

The Relationships Between the Myers-Briggs Type Indicator (MBTI), Job Satisfaction and Well-Being Among Working College Students in China

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Abstract

The phenomenon of working college students is on the rise in China. Evidence elsewhere suggests that working while studying can be problematic for students' well-being. This research sought to assess whether personality types and job satisfaction can be used to prevent the decline of well-being among working college students in the country. It specifically examined the effects of Myers-Briggs Type Indicator (MBTI) types on job satisfaction and well-being, relationship between job satisfaction and well-being, and the moderating roles of field of study and emotional state in these relationships. Based on the findings, these objectives have been successfully met. The findings show that MBTI personality types significantly shape both job satisfaction and well-being. Scoring highly on Extraversion, Sensing, Thinking, and Judging predicts high job satisfaction and better well-being among the students. Job satisfaction was also found to positively impact well-being for working students. Additionally, the findings also show that the field of study and emotional state moderate the stated relationships. The findings of this study are sound as they generally align with what other researchers have established. The findings imply that Myers-Briggs Type Indicator (MBTI) types and job satisfaction can be applied and targeted to enhance the well-being of working college students in China as the phenomenon continues to grow.

Keywords: MBTI, Job Satisfaction, Well-being, College Students.

Introduction

Background

Working part time or full time while studying has become more common around the world as higher education has become more expensive and the pursuit of further learning has become more common. Researchers have noted that the phenomenon has risen significantly among college students in China in recent years although concrete nationwide statistics on the issue are not widely available (Dong et al., 2022; Kamitewoko, 2021; Tan et al., 2020). Working while studying is beneficial to students in terms of paying personal and educational expenses and gaining valuable work experience. However, working while pursuing education has notable drawbacks. Researchers have noted that it tends to negatively impact academic performance, increase stress levels among students, lower social life quality, reduce sleep, and delay graduation resulting in an overall negative impact on physical, psychological, and emotional well-being among students (Behr et al., 2020; Stevenson et al., 2022; Zhang & Yang, 2020). In fact, researchers such as Zhang & Yang (2020) have argued that working while studying is actually more harmful than beneficial to students. However, given the economic challenges that many students face, working while studying is a reality that is unlikely to end anytime soon.

Need for Study

There is thus a need for different ways to ensure that students' academic performance and overall well-being are not adversely affected by working while studying. This is particularly important in China since the trend of students working while studying is expected to keep growing in the coming years (Dong et al., 2022). Failure to find concrete solutions to the problem would mean that students' well-being and the quality will gradually decline due to increased stress and poor academic performance. There is thus a clear need to address this issue and the extant literature shows some of the factors that can be significant in this context. For instance, research evidence in China indicates that job satisfaction is a significant positive

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predictor of overall well-being (Hu, 2021; Zeng et al., 2020). It is thus likely that job satisfaction can be expected to have a significant positive impact on overall well-being for students who work while studying.

Research Gaps

Literature Gap

However, there is limited empirical evidence of this relationship in the extant literature. It is also notable that in recent years, research evidence has increasingly shown that individual factors such as personality traits play an important role in the ability to handle stress and related outcomes such as mental and physical well-being under stressful conditions. For instance, evidence among university students in China has shown that students who score highly in neuroticism handle stress poorly and have generally lower levels of well-being while those that score highly in extraversion tend to handle stress well and have higher well-being scores (Huang et al., 2021; Veisi et al., 2023). However, it is notable that these studies have not been done in the specific context of working students in the country. Additionally, assessment has not been made in relation to the Myers-Briggs Type Indicator (MBTI) with the Big Five Personality Types being preferred. It is also notable that personality traits have been linked to job satisfaction (Akomolafe et al., 2020; Almutairi & Ahmed, 2022). However, once again, research in the specific context of working college students in China is lacking. These gaps stand out because feeling these gaps can offer different pathways that can be used to address the challenge of poor academic and personal well-being outcomes for working students in the country. This study will thus try to fill these gaps using empirical evidence. Doing so would be highly beneficial for students who are forced to work while studying, institutions of higher learning that are concerned about student performance, and society at large who will benefit from high quality graduates.

Cultural Applicability Gap

Although the MBTI (the Miles-Briggs personality type indicator) is widely used around the world, most of the theories and tools are based on Western cultural backgrounds. There is a lack of adequate research in the global east context in general and China in particular. This lack of research in using the theory in the global east context is noted by Song et al. (2021) while lack of research in China is pointed out by Cai (2021). It is an issue because cultural and individual differences are known to moderate elements such as job satisfaction. Theories can also play out differently across cultures and it is generally recommended not to assume that it will be the same without evidence.

Sample Representation Gap

As Wang et al. (2021) point out, job satisfaction and wellbeing are very widely researched in different contexts. Well-being has been widely researched among students including in China. However, there important gaps in the research for this two variables. There is a serious lack of research into how the two are related among working college students both globally and in China. The problem is that despite the growing tendency of students to work while studying, there has been surprisingly little interest on the job satisfaction of this specific cohort. This research will try to address the problem.

Insufficient Variable Control

There have been calls for more complex analysis by student researchers in China. Wang et al. (2021) note that most research remains rudimentary without analysis of mediators and moderators. This also applies to the specific context of the MBTI theory with Song et al. (2021) noting that more complex research that examines its moderators is needed. This study will also thus be heeding these calls.

