

**Adolescents' Gender Stereotypes,
Differences and Other Aspects of Behaviour in the Eastern Cape
Province, South Africa**

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Abstract

While in metropolitan countries gender stereotypes has been a topic of extensive research, this has not been the case in African countries including South Africa. Such a deficit served as a motivation for investigating the extent to which gender stereotypes among adolescents prevail in the Eastern Cape Province of South Africa. The sample was based on 599 Junior Secondary School students in grades 7-9 in Mthatha Eastern Province, South Africa. A questionnaire on gender stereotypes consisting of ten statements was administered to 239 girls and 360 boys drawn from five Junior Secondary Schools participating in the study. A chi square was used for statistical analysis. Based on the entire sample, the responses for each one of the ten statements in the questionnaire, early adolescents scored statistically significant on gender stereotypes. Further analysis based on gender showed statistically significant differences in gender stereotypes. The findings confirmed the findings of researchers in gender stereotypes in metropolitan countries. As reported in the literature, South African early adolescents experience gender stereotypes as observed in other cultures. Such results have implications for children, parents, teachers, educational institutions and society at large.

Introduction

This investigation explored the extent to which gender stereotypes of adolescents prevail in the Eastern Cape Province of South Africa. The investigation aimed at relating such stereotyping to how it impacts on learners in their school work, decision making in terms of subject choice and career to be pursued. It is vital that such knowledge be available for guidance not only in terms of school performance and career choices, but also in terms of child-rearing practices.

By gender stereotyping is meant the traditional perception of boys and girls as well as men and women regarding themselves and each other in the context of what they can or cannot do or whether they are capable of doing well or not so well; how they ought to think or behave purely on the ground of their gender (Delamere & Shaw, 2010; Holdsworth, 2007; Lee-Thomas, Sumsion & Robert, 2005; Martin, 1995). Gender stereotypes may further be defined as 'social differences between women and men that have been learned over time and may differ within and between cultures, rather than the biological characteristics which differentiate people as males or females' (Commonwealth Secretariat, 2008: 2).

In a study of black South African school-going adolescents aged 15 and 17 years, Gaganakis (2003) argues that sex role stereotyping occurs early in life as one's gender is subjected to a socialisation process leading to internalisation and integration in one's personality. Consequently, girls are associated with being passive, nurturing, needing approval, emotional, intuitive, in contrast to boys who are perceived to be rational, assertive, competitive, ambitious, curious and independent. In another South African study of adolescents, Phetla (2007) points out that gender roles are defined on the basis of one's culture marked by differentiation of both girls and boys as well as men and women, as they go through socialisation. Part of this socialisation entails the coinage and usage of nicknames among South Africans (De Klerk & Bosch, 1996). In nicknaming there is reflected the nurturing and nurtured role of women in

society, as well as the difference in social power between men and women. Such nicknaming is partly instrumental in promoting stereotypes more than may be in the fixed language used. Coinage and usage of nicknames among predominantly South African adolescent bearers and users is dominated by males more than females, and the latter being associated with affect more than being humorous and critical effect (ibid).

Conceptual framework

The literature review reported in South Africa, other African countries and western countries, in particular the US, constituted the conceptual framework. Special reference is made to the US because more research has been carried out on gender stereotypes than has been the case in any other country worldwide. Knowledge obtained from such a conceptual framework will be extended to examining how such knowledge can be transferred in combating the prevalence of gender stereotyping in the South African context.

According to Mwamwenda (2004), child rearing practices in South African ethnic populations, as well as how men and women relate to each other, gender stereotypes in numerous ways are clearly stipulated and defined in their socialisation, interactions and functions in various societal dimensions. Moreover, in South Africa, gender stereotypes are not only the domain in basic education covering Grades R to 12, as they are also reflected at public institutions of higher education, in terms of student enrolments, there are more men pursuing studies in the field of science, engineering and technology than there are women (Council on Higher Education, 2012: 26). There are almost three times as many women studying education than men (ibid).

Apart from South Africa, gender stereotypes have been observed in other African countries such as Nigeria and Sudan (Ifegbesan, 2010; Mwamwenda, 2011, 2004; Greany, 2008). In Nigerian gender stereotypes (Ifegbesan, 2010) men are associated with being strong, brave, and intellectual and identifies other stereotypes as self, school, family, cultural and gender stereotypes. Women are associated with being homely, warm, passive, lacking in competence, expressiveness.

