

Analysis of the Influencing Factors and Intervention Strategies for the Formation of Introverted Psychology: An Empirical Study

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Abstract: This study aims to explore the influencing factors of introverted psychology formation and propose corresponding intervention strategies. Relevant data was collected by means of questionnaires with the application of statistical analysis methods for processing and interpretation. The research results indicate that the formation of introverted psychology is influenced by multiple factors, including individual traits, family environment, negative social experiences, social environment and psychological factors. In terms of intervention, the development of introversion can be effectively reduced and prevented by providing corresponding support, cultivating social skills and establishing a positive psychological environment. This study is of great significance for understanding the formation mechanism of introverted psychology and conducting corresponding psychological interventions.

Keywords: introverted psychology, influencing factors, intervention strategies, empirical research

1. Introduction

Introverted psychology is a personality factor associated with low positive emotions and low sociability [1]. As a personality trait, introversion affects an individual's performance in social, emotional, and behavioral aspects. Introverted psychology is not a disadvantage, but individuals with introverted psychology are more likely to face challenges such as social difficulties, loneliness, and depression, which still need to be overcome in contemporary society. Therefore, exploring the causes of introverted psychology can help people better understand their strengths and weaknesses, effectively respond to their emotions and behaviors, and propose promoting effective social communication and emotional expression among introverted individuals.

Previous studies have found that introverted personality is related to multiple factors such as genetics and environment [2]. For example, family parenting styles, socioeconomic status, cultural background and biological factors may all affect an individual's introverted personality traits. Some studies have also found that introverted personality is associated with some negative mental states, such as depression and social anxiety [3]. In addition, the formation mechanism of introverted psychology and adopting corresponding intervention strategies has attracted widespread attention

from scholars. However, research on the influencing factors and intervention strategies for the formation of introverted psychology is still relatively limited. Therefore, this study aims to explore the formation mechanism of introverted psychology from three aspects: personal traits, environmental factors, and psychological factors through an empirical study based on previous studies, and propose corresponding intervention strategies. Research is beneficial for understanding the sources and development mechanisms of individual introverted traits, thereby better helping individuals with introverted personalities adapt to social environments. In addition, this research can also provide guidance for human resource management, psychology, education, career counseling and other fields, help promote the development of interpersonal relationships, which can help to promote interpersonal relationships, as well as help organizations to better deal with individual differences between employees or students, and improve overall performance and happiness.

2. Literature Review

The concept of introverted psychology first originated from the personality type theory of the Swiss psychologist Carl Jung, who categorized people into introverted and extroverted types [4]. Introverted individuals tend to focus on the internal world, such as their own feelings, thoughts, and feelings, rather than the external world, they are not very good at themselves and interacting with others in terms of their psychological traits [5]. This type of individuals are usually more concerned with internal experience, self-reflection, prefer independent thinking and deep exploration, and usually appears relatively calm and introverted. They may feel uncomfortable or nervous in situations that require a lot of socialization, expression, and external stimulation [6, 7]. On the contrary, extroverted individuals tend to seek external stimulation and social interaction. With the development of psychology, in the research of sociologist Max Weber, introversion is regarded as an individual trait more inclined to introspection, self-reflection and exploration of the inner world [8, 9]. Meanwhile, modern psychology also defines introverted individuals as those who prefer solitude, problem-solving, and attention to details. These theories collectively shape the concept of introverted psychology and have had a profound impact on the study of human behavior and personality.

Positive research on existing psychological populations has found that introverted individuals are typically more sensitive, think deeply, and more focused, and they have strengths in processing information and solving problems [10]. Specifically, introverted individuals have more advantages in terms of thinking ability, independence, creativity, introspection, and concentration. As a result, introverted psychological individuals excel in study, work, and interpersonal communication. At the same time, introverted individuals can also achieve better team performance by complementing and collaborating with extroverted individuals [11]. However, introverted psychology also has negative personality traits, for example, they tend to being more self-enclosed or use negative coping styles, and have poorer expression, socialization and social adaptation skills [1]. Moreover, this psychological characteristic makes them more prone to depression than extroverted students, as well as isolation, discrimination, and so on. In today's world where leadership, teamwork, and relationship governance are highly emphasized, interpersonal interactions are frequent and important both at school and in the workplace, which posing challenges for introverted individuals. Therefore, from the perspective of the factors influencing the formation of introverted psychology, this study proposes intervention strategies that can effectively alleviate and prevent the development of introverted psychology, in order to help introverted individuals better face their work and life.