Insufficient Research of Complex Interactions

The relationship between MBTI type and job satisfaction and psychological well-being may be influenced by multiple factors such as gender, grade, and socioeconomic status, and these complex interactions may not have been properly explored in previous studies. In view of the above research gaps, my research plan

can focus on in-depth research in these not fully explored areas, in order to obtain a more comprehensive and in-depth understanding.

Scope of the Study

This study will fill the gaps in the extant literature by empirically assessing various relationships. The study will first assess whether Myers-Briggs Type Indicator (MBTI) dimensions influence job satisfaction and well-being among working college students in China. The study will also assess whether there is a relationship between job satisfaction and well-being among the working students before examining whether field of study and emotional state moderate the relationships between Myers-Briggs Type Indicator (MBTI) dimensions, job satisfaction, and well-being among working college students in China. The study is a quantitative research study that includes hypothesis testing. It is a survey of college students that seeks to promote the wellbeing of working college students in the country. In this regard, the objectives of this research are:

General Objective

The general objective of the current study is examining the relationships between MBTI Personality Types, Job Satisfaction, and Psychological Well-being among working college students in China.

Specific Objectives

The specific objectives of the research including:

RO1: To examine the relationship between the Myers-Briggs Type Indicator (MBTI) types and job satisfaction among working college students in China.

RO2: To assess the relationship between the Myers-Briggs Type Indicator (MBTI) types and psychological well-being among working college students in China.

RO3: To evaluate the relationship between job satisfaction and psychological well-being among working college students in China.

RO4: To Explore the role of the field of study, type of job, and career duration in moderating the relationship between MBTI and job satisfaction among working college students in China.

RO5: To Explore the role of the field of study, type of job, and career duration in moderating the relationship between MBTI and psychological well-being among working college students in China.

RO6: To determine whether the MBTI can be considered a reliable predictor of job satisfaction and psychological well-being for working college students in the Chinese context.

RO7: To investigate potential differences in the relationships between MBTI personality types, job satisfaction, and psychological well-being among various academic majors or fields of study among working college students in China.

Literature Review

Well-being Among Working College Students

Well-being is regarded as a subjective term (Tov, 2018). This is because it depends on what individuals perceive to be important to them. However, it generally relates to the extent to which one is healthy, happy, and satisfied (Hascher & Waber, 2021). According to Tov (2018) physical health, mental and emotional stability, social connections, and a sense of purpose or fulfilment are important elements that shape overall well-being. Well-being is a critical issue that has been widely researched among students. Taylor et al. (2020)

posits that students tend to be at their physical prime and physical health issues are not a major concern. However, the researchers note that psychological health is a major and growing threat to the well-being of college students. Rodríguez et al. (2022) posits that college is often the first time that many people are away from their immediate family and lifelong friends and this can result in feelings of loneliness, fear, and anxiety which reduce psychological well-being among students. Factors such as academic pressures, financial pressure, and social media also contribute to poor psychological well-being among students (Ebrahim et al., 2022). It is notable that stressors in college environments have been increasing over the last few decades and this is contributing to poor mental health among students.

For instance, academic pressure has increased as more people view education as the most important pathway to a good life (Hossain et al., 2023; Rodríguez et al., 2022). Additionally, college education has gotten more expensive and governments around the world are reducing public subsidies for college education increasing the financial pressure on students. This is a major reason why working while studying has become a very common phenomenon in recent years (Taylor et al., 2020). The well-being of working college students has been of interest to researchers as a result of this development. The emerging evidence shows that students who work while at college generally have lower well-being compared to those who do not work. For instance, Mazhar et al. (2021) compared needs satisfaction and mental health well-being between working and non-working students in Pakistan and found a significant difference ($t= 3.21, p < 0.002$). Chiang et al. (2020) compared academic performance and sleep health among working and non-working students in the United States. The online survey study included 736 students and found that working students have lower academic performance and sleep health compared to non-working students. Several other studies have found that well-being tends to be lower among working college students (Creed et al., 2022; Hossain et al., 2023; Rodríguez et al., 2022; Taylor et al., 2020). It is however notable that most of these studies have not been done among working college students in China.

Job Satisfaction Among Working College Students

Job satisfaction is one of the most widely researched concepts in the existing research literature. It refers to the extent of contentment that employees hold towards their employment or occupation (Hartika et al., 2023). Job satisfaction can be measured in terms of overall job satisfaction or domain specific job satisfaction. It is heavily researched because it is a critical factor that shapes many employment and life variables. Long established evidence shows that job satisfaction influences career growth and development, job performance, engagement, productivity, organizational commitment, employee well-being, and overall life satisfaction (Hartika et al., 2023; Joanna & Jerzy, 2020;). Its relationship with well-being is particularly relevant for this study. According to Ewen et al. (2021) job satisfaction is linked to lower stress, lower risk or burnout, increased motivation, to overall life satisfaction which in turn predict positive mental, emotional, and physical well-being. Empirical studies including recent ones affirm that job satisfaction enhances well-being (Creed et al., 2022; Kosec et al., 2022; Ortan et al., 2021; Taylor et al., 2020; Thielmann et al., 2022). A few of these studies have even been done among students. For instance, Creed et al. (2022) found that job satisfaction enhances well-being and protects students against burnout. The study was a quantitative survey of 224 working students in the United Kingdom.

