

Adolescent developmental resources and differential analysis

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Abstract: Factors that promote the positive development of adolescents are referred to as developmental resources. This article, guided by the theory of developmental resources, analyzes the ideological and moral assessment project data from 11 middle schools in X District of City B. The study found that: adolescents have a relatively abundant supply of developmental resources overall, but there are also deficiencies; there are significant differences in developmental resources among adolescents of different genders and ages; the level of parental education significantly affects the richness of adolescents' developmental resources. It is recommended to specifically address the weak areas of adolescents' developmental resources; to tailor education to the needs of different genders; and to broaden the channels through which adolescents can access developmental resources.

Keywords: Adolescent Developmental Resources, Environment, Education

1. Introduction

Adolescents have always been a focal point of societal concern. As they are in a critical period of individual socialization, they have not yet obtained the qualifications for social entry or the ability to live independently, making their growth and development heavily reliant on the support of family, school, and society. These external environments have a significant impact on their development. On the other hand, we can observe that even when the living environment is the same, individual differences still exist. The internal value standards and personal abilities of adolescents are also crucial for their socialization. Therefore, both the external and internal environments constitute the key factors affecting the positive development of adolescents. Among these factors, there are some that promote the positive development of adolescents, which we refer to as developmental resources. Developmental resources not only help adolescents stay away from high-risk behaviors but also increase the likelihood of good behaviors. So, what is the current state of developmental resources for adolescents, and do different groups of adolescents differ? This study draws on the developmental resource theory model and attempts to answer the above questions through the measurement and analysis of adolescent developmental resources. Creating a positive environment for the comprehensive development of adolescents is not only the purpose of this article but also an inherent part of current adolescent education.

2. Research review

For a long time, the "problem" perspective that has come with the development of preventive science has been the main approach for Western scholars to study adolescents. Since the 1990s, the positive psychology theory based on "humanism" has been accepted by more and more scholars. Among them, the Positive Youth Development (PYD) theory, which studies adolescents, emphasizes the healthy development potential that adolescents themselves possess and advocates cultivating adolescents as a resource [1]. The "strengths" perspective, which focuses on the potential plasticity of adolescent development, has gradually become the mainstream theoretical framework in the field of contemporary adolescent research and services. This theoretical framework covers many specific explanatory models constructed by scholars, among which scholar Benson's developmental resource model is favored by researchers due to its rigorous theoretical and research foundation, strong transferability, and operability.

What are developmental resources? They refer to a series of experiences, skills, and values that can effectively promote positive development outcomes for all adolescents [2]. They focus on the microsystem environment that has the most direct impact on people (including family, school, peer groups, etc.) and the ecological environment units larger than the microsystem (including neighborhood communities, school organizations, etc.). The core orientation is to integrate resources from the individual themselves and their environment that are conducive to positive individual development. Leffert found in his research that the more resources adolescents have, the lower the possibility of alcohol abuse, depression, and violence [3]. Benson's research also found that adolescents living in families, schools, communities, and peers with abundant resources are about six times less likely to engage in risky behaviors than those with scarce resources [4]. From this, Benson and others found that the more developmental resources adolescents have, the more likely they are to achieve positive development. That is to say, internal resources from adolescents themselves and external resources from the surrounding environment, through positive interaction, can generate feasible and convenient resource interactions, which can not only reduce the possibility of dangerous behaviors but also play a role in preventing high-risk behaviors, promoting good development outcomes, and enhancing resilience [5].

Domestically, early researchers mostly used concepts such as "ideological character" and "moral ability" to measure whether adolescents are healthy, and the research was mostly about measuring and describing the moral behavior of adolescents, with relatively little discussion on the impact of their environment. With the global popularity of positive psychology, domestic research has gradually opened up a new perspective of developmental resources to view adolescent development. Scholar Chang Shu min explored the predictive role and operating mechanism of developmental resources on adolescent violent crime and found that the more internal resources adolescents have, the lower the possibility of becoming violent criminals, and developmental resources at medium and affluent levels can significantly reduce the incidence of adolescent violent crime [1]. In addition, Wang Mei Juan and Xu Mei respectively studied the relationship between developmental resources and academic adaptation of senior elementary school students and junior high school students. The research found that no matter elementary or junior high school students, the more developmental resources they have, the better their academic performance and adaptation, and the total number of developmental resources has a significant negative predictive effect on problematic behaviors [2,6]. The above domestic research further verifies Benson's developmental resource theory. However, for most researchers, developmental resources are still a new perspective and research field. With the gradual promotion and application of the developmental resource theory, more and more scholars are bound to focus on the broad social environment, giving more attention and a more important position to family, school, and community resources.

