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Exploring Careers for a Clearer Future Work-Self: The Influence of Proactive Personality as a Moderator

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ABSTRACT

Middle school serves as a pivotal juncture in career development, where adolescents grapple with adaptability challenges during transitional phases such as entrance exams and the selection of elective majors. Simultaneously, they embark on integrating their ongoing learning tasks with their ideal aspirations to lay the groundwork for future career development. Against this backdrop, the significance of career exploration and understanding future developmental directions becomes particularly pronounced. To investigate the intricate relationship between career exploration and the clarity of one's future work-self, along with the moderating role of proactive personality, this study employed the career exploration scale, proactive personality scale, and clarity of future work-self scale. Data from 457 high school students were collected, revealing a substantial positive correlation between career exploration and both future work self-clarity and proactive personality. Adjusting for gender and age highlighted proactive personality as a regulatory factor influencing the relationship between career exploration and future work self-clarity. Furthermore, the results underscored the crucial moderating role of proactive personality in shaping the connection between career exploration and the clarity of future work-self. In-depth analysis revealed noteworthy interactions, particularly with the environmental exploration dimension (standard coefficient of 0.849, $p < 0.001$). Similarly, interactions with self-exploration, goal-system exploration, and information quantity dimensions were also significant, featuring standard coefficients of 0.905 ($p = 0.002$), 0.935 ($p < 0.001$), and 0.854 ($p < 0.001$), respectively. In essence, these findings illuminate the nuanced dynamics at play, emphasizing the amplified connection between career exploration and the clarity of future work-self in the presence of higher proactive personality levels. This insight holds implications for educators, counselors, and researchers invested in fostering comprehensive career development strategies for adolescents.

Keywords: Career exploration; Clarity of future work self ; Proactive personality; Moderation effect

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1. Introduction

Data issued by the Ministry of Education show that the number of college graduates in 2023 is expected to be 11.58 million, a year-on-year increase of 820,000. A large number of fresh graduates are pouring into the talent market, but the shortage of job positions and graduates' confusion about their future careers have become the main reasons for employment difficulties. With the implementation of the new high school college entrance examination reform, career future planning in middle school has an increasingly critical impact on the subsequent career development of teenagers. This reform further classifies and refines the traditional division of liberal arts and science in high school, which also requires students to consider the majors they may choose, the careers they may be qualified for, and their future planning. It is obvious that both the reform itself and the tendency to develop vocational education contained within it require students to start making preliminary plans for future career development at the middle school stage. Have a clear understanding and exploration of their future development. At the same time, they also need to start to align their current learning tasks with their ideal goals, actively exploring the feasibility of future development directions and preparing for future career development. So career exploration and future work self-cognition are particularly important.

As a motivation resource and adaptive result, clear future work-self can help individuals to set goals and develop strategies to achieve them, so as to engage in active professional behavior^[1]. Future work self-clarity is an individual's cognitive representation of who they want to be in the future, with future-oriented, positive, and job-specific characteristics^[2]. According to Seginer, an individual's future orientation or impressions of the future provide a basis for formulating goals and plans, and are therefore considered an important task in adolescent development^[3]. Gjesme provided the earliest definition of future orientation, stating that it is the degree to which thoughts and actions are involved in the future^[4]. Although many domestic and foreign scholars have

different interpretations of this concept, they all agree that future orientation is the process of individuals valuing and thinking about their future development. The concept of the future work-self originates from the possible self. Drawing on the research of Markus and Nurius on the "possible self"^[5], Strauss et al. put forward the concept of the "future work-self"^[6]. Future work-self refers to an individual's reflection of future work expectations and images formed in the mind, including two attributes: clarity and detail^[6]. They define the concept of future work self-clarity as the degree to which an individual's self-image in future work is clear and easy to imagine. It is an anticipated expansion of self-possibilities in the career field, which can stimulate individuals to participate in various proactive career behaviors, and is of great help in the choice and understanding of future careers. The existing research has shown that individuals with higher future work self-clarity can help reduce the difficulty of career decision-making^[7]. There is also research showing that a clear future work self not only advances one's career, but also further promotes active professional behavior by linking one's self to the desired future.

Career exploration refers to an individual's own activity mainly aimed at achieving career goals. Stumpf based on the three aspects of behavioral, cognitive and emotional response, believes that career exploration includes exploratory belief, exploratory process and exploratory response^[8]. Flum and Blustein argued that the previous structure did not reflect the "lifelong nature" of career exploration, and only stable attitudes and skills formed in the process of exploration could maintain the continuity of this process^[9]. Among the existing studies on the career exploration of high school students, Wang Yu conducted a study on the career exploration of high school students and found that there was a significant positive correlation between the career exploration of high school students and all dimensions of self-esteem and social support^[10]. These studies show that high school students' career exploration is closely related to self-exploration, and career exploration is an important part of their career planning.