A study of 268 working students in Australia by Taylor et al. (2020) also found that job satisfaction enhances student well-being. The study found that job satisfaction enhances effective detachment which promotes well-being for students. It is notable that these studies have not been done among students in China. The factors that shape job satisfaction has also been a significant area of research interest. Factors such as work environment, job content, compensation and benefits, career growth and development, job security, feedback, recognition, and work-life balance have long been identified as significant determinants of job satisfaction (Joanna & Jerzy, 2020). Most of these factors are external factors. However, in recent years, researchers have begun to acknowledge that individual differences also play a role in job satisfaction. For instance, several studies have found that personality types play a significant role in job satisfaction (Sowunmi, 2022; Topino et al., 2021; Wang & Lei, 2021). These studies broadly show that people who score highly in agreeableness and extraversion report higher levels of job satisfaction than those who do not. Additionally, those who score highly in neuroticism report lower levels of job satisfaction. However,

there are evident gaps in the extant literature in relation to the Myer-Briggs Type Indicator and working students.

Myer-Briggs Type Indicator (MBTI)

The Myers-Briggs Type Indicator (MBTI) is a psychological tool used to assess personality types and preferences. It is one of the many types of personality indicators and tests. The most famous of these is the big five model which measures personality on five domains: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (Hong, 2022). The MBTI model contains four domains: Extraversion/Introversion, Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving (Hinton et al., 2019; Hong, 2022). The Extraversion/Introversion focuses on the extent to which a person prefers the outer world (extraverted) or solitude (introverted). The Sensing/Intuition dimension focuses on the extent to which one prefers hard facts and empiricism (sensing) or abstract projections (intuition) as their basis for their information acquisition and use (Hinton et al., 2019). The penultimate domain centres on the extent to which people are driven by logic (thinkers) or values and emotions (feelers) in their decision making and actions. In the final domain, people who fall under the judging category prefer structured and planned out approaches while those that fall in the perceiving category are more spontaneous and open minded (Hong, 2022). The MBTI model has gained popularity both in research and public discourse over the years. However, it is notable that many researchers remain highly critical of its validity and reliability (Buiatti, 2023; Remann & Nordin, 2021).

Researchers have nonetheless examined the extent to which these personality categories predict job satisfaction and well-being. Several studies have been done on the issue recently and have established that there are significant differences in job satisfaction based on the personality categorizations (Hirayama et al., 2023; Gottwald & Lejsková, 2023; Kang & Park, 2017; Koti et al., 2017; Kwo, 2016; Marshall, 2020; Yadav, 2023). There are slight differences in the findings but the overall indications from the studies is that those who score highly on extraversion, sensing, feeling, and judging tend to also score better in job satisfaction. Few of the studies have been done among students. However, the study by Kwo (2016) was done among dentistry students in South Korea and established that extroversion is the biggest predictor of job satisfaction followed by sensing. There has been substantially less research in the context of well-being. Some empirical studies have found that it does indeed predict well-being (Gottwald & Lejsková, 2023; Kang & Park, 2017; Koti et al., 2017; Kwo, 2016; Marshall, 2020; Yadav, 2023). Research among students who are working is lacking.

Field of Study and Emotional State

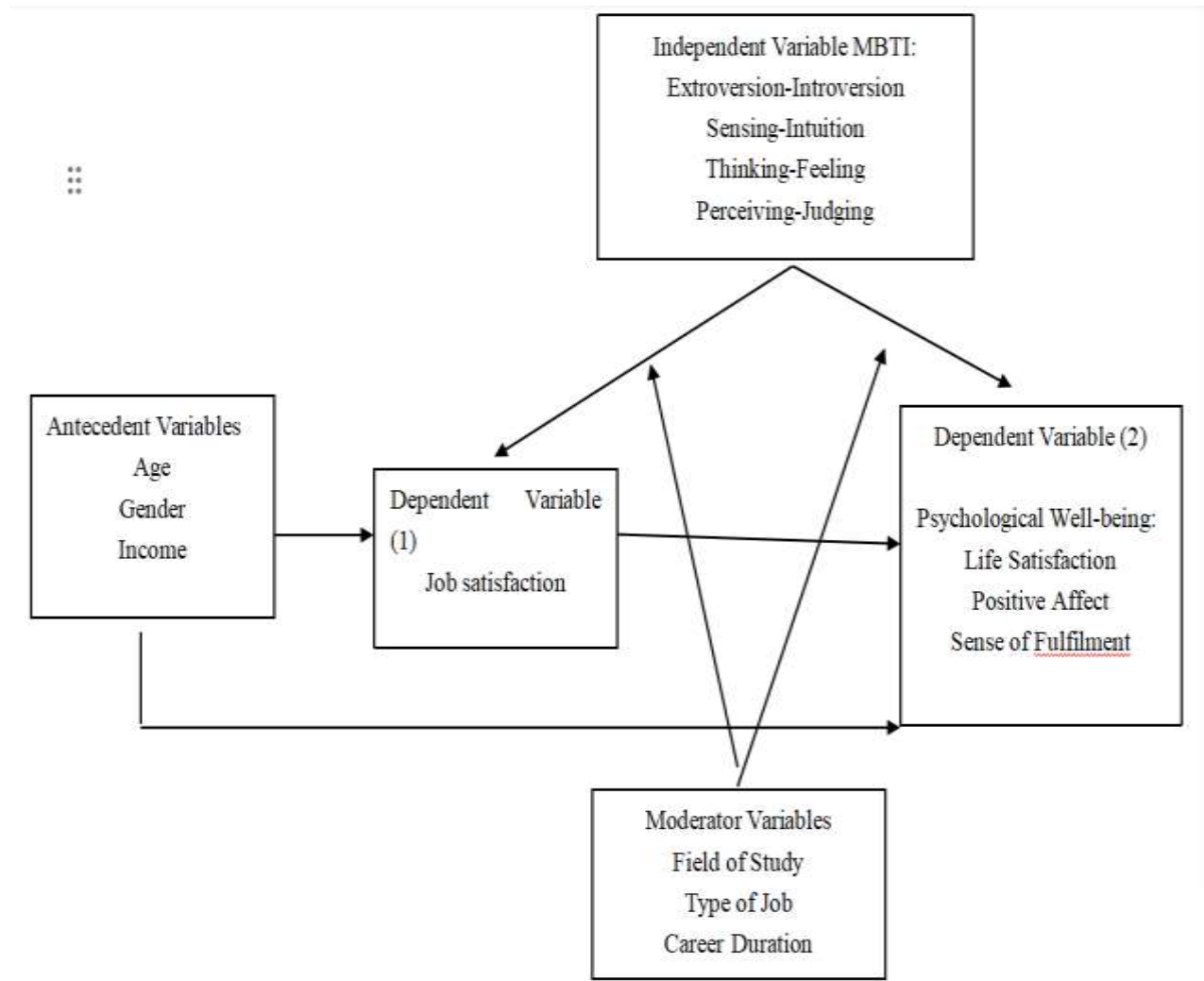
Field of study and emotional state are examined in this study as moderating variables in the primary relationships being explored. Field of study refers to the specific academic discipline that a student is pursuing (Verbree et al., 2021). It is most notable in higher education where specialist education is more prominent. This study examines the extent to which it moderates the relationships between MBTI types, job satisfaction, and well-being. Research on whether it does so is lacking in the existing research literature. Nonetheless, it is known to be a significant predictor in differences between students in relation to well-being (Lutz, 2022; Verbree et al., 2021). Overall, students pursuing stressful and demanding courses such as medicine tend to show lower levels of well-being compared to other students. Evidence also indicates that it moderates the relationships between student satisfaction and well-being (Merkle et al., 2023; Tekin, 2021). Additionally, a study by Shabani et al. (2023) found that choice of major correlates both with personality type and well-being among students. Chiang et al. (2020) assessed differences in sleep health and academic performance between working and non-working students in the United States in a study that also considered whether differences exist in terms of choice of major.