Further there are reports on teachers being accused of fostering gender stereotypes in school subjects and academic achievement. While Mwamwenda (2011) would not make similar charges against South African teachers, it is important to note that South African Junior Secondary School teachers in the Eastern Cape gender stereotype in subjects such as Mathematics, Sciences in favour of boys were very high. This being so, one wonders what kind of impact this must have had on their teaching such subjects. In Kenya, Bosire, Mondoh & Barmao (2008) present the argument that gender stereotypes have been part of education in Africa long before the encounter with Western civilisation. Traditional education was gender stereotyped, in so far as it was based on the sex and gender of the learner, and such learners were taught separately from each other. The knowledge, skills and cultural values transmitted were different and stereotyped, and in some cases calling for teachers of the same sex to provide such education. Moreover, even following the arrival of westernisation and the introduction of formal schooling, as we know it today, they started running both co-education and single sex schools, reflecting their own home background.

While the preceding section primarily addresses gender stereotypes as reported in several African countries, which is the focus of the present study, it is important to note that more studies on gender stereotypes have been carried out in metropolitan countries for a number of decades than has been the case in African countries (Mwamwenda, 2011; Ifegbesan, 2010). Such studies have been conducted on two dimensions, namely gender stereotypes in their own right, as well as gender stereotypes as they relate to school performance in the various subjects offered in their curricula. In fact, the very motive for undertaking this study is based on the researcher's exposure to gender stereotypes, as observed in Canada and the US, where he has studied and worked for a number of years. A brief review of literature for this component will be presented here.

Stereotypes are evident early in life as children interact with their environment

in various ways (Gender Bias in the Classroom, 2009; Kane, 2009; Greary, 1998). While there may be some modification and adjustment of stereotypes as children grow, fundamentally the impact of stereotypes remains permanent in the lives of people, as they interact with others and make various decisions in life (The Development of Gender, 2001). As children grow and develop socially, physically, emotionally and cognitively, they are inevitably subjected to the process of socialisation whereby they learn from parents, siblings, older children, peers, adults in the community and teachers at school, the numerous types of behaviour that govern their behaviours in a gendered fashion, e.g. in a family setting, and in a communal context (Gender Norms, 2012; Gender Stereotypes, 2004; Gaganakis, 2003).

Most societies draw a distinction between the behaviour on the basis of gender stereotypes, meaning there are different ways girls and boys as well as men and women are culturally expected to conduct themselves in various settings (Kinoti, 2012; Lee & Mushner, 2008; Mwamwenda, 2004).

Failure to do so is followed by censure, as correct adherence is followed by reinforcement of one kind or other. On the basis of stereotypes, it must be conceded, some people's behaviour is stigmatised, valued, despised, devalued, respected, advantaged or disadvantaged (Wilde, 2009; Mwamwenda, 2004; Spencer, Steele & Quinn, 1999).

From an education perspective, it is interesting to note that when children join school, what is already known about children stereotypes is reinforced by teachers in their interaction both in the classroom in particular, as well as outside the classroom in general (Mwamwenda, 2011; How Teachers Influence Gender Roles, 2007). In a study of 48 teachers' perceptions of 300 grades 3 & 4 students' competence and effort in Mathematics, their responses were in agreement with gender stereotypes in which it is argued that boys are better than girls in their performance of Mathematics (Wilhelm, 2009; Tiedemann, 2006). Ifegbesan (2010) and Kane (2009) further point out that in the context of

school and learning, both the attitudes and actions of teachers have a bearing on children stereotypes.

Leedy, Lalonde & Runk (2003) investigated attitudes held towards Mathematics by boys and girls in which it was observed that both boys and girls held the stereotypical view that Mathematics belongs to the domain of men. This led the researchers to conclude that teachers and parents play a significant role in enabling students' performance in Mathematics. Brandell and Staberg (2008) carried out a study consisting of 1300 secondary school students aged 15 and 17 years of age in Sweden, with the objective of finding out whether participants would classify the study of mathematics as a male, female or neutral domain. The results showed that mathematics was identified as a male domain. The older participants who were 17 years associated mathematics with males more than was the case with the young participants who were 15 years of age. Moreover, the latter who were registered in a science programme held stronger gender stereotypical beliefs that without doubt, mathematics was a male domain subject.

In a study of gender differences in lunar-related scientific and mathematical understandings, Wilhelm (2009) concluded that boys' performance in both astronomy and mathematics was better than that of girls.

In Kenya, Bosire et al (2008) examined students' performance in Mathematics in national examinations at the end of primary education. The results showed that boys' performance was superior to their female counterpart.

Moreover, in a study of 52 first and 65 second grade boys and girls taught by 17 teachers, it was shown that women teachers who had anxiety about their competence in Mathematics ended up with students (girls) who showed a similar characteristic (Schmid, 2010). This led to the conclusion that female elementary school teachers who are concerned about their own Mathematics skills may be transferring that to the young girls they teach.

The gender stereotypes observed among boys and girls in their performance in Mathematics also have been observed in Science where boys perform better than girls (Nosek, Smyth, Sriram et al, 2009; Woods, Kurtz-Costes, Stephanie, 2008; Schmader, Johns & Barquissau, 2004).