3. Research Hypothesis

3.1. The Impact of Environmental Factors on the Formation of Introverted Psychology

Environmental factors can significantly influence the formation of introverted psychology [12]. While there is a certain genetic basis for introverted personality, environmental factors also contribute to shaping an individual's character traits.

Firstly, the family environment plays a pivotal role [13]. A person's upbringing within an introverted family can impact their psychological development. For instance, if family members prefer quiet environments for work or study and are less inclined to engage in deep conversations or social activities, such an environment may foster the development of introverted psychology.

Secondly, negative social experiences. Social experiences also play a crucial role in the formation of introverted psychology. If a person experiences negative experiences in early social interactions, such as being ridiculed, rejected, or ignored, they may gradually become introverted and afraid to communicate with others and showcase themselves [14].

Furthermore, the educational environment and its emphasis on personal interests can influence the formation of introverted psychology. Educational systems that encourage self-expression and active participation in group discussions help develop social skills and reduce introverted tendencies. Conversely, educational settings that prioritize competition and personal achievement can induce stress and discomfort in introverted students, further reinforcing their introverted mindset.

Lastly, societal attitudes and cultural norms regarding introversion significantly impact the formation of introverted psychology. If society lacks understanding and acceptance of introverted individuals, it hinders their self-awareness and reduces their inclination to express their true selves and engage with the outside world. This, in turn, reinforces their introverted tendencies.

In summary, while introverted psychology has a genetic basis, various environmental factors such as family upbringing, social experiences, educational environment, and societal attitudes collectively contribute to the formation of introverted psychology. Therefore, this study proposes:

H1: Environmental factors can have an impact on the formation of introverted psychology.

H1a~d: Introverted family environment, negative social experiences, educational environment emphasizing personal interests, and low-inclusive social identity have a significant impact on the formation of introverted psychology.

3.2. The Impact of Psychological Factors on the Formation of Introverted Psychology

Introverted individuals often pay more attention to their inner world, making them more prone to contemplation, reflection, and self-observation. They may be more likely to fall into an emotional state of self-criticism and self-doubt, and prefer to solve problems through independent thinking. These cognitive and emotional characteristics may further strengthen their introverted tendencies. In addition, introverted individuals may be more sensitive to their emotions and thinking processes, and are more susceptible to negative emotions. For instance, introverts frequently experience social anxiety and fear social situations and interactions with others. This social anxiety can worsen their introversion and result in avoidance of social activities, further intensifying their introverted tendencies. Therefore, this study proposes:

H2: Psychological factors can have an impact on the formation of introverted psychology.

3.3. The Impact of Personal Physiological Traits on the Formation of Introverted Psychology

Personal physiological traits have a significant impact on the formation of introverted psychology. The internal causes of introverted psychology may include individual personality traits, genetic inheritance, neurophysiological differences, and other factors [15]. Firstly, some studies have

shown that introverted individuals may have higher pain sensitivity, cognitive control ability, and other characteristics. Some people are naturally more prone to making cautious and introverted responses to external stimuli, which makes them exhibit introverted characteristics [16]. Secondly, genetic factors may have an impact on the development of introverted traits [17]. Research shows that individuals may have a certain introversion tendency at birth, and these genetic factors may include genes, neurotransmitters and neural circuit. Some genes may affect whether individuals are more likely to show introverted behavior by regulating the level of neurotransmitters in the brain or influencing the way individuals respond to stimuli [18]. In terms of neural factors, some studies have shown that the brain of introverted individuals may not be very sensitive to stimulus responses, which may be related to the larger thickness of the cerebral cortex [19]. Meanwhile, studies have pointed out that the sensitivity of the brain to stimuli and the use of the left hemisphere may also affect whether they are more likely to exhibit introverted traits. Introverted individuals may be more inclined to use the left hemisphere when performing cognitive tasks, which is related to language and logical abilities [20]. In addition, research has confirmed that nervous system disease such as chronic subjective dizziness are also related to the formation of introversion [21, 22].