The study found that choice of major moderates examined relationships with non-working students in certain majors showing the same levels of poor sleep health as working students. However, the evidence is lacking in relation to MBTI and psychological well-being of working working students in China. Emotional state refers to the current, temporary condition of an individual's emotions (Nie, 2023). It is also a factor that is known to be shaped by personality types. For instance, people who score highly on neuroticism tend

to have worse emotional states compared to those who score lower (Norris & Brookes, 2021). Given that job satisfaction and well-being both have significant affective aspects; emotional state can be expected to moderate these variables. Evidence has shown that the current psychological state does indeed shape both job satisfaction and overall well-being (Liu et al., 2023). The evidence shows that people who are experiencing negative emotions unrelated to their work scoring poorly on both job satisfaction and well-being.

Research Framework and Hypotheses

Research Framework



The research hypotheses in this study contain:

H_{A1}: There are potential differences in the relationships between job satisfaction and various demographic indicators (age, gender, and income) among working college students in China.

H_{A2}: There are potential differences in the relationships between psychological well-being and various demographic indicators (age, gender, and income) among working college students in China.

H_{A3}: There is relationship between the Myers-Briggs Type Indicator (MBTI) and job satisfaction among working college students in China.

H_A4: There is relationship between the Myers-Briggs Type Indicator (MBTI) and the psychological well-being among working college students in China.

H_A5: There is relationship between job satisfaction and psychological well-being among working college students in China.

H_A6: The field of study, type of job, and career duration moderates the relationship between MBTI and job satisfaction among working college students in China.

H_A7: The field of study, type of job, and career duration moderates the relationship between MBTI and psychological well-being among working college students in China.

H_A8: The MBTI personality type can be considered a reliable predictor of job satisfaction and psychological well-being among working college students in China.

Methodology

Research Design and Procedure

To examine the relationships between MBTI personality types, job satisfaction, and psychological well-being among working college students in China, the correlational research design will be employed. MBTI personality types is dependent variable (IV), job satisfaction and psychological well-being are dependent variables (DV), the field of study, type of job, and career duration are moderator variables (MV), and age, gender, and income are antecedent variables (AV).

The procedure of this study include:

Getting the ethics approval from the relevant institutional review board for the research proposal.

Using a sample of college students from multiple universities through announcements posted in social media platforms and classroom visits. Then clear information about the study objectives will be provide for the samples.

Obtaining the informed consent from all participants to ensuring they understand the nature of the study, their rights as participants, and the confidentiality of their responses.

Assessment of the reliability and validity of MBTI Personality Test and Chinese Happiness Inventory (CHI) by administration of MBTI for small group of the research population (as pilot study) that they will be not part of sample group.

Data Collection: Collect demographic information from participants, such as age, gender, income, field of study , type of job, and career duration.

Administration of MBTI questionnaire to all participants (main sample by providing clear instructions for completing the questionnaire and offer any necessary clarification.

Subjects or Data Sources

The target population for this study will be Chinese college students. The study will involve a large sample of students from different universities across China to ensure diversity and representativeness. This study needs to recruit respondents and is intended to be completed via Sina Weibo. The information was sent to the social media pages of different universities across the country. This information explains the nature of the study, the expected profile of the respondents, and the terms of participation in the study. Those interested were recruited on a first- Data will be collected from these sources to understand the existing practices and services for Chinese college students and identify areas for improvement. Finally, we will

review academic journals, books and other relevant sources to gather existing knowledge and theories related to personality, career development, job satisfaction and well-being. This will provide the theoretical basis for the study and enable a comprehensive understanding of the current situation of the field.