While in the lower grades, there is not much difference in girls' and boys' performance in Mathematics and Science, this is not the case at high school and university where boys take the lead in both Mathematics and Science (Woods et al, 2008). It is argued therefore that messages - that may be either explicit or subtle emanating from parents, teachers and adults - regarding gender stereotypes in Mathematics and Science may have a negative effect on the students' attitude and performance in such subjects (ibid) 'Gender stereotypes might lead to gender differences in Mathematics and Science ability either by enhancing the self-competence of boys or by inhibiting Mathematics interest, self-competence perceptions and identification in girls' (ibid: 2).

It is further pointed out that 'It is clear that many parents and teachers believe that boys are more capable in Mathematics and Science than girls' (ibid: 3). This is in agreement with Jovanovic (2006) who presents the argument that during middle school years, there is a noticeable drop in girls' confidence to make a success of studying Mathematics and Science.

It is nevertheless, significant to note that, there are other studies which have not confirmed gender stereotypes that boys are better than girls in Mathematics and Science (Lee & Mushner, 2008). For example, in a study of middle school and elementary school girls and middle school boys, it was concluded that in both Mathematics and Science girls were better than boys (Rowley, Kurtz-Costes, Mistry & Feagan, 2007). Steele (2003) reports that gender differences in Mathematics and Science performance remain undetected till high school and university years. Similarly, Spencer, Steele & Quinn (1999) argue that differences in mathematics and science become more pronounced at senior level of high school and college/university level. In fact, before this period, it has been demonstrated that in some cases, girls outperform boys in their

performance in Mathematics and Science (Thomson, 2001; Early, Eccles & Lord, 1993).

According to research findings, there exists a relationship between gender differences and preferential treatment, classroom dynamics and students' performance or preference for school subjects (How Teachers Influence Gender Roles, 2007; Leedy, Lalonde & Runk, 2003). Teachers treat boys differently from girls. Boys are identified more readily and more attention is paid to them and asked questions more frequently.

Kane (2009) proposes a number of factors that may be accountable for gender stereotypes in society, some of which are due to physical differences between men and women which predispose them to behave differently. According to Vedantam (2006) one of the reasons girls do not perform so well in Mathematics and Sciences is that they have been told directly or indirectly that only boys are good and capable of dealing with such subjects. Hall, Davis & Bolen (1999) and McElroy (2005) stress that the reason for girls being less confident to handle Mathematics is based on their having been told thus by parents and their teachers and other means, such as the media and books. And therefore children fall in line as some sort of self-fulfilling prophecy (WikEd, 2010; Frawley, 2005; Jost & Kay, 2003). Moreover, stereotypical behaviour is a function of males' and females' differential upbringing and life experience starting with their birth, and as they grow into childhood, adolescence and adulthood (Kane, 2009). According to Smith, Sansome & White (2007) women continue being less successful in mathematics and science and related subjects due to biological and socialisation factors. Better performance on mathematics maybe attributed to earlier maturation of boys in their spatial ability as well as visualisation (Wilhelm 2009; Giedd, Blumenthal, Jeffries et al, 1999). According to Bosire et al (2008) the differences in mathematics performance between girls and boys is based on brain lateralisation involving the use of right and left hemispheres of the brain. Boys are more inclined to use the right hemisphere while girls use the left hemisphere. The left hemisphere focuses on processing languages and other related subjects, whereas the right

hemisphere focuses on visualisation and spatial information, which is mathematics related.

Impact of stereotypes

Undertaking the study of gender stereotyping is not an end in itself. The interest beyond is the social implication on the lives and decision making of those affected by gender stereotypes. In this context, it can be proposed and argued that stereotyping has a great impact in the shaping and questioning, as well as promoting reinforcement when it comes to the development in the lives of both boys and girls, as they pursue their educational careers and their day-to-day behaviour as they interact with their physical and psychological environments (Mwamwenda, 2011; Ifegbesan, 2010; Bosire, et al, 2008; Smith, Sansome & White, 2007). As a result of gender stereotyping, the outcomes are restriction in educational achievement, as well as job prospects. More than this, the very norms used for the promotion of gender inequality are further strengthened (Musanovic, 2009; How Teachers Influence Gender Roles, 2007; Frawley, 2005). Surprisingly, teachers in schools engage in reinforcing gender stereotypes without their conscious knowledge (Kane, 2009). Stereotypes set the standard by which children are judged in terms of their behaviour. Children will behave in the manner they are stereotyped, thus confirming adults' expectations (Martin, 1995). Unknowingly, teachers perpetuate the male stereotype by paying more attention to male students, while paying very little attention to female students (Gender Bias in the Classroom, 2009).

Research shows that in the classroom environment, boys are preferentially treated compared to girls (How Teachers Influence Gender Roles, 2007; Gender Bias in the Classroom, 2009). Boys are praised more than girls for their correct answers; boys have more contact times with their teachers than is the case with girls; boys are given more time to answer questions than girls are given. Moreover, boys are asked more cognitively challenging questions than is the case with girls.

