

A decade comparison: Self-concept of gifted and non-gifted adolescents

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The study explores the link between general social environment and self-concept, and giftedness and self-concept. A total of 135 high school and 64 university students with an average age of 16 years from China took part in the research, consisting of four groups: gifted and non-gifted adolescents of Year 1993, and gifted and non-gifted adolescents of Year 2003. Comparison between the groups has been made. Findings indicate that social environment has a significant impact on the non-gifted adolescents while its influence on the gifted is comparatively slight. The Year 1993 sample shows that the gifted adolescents have a more positive academic self-concept than the non-gifted group while Year 2003 sample reflects inconsistency with the former result.

Self-concept, adolescence, social environment, academic

INTRODUCTION

Self-concept has been of interest to philosophers and psychologists for many decades. It is widely believed that self-concept has a great impact on the academic and social performance of the person. And some research reports that gifted children usually have a more positive self-concept than non-gifted children. Research also suggests that an individual's self-concept is strongly influenced by environmental factors. We address two general issues in this article. First, do the self-concepts of gifted and average late adolescents differ, and, if so, in what aspects? Second, in what respects does social environment influence self-concept of gifted and non-gifted students respectively?

Self-Concept in adolescence

Self-concept generally refers to "the totality of a complex, organised, and dynamic system of learned beliefs, attitudes and opinions that each person holds to be true about his or her personal existence" (Purkey, 1988). More specifically, it refers to "our attitudes, feelings and knowledge about our abilities, skills, appearance, and social acceptability" (Byrne, 1984, p.429). As the definition implies, self-concept is a multidimensional concept.

A number of theorists posit hierarchical or multidimensional self-concept models. Shavelson, Hubner, and Stanton construct a hierarchical structure consisting of many lower-level cognitive representations about oneself in different areas of behaviour. Under the general self-concept, there are two broad classes of subordinated self-concept, named academic and non-academic self-concept. Academic self-concept is subdivided according to different school subjects, whereas non-academic self-concept is subdivided into social, emotional, and physical self-concepts. Based on this model, with important adaptation, Marsh and his colleagues (1982, 1984, 1985, 1987) designed a series of Self Description Questionnaires (SDQ) to measure the self-concept of

elementary aged children, younger and late adolescents and adults. In this research, SDQII is adopted as measurement.

Harter (1983, 1990) gives an overview of the dimensions along which structural changes in the self-concept occur developmentally. Researchers generally believe that adolescence is a period when an individual strives toward a consistent, stable, independent self-identity and therefore, should be regarded of great importance.

Giftedness

Current research applies a broad definition of giftedness, including intelligence as well as social components as determining factors. Giftedness can be better understood when high intellectual capacities, creativity and motivation, as well as the environmental factors are considered (Mönks and van Boxel, 1985; Monks and Mason, 1993). In our research, however, we focus only on the intelligence factor of giftedness. “Gifted students” in this research refer to adolescents who are admitted to colleges at a much lower age than common peers.

Giftedness and self-concept

There remains great interest in the relationship between giftedness and self-concept. People expect to find in gifted adolescents a more positive self-concept than those of average ability because it is believed experiences of success and being labelled as ‘gifted’ or ‘talented’ will enhance one’s self-esteem. Other hypotheses argue a negative self-concept of gifted adolescents due to several reasons including high expectations that may be difficult to measure up to.

Conflicting research results render it difficult to understand the relationship between giftedness and self-concept. Some authors find no difference in self-concept between gifted and non-gifted children while other evidence shows that there are differences between the self-concept of gifted and average adolescents. Brounstein et al. (1991) used the SDQII and found that there was no difference between gifted and non-gifted adolescents on their general self-concept, gifted students score higher on academic self-concept, but lower on social and physical self-concept.

In this research, we use multidimensional self-concept measurements to compare the self-concepts of gifted and non-gifted adolescents and we expect that the gifted will show a more positive academic self-concept than non-gifted and no significant difference in non-academic self-concept.