When the population exhibits diversity in the variable being investigated and is organized into distinct groups or subpopulations, referred to as strata, a suitable sampling method is stratified random sampling. This approach involves treating each subpopulation as an independent entity and selecting samples through simple random sampling from each stratum (Banning, Camstra, & Knottnerus, 2012). In the context of the current study, which focuses on the population distributed across various universities and colleges, the research will employ the stratified random sampling technique.

Instrumentation

Demographic Questionnaire. The demographic questionnaire in this study aims to obtain data related to individuals' age, gender, ethnicity, education level, occupation, income, and marital status, field of study, type of job, and career duration.

The Myers-Briggs Type Indicator Personality Test (MBTI): MBTI is a widely used psychological tool that helps individuals understand their personality preferences. It was developed by Katharine Cook Briggs and her daughter, Isabel Briggs Myers, based on Carl Jung's theory of psychological types.

The MBTI assesses personality based on four dimensions, each having two opposite preferences, resulting in 16 possible personality types. These dimensions include:

Extraversion (E) vs. Introversion (I): This dimension measures how individuals direct and receive their energy. Extraverts focus outwardly, drawing energy from social interactions, while introverts draw energy from within and prefer solitary activities.

Sensing (S) vs. Intuition (N): This dimension describes how individuals gather information and perceive the world. Sensing types rely on their five senses to gather information and pay attention to concrete facts, while intuitive types focus on patterns and possibilities, relying on their instincts.

Thinking (T) vs. Feeling (F): This dimension represents how individuals make decisions and evaluate information. Thinking types prioritize logic and objective analysis when making decisions, while feeling types rely more on emotions and personal values.

Judging (J) vs. Perceiving (P): This dimension reflects how individuals orient themselves and structure their lives. Judging types prefer a planned and organized approach, enjoying closure and making decisions, while perceiving types are more flexible and spontaneous, embracing open-ended options.

The MBTI Personality Inventory provides individuals with a four-letter code that represents their personality type, such as ISTJ (Introverted, Sensing, Thinking, Judging) or ENFP (Extraverted, Intuitive, Feeling, Perceiving). This code offers insights into an individual's preferences in various areas like communication style, problem-solving, decision-making, and interpersonal interactions.

Chinese Version of the Psychological Well-Being (PWB) Scale

The Psychological Well-Being (PWB) Scale, created by psychologist Carol Ryff renowned for her contributions to positive psychology, is a widely utilized psychological assessment tool. It gauges diverse dimensions of psychological well-being, offering a comprehensive insight into an individual's mental and emotional health. In the current study the Chinese Version of the Psychological Well-Being (PWB) Scale will be used (Xia & Li, 2021).

Carol Ryff's conceptualization of psychological well-being encompasses six fundamental dimensions:

Autonomy: This pertains to the ability for self-determination, independence, and the capacity to resist societal pressures.

Environmental Mastery: This refers to the skill to effectively manage and control one's surrounding environment, including the ability to select or establish contexts that align with personal needs.

Personal Growth: This dimension involves the belief in ongoing personal development and the realization of one's full potential.

Positive Relations with Others: This dimension evaluates the ability to foster warm, satisfying, and trusting relationships with others, while also contributing to the well-being of others.

Purpose in Life: This denotes having a sense of direction and purpose, feeling that life is meaningful and worth living.

Self-Acceptance: This involves maintaining a positive attitude toward oneself, including the acknowledgment and acceptance of both positive and negative aspects.

Chinese Version of Minnesota Satisfaction

In the present study to measure job satisfaction the adopted Chinese version of the 20-item Minnesota Satisfaction Questionnaire (MSQ) will be used (Weiss et al., 1967) with a Likert scale from 1 = Very dissatisfied to 5 = Very satisfied. In a study, among Chinese population the Cronbach's alpha for Chinese version of the 20-item Minnesota Satisfaction Questionnaire (C-MSQ) was 0.92 (Li & Xie, 2020).

Data Analysis

In the current study, the descriptive statistics such as mean, median, mode, and standard deviation applied to summarize and describe the participants responses to the instruments. SPSS 20.0 was used to data analyses via ANAOVA and multiple regression and to generate tables and graphs describing the data. Descriptive statistics are techniques that assist researchers in organising, summarizing, and simplifying the findings derived from the data set

Assumptions and Limitations

The researchers want to conduct a study specifically on contemporary Chinese college students, who are currently undergoing a significant change and challenge. These college students are faced with various pressure, and how to get them employed to continuously improve their job satisfaction and happiness is a necessary topic. Therefore, the researchers believe that exploring this special group is of great practical significance and social value.

Results

Demographic Variables

The table below summarizes survey data by age, gender, and university year.

Table 1. Demographic Analysis

		Frequency	Percent
1. What is your age?	18-20 years old	84	18.7
	21-23 years old	351	78
	24-26 years old	15	3.3
2. What is your gender?	Female	189	42

	Male	261	58
3. What year of university are you in?	Freshman	27	6
	Junior	285	63.3
	Senior	42	9.3
	Sophomore	96	21.3

In terms of age distribution, the bulk of respondents are between the ages of 21 and 23, accounting for 351 people (78% of the total). The 18-20-year-old age group follows in second with 84 responses (18.7%), while the 24-26-year-old age group is the lowest, with just 15 respondents (3.3%).

