

SCHOOL ORGANISATION AND SEX DIFFERENCES AND CHANGE IN
ADOLESCENT SELF ESTEEM

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Introduction

The special study group to the Schools Commission on the education of girls wrote (Girls, School and Society 1975) that they viewed the evidence on self confidence and self perception as coming 'nearer to the heart of the matter' than any previously reported. Most researchers in the area agree that these are still topics of key importance in the education of girls, and the Schools Commission continues to stress their importance (1978, 1981).

There is a growing body of research evidence which documents sex differences in self esteem. Several major Australian surveys have found that girls have lower self esteem than boys during adolescence (Edgar 1974, Connell *et al.* 1975, Poole *et al.* 1976). Connell and others (1975) found a highly significant drop in levels of self esteem around thirteen or fourteen, falling off until late adolescence; whereas boys' self esteem showed a steady rise during this period.

Self esteem is a crucial variable in educational achievement (LaBenne and Green 1969, Purkey 1970, Wylie 1961), and also in adult life (Coopersmith 1968). Furthermore low self esteem is often related to low educational and occupational aspirations and expectations, and to negative self views and perceptions of the future. Such attitudes were reported in adolescent girls by both Connell *et al.* (1975) and Edgar (1973).

Negative self perceptions have far reaching effects when key decisions about school and jobs are being made. It is likely that the processes leading to sex differentiation in post-school educational qualifications, and in the workforce, begin early in secondary school. It is therefore important that the dynamics of the decline in self esteem of girls is understood, and particularly that any aspects of schooling which might be involved be delineated.

Sex as an organising principle

There is an extensive body of literature which documents various facets of school experience which contribute to sex role stereotyping (for example, Davies and Meighan 1975, Frazier and Sadker 1973, *Girls, School and Society* 1975, Lobban 1978). Which are most significant and is it possible to perceive any pattern integrating the various aspects?

Shaw (1976) has suggested that the use of sex as an organisational principle is similar to the institution of streaming, and that it makes a unique contribution to the division of labour in society. It is likely that school organisation is a major determinant of differences in the school experience of girls and boys, and as such is a key factor to be considered.

Theoretical perspectives

The basic theoretical perspective was the Social Construction of Reality theory of Berger and Luckmann (1966), with schools viewed as reality defining institutions. It was proposed that, through their patterns of organisation, schools reflect the social structure, in terms of both the class and sex divisions of society. This is the reality which is imposed on students and which is internalised, thereby influencing identity, and in turn self esteem. Thus the objective view of reality - that certain jobs and futures are appropriate for boys and girls - is internalised by students. These changing perceptions of the future will be likely to be expressed in changing levels of self esteem.

The study therefore investigated sex differences in self esteem, with course group as an important

intervening variable between sex and self esteem. It was postulated that self esteem will, in general, be lower for adolescent girls than for boys. It was also suggested, on the basis of previous research (Connell 1975, Edgar 1974, Poole *et al.* 1976, Poole 1977) that self esteem in girls would show a decline during early secondary school, whereas boys' self esteem would be likely to rise or remain stable. These trends, however, would be influenced by the mediating effect of course group, such that the sex differences and changes in self esteem would be more evident in course groups which are low in terms of the academic hierarchy of the school.

The following propositions were developed and tested in the study:

1. There will be *sex differences in self esteem* at Grades 8, 9 and 10.
 - 1.1 Girls will have lower levels of self esteem than boys at all grade levels.
 - 1.2 Sex differences in level of self esteem will increase from Grade 8 to Grade 10.
2. There will be *differential changes in level of self esteem* through Grades 8, 9 and 10.
 - 2.1 Level of self esteem in girls will decline from Grade 8 to Grade 10
 - 2.2 Level of self esteem in boys will not decline from Grade 8 to Grade 10.
3. Sex differences and changes in level of self esteem will vary with *course group* of the student.
 - 3.1 Sex differences in level of self esteem will be greater among students who are in a low course group than among students who are in a higher course group.
 - 3.2 Decline in level of self esteem in girls from Grade 8 to Grade 10 will be greater among girls in a low course group than among girls in a higher course group.

Research Methods

The study was undertaken as part of a broader investigation into aspects of school organisation, which involved the collection of qualitative and quantitative data. Sex differences in educational and occupational aspirations and expectations were also investigated but are not reported in this paper (see Taylor 1981).