Social environment and self-concept

Rogers (1947), who introduced an entire system of helping built around the importance of the self, believed that self-concept is a “social product”, developing out of interpersonal relationships. Theorists focusing on the self-concept agree that self-concept develops with the individual experiences in the social environment. There is also empirical evidence that the self-concept of adolescents in different cultural contexts shows significant differences in some dimensions.

China, with the further implementation of opening policy, has undergone many social changes in the previous decade (from 1993 to 2003). Great economic and technological development has not only improved the general welfare of the public, but has also brought new ideas and ideologies to Chinese people. Many significant events have taken place during the decade.

In this research, we apply multidimensional self-concept measurements and investigate the impact that social environment has on the self-concept of gifted and non-gifted adolescents respectively by comparing the self-concept of students of year 1993 and 2003. We expect to find a significant difference in dimensions such as Social and Non-academic self-concepts.

METHOD

Participants

Thirty-four Grade 1 students (6 females and 28 males) from the Special Class for the Gifted Young (hereafter referred to SCGY) of University of Science and Technology of China (hereafter referred to USTC), and 65 Grade 1 students (32 females and 33 males) from USTC high school took part in the 1993 research.

Thirty Grade 1 students (7 females and 23 males), with the average age of 16.3 years from SCGY of USTC and 70 Grade 1 students (34 females and 36 males), with the average age of 16 years from USTC high school took part in the 2003 research.

Measure

The Chinese version of Self-Description Questionnaire-II (Marsh, 1989) was used. The Questionnaire consists of 102 items. Each item has a 6-point response scale: (1) Strongly Agree, (2) Agree, (3) Generally Agree, (4) Generally Disagree, (5) Disagree, and (6) Strongly Disagree.

The questionnaire is organised in 11 subscales (8 or 10 items for each) assessing three areas of Academic Self-Concept: a) Verbal; b) Math ; and c) General School (G. School).

Eight areas of Non-Academic Self-Concept are assessed:

- a) Physical Appearance (P. App)
- b) Physical Abilities (P. Abil)
- c) Same-sex Relations (SSexRel)
- d) Opposite-sex Relations (Opp.sex)
- e) Parent Relations (Parent)
- f) Emotional Stability (E.Stabil)
- g) Honesty-Trustworthiness (HonTr); and
- h) General Self-concept (G. self-con).

High scores indicate a more positive self-concept. The coefficient alpha estimate of reliability for each SDQII subscale is reported from 0.83 to 0.91. The validity is also proved to be high.

Procedure

In a classroom setting, all participants were given the Chinese version of Self-Description Questionnaire-II requiring them to circle the response that fit their own situation.

RESULTS

By adding scores from related subscales of SDQII, we define the following combined self-concept: Academic Self-concept is a combination of math and verbal self-concept; Social Relations includes the self-concept subscales Parent Relation, Same-Sex Relation and Opposite-Sex Relation; and Non-academic Self-Concept combines physical appearance, physical ability, honesty, emotional stability, parent relation, same-sex relation and opposite-sex relations.

Differences in Self-Concept Caused by Social Environment

Self-Concept common to high school students in Year 1993 and 2003

The difference between the 11 subscales self-concepts of non-gifted students of Year 1993 and Year 2003 are presented in Table 1. In Table 2, the difference between the combined self-concept and SDQ total are presented.

Table 1. Mean scores (and standard deviations) on self-concepts of 11 subscales of non-gifted students of Year 1993 and 200

Subscale	Math	P.App	G.Self	HonTr	P.Abil	Verbal	E.Stabil	Parent	G. School	SSexRel	Opp. sex
Year93 (N=65)	42.498 (8.42)	32.54** (5.66)	45.86** (4.89)	41.57* (6.62)	30.49 (6.82)	37.68*** (8.3)	40.58 (5.25)	34.66 (5.41)	41.14*** (5.95)	47.54** (6.59)	32.86 (4.89)
Year03 (N=70)	39.89 (10.42)	35.90 (7.27)	49.03 (6.74)	44.10 (7.00)	32.20 (9.84)	43.47 (9.95)	40.63 (9.53)	36.39 (7.75)	45.54 (7.47)	51.04 (7.54)	34.29 (8.47)