In summary, this article takes the developmental resource model as the perspective, based on the questionnaire survey of the status of adolescent developmental resources, combined with the development situation of adolescents, explores and analyzes the current developmental resources and their differences that adolescents have, and on this basis, proposes countermeasures and suggestions on how to improve adolescent developmental resources and promote positive development outcomes for adolescents.

3. Research methods

3.1. Sampling methods and sample introduction

This study employed a cluster sampling method. Initially, 11 middle schools were selected from 32 in X District of City B, and then all classes from the first year of junior high school and the first year of senior high school in these 11 schools were chosen for the survey. A total of 59 classes from the first year of junior high school were sampled, comprising 2,216 individuals; 66 classes from the first year of senior high school were sampled, comprising 2,243 individuals. The total number of student samples was 4,459. For the first year of junior high school, 2,046 questionnaires were distributed and 1,996 valid questionnaires were collected, with a validity rate of 97.5%; for the first year of senior high school, 2,093 questionnaires were distributed and 1,933 valid questionnaires were collected, with a validity rate of 92.4%. After further screening, the final sample size was 3,927.

The survey was conducted primarily by master's degree students who possess strong professional capabilities and have undergone rigorous assessment training and guidance. All questionnaires were distributed and organized by the testers in the surveyed classes, with questions from students answered on the spot. The questionnaires were collected and organized within the specified time, followed by data entry and statistical analysis (see Table 1 for details).

Table 1: Basic Situation of Middle School Students in X District of City B (n=3927)

Variable	Category	Frequency	Proportion/%
Gender	Male	2038	51.9
	Female	1889	48.1
Hukou (Household Registration) Location	Local	3371	85.8
	Non-local	513	13.1
	Unknown	43	1.1
Only Child	Yes	3275	83.4
	No	652	16.6
Grade	First Year of Junior High	1995	50.8
	First Year of Senior High	1932	49.2
Ethnicity	Han	3380	86.1
	Other Ethnic Groups	532	13.5
	Unknown	15	0.4
Class Leadership	Not a Class Leader	1179	30.0
	Class Leader	2748	70.0

3.2. Concept definition and operationalization

Developmental resources are divided into two parts: internal developmental resources and external developmental resources. Internal developmental resources refer to the intrinsic values that guide adolescents' behavior, including four dimensions: social skills, positive self-identity, eagerness to learn, and positive values. External developmental resources refer to the positive developmental experiences provided to adolescents by family, school, neighborhood, community groups, peer youth, and social organizations, including five dimensions: support, empowerment, boundaries and experiences, constructive resources, and creative use of time. These dimensions are further refined into 40 clear measurement indicators (20 indicators for internal and external resources respectively), and a Likert five-point scoring system is used, with higher scores indicating richer developmental resources.

In addition, basic demographic variables are included, such as gender, age, household registration, and parents' level of education. The level of parents' education is divided into three levels here: junior high school and below as low education level; high school and college as medium education level; and bachelor's degree and above as high education level.