The study was carried out in a large Queensland urban secondary school with an enrolment of around 1400, and with a broad socioeconomic spread among the students. The classes were not streamed in Grade 8, but streamed into 'academic' (Group 1), 'commercial' (Group 2) and 'general' (Group 3) subjects in Grades 9 and 10. This pattern of organisation is common in secondary schools in the region. A highly salient feature of the school organisation was that courses were self selected by students and their parents, with choices being made towards the end of the Grade 8 year.

In order to test the propositions a pre-test/post-test design was chosen. The research plan adopted was an attempt to overcome some of the problems of using cross-sectional or longitudinal studies alone. Ideally, in any study which deals with trends over time there is a need to measure age, period and cohort effects (Palmore 1978). However, the main concern in this study was not in separating out these three possible effects, but rather in investigating differential effects on the sexes over time.

The research plan is shown in Figure 1. Testing was done early in the school year (March 1976) and again one year later (March 1977), with the exception of the Grade 10 students who were post-tested in December 1976 as many of them were leaving school at the end of the year. Group D was a random sample of 80 (40 boys, 40 girls) of the 1977 Grade 8 students selected for comparison with the 1976 Grade 8 population.

FIGURE 1

<u>Research plan</u>		Group A	Group B	Group C
PRE-TEST		Grade 8	Grade 9	Grade 10
March 1976				
POST-TEST	Group D	Group A	Group B	Group C
March 1977	Grade 8	Grade 9	Grade 10	End of Grade 10

It was decided to test the entire Grade 8, 9 and 10 population to ensure that numbers were sufficiently large to allow comparison between the sexes within each course group, and also to allow for attrition through students leaving school during the time the research was undertaken. This was also acceptable to the school administration, as whole classes could be surveyed at a time. A total of 882 students were tested in the pre-test, and 826 in the post-test.

Instrumentation

Self esteem was measured using the Rosenberg Self Esteem Scale (1965). This scale measures the self acceptance aspect of self esteem, and has the advantage that it was originally developed for use with high school students. It was selected mainly because it was that used by Connell and his team (1975) and very similar to that used by Edgar (1974), and it was considered important to continue work in this area using the same scale.

The scale consists of ten, six point, Guttman items which indicate degree of self acceptance: a high score (5 or 6) signifies low self esteem, and a low score (0 or 1) signifies high self esteem.

After analysis of the self esteem scores from the pre-test data, it appeared that a measure of Grade 8 students' self esteem later in the school year was needed. Consequently the scale, with items randomly re-ordered, was administered to Grade 8 students in October, before discussion about course choice for Grades 9 and 10 had begun. In the post-test questionnaire the items were also randomly re-ordered.

Results

It should be noted that there were found to be no significant differences in age, general ability, father's occupation or self esteem between the two grade 8 cohorts, and it was concluded that the two cohorts were comparable.

The propositions were tested using the t-test to determine whether there were significant sex differences in self esteem. It was determined that propositions would be accepted at the .05 level of significance.

Scores for self esteem are shown in Table A. Girls had significantly lower self esteem than boys at all grade levels, both in the pre-test and the post-test. When the levels of t are examined for each grade, it can be seen that the level of t increases with grade level, indicating increasing sex differences. However, there was an

TABLE A
Mean scores on Rosenberg Self Esteem Scale

PRE-TEST									
GRADE	BOYS			GIRLS			t-test results		
	Mean	SD	n	Mean	SD	n	t	df	Probability (one tailed test)
8	2.28	1.33	177	2.57	1.38	187	-2.05	362	<.025
9	2.19	1.57	116	2.85	1.44	162	-3.60	276	<.0005
10	2.08	1.30	103	2.84	1.48	137	-4.15	238	<.0005
POST-TEST									
9	2.01	1.43	164	2.34	1.57	187	-2.05	349	<.025
10	1.92	1.49	147	2.65	1.58	147	-4.06	292	<.0005
End of 10	2.39	1.56	88	2.79	1.60	93	-1.70	179	<.05

exception at the end of Grade 10, when students were about to leave school. At this point the trend was reversed and the sex difference was only just significant.

Thus, proposition 1.1 was supported, and proposition 1.2 was supported at the pre-test but not at the post-test.

In general, the mean level of self esteem in girls declined from Grades 8 to 10 at both pre-test and post-test; and although the mean for Grade 9 girls and Grade 10 girls in the pre-test was almost the same, there was an overall decline from Grade 8 to Grade 10. The level of self esteem in boys showed a steady rise, again with the exception of boys at the end of Grade 10 in the post-test. These boys showed a marked decline, although their level of self esteem still remained higher than that of the girls.