Previous studies have shown that career exploration can significantly predict college students' future work self-clarity. Individuals with more career exploration will have a clearer understanding of their future careers^[11]. There is a significant positive correlation between adolescent career exploration and future work self^[12]. This study will also discuss whether this correlation exists in the group of middle school students. Existing literature has shown that career exploration plays a mediating role between other variables and future work self-clarity. For example, career exploration plays a mediating role between optimism and future work self-clarity^[11]. Career exploration plays a mediating role in perceived social support and future self-clarity^[13]. Therefore, career exploration is an important reason that affects middle school students' future work self-clarity.

In previous studies on career exploration and future work self-clarity, another variable has been discovered: proactive personality. Bateman et al. proposed proactive personality in 1993, believing that individuals with proactive personality are more stable and less susceptible to external forces, thereby enabling them to better adapt to environmental changes and development. When facing new environments, they can accurately seize opportunities, actively embrace opportunities and challenges, and at the same time constantly adjust their mentality and behavior according to environmental and other factors and increase individual initiative. It is a relatively stable individual characteristic endogenous to the individual^[14]. According to Major, Turner and Fletcher, individuals with proactive personality have stronger learning motivation, can be responsible for their own choices in terms of academic development and career planning, and show greater career initiative than those with low initiative^[15]. Cai et al. found that after controlling for self-esteem, a proactive personality can indirectly predict future work self-clarity through career exploration because when an individual's proactive personality is high, he or she will maintain a high level of career exploration behavior, resulting in a higher level of future work self-clarity^[16]. Lu Shan found that work initiative and future work

self-clarity are significantly positively correlated^[17]. After exploring the relationship between proactive personality and future work self-clarity, many scholars found that there is a certain positive correlation between the two^[18].

In conclusion, this study uses a questionnaire survey to investigate the career exploration, future self-clarity and proactive personality of middle school students, exploring the role of proactive personality in career exploration and future work self-clarity.

2. Materials and methods

2.1 Interviewees

This study involved 472 middle school students in Beijing. The questionnaire is anonymous and informed consent is read to students in advance by the class teacher. After communicating with the classroom teacher, we entered the classroom to distribute the questionnaires, and a total of 465 questionnaires were collected. After screening the questionnaires, 8 incomplete questionnaires were excluded, leaving 457 valid questionnaires, with a questionnaire effectiveness rate of 98.28%. Among them, 208 are boys, accounting for 45.5%; 249 are girls, accounting for 54.5%. There are 395 only children, accounting for 86.4%, and 62 are non-only children, accounting for 13.6%.

2.2 Method

This study adopted the questionnaire survey method to distribute the Career Exploration Scale, Proactive Personality Scale and Future Work Self-Clarity Scale to two high schools in Beijing. The selection of the scale is based on the good validity of the field, and the scale is widely used. Students filled out the questionnaire on their own and collected them after completion.

2.3 Survey tools

Career Exploration Scale

This study used the Career Exploration Scale

modified by Xu Cun based on Stumpf's scale ^[19]. The scale consists of 18 items in total, including four dimensions: environmental exploration (1–5), self-exploration (6–10), purpose-system exploration (11–14) and information quantity (15–18). A 5-point Likert scale is used, with 1 indicating “very little” and 5 indicating “very much”. The higher the score, the higher the corresponding exploration enthusiasm. The internal consistency reliability of the scale is 0.93.

Proactive Personality Scale

This study used the Proactive Personality Scale that Wenfang simplified and revised in 2011 for middle school students. After testing and analysis, a shortened scale consisting of 9 items was finally formed ^[18]. The internal consistency coefficient of this scale in this study was 0.897, which meets statistical standards.

Future Work Self-clarity Scale

This study used the back-translated version of the English version of the scale by Guan et al. based on Strauss ^[20]. There are a total of 4 items in this scale, of which one item in the English version has been removed, “In my mind, the type of work-related future I want is very clear.” The internal consistency coefficient of the scale is 0.903.

2.4 Statistical method

SPSS 19.0 and Amos 16.0 are the most commonly used data analysis software with complete functions and easy operation. Firstly, the collected questionnaires were preprocessed, and then SPSS 19.0 was used to input and analyze the data. The main analysis methods used included independent sample t-test and correlation analysis. A structural equation model was established using Amos16.0 to explore the moderating effect of proactive personality.

3. Results

3.1 Statistical analysis of demographic variables

We conducted a gender difference test in career exploration and each sub-dimension, future work self-clarity, and proactive personality. As shown in

Table 1, on the purpose-system exploration of the career exploration questionnaire, boys' scores were significantly higher than girls' ($t = 2.256, p = 0.025$). In terms of proactive personality scores, boys scored significantly higher than girls ($t = 2.737, p = 0.006$). Besides, gender differences in other dimensions are not significant.