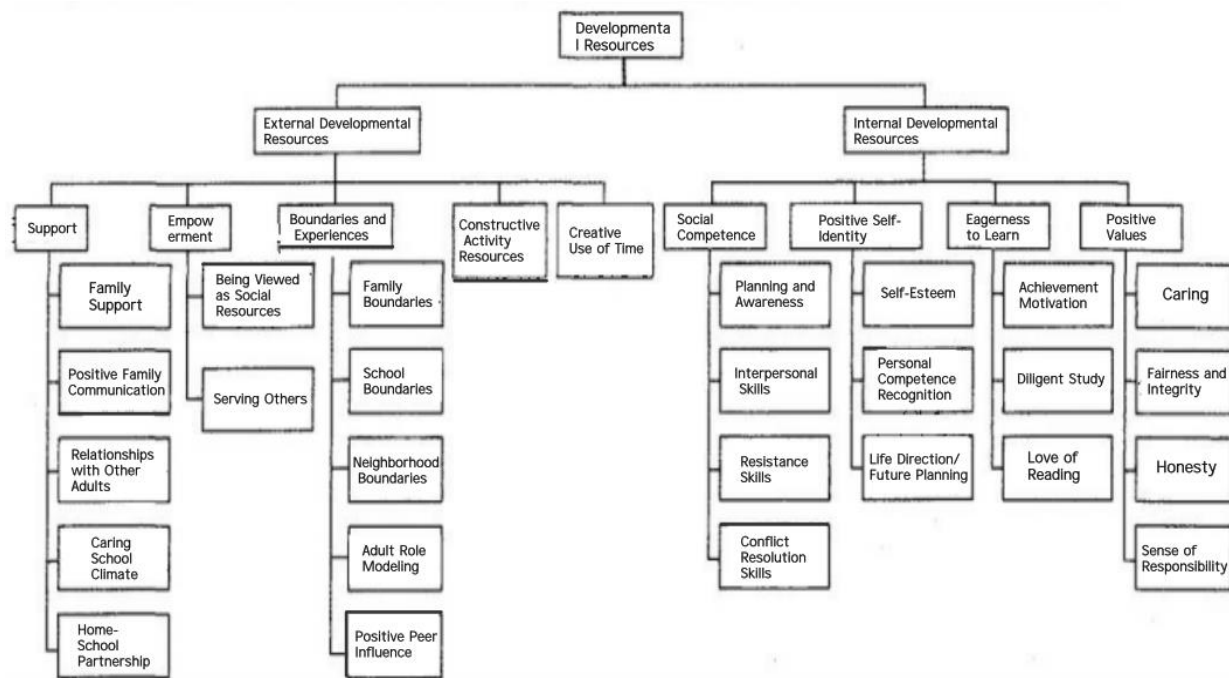


Figure 1: Structure Diagram of Adolescent Developmental Resources

4. The results of this study are discussed in two parts

First, the status of the developmental resources possessed by adolescents is reported, followed by an analysis of the differences among different adolescent groups, and finally, a summary of the characteristics of the developmental resources owned by adolescents.

4.1. Descriptive analysis of adolescent developmental resources

Overall, the total average score of the developmental resources possessed by adolescents is 429.63, with an average item score of 3.75. Since the scale uses a five-point scoring system, the total score range for adolescent developmental resources is 115 to 575, and the mean score range is 1 to 5. This indicates that the overall development status of the developmental resources possessed by adolescents is relatively good.

Furthermore, by ranking the average scores of the developmental resources possessed by adolescents from high to low, the ownership status of developmental resources among all adolescents is divided into high, medium, and low three levels. The statistical analysis results show that adolescents with fewer developmental resources (average item score < 2.33) account for 1.1%, those with a moderate level of developmental resources (average item score between 2.33 and 3.66) account for 40.2%, and those with richer developmental resources (average item score > 3.66) account for 58.7%, reflecting that adolescents generally possess a wealth of developmental resources.

The overall average score for internal developmental resources is 254.52 (range: 53 to 265), with an average item score of 3.752; for external developmental resources, the overall average score is 304 (range: 62 to 310), with an average item score of 3.749. This indicates that the development status of both internal and external developmental resources among adolescents is relatively good, with internal developmental resources being relatively richer than external resources. The proportion of individuals in the low segment is 0.6%; the proportion in the high segment is close to 60%, mostly located in the medium-high segment. In contrast, the proportion for external developmental resources is 1.3% and 57.9%, even slightly lower than the overall developmental resources, as shown in Table 2.

On the other hand, looking at the structure of internal and external developmental resources, there are certain differences among the dimensions. The internal resources are ranked from high to low in the following order: social skills (3.78 points), positive values (3.77 points), eagerness to learn (3.76 points), and positive self-identity (3.68 points), all of which are in the high segment. Social skills are relatively

well-developed, while positive self-identity is relatively weaker. This can also be verified from the distribution proportions, with 60.4% and 38.6% of individuals having high and medium levels of social skills, respectively, while the proportion for positive self-identity is only 54.8% and 43.9%, respectively. The proportion of individuals with richer developmental resources differs by 5.6% between the two.