Along the same vein of thought, it has been shown that teachers treat boys

differently from girls (How Teachers Influence Gender Roles, 2007). Boys are identified more readily and more attention is paid and questions are asked more frequently. Consequently, they are of the view that they are valued and led to take risks more than girls. On the other hand, the girls are not valued to the same extent and are not that likely to participate in some of the class activity (How Teachers Influence Gender Roles, 2007).

Martin (1995) postulates that adults' stereotypes of children are likely to have an impact on gender roles in a variety of ways. For example, children may be either rewarded or punished on the basis of gender stereotypes. This may also apply to the manner and severity of the way they are punished. Frawley (2005) stresses that teachers' biases whether intentional or accidental have an impact on students as they form their own perceptions, beliefs and develop their social, intellectual, emotional and physical abilities. He further identifies some of the aspects that impact on children's gender stereotypes as: being told that they cannot engage in certain activities on the grounds of their gender, the hidden curriculum, and in instructional materials such as textbooks.

Girls have been reported to do better in other areas of study than is the case with boys (Delamere & Shaw, 2010; Woods et al, 2008; Lee & Mushner, 2008; Tucker, 2007; Driessen, 2007). This is particularly so in languages, where girls have been reported to perform better than boys and that for this reason, girls value the study of English more than is the case with boys (Early, Eccles & Lord, 1993). The more the girls valued English, the more they endorsed the gender stereotypes that girls are better than boys at English. This partly lends support to the perception that both girls and boys have a natural talent in specific subjects as shown in boys' performance in mathematics and girls' in languages such as English or whatever other language there be for comparison purposes (Lee & Mushner, 2008; Driessen, 2007; Bornholt, Goodnow, & Cooney, 1994).

Tucker (2007) and WikEd (2010) report that according to research findings, girls have advantages over boys in verbal abilities consisting of grammar, spelling and writing. Woods et al (2008) point out that while girls show self-competence

in verbal domains, boys show self-competence in Mathematics and Science. Similarly, in a study carried out by Schmid (2010) it was concluded that comparatively, boys are better at Mathematics, whereas girls were better at Reading than boys.

In the study carried out by Delamere & Shaw (2010) on children's perception of leisure stereotypes, it was observed that gender stereotype of leisure choices was more pronounced among boys than girls. The boys' emphasis was on: sports, such as hockey, soccer, baseball and basketball. Correspondingly, the girls' leisure choices were on music lessons, choir, arts and crafts. Furthermore, children were aware that parents had differentiated gender leisure choices. Sisters were interested in feminine activity such as playing with dolls, playing house, doing crafts compared to brothers whose focus was sports and video games (Delamere & Shaw, 2010; Vedantam, 2006). Fathers showed leisure choice for sports, golf, hockey, soccer, and football. This is how boys more than the girls perceived their fathers, whereas the girls more than the boys perceived their mothers to show greater involvement in social activities such as visiting, chatting, talking on the phone with friends and reading (Delamere & Shaw, 2010).

The purpose of the investigation and research hypotheses

In view of the review of literature on gender stereotypes as reported here, there is a paucity of research undertaken on gender stereotypes in South Africa in particular and Africa in general. This did not only serve as a motivation for this investigation, but further constituted the statement of the problem, to examine the extent to which gender stereotypes prevail among South African adolescents in Junior Secondary Schools in the Eastern Cape Province, South Africa. The investigation further sought to examine whether there would be a difference in gender stereotypes between boys and girls during adolescence.

Research hypotheses

The research hypotheses that guided this investigation were as follows:

There would be significant difference in gender stereotypes based on the participants' responses to the ten questionnaire items in terms of those who were stereotyped and as opposed to those who were not stereotyped.

Male adolescent participants' responses would be significantly different from those of female adolescents' responses to gender stereotypes responses to the ten questionnaire statements.

Method

The objective of this study was to explore the extent of gender stereotypes prevalence among adolescents in the Eastern Cape. The nature of responses expected to the ten questionnaire statements was in the form of binomial distribution responses which called for the use of a quantitative rather than a qualitative approach. Using a quantitative approach entailed the use of descriptive statistics in the form of chi-square table contingency. This determined whether the mean difference was significant between those with stereotyped behaviour and those not.

Those who had more stereotypes in their scores would fall under the category of being stereotyped, whereas those whose scores were low would fall under the category of those who were not stereotyped. This in brief accounts for the approach used in determining the nature of the statement of the problem, as reflected in the literature review and the preceding hypotheses.

Sample

Participants in this study were drawn from five Junior Secondary Schools located in the vicinity of the Municipality of Mthatha in the Eastern Cape Province in South Africa. In total there were 599 adolescents in Grades 7-9. The gender distribution was 360 boys and 239 girls whose age ranged from 14 to 24 years with a mean of 18.5 years.