*p < 0.05, **p < 0.01, ***p < 0.001

Table 2. Mean scores (and standard deviations) on self-concept scales and SDQ-II total of non-gifted students of Year 1993 and 2003

Scale/Group	SDQ Total	General Self	Academic	Social Relations	Non-Academic
Year93 (N=65)	427.42** (38.16)	45.86** (4.89)	121.31** (13.09)	115.06* (12.34)	260.25** (25.85)
Year03 (N=70)	452.47 (53.64)	49.03 (6.74)	128.9 (18.29)	121.71 (17.94)	274.54 (34.76)

*p < 0.05, **p < 0.01

Significant main effects of social environment on non-gifted students were found on subscales Physical Appearance (p < 0.01), Honesty-Trustworthiness (p < 0.05), Verbal (P < 0.001), General School (P < 0.001), and Same-sex Relations (p < 0.01). And significant differences were also found in combined scales of Academic (p < 0.01), Non-academic (p < 0.01), Social Relations (p < 0.05), General Self (p < 0.01) and SDQ total.

Notably, non-gifted students of Year 2003 score higher than their counterparts in Year 1993 in every subscale except Math. They show more positive self-concepts than their 1993 counterparts in every general aspect including Academic, Non-Academic, Social and General self-concepts.

Self-Concept of gifted students in Year 1993 and Year 2003

In Table 3, the difference between the 11 subscales self-concepts of gifted students of Year 1993 and Year 2003 are presented. In Table 4, the difference between the combined self-concept and SDQ total are presented.

Table 3. Mean scores (and standard deviations) on self-concepts of 11 subscales of gifted students of Year 1993 and 2003

Subscale	Math	P.App.	G.Self	HonTr	P.Abil	Verbal	E.Stabil	Parent	G.School	SSexRel	Opp.sex
Year93 (N=65)	44.56 (5.92)	30.09* (4.37)	45.38 (4.96)	41.56 (3.72)	30.74 (5.88)	37.71 (6.38)	41.03 (5.77)	38.53 (4.55)	44.32 (5.09)	45.91 (4.64)	30.15 (5.02)
Year03 (N=70)	42.10 (8.59)	33.07 (5.97)	47.27 (7.14)	42.27 (6.78)	31.53 (7.75)	36.77 (11.05)	42.53 (4.90)	37.57 (5.55)	43.17 (7.57)	48.13 (5.86)	32.57 (5.68)

*p < 0.05

Table 4. Mean scores (and standard deviations) on self-concept scales and SDQ-II total of non-gifted students of Year 1993 and 2003

Scale/Group	SDQ Total	General Self	Academic	Social Relations	Non-Academic
Year93 (N=34)	429.97 (31.51)	45.38 (4.96)	126.59 (11.46)	114.59 (10.51)	258.00 (20.33)
Year03 (N=30)	436.97 (44.67)	47.27 (7.14)	122.03 (22.22)	118.27 (12.55)	267.67 (26.10)

Contrary to the significant differences shown in Table 1 and Table 2, significant main effects of social environment were only found in the subscale Physical Appearance (P.App), and no significant difference was found in the general five aspects and the SDQ total. This finding suggests that change of social environment has little impact on the self-concept of gifted adolescents.

Differences in Self-Concept Caused by Intelligence

Difference in self-concept between gifted and non-gifted students in 1993

In Table 5, the differences between the 11 subscales self-concepts of gifted students and non-gifted adolescent in Year 1993 are presented. In Table 6, the differences between the combined self-concept and SDQ total are presented.