Table 2: Adolescent Developmental Resources Segmentation Statistics Table

Category	Total Score	Item Mean Score	Item High Score	Item Medium Score	Item Low Score
Overall Developmental Resources	429.63	3.751	4.05	3.34	2.09
Number/%	100	100	58.7	40.2	1.1
Internal Developmental Resources	254.52	3.752	4.05	3.35	2.06
Number/%	100	100	59.1	40.3	0.6
External Developmental Resources	304	3.749	4.12	3.28	2.01
Number/%	100	100	57.9	40.8	1.3

External resource dimensions show more significant differences. The mean scores, ranked from high to low, are Constructive Resources (4.04 points), Boundaries and Experiences (3.92 points), Support (3.71 points), Empowerment (3.63 points), and Creative Use of Time (3.34 points). It is evident that Constructive Resources and Boundaries and Experiences dimensions are relatively abundant, with over 70% at a high level, indicating that families and schools have created a fairly good environment for adolescents to grow. However, the Empowerment dimension scores lower, and the Creative Use of Time dimension is particularly poor, with the highest-level proportion being the lowest among all dimensions, at only 30%. For more details, see Table 3.

Table 3: Adolescent Developmental Resources Mean Score Table

Item		Internal Resource Mean Score				External Resource Mean Score				
		Social Competence	Positive Self-Identity	Eager to Learn	Positive Values	Support	Empowerment	Boundaries and Experiences	Constructive Resources	Creative Use of Time
Mean Score		3.78	3.68	3.76	3.77	3.71	3.63	3.92	4.04	3.34
Standard Deviation		0.52	0.52	0.58	0.52	0.637	0.791	0.738	0.774	0.803
Resource Level	High	60.4	54.8	57.5	57.0	55.3	50.7	70.6	70.1	30
	Medium	38.6	43.9	41.2	41.7	42.4	43.6	28.3	27.4	57.9
	Low	1.0	1.3	1.3	1.3	2.3	5.7	1.1	2.5	12.1

4.2. Adolescent developmental resource differential analysis

Analysis of Overall Differences in Developmental Resources. To understand whether there are significant differences in developmental resources among different groups of adolescents, the author compared the mean values of resources among adolescents of different genders, grades, household registrations, and parental education levels, and conducted an analysis of variance (ANOVA). The results of ANCOVA indicated that, except for the household registration variable, there are significant differences in

developmental resources among adolescents of different genders, grades, and parental education levels. Among them, girls' developmental resources (3.770 points) are significantly richer than those of boys (3.733 points), with a difference of about 0.4 percentage points; seventh-grade adolescents' developmental resources (3.836 points) are significantly richer than those of ninth graders (3.661 points), with an average difference of 0.2 percentage points. There are no significant differences in developmental resources between adolescents who are local or non-local, only children or non-only children, while significant differences exist among adolescents with different parental education levels, with mean scores of 3.675, 3.725, and 3.787 points, respectively, indicating that as parental education levels increase, adolescents' developmental resources gradually become richer. Further analysis using the main effect model of ANOVA and post-hoc comparisons found that there are no significant differences in resources among adolescents with medium and low levels of parental education, while there are significant differences between low and high levels (average difference of 0.106 points) and between medium and high levels (average difference of 0.062 points). This suggests that when parental education levels are at a medium to low level, the differences in resources among adolescents are not significant, but when adolescents have parents with high education levels, their resources are significantly better than those of adolescents whose parents have medium to low education levels, as detailed in Table 4.

Table 4: Comparative Table of Demographic Differences in Developmental Resources

Item	Category	Overall Developmental Resource	Internal Developmental Resources	External Developmental Resources
Gender	Male	3.733*	3.734*	3.732*
	Female	3.770*	3.771*	3.768*
Grade	Seventh Grade	3.836*	3.838*	3.834*
	Ninth Grade	3.661*	3.661*	3.660*
Household Registration	Local	3.750	3.752	3.748
	Non-local	3.783	3.774	3.786
Only Child	Only Child	3.753	3.755	3.751
	Non-Only Child	3.739	3.735	3.742
Father's Level of Education	Low	3.674*	3.697*	3.652*
	Medium	3.716*	3.718*	3.714*
	High	3.785*	3.784*	3.786*
Mother's Level of Education	Low	3.670*	3.698*	3.642*
	Medium	3.710*	3.723*	3.697*
	High	3.788*	3.783*	3.793*