For the purpose of confidentiality, participants were asked not to write their names or schools with which they were affiliated. All that was required of them was to indicate their age, as they proceeded with responding to the questionnaire.

It is relevant to point out the rationale why the present sample was selected to participate in the present study. First, it was a convenience sample given that both the researcher and the research assistant were familiar with both the schools and some of the teachers who taught in these schools, thus enhancing accessibility to such schools. Second, the participants were considered appropriate given their chronological age as adolescents and their level of education. Third, cognitively they were at the formal operational level, which facilitated their adequate grasp of the abstract gender stereotypes concept. Moreover, the nature of questionnaire to which they were expected to respond dealt with familiar experience in terms of the socialisation process to which they had been subjected, as well as the fact they had been exposed to the study of a number of subjects such as mathematics, science, sports and technology to which they were to relate their responses. Finally, their participation made it easier for the study to examine the educational implication of stereotypes.

Questionnaire

The questionnaire administered consisted of ten statements used in reference to gender stereotypes. The ten statements dealt with areas such as Reading, Sports, Dancing, Mathematics, Talking, Science, Getting Along with Peers, Fixing Things, Cooking and Getting Along with Adults. For each statement, there were three possible answers comparing boys and girls. The participants were to mark with a tick the most appropriate answer showing whether boys or girls were better at a certain activity. In case they did not think so, they had a third option on questionnaire which was to be marked with a tick. The third answer read as follows: 'There is no difference.'

The validity and reliability of the ten-statement gender stereotypes questionnaire has been confirmed (Beerz, 1990). Moreover, many research studies carried out in more than two decades have used the same questionnaire in the investigation of gender stereotypes (Mwamwenda, 2011; Ifegbesan, 2010; Gender Stereotypes, 2004)

Procedure

Prior to the administering the questionnaire, permission was sought from each one the five principals of the schools, as well as the class teachers in charge of such classes. Participants' consent was obtained in a rather indirect manner, in so far as they were given the option of not responding to the questionnaire, if they so desired. Ideally, permission could have been sought from the Department of Education and parents could have been notified and perhaps expressed their consent. On account of past experience and practice, this was not thought necessary. Had it not been so, the school principals would have said so. Following such permission, arrangement was made with the teachers involved in teaching the various grades so that students would be administered the questionnaire during the respective periods. The monitoring of the writing of answers to the questionnaire was done by the research assistant with the assistance of the respective teachers.

Immediately after the briefing, participants were asked whether they had any questions to raise regarding the exercise. A couple of clarifying questions were raised for which answers were provided. Thereafter, the participants proceeded to respond to the questionnaire for which they were given twenty minutes to complete. Those who completed the questionnaire earlier than the allocated twenty minutes were to remain seated until the allocated time was over. At the end of the allocated time limit, all participants were asked to stop writing and submit the questionnaire to the research assistant and the teachers who assisted in invigilation.

Analysis of data

Chi square (χ^2) contingency tables were used to confirm or not confirm the alternate research hypotheses on gender stereotypes in the responses for the entire set of participants, as well as in the responses for male and female participants separately. This held true for each one of the ten statements in the questionnaire to which the participants were expected to respond.

For each of the ten statements, there were three possible responses. Participants were expected to choose one that was most appropriate in their views as individuals. For each one of the ten statements the respondent was to indicate whether girls or boys are better than the other, or whether there was no difference.

The responses for all the participants for all the statements are displayed in Table 1. In response to Reading, there was a statistically significant difference proportionally χ^2 (2 df, N597) =208.8 $p < .001$. In view of this, the alternate hypothesis that there was a statistically significant difference was accepted, as more responses indicated that girls were better at Reading than was the case with boys.

Table 1:

Participants' Responses to Stereotypes Statements* N= 599

Statements*	Girls Better	Boys Better	No Difference	Chi Square	P
Reading	204	102	292	208.8	.001
Sports	38	358	205	137.7	.005
Dancing	247	63	278	152.9	.001
Mathematics	30	332	236	146.6	.001
Talking	303	116	179	199	.001
Science	32	304	249	124	.001
Getting Along with Peers	171	144	240	127	.001
Fixing Things	85	389	111	214	.001
Cooking	474	21	89	169	.005
Getting Along with Adults	184	85	312	208	.001

*Key words in Questionnaire used for Statements

Responses regarding whether girls or boys were better were statistically significant χ^2 (2 df, N597)= 137.7, $p < .005$. The alternate hypothesis was accepted, as boys were considered better at sports than girls. In Dancing, the proportion of participants agreeing that girls are better than boys was statistically significant χ^2 (2 df, N597)=152.9 $p < .001$. For this reason, the experimental hypothesis that girls are better at dancing than boys was accepted.