In terms of gender, the survey had more male participation than females, with males accounting for 58% of the total (261 respondents) and females accounting for 42% (189 respondents).

When it comes to the academic position of the respondents, 285 students (63.3%) are juniors in university. Sophomores account for 21.3% of the total (96 respondents), seniors account for 9.3% (42 respondents), and freshmen account for 6% (27 pupils).

Hypotheses Testing

Hypothesis One

The statistical analysis presented examines the relationship between Myers-Briggs personality dimensions—Judging vs. Perceiving, Extraversion vs. Introversion, Sensing vs. Intuition, Thinking vs. Feeling—and job satisfaction.

Table 2. Model Summary- H1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.853 ^a	.727	.725	.4238

a. Predictors: (Constant), Judging vs Perceiving, Extroversion vs Introversion, Sensing vs Intuition, Thinking vs Feeling

According to the Model Summary, the model has a rather high R (multiple correlation coefficient) value of .853, showing a significant association between the predictors and the dependent variable, job satisfaction. The R Square value is .727, indicating that the model can explain about 72.7% of the variation in work satisfaction. The Adjusted R Square is .725, which has been slightly adjusted for the number of predictors in the model, confirming that the model fits the data well.

Table 3. ANOVA- H1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	213.099	4	53.275	296.614	.000 ^b
	Residual	79.926	445	.180		
	Total	293.025	449			

a. Dependent Variable: Job Satisfaction

b. Predictors: (Constant), Judging vs Perceiving, Extroversion vs Introversion, Sensing vs Intuition, Thinking vs Feeling

H1: There is a significant positive correlation between Myer-Briggs Type Indicator (MBTI) personality traits and job satisfaction among university students.

The ANOVA table determines if the regression model predicts the outcome substantially better than a model with no predictors. With a very high F-value of 296.614 and a significance (Sig.) level of .000, it shows the model is statistically significant.

Table 3. Coefficients- H1

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.121	.123		-.981	.327
	Extroversion vs Introversion	.187	.041	.182	4.583	.000
	Sensing vs Intuition	.325	.032	.331	10.108	.000
	Thinking vs Feeling	.399	.044	.387	9.008	.000
	Judging vs Perceiving	.116	.028	.114	4.092	.000

a. Dependent Variable: Job Satisfaction

Each independent variable's link with work satisfaction is measured in the Coefficients section.

H1a: The Extroversion-Introversion dimension of the Myer-Briggs Type Indicator (MBTI) significantly influences job satisfaction among working college students in China.

Extraversion vs Introversion' has a B coefficient of.187, which means that for every unit increase in extraversion, job satisfaction rises by.187 units when all other variables remain constant. The fact that it has a significant t-value (4.583) and p-value (.000) suggests that it is a credible predictor.

H1b: The Sensing-Intuition dimension of the Myer-Briggs Type Indicator (MBTI) significantly influences job satisfaction among working college students in China.

'Sensing versus Intuition' has the greatest Beta value (.331) and the highest B coefficient (.325), indicating a substantial positive effect on work satisfaction and extremely reliable prediction with a t-value of 10.108 and p-value of.000.

H1c: The Thinking-Feeling dimension of the Myer-Briggs Type Indicator (MBTI) significantly impacts job satisfaction among working college students in China.

With a B of.399 and a high Beta of.387, 'Thinking versus Feeling' also has a strong, significant influence on work satisfaction, as indicated by a t-value of 9.008 and a p-value of.000, suggesting that the preference for thinking over feeling is related with better job satisfaction.

H1d: The Judging-Perceiving dimension of the Myer-Briggs Type Indicator (MBTI) significantly impacts job satisfaction among working college students in China.

The t-value of 4.092 and p-value of.000 indicate that 'Judging versus Perceiving' has a B of.116 and a lower Beta of.114, but it is still a significant predictor of work satisfaction. These findings imply that personality characteristics as defined by the Myers-Briggs typology have a significant and quantitative influence on work satisfaction.

Hypothesis Two

Using a multiple regression analysis, the exhibited statistical output investigates the prediction potential of Myers-Briggs personality traits on individual well-being.

Table 4. Model Summary- H2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856 ^a	.733	.731	.4211

a. Predictors: (Constant), Judging vs Perceiving, Extroversion vs Introversion, Sensing vs Intuition, Thinking vs Feeling

The Model Summary shows a substantial positive association between personality traits and well-being, with a R value of .856. The R Square value of .733 indicates that the model explains approximately 73.3% of the variance in well-being, which is significant. The Adjusted R Square, at .731, reduces this value somewhat to account for the number of predictors while still suggesting a high match.

Table 5. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	216.845	4	54.211	305.683	.000 ^b
	Residual	78.918	445	.177		
	Total	295.763	449			

a. Dependent Variable: Well-Being

b. Predictors: (Constant), Judging vs Perceiving, Extroversion vs Introversion, Sensing vs Intuition, Thinking vs Feeling

H2: There is a significant positive correlation between Myer-Briggs Type Indicator (MBTI) personality traits and well-being among university students.

The ANOVA findings reveal that the regression model accurately predicts satisfaction. The model's predictive performance is statistically robust, significantly beyond conventional levels of statistical significance, with a high F-value of 305.683 and a p-value below .001.

