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Exploring the Psychological Status of Technical and Vocational Education and Training Students in China

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Abstract: This study mainly analyze the psychological status of technical and vocational education and training students in China. This study uses comparative analysis between vocational students with career planning and public school and vocational students who have not received career planning in order to discover their difference on how they perceiving future job development and their mental health status. Through the implementation of quantitative method and specific questionnaire, the method comprehensive divide the research into two section: psychological aspect and academic aspects. Through collecting data across the country, the overall mental health status for vocational students with career planning suggests a increase trend in their well-being. This is primarily due to the specific implementation of career planning that assist students to have a specific plan for future careers and professional skills for work fields. With the solution of AI assistance and conversation for vocational students, they would be beneficial from both career planning and AI assistance on improving their overall mental health development.

Keywords: Psychological status, career planning, well-being.

1. Introduction

In recent years, China had been put a large amount of effort in implementing the Technical and Vocational Education and Training (TVET) across the state. However, while the policy underscores employment and skills development, the TVET program fails to consider the mental health status and well-being of TVET students. Compared with public academic high school students, TVET students suffered a larger amount of pressure from economic condition and social stigma. Vocational school students are more prone to anxiety, impulsive tendency and physical symptoms [1]. These hidden pressure could intensify their negative mental status. Their main pressure are derived from lack of social recognition in working fields and uncertain with their future careers.

As a result, this study aims to delve into the psychological status of vocational students through comparative study with students from public academic high schools. By comparing the mental status of academic public school student with the TVET school student to explore the hidden mental obstacles and issues of TVET school students. By administering structured based questionnaire to compare the status quo between two groups and use interview as an qualitative way to explore further about the unique circumstance of certain TVET student who need support. This qualitative study will exemplify TVET students' living condition, how they envision their future, navigate academic struggles, in order to address their mental issue via government solution.

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The study not only seek the disparity between the two groups but also aims to discover the hidden potential of TVET through implementing the career planning for TVET students. Through the incorporation of AI tool assistance such as DeepSeek and ChatGPT, TVET students would be decent in adapt into skills development and have a unambiguous view toward their future careers through professional career planning in their education. TVET students would ultimately comprehensively improve their psychological needs as well as reach a effective result about their future employment.

2. Literature review

Through four authoritative research articles about the psychological status of vocational students and comparison with the mental status of public high school students, a eligible preview is being supported for this research. According to PubMed, a cross-sectional questionnaire survey was conducted among several vocational high school students in Hunan Province. 7,968 valid questionnaires discovered that 37.7, 15.7, and 21.8% reported the idea and plan of suicide [2]. It is evident that the psychological status of vocational students suicidal behavior is significantly high, which reveals vocational student's suffered from large amount of anxiety and pressure comparing with academic public school students.

Another research reveals the comparison between the mental health status of left-behind secondary vocational school students and left-behind general high school students. Through the use of SCL-90 symptom self assessment scale, the research uncovers that the positive detection rate of psychological status of left behind secondary vocational school students was 37.6%, while the mental status of left-behind general high school students was only 27.9% A valid comparison of mental health status exemplifies vocational students manifest in obsessive-compulsive symptoms, interpersonal sensitivity, anxiety, etc [3]. This crucial findings suggests the necessity of promoting the mental health status of vocational students in China.

A research explore about the depressive symptoms of vocational technical school students during Covid-19 pandemic. Through the implementation of questionnaire on sociodemographic variables, the research finds that there are 43.4% of depressive symptoms among vocational students [4]. The main association of depressive symptom is primarily due to social isolation and feeling of loneliness. Based on solid methodology and internationally validated instruments, this study crucially stress the significance of depressive symptoms of vocational students, highlighting the needs of paying attention of refining the mental health of vocational students in China.

The last research article discusses about the scoping review of positive mental health research on vocational students. Despite of facing various mental depression from previous review of research article, it is notable to discuss that supportive school environment, physical activity and intense vocational identity may also foster a positive psychological health of vocational students [5]. By utilizing scoping review, the study provide a comprehensive overview of the size and scope of the studies. This broad study ensure a larger context for the research and further Meta analyses of scope view systemically measure the psychological status of vocational students.