Thus, proposition 2.1 was supported, and 2.2 was supported at the pre-test, but not in the post-test.

It should be noted that when self esteem levels were checked towards the end of Grade 8, the mean scores were 2.28 for the boys and 2.43 for the girls (compared with 2.28 and 2.57 respectively in the pre-test). These results suggest that girls' self esteem had not declined through Grade 8, in fact it had risen a little, and boys' self esteem had remained stable.

When self esteem scores by group are examined (Table B) it can be seen that in all groups boys had higher self esteem than girls; and boys in group 3 had higher self esteem than girls in group 1 at both Grades 9 and 10 levels in the pre-test, and Grade 10 in the post-test. Grade 9 girls in groups 2 and 3 seemed to show a marked drop in self esteem which continued to fall off to Grade 10. The sex differences are highly significant in Group 3 at both pre-test and post-test, particularly in Grade 10 in the post-test ($p < .005$). There was an exception in the leaving group (end of Grade 10), as has already been mentioned, where boys also seemed to suffer a drop of self esteem.

TABLE B
Mean Scores on Rosenberg Self Esteem Scale x Grade x Group

PRE-TEST		BOYS			GIRLS			t-test Statistics		
GRADE	GROUP	Mean	SD	n	Mean	SD	n	t	df	Probability (one-tailed)
8	-	2.28	1.33	177	2.57	1.38	187	-2.05	362	<.025
9	1	2.12	1.56	66	2.56	1.36	64	-1.72	128	<.05
	2	-	-	-	2.76	1.44	50	-	-	-
	3	2.28	1.59	50	3.31	1.48	48	-3.33	96	<.005
10	1	1.92	1.37	66	2.57	1.45	51	-2.46	115	<.01
	2	-	-	-	2.82	1.40	50	-	-	-
	3	2.35	1.14	37	3.25	1.59	36	-2.78	71	<.005
POST-TEST										
9	1	1.91	1.47	75	2.01	1.37	75	-0.46	148	ns
	2	-	-	-	2.52	1.78	60	-	-	-
	3	2.10	1.39	89	2.62	1.52	52	-2.05	139	<.025
10	1	1.85	1.62	81	2.46	1.54	71	-2.38	150	<.01
	2	-	-	-	2.17	1.39	46	-	-	-
	3	2.00	1.32	66	3.80	1.43	35	-6.32	99	<.0005
END OF 10	1	2.15	1.45	60	2.79	1.69	42	-2.04	100	<.025
	2	-	-	-	2.62	1.55	29	-	-	-
	3	2.89	1.69	28	3.00	1.54	22	-0.23	48	ns

Thus, proposition 3.1 was supported at the pre-test level, but not in the post-test; and proposition 3.2 was supported at both pre-test and post-test.

Discussion of results

The pattern of sex differences in self esteem, and the decline in level of self esteem in the adolescent girls involved in the study were consistent with previously published research (Connell *et al.* 1975, Edgar 1974, Poole *et al.* 1976, Poole 1977). However, the study indicated that the decline in self esteem was greater among girls doing a general course than among girls in an academic group. This finding that the decline in self esteem was not uniform, and that certain groups of girls are more likely to be seriously affected than others, was of interest. Certainly it provided suggestive evidence for social rather than biological factors being a major influence on the decline in self esteem in girls. Furthermore, the fact that sex differences in self esteem were not significant towards the *end* of Grade 8 showed that the 'drop' seemed to be related to the onset of the Grades 9 and 10 courses and did not gradually occur through early high school.

The data on self esteem showed that girls had lower levels of self esteem than boys at each of the grade levels 8, 9 and 10, and that the sex difference was greatest in the general course group. Boys showed a steady increase in level of self esteem from Grades 8 to 10; except in the case of some boys in the general course about to leave school, when they too showed a drop in self esteem. The other noteworthy factor was the high proportion of girls in the general course with low levels of self esteem - a phenomenon which was also reflected in the interview data.