Table 5. Mean scores (and standard deviations) on self-concepts of 11 subscales of non-gifted students and gifted students of Year 1993

Subscale	Math	P.App	G.Self	HonTr	P.Abil	Verbal	E.Stabil	Parent	G.School	SsSexRel	Opp.sex
Non-gifted (N=65)	42.49 (8.42)	32.54** (5.66)	45.86 (4.89)	41.57 (6.62)	30.49 (6.82)	37.68 (8.30)	40.58 (5.25)	34.66*** (5.41)	41.14** (5.95)	47.54 (6.59)	32.86* (4.89)
Gifted (N=34)	44.56 (5.92)	30.09 (4.37)	45.38 (4.96)	41.56 (3.72)	30.74 (5.88)	37.71 (6.38)	41.03 (5.77)	38.53 (4.55)	44.32 (5.09)	45.91 (4.64)	30.15 (5.02)

*p < 0.05, **p < 0.01, ***p < 0.001

Table 6. Mean scores (and standard deviations) on self-concept scales and SDQ-II total of gifted and non-gifted students of Year 1993

Scale/Group	SDQ Total	General Self	Academic	Social Relations	Non-Academic
Non-gifted (N=65)	427.42 (38.16)	45.86 (4.89)	121.31* (13.09)	115.06 (12.34)	260.25 (25.85)
Gifted (N=34)	429.97 (31.51)	45.38 (4.96)	126.59 (11.46)	114.59 (10.51)	258.00 (20.33)

*p < 0.05

Significant main effects of intelligence were found in the subscale Physical Appearance (p < 0.01), Parent Relations (p < 0.001), general school (p < 0.01) and Opposite-sex relations (p < 0.05). A significant difference was only found in the combined Academic self-concept, which shows gifted adolescents of Year 1993 have a more positive academic self-concept than the non-gifted.

Difference in self-concept between gifted and non-gifted students in 2003

In Table 7, the differences between the 11 subscales self-concepts of gifted students and non-gifted adolescent in Year 2003 are presented. In Table 8, the differences between the combined self-concept and SDQ total are presented.

Table 7. Mean scores (and standard deviations) on self-concepts of 11 subscales of non-gifted students and gifted students of Year 2003

Subscale	Math	P.App	G.Self	HonTr	P.Abill	Verbal	E.Stability	Parent	G.School	SSexRel	Opp.sex
Non-gifted (N=70)	39.89 (10.42)	35.90* (7.27)	49.03 (6.74)	44.10 (7.00)	32.20 (9.84)	43.47** (9.95)	40.63 (9.53)	36.39 (7.75)	45.54 (7.47)	51.04 (7.54)	34.29 (8.47)
Gifted (N=30)	42.10 (8.59)	33.07 (5.97)	47.27 (7.14)	42.27 (6.78)	31.53 (7.75)	36.77 (11.05)	42.53 (4.90)	37.57 (5.55)	43.17 (7.57)	48.13 (5.86)	32.57 (5.86)

*p < 0.05, **p < 0.01

Table 8. Mean scores (and standard deviations) on self-concept scales and SDQ-II total of gifted and non-gifted students of Year 2003

Scale/Group	SDQ Total	General Self	Academic	Social Relations	Non-Academic
Non-gifted (N=70)	452.47 (53.64)	49.03 (6.74)	128.9 (18.29)	121.71 (17.94)	274.54 (34.76)
Gifted (N=30)	436.97 (44.67)	47.27 (7.14)	122.03 (22.22)	118.27 (12.55)	267.67 (26.10)

Significant main effects of intelligence were only found in the self-concept subscale Physical Appearance (p < 0.05) and Verbal (p < 0.01). No significant differences were found in combined General Self, Academic, Social, Non-Academic self-concepts and SDQ total. From Table 8, we find slightly more positive self-concept in every scale of non-gifted adolescents than the gifted.