The responses to whether girls or boys were better at Mathematics were statistically significant χ^2 (2 df, N597)= 146.6, $p < .001$. Boys were thought to be better than girls in Mathematics, which led to the alternate hypothesis being confirmed. Moreover, participants were of the view that girls do better at Talking than is the case with boys χ^2 (2 df, N 597)=199, $p < .001$. The alternate hypothesis, supporting the position that girls are better at Talking than boys was confirmed

Table 1 shows that participants' responses were in the direction of boys being better in Science than was the case with girls χ^2 (2df, N597)=124, $p < .001$. Therefore, the experimental hypothesis was retained, as more boys were considered better than girls in their Science performance. The seventh statement dealt with either boys or girls being better at Getting Along with Peers, in which case girls were deemed better than boys χ^2 (2 df, N597)=127, $p < .001$. The alternative hypothesis that girls are better than boys in Getting Along with Peers was confirmed.

In statement eight, participants were asked to show whether boys or girls were better at Fixing things or there was no difference. There was a significant difference statistically χ^2 (2 df, N597)=214, $p < .001$ in support of boys being better at Fixing Things. The alternate hypothesis was retained. In response to whether girls or boys were better or the same when it came to cooking, the overwhelming response was in favour of girls being far better than boys χ^2 (2 df, N597)=169, $p < .005$. The experimental hypothesis was confirmed.

Participants were finally asked whether girls or boys were better at Getting Along with Adults. There was a statistically significant difference χ^2 (2 df, N597)=208, $p < .001$. The alternate hypothesis that girls are better than boys at Getting Along with Adults was confirmed.

In summary, the hypotheses that adolescents' responses to gender stereotypes would differ significantly were confirmed for every one of the ten statements of the questionnaire. This demonstrates that the gender stereotypes observed in Western countries also prevail among the South African adolescents who participated in this investigation.

Sex differences in gender stereotypes

The second aspect of the data analysis consisted of examining sex differences in gender stereotypes for which alternate hypotheses were tested by Chi square (χ^2) contingency tables as displayed in Table 2.

Table 2:

Boys' and girls' responses to stereotypes statements Boys=360 Girls=239

Participants	Girls Better	Boys Better	No Difference	Chi Square	P
Reading					
Boys	86	85	188	42.3	.001
Girls	118	17	104		
Sports					
Boys	8	242	110	263.3	.001
Girls	25	116	93		
Dancing					
Boys	135	49	174	135	.001
Girls	112	14	104		
Mathematics					
Boys	12	232	115	237	.001
Girls	18	100	121		
Talking					
Boys	152	78	130	96.2	.001
Girls	151	38	49		
Science					
Boys	7	218	129	160.2	.001
Girls	25	86	120		
Getting Along with Peers					
Boys	71	101	182	44.4	.001
Girls	100	43	88		
Fixing Things					
Boys	46	241	66	284	.001
Girls	39	148	45		
Cooking					
Boys	272	17	64	251	.001
Girls	202	4	25		
Getting Along with Adults					
Boys	95	64	195	130	.001
Girls	89	21	117		

*Middle Column shows key words standing for the Questionnaire Statements. For the alternate hypothesis, it was expected boys and girls participants' responses would be significantly different. The chi square analysis showed that the difference between the two sets of participants was significantly different $\chi^2(2df, 392) = 42.3, p < .001$. Such a difference led to the acceptance of the alternate hypothesis in which girls were in greater proportion than boys. On the statement of Sports, there was a statistically significant difference between male and female participants $\chi^2(2 df, N241) = 263.3, p < .001$. Therefore the alternate hypothesis was confirmed with a greater proportion of boys in support of boys being better than girls in Sports.

On the question of girls and boys in relationship to Dancing, the difference was statistically significant $\chi^2(2 df, N260) = 135, p < .001$. The experimental hypothesis was retained. More girls' responses than those of boys were of the view that girls are better at Dancing than is the case with boys. As far as performance in Mathematics was concerned, statistically significant difference was observed $\chi^2(2 df, N335) = 237, p < .001$. The alternate hypothesis was accepted. More boys were in agreement with alternate hypothesis than was the case with girls.

In response to whether girls are better at Talking than boys or vice versa, the difference was statistically significant $\chi^2(2 df, N206) = 96.2, p < .001$. Girls were said to be better at Talking than boys, supported by a greater proportion of female participants than male participants. The alternate hypothesis was confirmed. In relation to Science and the way girls and boys perform, there was a statistically significant difference with boys being said to be better than girls $\chi^2(2 df, N390) = 160.2, p < .001$. Hence, the support for the alternate hypothesis. There were more boys than girls in support of the alternate hypothesis.

Participants were asked to compare girls and boys in the manner they Get Along with Peers, for which significant difference was observed with girls being classified as getting along with peers better than boys $\chi^2(2 df, N153) = 44.4, p < .001$. A greater proportion of girls were in support of this prediction than was

the case with boys. The alternate hypothesis was supported.

