many of them stated it is due to the fact that they were already born that way.

It can be gleaned from the table that the respondents aged 3-5 years old can manifest the first three stages of the gender constancy process as applied to the self. However, in terms of gender constancy, only 71 percent manifested this stage. These respondents already had the concept that even if they wore clothes and played with toys of the opposite sex, they will retain the gender identity they have of themselves.

By age of the respondents

All the respondents in the three age groups correctly gave their gender identities. Table 2 shows the distribution of correct responses by age of the respondents. However, in the other three stages, particularly, in the last stage of gender constancy, the lowest proportion of correct responses can be seen. The three year olds had lower scores than the four and five year olds.

The Pearson correlation coefficient between age and own-gender constancy was .086 which was not significant at $p=0.01$. Thus, there is no relationship between age and own-gender constancy in this study.

By sex of the respondents

All male and female respondents correctly gave their gender identities. Generally, the male respondents had higher scores in the gender stability, gender motive and gender constancy stages (Table 2).

Other-gender Constancy

When the respondents were asked to identify the gender identity of the male and female toddlers in the photos, most of them were able to give the correct gender label (Table 3). In terms of gender stability for the pictured toddlers, most of the respondents manifested this stage. For the gender motive stage, the proportion of respondents with correct answers was lower than in the first two stages. The last stage of gender constancy as applied to others had less than half of the respondents with correct responses.

The responses for the last stage of gender constancy can be further categorized

into five, as shown in Table 4. Of the respondents, 33% were able to conserve for both the male and female toddlers and knew that gender has a genital basis. It was also observed that they use both genital and cultural cues to determine the toddlers' genders. When viewing the gender-inconsistent photos, they looked at the toddlers' genitals to clear the confusion the photo transformation created. When shown the gender-consistent photos, they used the cultural cues to confirm their answers.

Table 3. *Distribution of Correct Responses for the Other-gender Constancy Test by Age*

Stages of other-gender constancy	Age of respondents (year)			Total % of n=87
	3 %of n=24	4 % of n=31	5 % of n=32	
Shows gender identity				
For male toddler	96	97	100	98
For female toddler	92	100	97	97
Shows gender stability				
For male toddler	92	97	100	97
For female toddler	71	100	97	91
Shows gender motive				
For male toddler	79	90	88	86
For female toddler	71	94	90	86
Shows gender constancy				
For male toddler	54	42	34	43
For female toddler	33	58	53	49

The second and third categories show that there are children who can conserve for only one gender, either the male or female toddler. More were able to conserve gender for the female toddler. The cultural cues (e.g. clothes) in the dress up transformation influenced them to make incorrect responses because these are easily perceived or noticed.

The transition stage or pseudoconstancy was manifested by those children who gave correct answers but could not give the correct explanation based on the genitals.

Table 4. *Specific Categories of the Last Stage of Other-gender Constancy by Sex*

Category for other-gender constancy	Sex of the respondents		Total % of n=87
	Male	Female	
	% of n=42	% of n=45	
Has gender constancy for both male and female toddlers	29	38	33
Has gender constancy for male toddler only	31	54	43
Has gender constancy for female toddler only	53	47	49
In psuedoconstancy	14	9	12
No other-gender constancy	31	29	30

By age of the respondents

Table 3 shows that almost all respondents in the three age groups correctly gave the gender identities of the photographed toddlers. The proportion of correct responses for gender stability and gender motive were a little lower. The last stage of gender constancy had the lowest proportion of correct responses for all the age groups.

The performance by age in the specific categories of the last stage of other-gender constancy is also shown in Table 3. The four and five year olds had a higher percentage of respondents who manifested other-gender constancy for the photographed toddlers. The three year olds showed gender constancy for the male toddler, while the four and five year olds manifested this for the female toddler. There were respondents who manifested the pseudoconstancy stage where they gave correct responses but not genital-based explanations. There were more five year olds who did not manifest other-gender constancy.

The Pearson correlation coefficient for age and other-gender constancy was .118 which was not significant at $p=0.01$. Thus, there is no clear relationship between age and other-gender constancy in this study.

By sex of the respondents

More female than male respondents manifested other-gender constancy for both photos of the male and female toddlers (Table 4). Further, more male respondents

showed other-gender constancy for the photos of the female toddler and more female respondents showed other-gender constancy for the photo of the male toddler. More males were in the pseudoconstancy stage. The proportion of male and female respondents without gender constancy was similar.