DISCUSSION

Social Environment and Self-concept

Social Environment and self-concept of non-gifted adolescents

Our results suggest that the improved social environment has a positive effect on the general self-concept of non-gifted adolescents. This result is consistent with our expectation. Compared with the social situation and living standards of 1993 in China, adolescents now enjoy a more comfortable and colourful life and with the development of the internet and communication technology, it is easier for them to get access to and connect with the outside world. And in the present China, individualism is stressed and advocated more than ever before and students tend to care more about themselves, their physical appearance, their abilities when the comparative abundance of the society provides more possibilities for the adolescents to better themselves. In general, adolescents are more satisfied and confident with their life and feel better about their quality than their counterparts ten years before. All these are represented in their more positive Academic, Social, Non-Academic and General Self-concept.

In Table 1, we find a decline, though not significant, in the self-concept subscale of math and a very significant increase in the verbal. Our explanation for this phenomenon is the reform on Chinese education and the changed social environment. In the past, math is given so much emphasis that the performance on math was almost regarded as an essential criterion for the academic performance of a student. Currently, the predominant role of math has declined and educationalists emphasise a balanced development in the arts and sciences subjects. Furthermore, the media, debate contests, and experiences in present job market make people believe that verbal abilities play a significant role in the success of one's career and personal development; therefore, an increasing emphasis is placed on verbal abilities. All these changes result in an increasing confidence in verbal and decrease in math.

Social Environment and self-concept of gifted adolescents

Surprisingly, apart from the self-concept subscale Physical Appearance, the result suggests no significant social impact on the self-concept of gifted adolescents.

It is comparatively easy to explain the significant increase in the confidence of physical appearance of gifted adolescents. Compared with the adolescents ten years ago, today we have more nutritious food to eat and more beautiful clothes to wear. The reality is that people today do look nicer than their counterparts ten years ago. Gifted and non-gifted adolescents show the same tendency in this subscale.

Although increases were found in the General Self, Social-Relations, Non-Academic self-concept and a decrease was shown in the academic aspects, the effect of changed social environment, unlike the effects on non-gifted adolescents, is far from significant. One possibility is that the sample of gifted adolescents is relatively small and cannot reflect the real trend of the changes in the self-concept of the group. But we would rather attribute the consistency to the possible special characteristic of the gifted. Because gifted adolescents are labelled as 'genius' at a fairly early age, they are used to praise and special attention. We predict that compared with their regular peers, the gifted group has less concern about the surrounding environment and how others behave toward them; therefore, this group maintains a relatively stable and consistent self-concept and is influenced less by the social environment.

Giftedness and Self-concept

The comparison of non-gifted and gifted adolescents of year 1993 is consistent with our prediction and many findings in literature in which a more positive academic self-concept is found among the gifted group. The more academically intelligent adolescents have more positive self-concept in academic fields because they experience more success in academic fields, but they may not necessarily perceive themselves positively in other aspects.

Strangely, a more positive academic self-concept is not found in the gifted group in the year 2003; instead, a more negative self-concept, though not significant, is found in the Academic, Social, Non-Academic, General self-concept dimensions. The possible explanation for this apparent inconsistency is that the research is done in the second semester of year 2003, when the gifted adolescents have studied at university for a whole semester. Some theorists, taking into consideration of the social comparison process, predict a more negative self-concept in the gifted group. When the gifted adolescents are removed from the regular classroom, and placed into homogeneous groups of other exceptional peers, this change in the comparison group might under some circumstances lead to a decline in self-esteem. Many psychologists have discussed the social comparison process in this type of situation.

CONCLUSION

Most research studies tend to explore the link between social environment and self-concept and the link between giftedness and self-concept. Our results suggest the social environment does have a great impact on the non-gifted adolescents' perception of themselves while this element has much less influence on the gifted group. The gifted adolescents seem to have a more stable and consistent self-concept probably due to their special status and social recognition.

The comparison between the self-concept of gifted and non-gifted group in 1993 is consistent with most studies, which is that the gifted have a more positive academic self-concept than their common peers, although the research in 2003 does not support this finding. We attribute the inconsistency to the comparison process which may occur when the gifted are placed with other exceptional adolescents and consequently they may feel less confident in their academic achievements.

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