Table 1. Gender-Based comparative analysis: Exploring differences across various dimensions.

Dimension	Male		Female		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Environment	14.413	4.7845	14.341	4.5658	0.164
Self	14.077	3.1152	13.988	2.7127	0.322
Purpose	15.197	4.7482	14.237	4.3399	2.256*
Information	12.639	3.5125	12.426	3.3953	0.66
Exploration	56.327	14.27	54.992	12.9984	1.046
Personality	32.486	6.3959	30.976	5.1767	2.737*
Future	12.923	3.8327	12.731	3.5395	0.557

Note: * $p < 0.05$, ** $p < 0.01$.

We conducted a difference test of the number of children in the family in career exploration and each sub-dimension, future work self-clarity, and proactive personality. After testing, there is no significant difference in each variable whether one is an only child or not.

3.2 Correlation analysis of key variables

Correlation analysis was performed on each variable. The results in **Table 2** show that there is a significant correlation between all indicators ($p < 0.01$), which suggests that there is a significant positive correlation between the three.

3.3 Test of the moderating effect of proactive personality

Taking proactive personality as the moderating variable, we studied the impact of career exploration on future work self-clarity, and thus constructed a structural model, as shown in **Figure 1**. In this model, CMIN/DF = 3.828, RMSEA = 0.079 < 0.08. GFI (0.958), NFI (0.968), TLI (0.96), and CFI (0.976) are all greater than 0.9, indicating that the model fits well and can be used to analyze.

Table 2. Correlation of three variables and their dimensions.

	1	2	3	4	5	6	7
1.Environmental exploration	1						
2.Self-exploration	0.663**	1					
3.Purpose-system exploration	0.704**	0.757**	1				
4.Information quantity	0.692**	0.632**	0.619**	1			
5.Total score of career exploration	0.896**	0.854**	0.895**	0.833**	1		
6.Proactive personality	0.333**	0.435**	0.430**	0.456**	0.467**	1	
7.Future work self-clarity	0.443**	0.408**	0.383**	0.612**	0.523**	0.462**	1

Note: * $p < 0.05$, ** $p < 0.01$.

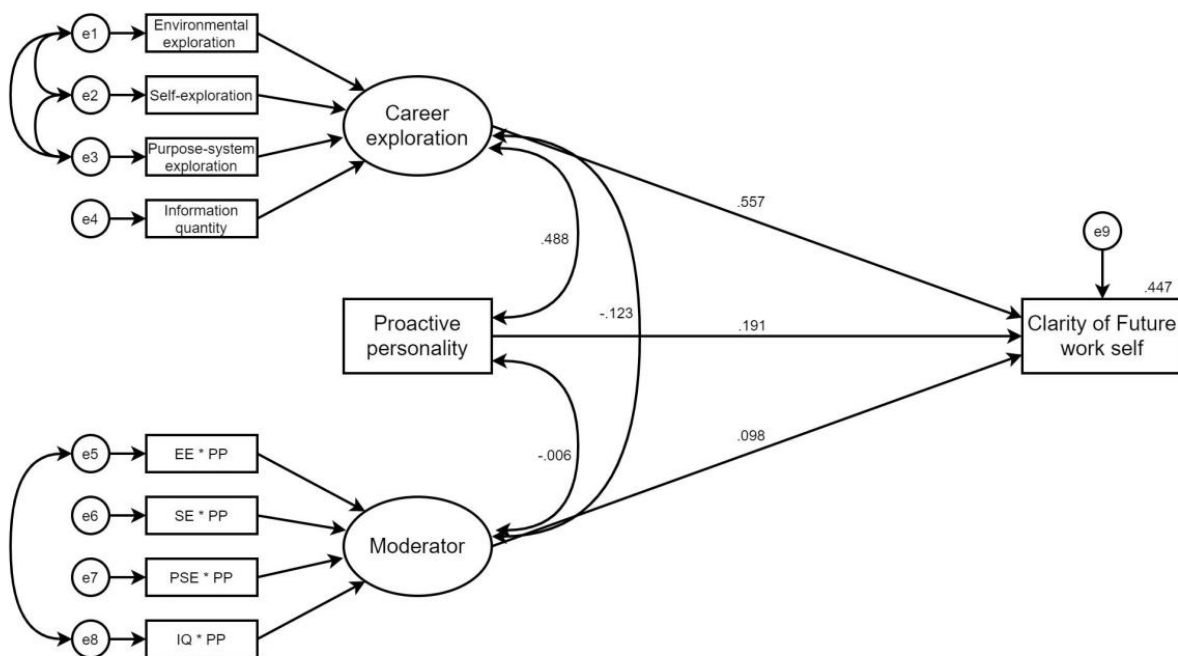


Figure 1. Structural equation model.