Level of Genital Knowledge

Of the respondents, majority already had an average to high level of genital knowledge and 75 percent already have a high level of genital knowledge. Table 5 shows the genital knowledge level of the respondents as a whole and by age of the respondents.

By age of the respondents

There was a large difference between the scores of the three year olds and the four and five year olds. Most of the four and five year olds had high genital knowledge scores while more of the three year olds had average genital knowledge scores only.

Table 5. *Categories of Genital Knowledge Scores by Age Group*

Score	Categories of genital knowledge	Age of respondents (year)			Total
		3 % of n=24	4 % of n=31	5 % of n=32	% of n=87
19-26	High	46	84	88	75
9-18	Average	54	13	9	23
1-8	Low	-	3	3	2

By sex of the respondents

More male respondents had high genital knowledge scores (Table 6). On the other hand, more female respondents had average genital knowledge scores.

Table 6. *Categories of Genital Knowledge Scores by Sex*

Score	Categories of genital knowledge	Sex of respondents	
		Male % of n=42	Female % of n=45
19-26	High	79	71
9-18	Average	17	29
1-8	Low	4	-

Relation of own-gender constancy and related factors***By age of the respondents***

The three age groups were compared in relation to their own-gender constancy mean scores (Age 3- 5.50, Age 4- 5.68, Age 5- 5.69). The difference in the means was not significant, $\chi^2 (2, N=87) = 1.252, p=0.05$.

By sex of the respondents

Using Levene's test for equality of variances, own-gender constancy scores were found to be significantly different between the sexes (Table 2). The male respondents had significantly higher scores in this test.

Relation of other-gender constancy and related factors***By age of respondents***

The other-gender constancy mean scores were compared across the three age groups (Age 3- 8.54, Age 4- 10.0, Age 5- 9.41). The difference in the means was significant, $\chi^2 (2, N=87) = 10.156, p=0.05$.

By sex of the respondents

The mean scores of female respondents was higher than the males. However, using Levene's test for equality of variances, the differences between the sexes was not significant (Table 7).

Relation of own-gender constancy and other-gender constancy

There was a significant positive but low correlation between own-gender constancy and other-gender constancy (Table 7). Using the Pearson correlation coefficient, the computed r was 0.292 which was significant at $p=.003$. Respondents with

high own-gender constancy scores tend to have high other-gender constancy scores.

Table 7. *Pearson Correlation Coefficient Values for Own-gender Constancy, Other-gender Constancy and Genital Knowledge*

Variable	Other-gender constancy
Own-gender constancy	.292 (.003)
Genital knowledge	.304 (.002)

Relation of other-gender constancy and genital knowledge

There was a significant positive but low correlation between genital knowledge and other-gender constancy. Using the Pearson correlation coefficient, the computed r was 0.304 which was significant at $p=.002$. Respondents with high other-gender constancy scores tend to have high genital knowledge scores.

Discussion

Cultural cues versus genital cues

The cultural cues used to dress up the photos of the toddlers were paper cut-outs of toys and other objects and transparent clothes. The respondents made more mistakes when the clothes were used than toys/objects in the subtest where the toddlers' photos were dressed up with gender-inconsistent cues. This suggests that clothes are the more distinguishing cultural cues used to differentiate male from female. Also, the clothes were used as cues by the respondents who gave greater importance to this cultural cue, the three year olds. More three year olds made this kind of mistake. It seems that, in younger children, clothing is more visually distinctive for gender categorization than toys or other gendered objects. The impact of clothes is not very surprising. In De Lisi and Gallagher (1983), even the school-aged children aged 7 and 9 years old used social norms (e.g. females do more cooking) and stimulus cues (e.g. the shoes used by boys and girls) to explain their gender judgments of another person.

More of the mistakes made were during the dress up part of the female toddlers' photo. This could be due to the female genital being less noticeable because it is hidden and the observation that girls, more than boys, are allowed by adults to play

with the toys of boys (e.g. transportation toys, house tool toys). Further, girls can even be dressed up in different shades of blue and in pants, shirts, shorts and rubber shoes like boys.