Fixing Things responses from both boys and girls were significantly different $\chi^2(2 \text{ df}, N391)=284, p<.001$. In view of this, the experimental hypothesis was confirmed. Boys were said to be better than girls at Fixing Things, and this was supported by girls more than by the boys.

Responses to whether girls or boys are better at Cooking from male and female participants were significantly different, with a greater number of responses from girls than boys asserting that girls are better $\chi^2(2 \text{ df}, N553)= 251, p<.001$. Such difference led to accepting the experimental hypothesis. On Getting Along with Adults, more girls than boys thought girls were better than boys, $\chi^2(2 \text{ df}, N241)= 130, p<.001$. The alternate hypothesis was confirmed.

DISCUSSION

The principal purpose of this investigation was first to examine the prevalence and existence of gender stereotypes among adolescents in the Eastern Cape Province of South Africa. Subsidiary and as an extension of the title of the investigation, further analysis was sought to identify gender differences in gender stereotypes among the participants consisting of 360 boys and 239 girls. The second component of the study aimed at determining the extent to which there were statistically significant different responses to the ten statements of the questionnaire based on the participating girls and boys.

The analyses of data led to the confirmation of all the research hypotheses which predicted statistically significant differences in the responses of participants in support of gender stereotypes. This held true for all the ten statements in the questionnaire covering the following aspects of behaviour for boys and girls: Reading, Sports, Dancing, Mathematics, Talking, Science, Getting Along with Peers, Fixing Things, Cooking, and Getting Along with Adults.

A significant number of boys and girls were of the view that comparatively girls are better than boys in Reading. In terms of Sports, a statistically significant

number of participants thought that boys were better than girls. The same held true in response to whether boys are better than girls in Mathematics.

A comparison between boys and girls on Talking showed a significant difference in favour of girls being better than boys. However, when it came to Science, the response was that boys were better than girls. Getting Along with Peers was viewed as the domain of girls who are stereotyped to do better than boys. In contrast, boys were said to do better than girls when it comes to Fixing Things. Cooking was considered the domain of girls, as the majority of respondents agreed that girls are better than boys. Similarly, the majority of participants said that girls are better than boys in Getting Along with Adults.

These findings are in alignment with other research findings reported in the literature review (Delamere & Shaw, 2010; Wilde, 2009; Wilhelm, 2009; Gaganakis, 2003). In these studies it was shown that women are associated with cooking and domestic chores more than is the case with men. It was also pointed out that comparatively, boys are keener in participating in sports such as hockey, baseball, golf and soccer than girls who engage in feminine activity such as music lessons, dance, handcrafts and choir.

Furthermore, the findings of this investigation are in agreement with extensive research that has been carried out on gender stereotypes based on girls' and boys' performance in school subjects such as Mathematics, Science, English (Wilhelm, 2009; Bosire et al, 2008; Woods et al, 2008; Lee & Mushner, 2008; Driessen, 2007; Smith et al, 2007). In these studies, it has been shown that boys outperform girls in both Mathematics and Science, whereas in English and verbal ability, girls outperform boys. Such difference in performance becomes more distinct after completing the lower classes of high school and at university level.

The current findings are a replica of what has been observed in Western countries, where research on gender stereotypes has been widely carried out for many years. This has not been the case in South Africa or other African countries. Given what has been reported in the literature review, the findings of the present investigation lend support to such findings. What is even more interesting are the implications of such findings in the relationship between teachers and adolescent students and other factors which have a bearing on the lives of adolescent students in the present as well as the future.

It can be argued that when children join school, what is already known about the children's stereotypes is reinforced by teachers in their interaction both in the classroom in particular, as well as outside the classroom in general (Mwamwenda, 2011; Ifegbesan, 2010; Kane, 2009; Tiedemann, 2006). Holdsworth (2007) cautions that the very teachers involved in the education of the young ones are not immune to the gender stereotypes.

Unknowingly, teachers perpetuate male stereotypes by paying more attention to male students, while paying very little attention to female students (Mwamwenda, 2011; Ifegbesan, 2010; Gender Bias in the Classroom, 2009). The education children receive at school reinforces what has been acquired at home regarding stereotypes, as reflected and displayed in the reading material and textbooks used at school (Ifegbesan, 2010; Commonwealth Secretariat, 2008).

The implication of stereotypes is the impact it has in the shaping, questioning, and promoting reinforcement in the development of identity, education, career, and decision making in various aspects of life in the lives of girls and boys while still young, and as they grow into adulthood (Brandell and Staberg, 2008; Phetla, 2007; Frawley, 2005; Gaganakis, 2003). In this context, Musanovic (2009) argues that it is not a wrong assumption to say teachers' stereotyping has an impact on school children, as they are academically and socially moulded.