As shown in **Table 3**, after constructing a moderating effect model of active personality using AMOS software, the above data were obtained (all interaction data have been decentralized). It can be concluded that the interaction term between proactive personality and environmental exploration is significant, with a standard coefficient of 0.849 and a 95% confidence interval of [0.789, 0.897]; the interaction term between proactive personality and self-exploration is significant, with a standard

coefficient of 0.905 and a 95% confidence interval of [0.854, 0.935]; the interaction term between proactive personality and purpose-system exploration is significant, with a standard coefficient of 0.935 and a 95% confidence interval of [0.901, 0.96]; and the interaction term between proactive personality and the information quantity is significant, with a standard coefficient is 0.854 and a 95% confidence interval of [0.795, 0.901], indicating a significant moderating effect.

Table 3. The moderating effect of proactive personality on the relationship between career exploration and future work self-clarity.

Route		Standard coefficient	Lower	Upper	P
Environmental exploration	→ Future work-self	0.724	0.661	0.779	0.001
Self-exploration	→ Future work-self	0.667	0.586	0.734	0.002
Purpose-system exploration	→ Future work-self	0.651	0.58	0.713	0.001
Information quantity	→ Future work-self	0.953	0.905	1.004	0.001
Proactive personality	→ Future work-self	0.191	0.06	0.306	0.005
Environmental exploration × Proactive personality	→ Future work-self	0.849	0.789	0.897	0.001
Self-exploration × Proactive personality	→ Future work-self	0.905	0.854	0.935	0.002
Purpose-system exploration × Proactive personality	→ Future work-self	0.935	0.901	0.96	0.001
Information quantity × Proactive personality	→ Future work-self	0.854	0.795	0.901	0.001

4. Discussion

4.1 Differences in various indicators of demographic variables

The survey found that among the four dimensions of career exploration, only the score of the purpose-system exploration was significantly higher in boys than girls, with little difference in other dimensions. The purpose-system exploration is operationally defined as the degree to which an individual collects self information and environmental information purposefully and systematically. Boys in middle schools may be more macro-minded about their future career choices, while girls may pay more attention to details.

In terms of proactive personality scores, boys' scores are significantly higher than girls', indicating that boys have higher initiative. The average score of students' proactive personality in this study is 31.73, which is above the average level. In other words, most middle school students have good initiative, which is consistent with previous research.

4.2 The correlation between career exploration, proactive personality, and future work self-clarity

There is a significant positive correlation between career exploration and each dimension of career exploration, and future work self-clarity. That is, the higher the career exploration score, the higher the clarity of future work self.

There is a significant positive correlation between proactive personality and future work self-clarity, indicating that proactive personality can positively predict future work self-clarity.

There is a significant positive correlation between career exploration and each dimension of career exploration, and proactive personality. That is, the higher the career exploration score, the higher the proactive personality score; and vice versa.

4.3 The moderating effect of proactive personality on the relationship between career exploration and future work self-clarity

The results found that proactive personality has a significant moderating effect between career exploration and future work self-clarity. A highly proactive personality can enhance the connection between career exploration and future work self-clarity for middle school students. Students with a high proactive personality may be more willing to actively obtain the future career information they want through various channels, and are also more willing to actively do some future planning and exploration. For students with low proactive personality, it can increase their interest in future careers and guide them to seek and explore.

4.4 Research limitations and prospects

On the basis of previous exploration and social background, this study recognizes the importance of vocational education for middle school students,

and verifies the relationship between future work self-clarity, career exploration and proactive personality. The empirical research on the career development of middle school students in China is enriched, so that middle school students have a clearer understanding and plan for their future career planning. Of course, there are some shortcomings in this study. For example, the subjects were all from schools in urban areas of Beijing, and the family environment was relatively favorable, and there was a lack of subjects from other regions, so the universality of the research conclusions was unknown.

5. Conclusions

This article draws the following conclusions through the study of the relationship between career exploration, proactive personality, and future work self-clarity among middle school students:

(1) Middle school students' career exploration has a significant positive predictive effect on future work self-clarity.

(2) Middle school students' proactive personality has a significant positive predictive effect on future work self-clarity.

(3) The proactive personality plays a moderating role between career exploration and future work self-clarity.

Author Contributions

Xin Yin: Responsible for literature review, data collection, data analysis and thesis writing.

Zeren Liang: Responsible for data collection and data analysis.

Shixiang Liu: Responsible for overall design and thesis writing.

Conflict of Interest

There is no conflict of interest.

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