An interesting observation was that more females (54%) were able to gender conserve for the male toddler only while more males (53%) were able to gender conserve for the female toddler only (Table 6). This may be due to a heightened interest to or curiosity about the appearance and genitals of the opposite sex toddler and which may have overshadowed their perception of the toddler of the same gender category.

Own-gender constancy attainment

The performance of the respondents was higher for own-gender constancy in all stages compared to other-gender constancy. This was also observed in the studies of Marcus and Overton (1978) and Gouze and Nadelman (1980) where children accurately apply this gender concept to themselves first. This own-gender before other-gender constancy attainment may be due to their body and gender identity being more concrete to them than the appearance and gender identity of another person. Their gender identity is a means to establish their emerging self-concepts as they interact with others in their social environments. This also indicates that the emergence of greater cognitive abilities in the operational stage is required for them to consistently apply this gender concept to other persons in the middle and late childhood years.

Based on their correct responses to the test, the first two stages of gender identity and stability are quite established by the ages of four and five (Table 2). Gender motive is evident but still in the process of developing. However, the relationship between age and own-gender constancy was not significant. This could be due to the ages groups being very close in this study and thus, did not show the progression. Further studies may use the cross-sectional design with bigger gaps in ages of the respondents like 3, 5, 7, and 9 year olds or use at least 5 succeeding ages like 3, 4, 5, 6 and 7 year olds. In addition, longitudinal studies can be done to follow the development of own-gender constancy in a group of individuals.

In terms of sex differences, male respondents did better in the own-gender con-

stancy than females. This could be due to the greater familial and social pressures for boys to act in accordance with their gender identity, leading to the earlier emergence of own-gender constancy in boys. Among children in Filipino families, males, even young ones, may feel this pressure since they are looked upon as future heads of the family, providers and heirs to businesses and properties.

Other-gender constancy attainment

Despite the high proportion of correct responses for gender identity, stability and motive for others, seeing the transformation in the dress up the toddlers subtest seemed to have confused the respondents and made them respond incorrectly. Only some 40% of the respondents were able to show gender constancy for both the photos of the male and female toddlers. This validates Bem's (1989) results that young children in the preoperational stage can also conserve for gender and that the instruments used may affect their performance. Very young children are easily deceived by visual changes in appearances. They are not yet capable of storing in their minds the actual identity of the person or an object and when the appearance is changed, they focus on the changes than on the features that were previously present to them (Shaffer, 1999).

In foreign studies in the West (Eaton and Von Bargen, 1981; Bem, 1989; Slaby and Frey, 1975; De Lisi and Gallagher, 1983), a low percentage of preschoolers attained other-gender constancy compared to older children. The percentages for other-gender constancy attainment ranged from 22 to 42 percent for 3-6 year olds. School-aged children, aged 7-9 years old, did better than younger children. An Asian study on gender constancy (Bhogle and Seethalakshmi, 1992) found out that Indian children have not yet attained other-gender constancy by the age of 6 years but have attained the three prior stages of gender identity, stability and motive. In comparison, the respondents in this study performed within the range stated above, around 40 percent.

Generally, this concept is starting to develop during the preschool years. It seems that the ability to conserve for gender and other concepts is enabled by more complex cognitive abilities, knowledge and experiences that arise only after the preschool

years. It is suggested that knowledge of cultural stereotypes and social norms or the lack of it may have influenced the respondents' judgments. Sex roles have two components, the descriptive (based on appearances, e.g. boys have short hair) and the prescriptive (based on societal norms, e.g. girls should do the cooking). Children may think that these two are identical and only later realize that they are not. As they acquire maturity, knowledge and experiences, children can better understand that long-haired men are men even if they are chefs and short-haired women are women even if they are engineers. Further, Trautner, Gervai and Nemeth (2003) suggest that the ability to distinguish between appearance (what looks like) and reality (what really is) is essential for a better understanding of gender constancy, which may even be independent of the child's age. It should be noted that children vary in their rate of cognitive maturation despite following the same developmental blueprint.

There was no significant sex difference in this study for other-gender constancy. In Eaton and Von Bargen's study (1981), no significant sex difference was also found. Sex, as a variable, is seemingly unrelated to other-gender constancy. This could be due to the concept of gender being applied to others, making it an abstract idea harder for the preschoolers to grasp.