Connell (1975) concluded that most girls derive a sense of self esteem through social and interpersonal acceptance, while boys derive self esteem from achievement and success as well as from social acceptance. These last aspects were not investigated in this study, but it is difficult to explain the relatively low levels of self esteem of the girls in the general course in terms of lack of social acceptance of any kind. Furthermore, one is led to query why the boys in this course were so high in comparison? There was no evidence for much higher success and achievement in the case of these boys, and the fact that they had wider networks of peer group relationships makes it likely that *their* self esteem derived from mainly social sources. These wider peer networks were not found in the girls who tended to have friends from school, and often from their own class. However, it is interesting that when students *themselves* were asked in interviews about the decline in self confidence in adolescent girls, many replied along the lines of social acceptance (See Appendix).

In discussing the lower self esteem of early leavers in her study, Poole (1976) suggested that adolescents may use peer group experiences for self concept building. However, as suggested above, this study indicates that there may be different mechanisms for boys and girls.

In relation to the theoretical framework, there was some support for the notion that school plays an active role in structuring objective reality through its pattern of organisation. Perhaps the first drop in girls' self esteem occurs when they first realise the narrowness of the range of future job opportunities open to them. Increasing awareness of poor job opportunities, together with sex differences in school experience, would help sustain sex differences in self esteem. It is likely that the realities crowd in on the boys much closer to leaving, when, for example, they realise that they may *not* get the apprenticeship they have planned for. This would explain the drop in self esteem in the general course boys at the end of Grade 10, and supports the view that self esteem is related to perception of future job opportunities (or prospects of unemployment).

Further research is needed on adolescent self esteem: a longitudinal study would be of value because little is known about levels of self esteem during late adolescence. It would be of particular interest to follow

into adulthood the group of girls found to have particularly low self esteem. There are other aspects also which need clarification such as source of self esteem, and whether or not there are different mechanisms involved in girls and boys.

Conclusions

If schools are to attempt to address the issue, there is firstly a need for structural change in the system. Lessening the effects of school organisation as a structural determinant seems to be as crucial in improving the education of girls as the introduction of more specific reforms in the area. There seems to be a need for a *weakening* of the nexus between school and the occupational structure, such that the allocation function of schooling becomes less dominant. In recent years, however, there have been attempts to *strengthen* this function.

There is also a need for specific programs to be undertaken in schools to sustain girls' self esteem, together with programs to counsel girls actively about careers, and provide them with demographic information about current life patterns of Australian women. Such action could be criticised for only scratching at the surface, but Anne Summers has pointed out that the internal forces which oppress women 'have to be contended with as much as, perhaps even more in some situations than, the more readily identifiable external oppressive forces' (1975, p460). If the 'internal restraints' in adolescent girls can be lessened, this could have fundamental long-term consequences. Occupational structures and opportunities for girls will not be changed, but perhaps by giving girls more positive self views and an awareness of the structure of society they will act to transform those structures themselves.

Research on intervention programs is imperative. The Schools Commission study (Girls, School and Society 1975) reported that action was needed but that the most effective ways of doing it were not self evident. It is important to find out which particular approaches are most effective and how such programs are best facilitated in the school situation. Such programs would ideally be necessary as a short-term measure to help girls achieve a more positive self evaluation. They are particularly important at the times when girls are making key choices for the future.

APPENDIX: Interview data relating to the drop in self confidence in girls

The question relating to this was only asked of the students who seemed to be particularly informative. Of eighteen who were asked if this drop does occur, eleven agreed that it does, but not everyone could say why. The four who said they had not noticed it were all boys in Group 3.

Reasons volunteered to explain the drop were:

- a) difficulty of school in Grade 9 and the implications for getting jobs (5):

Some people they find the subjects too hard and they start getting low grades, they won't be able to get a good job and they won't be able to pass and they stop trying. (Girl - Group 2)

- b) behaviour of other people towards adolescent girls (including teachers) (4):

I think it's the treatment that they get at school. Because possibly some of the teachers - they realise that these girls in 9(3) have got low academic levels. They excuse the boys from that sometimes. It's presumed that boys aren't so good at academic stuff, but when it's a girl it's not so excusable...and maybe they're treated low by the teachers. (Girl - Group 1)

May be to do with the way people act towards them as people. (Boy - Group 1)

- c) worries about what other people think of them especially the opposite sex (5):

Probably it would go back to boyfriends. If it doesn't work out they feel they're failures. Boys don't care - you either like them or you don't - girls are more worried about what people think of them. (Girl - Group 2)

Girls are more shy socially 'cos they worry whether people will like them... I suppose they mature earlier than boys and their emotions are all tied up...it's the way girls and boys are brought up... (Girl - Group 1)

This girl went on to say: *Girls who lose their confidence need someone to help them build it up.*

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