As a result of gender stereotyping, the resultant outcomes are restriction in educational achievement and job prospects. Moreover, the very norms used for the promotion of gender inequality are further strengthened (Holdsworth, 2007). Frawley (2005) advances the argument that it is vital for teachers to recognise that teachers' biases whether intentional or accidental have an impact on students, as they form their own perceptions, beliefs and develop their social, intellectual, emotional and physical abilities.

According to the Commonwealth Secretariat (2008), stereotypes reinforced by teachers in many commonwealth countries are responsible for hindering boys and girls expected achievement at school. It is further argued that children are expected to be provided with an appropriate environment that is conducive to their growth and development of natural powers at their own pace to their fullest potential (Commonwealth Secretariat, 2008).

In the South African setting, the educational implication of the present investigation is a serious one. At all levels of the education system students have problems in academic achievement in all subjects, but more so in mathematics-science-related areas of studies. Various factors have been identified as associated with such a state of affairs. There is hardly a study bringing the attention of those concerned that some of the problems experienced may be attributed to gender stereotypes as experienced in society in general, and school in particular. Society, parents, teachers and students have gender stereotypes which may be contributing to such poor performance.

It is important therefore that due emphasis should be placed on an awareness of gender stereotyping not only at home and school, but also in society at large, as children, adolescents and adults interact among themselves as well as community members, teachers, parents and the significant others in society such as journalists, politicians, business persons, peasants and farmers. This should be reflected in professional development, school curriculum, textbooks, media inclusive of radio, television, textbooks and other reading material, school practice, teacher-student interaction in class and school as a whole. This is 'a tall order', and yet this is the challenge with which South Africa must

grapple to bring about transformation in the education system.

Limitations

The sample consisted of participants who lived in a rural area and attended school in the same rural area not far from Mthatha in the Eastern Cape. This was a limitation in so far as it excluded participants from urban areas of the Eastern Cape. What we know about the rural students cannot provide us with similar knowledge about urban dwellers. Another limitation was its confinement to the Eastern Cape, to the exclusion of other provinces in South Africa. Given the nature of the educational implications of gender stereotypes, the study could have included a correlation study in which the participants' stereotypes would have been compared with their academic achievement in their school subjects. Alternatively, the study could have examined a correlation between student gender stereotypes and those of their teachers based on the same questionnaire. Such limitations are important to be considered for future research on gender stereotypes in South Africa.

Conclusions

In summary, the literature review clearly shows that child rearing practice, parents, teachers and other members of society have a bearing on the development of gender stereotypes as observed in school children. Teachers influence students in the manner they perform in school subjects such as Mathematics, Sciences, Languages and Sport, on the basis of their gender stereotypes. Equally true are the students whose gender stereotypes influence their commitment in certain subjects. Moreover, their decision making is constrained on the basis of their gender stereotypes. Gender stereotyping starts with child-rearing and socialisation processes. By the time children commence school, they have already formed their own perceptions of the already established stereotypes.

Teachers have their own gender stereotypes related to themselves, career and cultural background. In the African context, hardly any attempts are made to discard such stereotypes. It is almost a way of life. Instead they are passed on to school children as if it were a legacy. As was seen in the literature review,

boys are considered better at Mathematics and Sciences than is the case with girls. This affects teachers in their teaching students in their classrooms. This has a corresponding effect on how students perform in such subjects, particularly among girls. This includes the preparation of instructional material, and the way teachers interact with learners in class, in particular and school in general. According to the literature review, parents and teachers, as well as other members and institutions in society play a role in children's development of gender stereotypes.

Though the present investigation did not address all these issues in the broadest sense, as carried out in the literature review, it addressed the core aspect. It focused on the extent to which gender stereotypes prevail among school adolescents in the Eastern Cape Province. In the questionnaire administered participants commented on social interactions, school subjects, sports, music, reading and other aspects of life. The results were a replica of what has been observed in Western countries regarding gender stereotyping. Indicating as it did, that there is no difference in the domination of gender stereotypes in an African rural environment, though not devoid of Western influence. If this is the case, then it would not be stretching the point, to make the assumption, that the implications of such gender stereotypes also may apply to African children in the Eastern Cape, subject to empirical research for confirmation purposes. In fact, the level of gender stereotyping among some teachers in the Eastern Cape is not different from what has been observed among their students ((Mwamwenda, 2011).

As a researcher, I am of the view that the findings of the present investigation are a contribution to a body of knowledge within its own right. Given the paucity of research on gender stereotypes in South Africa, the study provides knowledge that will be useful to teachers, policy makers and those involved in the preparation of students for a teaching career, without leaving out the political component of society. Every society worldwide believes in the crucial role education plays in the development of people, as well as in national and economic development. As such, the nature of curriculum pursued at all levels of education is of paramount importance. A knowledge of gender stereotypes

among school children at all levels would be something in which men and women irrespective of creed would want to invest in, by ensuring that gender stereotyping is not part of the education landscape in the education system and society at large.

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