3. Analysis and discussion

3.1. Research method

This research mainly utilize quantitative method to analyze the psychological status of vocational students. Mainly quantitative by making survey collecting data about mental status between public school student and TVET student, by making two separate questionnaire, this can better discover the significant difference between these two groups. qualitative may take for further interview later by offline, through making proper documentary or interview. In details, the research method divided into two specific questionnaire. Specially, one questionnaire mainly delve into the psychological status of

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vocational students in China. This questionnaire utilize several research question types, mainly composed of multiple choice. The questionnaire was spread via online platform. In terms of the scope of the questionnaire, the first questionnaire of analyzing the psychological status of vocational students who have experienced career planning contains 2423 respondents. In details, the demographic information ranged from vocational students from middle school to universities. With 17.66% secondary and higher vocational education students, 37.4% higher vocational education students and 44. 94% higher vocational undergraduate students. This comprehensive demographic information ensure the authoritativeness and diversity of the research. For the second questionnaire analyzing about students who from public school and vocational students who have not experienced career planning before, which contains 1428 respondents across the country. With the majority of 81.92% of high school students. Both of the questionnaire used the same online platform and operate the database in the same times. This operation ensure the validness of the research and consolidate the qualitative interview further.

3.2. Analysis

This section delves into a comprehensive comparison with the two questionnaires. Specifically, the analysis section aims to discover the significance of positive mental health of vocational students who have experience career planning, in order to highlight the need for improving mental health for vocational students who have not experienced career planning before and promoting a decent well-being for their mental development.

In terms of the psychological status aspect, two questionnaire adopt question about students ways of alleviating pressure, how students accept failure and learned lesson personal growth from the failure. Specifically, from the first question about how students alleviate pressure. Vocational students reports of 70.04% of them willing to calmly analyze the pressure itself and try hard to solve the issue (shown in Figure 1). Comparing with the groups of public school students and vocational students without career planning, the answer of calming analysis declined to 66.32% response rate.

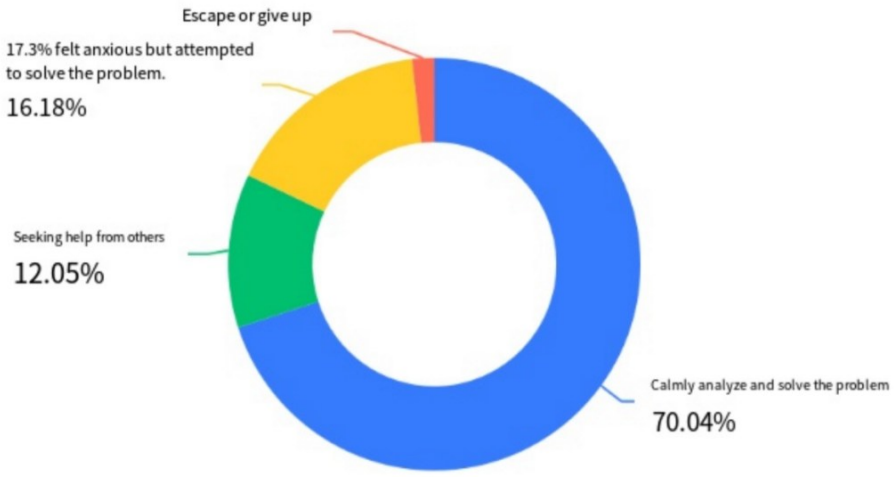


Figure 1: Response data of vocational students with career planning (picture credit: original)

In addition to the questions about how students alleviate stress, the research also encapsulate questions regarding the life attitude and whether they satisfied about their life or not. By implementing the question about their life attitude, with over 60.13% of vocational students with career planning show their attitude are optimistic and with vibrant hope. By comparing data with

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public school and vocational student without career planning, the response rate declined to 55.88%. Furthermore, analyzing about their intrinsic motivation that is regarding to personal growth. The question delve into whether students are willing to change their lifestyle through hard-work? The response rate of vocational students with career planning was 60. 3%, whereas only 56% the data of public school and vocational students with no career planning.

There are also two more specific question regarding the mental health of these two groups. Specifically, exploring whether students are willing to accept the uncertainty in life or not. With over 59% of vocational students with career planning are willing to fully accept the uncertainty, while the data decreased to 52% for public school and students without career planning. In addition, analyzing the questions regarding whether students are expect their future life or not. With nearly 62% of vocational students are willing to expect about their future life. Nonetheless, the overall data for public school and vocational students without the career planning declined to 56%. It is significant to notice from these four questions to discover about the differences in psychological status between these two groups. It is notable that the overall mental health status of vocational students with career planning had over 4-7% higher rate of positive mental health. As a result, the data crucially highlight the positive side of vocational students with career planning.