From the above, we understand that there are no significant differences in the variables of household registration and only-child status, while there are significant differences in resources among adolescents of different genders, grades, and parental education levels. To further analyze the specific differences in what types of resources exist, we conducted independent sample t-tests and ANOVA, and the results showed:

Firstly, in terms of the gender variable, there are no significant differences in the developmental resources of adolescents of different genders in the aspects of support, boundaries and experiences, and creative use of time, while all other dimensions show significant differences ($P=0.000$). On one hand, for the three dimensions of internal developmental resources, including positive self-identity, eagerness to learn, positive values, and the empowerment dimension of external resources, girls scored significantly higher than boys (3.698, 3.818, 3.802, 3.694 vs. 3.655, 3.715, 3.750, 3.576), with the largest difference in the empowerment dimension, reaching a gap of 0.12 points. On the other hand, boys scored significantly higher in social competence (3.808) than girls (3.757), with a difference of 0.051 points.

Secondly, in terms of the grade variable, there are significant differences in developmental resources among different grades. On one hand, the developmental resources of the first year of junior high are richer than those of the first year of senior high, with an average difference of about 0.016 points, especially in the boundaries dimension, which is 0.26 points higher than senior high. On the other hand, in the empowerment dimension, the first year of senior high (3.700) is significantly higher than the first year of junior high (3.568).

Lastly, in terms of parental education level, except for the positive values and boundaries and experiences dimensions, there are significant differences in developmental resources among adolescents with different parental education levels. The general trend is that the higher the parental education level, the richer the internal and external developmental resources of adolescents, especially in the empowerment dimension, which is the most evident ($F=1.420$, $P=0.041$), see Table 5.

Table 5: Comparison of Developmental Resource Differences Among Adolescents of Different Genders, Grades, Household Registrations, Only-Child Status, and Parental Educational Levels

Item	Category	Internal Developmental Resources				External Developmental Resources				
		Social Competence	Positive Self-Identity	Eager to Learn	Positive Values	Support	Empowerment	Boundaries and Experiences	Constructive Resources	Creative Use of Time
Gender	Male	3.808*	3.655*	3.715*	3.750*	3.699	3.576*	3.912	4.003*	3.344
	Female	3.757*	3.700*	3.818*	3.802*	3.720	3.694*	3.927	4.077*	3.338
Grade	Seventh Grade	3.890*	3.745*	3.844*	3.862*	3.777*	3.568*	4.046*	4.115*	3.471*
	Ninth Grade	3.672*	3.602*	3.680*	3.684*	3.638*	3.700*	3.787*	3.958*	3.207*
Father's Level of Education	Low	3.713*	3.617*	3.657*	3.781	3.573*	3.455*	3.878	3.841*	3.239*
	Medium	3.752*	3.628*	3.715*	3.764	3.658*	3.555*	3.944	3.969*	3.257*
	High	3.815*	3.712*	3.811*	3.790	3.756*	3.702*	3.925	4.100*	3.388*
Mother's Level of Education	Low	3.715*	3.595*	3.671*	3.789	3.560*	3.448*	3.895	3.815*	3.211*
	Medium	3.762*	3.652*	3.721*	3.749	3.646*	3.552*	3.917	3.980*	3.240*
	High	3.810*	3.711*	3.810*	3.794	3.764*	3.708*	3.929	4.099*	3.404*

Overall, there are significant differences in developmental resources among adolescents of different grades, genders, and parental education levels. These differences do not present a simple linear relationship with the increase of grade level or differences in gender, but rather are the complex result of the interaction of various factors.

5. Suggestions

First, target the weak areas of adolescent developmental resources. Initially, schools and families should establish a sense of "empowerment" for adolescents and foster a sense of "self-empowerment" among adolescents. This involves creating a democratic and equal environment for growth, respecting adolescents as independent individuals, granting them the rights appropriate for their stage, and clarifying their duties. Secondly, enrich the creative use of time for adolescents. The purpose of nurturing adolescents in schools

and families should not only focus on academic success but also provide a broad space for growth and cultivate healthy and positive interests and hobbies. Lastly, guide the establishment of adolescent identity. Adolescents generally have not yet formed an objective and complete understanding of themselves and the world. Schools and parents should engage in equal ideological exchanges with them, guiding them to correctly understand themselves and enhance positive self-identity.