Table 6. Coefficients- H2

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.204	.122		-1.664	.097
	Extroversion vs Introversion	.232	.040	.225	5.730	.000
	Sensing vs Intuition	.291	.032	.295	9.112	.000
	Thinking vs Feeling	.380	.044	.367	8.638	.000
	Judging vs Perceiving	.144	.028	.142	5.133	.000

a. Dependent Variable: Well-Being

H2a: The Extroversion-Introversion dimension of the Myer-Briggs Type Indicator (MBTI) significantly influences well-being among working college students in China.

'Extroversion vs Introversion' shows a positive unstandardized coefficient (B = .232) and is statistically significant (p.001), indicating that extraversion promotes well-being.

H2b: The Sensing-Intuition dimension of the Myer-Briggs Type Indicator (MBTI) significantly influences well-being among working college students in China.

'Sensing vs Intuition' also demonstrates a positive connection (B = .291) with a high degree of significance (p.001), demonstrating that a sensing orientation has a strong beneficial influence on well-being.

H2c: The Thinking-Feeling dimension of the Myer-Briggs Type Indicator (MBTI) significantly impacts well-being among working college students in China.

'Thinking versus Feeling' has the greatest unstandardized coefficient ($B = .380$) and is highly significant ($p = .001$), demonstrating a strong correlation in which a thinking orientation corresponds with better well-being.

H2d: The Judging-Perceiving dimension of the Myer-Briggs Type Indicator (MBTI) significantly impacts well-being among working college students in China.

'Judging versus Perceiving' has a lower positive coefficient ($B = .144$) but is still a significant predictor of well-being ($p = .000$), indicating that a judging orientation is connected to well-being, but to a lesser extent than the other components. These coefficients show that some Myers-Briggs personality characteristics can be substantial predictors of an individual's well-being.

Hypotheses Three

The relationship between job satisfaction and well-being factors.

Table 7. Correlations- H3

		Job Satisfaction	Well-Being
Job Satisfaction	Pearson Correlation	1	.982**
	Sig. (2-tailed)		.000
	N	450	450

** . Correlation is significant at the 0.01 level (2-tailed).

H3: There is a significant positive relationship between job satisfaction and well-being among working college students in China.

The Pearson correlation coefficient in the table indicates a very significant positive association ($r = .982$) between work satisfaction and well-being. With a p-value of .000, this correlation is statistically significant, implying that the likelihood that this high association is attributable to chance is less than 1 in 1000. The sample size (N) for both variables is 450, giving a solid foundation for the correlation's statistical significance.

Hypotheses Four

Using regression analysis, the offered statistical output investigates the influence of Myers-Briggs personality characteristics and emotional state on work satisfaction.

Table 8. Regression Analysis- H4a

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856a	.733	.730	.4195

a. Predictors: (Constant), Emotional State , Judging vs Perceiving, Extroversion vs Introversion, Thinking vs Feeling, Sensing vs Intuition

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	214.900	5	42.980	244.266	.000b
	Residual	78.125	444	.176		

Total	293.025	449		
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a. Dependent Variable: Job Satisfaction

b. Predictors: (Constant), Emotional State , Judging vs Perceiving, Extroversion vs Introversion, Thinking vs Feeling, Sensing vs Intuition

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.148	.122		-1.211	.226
	Extroversion vs Introversion	.233	.043	.227	5.444	.000
	Sensing vs Intuition	.430	.046	.438	9.411	.000
	Thinking vs Feeling	.430	.045	.418	9.583	.000
	Judging vs Perceiving	.108	.028	.107	3.839	.000
	Emotional State	-.168	.053	-.177	-3.200	.001

a. Dependent Variable: Job Satisfaction

The Model Summary reveals a significant association with a R value of .856. The R Square of .733 shows that the model explains 73.3% of the variation in work satisfaction.

H4a: Emotional state moderate the relationships between Myers-Briggs Type Indicator (MBTI) types, and job satisfaction among working college students in China.

With a F value of 244.266, the ANOVA reveals a highly significant model, confirming the variables' combined effect on work satisfaction.

'Emotional State' shows a negative connection with work satisfaction ($B = -.168, p = .001$), meaning that those who are in a bad mood are more likely to be dissatisfied with their jobs. These correlations show that personality characteristics and emotional state are important factors of how content people are with their work.

This regression study investigated the impact of personality types and emotional states on job satisfaction.

Table 9. Regression Analysis- H4b

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856a	.733	.730	.4195

a. Predictors: (Constant), Emotional State , Judging vs Perceiving, Extroversion vs Introversion, Thinking vs Feeling, Sensing vs Intuition

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	214.900	5	42.980	244.266	.000b
	Residual	78.125	444	.176		
	Total	293.025	449			

a. Dependent Variable: Job Satisfaction

b. Predictors: (Constant), Emotional State , Judging vs Perceiving, Extroversion vs Introversion, Thinking vs Feeling, Sensing vs Intuition

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.148	.122		-1.211	.226
	Extroversion vs Introversion	.233	.043	.227	5.444	.000
	Sensing vs Intuition	.430	.046	.438	9.411	.000
	Thinking vs Feeling	.430	.045	.418	9.583	.000
	Judging vs Perceiving	.108	.028	.107	3.839	.000
	Emotional State	-.168	.053	-.177	-3.200	.001

a. Dependent Variable: Job Satisfaction

The Model Summary shows a high R value of .859, indicating a robust association, with the model explaining 73.7% of the variation in well-being (R Square). The F value of 248.936 in the ANOVA table indicates statistical significance, demonstrating the predictors' aggregate influence on well-being.

H4b: Emotional state moderates the relationships between Myers-Briggs Type Indicator (MBTI) types, and well-being among working college students in China.