In terms of the future career path about these groups. This questionnaire also comprehensive adopts several specific questions for comparing students' goals and whether they are clear about their future career goals. Specifically, this section delves into 5 specific questions regarding their future envision. In term of the question of whether they are clear about their future career jobs. The response of vocational students with career planning have 41.48% of them are very clear and a concise plan of their future jobs. Comparing with the 37.82% of vocational students without career planning, it is evident to analyze the significant increase in future expectation for students who receive career planning in their school. Another specific aspect analyze about whether students understand the career development path corresponding to the major they are studying. With only 36% of vocational students without career planning are certain about the correspondence between their major and future career. An increase of 4%, which is 40% of vocational students with career planning have proper planning and envision about the relevance of their major with future development.

In terms of their initiative about their future development, the questionnaire delve into problems about whether students will actively seek internship or part-time opportunities to accumulate experience. With 47% of vocational students with career planning are actively seek opportunities. There is an decline to 41% for vocational students with no career planning. An research article about whether junior high school students want career planning or not, the research discover that a large amount of junior high school student consider career planning as an crucial factor for their education and they would like to gain specific information about their career planning process [6]. This indicates that initiative for most students about career planning is very active and positive. In terms of the academic qualification, the questionnaire comprehensively analyze about whether students think that academic qualifications have a great influence on career development. With 41.39% of vocational students with career planning answered the academic qualification have a large and crucial influence on future development, however, with only 34% of vocational students without career planning believe the influence is essential. Therefore, these crucial database further consolidate the result that the career planning for vocational students enables students to gain concise view about their current major as well as their envision on future career jobs and opportunities.

3.3. Discussion

Overall, it is evident to notice the overall personal growth for vocational students who have received with career planning in school show a decent growth in their personal growth from both psychological aspect and academic fields. Significantly, the mental health of vocational students with career

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planning show a increase trend. The systemic implementation of career planing in vocational school ensure students with proper real life opportunities to engage with employment and jobs, as well as acquire the skills of interpersonal and specific course related to their current majors. Career planning and development are important milestone for education, as exemplified from research about the importance of career planning and development [7]. As a result, with the comprehensive planning about their specific steps about their future jobs and life development, it is undeniable that the psychological status of vocational students have been increased from aspect of their future living condition, the way how they deal with difficulties, and how they self-reflection with several challenges and failure. Meanwhile, the academic aspect also ensure vocational students to equip with sufficient and professional skills, this will adaptive for students to better fit in and engage with future job fields. Overall, the impact of career planning is crucial for the personal growth for vocational students, which brings them self-esteem and empowerment to steps into their future career jobs and a well-established well-being for the future development.

4. Feasible solution

In terms of the feasible solution for vocational students to improve their psychological growth. The questionnaire also adopts a question about whether students improved their mental health status with the implementation with the interaction with digital Artificial Intelligence tool (eg: DeepSeek, ChatGPT, etc). The majority of the students answer ranged from 54-60% of certainty that the AI assistance have help students to improve their overall mental health status. It is crucial to notice the development of interaction of AI assistance nowadays have raises more individuals to spend more time to engage with artificial technology. A systematic review suggests that conversational artificial intelligence (AI) can effectively alleviate psychological stress of individuals through implementing meta-analysis and systemic review [8]. With NHS Talking therapies service, AI conversation had a large impact on support mental health services [9]. Therefore, it is evident that with the implementation of chatting and interaction, individuals gained more self-esteem and refine their mental health after having conversation with AI tools.

As a result, a proper solution give to the research questions is implementing the AI tools for vocational students in helping them to alleviate their mental struggles. With the adaption of sufficient career planning for vocational students and public students, especially vocational students, students would have a better vision about the future career development. The intertwine between AI assistance and career planning program ensure students acquire sufficient academic skills from school. These crucial skills earned better allows vocational students to boost sufficient self-confidence and encouragement, which in order to promote their mental health status. It is also beneficial for government to implement certain social policy to help vocational students to gain decent reputation and brings a brighter and positive psychological status for them.

5. Conclusion

To sum up, this research mainly delves into the psychological status of vocational students. By comparing with the vocational students who have not experienced vocational career training before and public school students, the research uses quantitative method to discover the significance of career planning program on raising the overall mental health development for vocational students. This career planning allows students to be fully prepared for future job employment and owning a clear and concise overview about how they current major correspond to their furture career jobs and opportunities. Therefore, by addressing the unique circumstances of vocational students of having unclear vision about future and anxiety about the current lifestyle. A further adoption of implementation of AI assistance on career planning as well as proper policy from government

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empower students gain comprehensive understanding about their future development and boost their mental health overall.

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