Secondly, for adolescents of different genders, "tailor-made" education is needed. For boys, schools and families should strengthen correct and moderate behavioral guidance in line with the psychological development of adolescents, enhance their awareness of rules and boundaries, and also provide the same care and attention to boys, strengthening school and family support. For girls, it is necessary to develop their social skills, enhance their ability to cope with setbacks and independence, and improve self-control.

Thirdly, broaden the channels through which adolescents obtain developmental resources. As adolescents grow older, schools and families need to provide more diverse channels for resource acquisition: for example, by encouraging adolescents to participate in school clubs, which not only develop interests and hobbies but also provide peer support; by carrying out community work to provide rich community activities for adolescents, enhancing their community resources; by advocating youth volunteer work to connect them with society, fostering a sense of social ownership and responsibility. These measures further strengthen the social support network for adolescents.

6. Conclusion

Through the above analysis, we have gained an understanding of the specific situation of adolescent developmental resources, which can be summarized as follows:

Firstly, overall, the developmental resources of adolescents in our country are relatively abundant, but there are areas of deficiency. On one hand, the majority of dimensions of developmental resources score in the high range, indicating that most adolescents possess a wealth of developmental resources. On the other hand, there is an imbalance in the possession of resources across different aspects. For example, adolescents generally have high social skills, positive values, strong sense of rules, and abundant constructive resources, but they are relatively weak in empowerment, creative use of time, and positive self-identity. The weakness in empowerment may be due to the excessive discipline and restraint from schools and families, preventing them from exercising their rights effectively. There is a particular lack in creative use of time, with nearly 70% of adolescents having poor experiences in this area, which may be related to the heavy academic burden on adolescents. In addition, the low level of positive self-identity may be related to the special psychological stage of adolescence. Looking from the perspective of adolescents themselves, they are at a critical period in the formation of values and worldviews. On one hand, individuals affirm their abilities, goals, and values, but on the other hand, they are in a period of seeking self-identity, coupled with the sensitive, contradictory, and confused psychological characteristics of puberty, making it difficult for them to form a correct and stable self-perception.

Secondly, there are clear gender and age differences in adolescent developmental resources. Firstly, there are no significant differences in resource conditions between only children and non-only children, or between local and non-local household registrations. Secondly, in terms of gender, as age increases, the social differentiation expectations of gender roles become more apparent: boys tend to have decisive and open-minded characteristics, rich in masculinity, and are also inclined to challenge authority and social norms; girls, on the other hand, care more about the opinions of others and conform to their expectations. Therefore, boys have higher social skills than girls, while girls outperform boys in eagerness to learn and positive values. Lastly, in terms of age, lower grades have more abundant developmental resources than higher grades. The first year of junior high school is still in the early stages of puberty, where academic life and interpersonal relationships are relatively simple, leading to good adaptation. The first year of senior high school is in the midst of puberty, facing increasingly adult problems, but personal capabilities are still relatively immature, coupled with increased academic burdens and many pressures, psychologically unprepared to cope. In addition, the results of the "Chinese Adolescent Mental Health Quality Survey Study" also show that self-evaluation during this period is at a low value [7]. This indicates that the experience of adolescents with developmental resources is synchronized with the development of the special psychological stages of puberty. From another perspective, as age increases and independence grows,

the impact of family as an ascribed condition on adolescents will gradually decrease, and the expansion of social networks will provide more sources for resource acquisition, making resources richer. However, the reality is the opposite, indicating a lack of diversity in external resources during the growth process of adolescents, especially failing to utilize the role of neighborhood and community resources.

Thirdly, parental education level significantly affects the richness of adolescent developmental resources. The study found that the higher the parental education level, the richer the developmental resources of adolescents. Firstly, parents with higher education levels have better behavioral habits and a more harmonious and democratic family atmosphere, providing more positive and proactive examples and independence to their children, with a particular emphasis on cultivating adolescents' sense of rights. Secondly, the higher the education level, the more social capital, and the greater the ability to provide adolescents with a broader platform and more resources. Thirdly, the influence of parental education level is not a linear relationship; parents with higher education levels have a more significant promotional effect on their children's developmental resources than parents with medium to low levels of education, which also reflects the imbalance in the distribution of social resources. Lastly, the difference in parental education levels does not significantly affect the positive values and boundary awareness of adolescents, indicating that family factors do not significantly impact adolescents in these two aspects.

7. References

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