The variable 'Emotional State' shows a negative influence ($B = -.135$, $p = .011$), indicating that a more negative emotional state is related with lower well-being. These findings emphasize the significance of personality characteristics and emotional state in determining an individual's feeling of well-being.

Discussion and Conclusion

Discussion of the Findings

The findings are broadly consistent with expectations. The demographic findings show that a majority of the respondents are male aged 21-23, and juniors. This is consistent with the general college profile for students in China where the majority are male due to the one child policy. Additionally, research evidence has shown that male students tend to work more than female students. The hypothesis testing showed that the MBTI personality types significantly predict job satisfaction among working students. MBTI personality types accounted for 72% of the variance in job satisfaction in the model that was proposed in the study. Additionally, the findings show that the higher scores in Extraversion, Sensing, Thinking, and Judging dimensions predict higher levels of job satisfaction among working college students in China. The findings are generally consistent with what other researchers have found (Hirayama et al., 2023; Gottwald & Lejsková, 2023; Kang & Park, 2017; Koti et al., 2017; Kwo, 2016; Marshall, 2020; Yadav, 2023). Notably, the study by Kwo (2016) was done among students and found similarly.

The only notable difference with the majority of the findings of other researchers is on the Thinking/Feeling domain where the majority of studies have found that feeling is more predictive of a positive relationship while this study has found that thinking is more predictive. However, the studies by Kang & Park (2017) found similarly on this domain. The same pattern of findings is evident on the relationship between MBTI personality types and well-being among working college students. MBTI personality types were found to be predictive of well-being among working college students with Extraversion, Sensing, Thinking, and Judging dimensions predicting higher levels of well-being. This is also consistent with what other researchers have found in the existing research literature (Gottwald & Lejsková, 2023; Kang & Park, 2017; Koti et al., 2017; Kwo, 2016; Marshall, 2020; Yadav, 2023). It is thus evident that personality types can predict both job satisfaction and well-being among working college students in China. The consistency with other research findings suggests that these findings are accurate. The domain specific difference suggests that cultural differences may be a play.

The results also show that job satisfaction leads to better wellbeing among working college students in China. This is also consistent with the evidence in the existing research literature (Creed et al., 2022; Kosec et al., 2022; Ortan et al., 2021; Taylor et al., 2020; Thielmann et al., 2022). The evidence in this regard is highly consistent. This is notable because it suggests that job satisfaction can be targeted as a way to improve well-being among working college students as they tend to have lower well-being compared to other students. The findings also show that the field of speciality and emotional state mediate the relationships between MBTI personality types, job satisfaction, and well-being among working college students. Evidence in the existing research suggests that emotional state and field of study correlate with personality types, job satisfaction, and well-being (Lutz, 2022; Verbree et al., 2021). This suggests that they may indeed moderate the stated relationships. However, this is a novel finding for this study as evidence on the issue is limited especially in relation to working college students. Overall, the findings of this study seem to be sound as they are consistent with what other researchers have established.

Implications for Practice

This evidence that has emerged in this research portends important implications for practice. The findings show that MBTI personality types and job satisfaction should be taken seriously in the development of strategies to promote well-being among working college students in China. The phenomenon of working college students is on the rise and it has been associated with decreasing well-being among students. Tailored interventions considering individual personality traits can be designed to enhance job satisfaction and well-being among working students. The findings can thus be used as part of well-being support programs for working college students in China. Institutions can implement comprehensive programs that consider emotional states and fields of study since they play an essential moderating role in these relationships. This will create a conducive environment for students to balance work and academics effectively. The findings also have implications for the government since the well-being of students is also a concern for the government. Policies that require working students to seek tailored guidance and counselling can be developed on the basis of these findings.

Future Research Directions

This study faced some limitations that other researchers can attempt to fill. This study was limited in its scope and could not gain in-depth knowledge on the experiences of working college students to gauge how they shape the stated relationships. Future researchers should address this gap by carrying out qualitative or mixed methods studies in this research area. Additionally, given that the MBTI model continues to be discredited in some quarters, researchers should consider similar studies using other personality categorization approaches. There is also a need for more research within China to validate the findings of this research study. The moderating roles of field of study and emotional state in particular need to be assessed as there are limited related studies on the issue. Other researchers should also compare these relationships between working and non-working students to further knowledge. Overall, the phenomenon of working college students is on the rise in China and more research into its implications for students is needed.

Conclusion

The phenomenon of working college students is on the rise in China. Evidence elsewhere suggests that working while studying can be problematic for students' well-being. This research sought to assess whether personality types and job satisfaction can be used to prevent the decline of well-being among working college students in the country. This study thus set out to meet the following objectives:

RO1: To assess the relationship between the Myers-Briggs Type Indicator (MBTI) types and job satisfaction among working college students in China.

RO2: To assess the relationship between the Myers-Briggs Type Indicator (MBTI) types and well-being among working college students in China.

RO3: To assess the relationship between job satisfaction and well-being among working college students in China.

RO4: To assess the moderating roles of field of study and emotional state in the relationships between Myers-Briggs Type Indicator (MBTI) types, job satisfaction, and well-being among working college students in China.

Based on the findings, these objectives have been successfully met. The findings show that MBTI personality types significantly shape both job satisfaction and well-being. Scoring highly on Extraversion, Sensing, Thinking, and Judging predicts high job satisfaction and better well-being among the students. Job satisfaction was also found to positively impact well-being for working students. Additionally, the findings also show that the field of study and emotional state moderate the stated relationships. The findings of this study are sound as they generally align with what other researchers have established.

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