Pattern of gender constancy attainment

The respondents showed this general pattern—own-gender constancy → other-gender constancy. These two are positively correlated. The process starts from the individual's concrete experience of the self and gender identity to that of others.

Further, the pattern for other-gender constancy showed this pattern: no constancy → pseudoconstancy → other-gender constancy for one gender category → other-gender constancy for both gender categories. In this study, 12 percent of the respondents showed pseudoconstancy where they gave correct gender judgments but with incorrect explanations. In foreign studies, the percentage of children who manifested this stage ranged from 6 to 18 percent.

Generally, the sequence of other-gender constancy in this study follows the pattern of identity-stability-constancy, thus giving credence to Kohlberg's original idea that this process is a universal cognitive acquisition happening to all children.

Genital knowledge

As the child's age increases, a greater proportion of high or perfect scores in the test was seen. This may be explained by the children's greater exposure to sexy movies, sexy movie trailers on TV, content of prime time TV shows, lewd newspapers or tabloids sold on the streets, information from adults and other children, and even usual adult expressions mentioning body parts, particularly, how the genitals are called in the vernacular. Naturally curious and observant about body parts, children easily learn about this topic.

There is a positive but low correlation between genital knowledge and other-gender constancy. In two prior studies (McConaghy, 1979; Bem, 1989), they found out that even for preschoolers, attaining gender constancy was possible if the children had the domain-specific knowledge that the genitals define the male and female. More than 70 percent of those who have attained other-gender constancy had high genital knowledge scores and it seems that other-gender constancy builds upon genital knowledge for those children who can grasp the importance of genital cues and differences.

In another study (Trautner, Gervai and Nemeth, 2003), on the other hand, attainment of other-gender constancy was independent of the children's genital knowledge. Only half of those who had gender constancy also displayed genital knowledge. Thus, the relationship between these two constructs still needs further study. Also, the genital knowledge test can be further developed and applied to own-gender constancy attainment to see their relationship.

Gender labeling

It is not surprising that for these preschoolers, nearly 60 percent said that it was their mothers who labeled them as male or female. Despite the Filipino society's present state of dual-earner families and increasing number of overseas contract workers, mothers remain to be the teachers in the home and the transmitters of the culture. Only a few respondents stated that their fathers identified their gender category for them. Other significant people who were also responsible for gender labeling were mostly females: grandmothers, aunts, older sisters, yayas/nannies and teachers.

In this society, the persons who teach and nurture are still the females since this is part of the culturally prescribed roles that they play. Also, the extended family members and relatives who live with the nuclear family or live nearby and regularly visit are also sources of information for the growing child.

The teachers even in the preschool level teach about the human body and sex differences because this topic is an integral part of the preschool curriculum. Upon this is built the more advanced topics on the human body and sex roles in the later elementary school level. Thus, there is reinforcement or clarification given in school to what is taught in the home about the body, gender identity and gender roles.

The mass media, in addition, should be considered as another source of information particularly, television and print media that children are exposed to. The television is used as a baby sitter or surrogate parent in a lot of homes so that mothers, nannies and other caregivers can do household chores and take a rest. Movie trailers with sexy themes, songs with double meanings, and sexy TV programs are aired during primetime. Tabloids of women in various states of undress are displayed in street stalls, some near school areas. These make children all the more aware about bodies and how these are viewed and used by males and females. Children obtain cultural messages about gender in our society now from various sources.

Other directions for gender constancy

The significance of gender constancy attainment to the cognitive and social realms can be further studied. The cognitive level of the children, as measured by verbal and non-verbal intelligence tests, can be included in later studies as a variable in relation to the attainment of gender constancy. It may be mental age, not chronological age, that affects the rate of progression through these stages.

Also, gender constancy can be related to the adoption of later sex role behaviors and attitudes. Ruble, et.al. (2007) found an increase in stereotypical knowledge, rigidity of stereotypical beliefs, and positive evaluation of one's own gender category in young children which are mediated by the stages of gender constancy. Older children display gender constancy more and they also display behaviors that are more gender-stereotypical. Gender constancy is said to result to stereotypical behavior and

preferences for same-sex modeling as the child grows older (Warin, 2000). Further studies on this are needed to relate gender constancy to the child's self-concept evaluations and social interactions.

Generally, additional research and validated research instruments are needed to broaden the knowledge base for gender constancy in early, middle and late childhood in terms of the local literature.

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