In summary, individual psychological characteristics have a significant correlation with the formation of introverted psychology, but this correlation is complex and not readily observable. Hence, this study preliminarily determined that individual physiological traits can have an impact on introversion formation. Nevertheless, the validation process primarily focuses on psychological and environmental factors.

Combining the above analysis, the theoretical model of this study is shown in Figure 1.

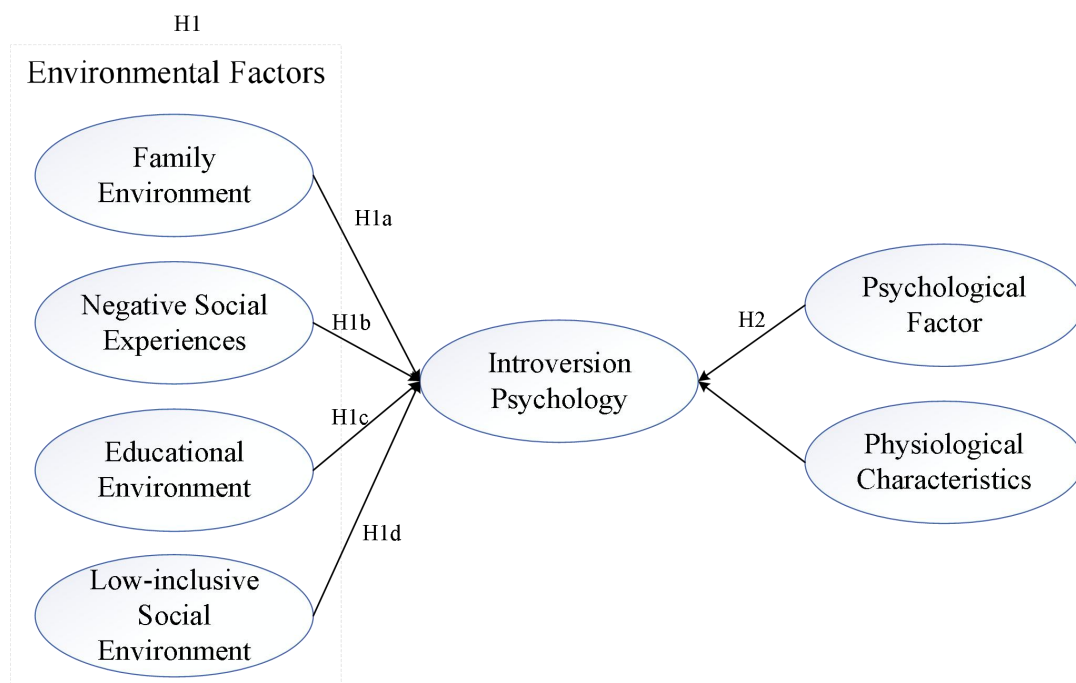


Figure 1: Theoretical model.

4. Methodology and Results

4.1. Research Method

Data were collected in this study using questionnaires, and a certain number of participants were selected as the study sample. The scale was used to measure the degree of introversion of the

participants as well as the related influencing factors, such as environmental factors and psychological factors. A total of 87 questionnaires were distributed in this study, and 82 valid questionnaires were obtained after excluding invalid questionnaires that were not completed. After screening and sorting out the valid questionnaires, SPSS 24 software was used for descriptive statistical analysis and reliability and validity analysis, and finally regression analysis was used for hypothesis testing.

Table 1: reflects the distribution of respondents in this survey.

Table 1: Descriptive stats.

Characteristics	Item	Frequency	Percent
Gender	Male	25	30.49
	Female	57	69.51
Age	less than 18	4	4.88
	18-25 years old	33	40.24
	26-35 years old	28	34.15
	36-45 years old	10	12.20
	45 years old or more	7	8.54
Education	Graduate or above	19	23.17
	undergraduate course	30	36.59
	junior college	24	29.27
Career	High school and below	9	10.98
	student	29	35.37
	worker	53	64.63

4.2. Reliability and Validity Analysis

As shown in Table 2, the factor loadings of the measurement questions for each variable >0.6 , the KMO for each variable >0.6 , and Cronbach's $\alpha > 0.6$, indicating that the reliability and validity of the research data meets the requirements and can be further analyzed [23, 24].

Table 2: Reliability and validity.

Variable	Item	Factor loadings	KMO	Cronbach's α
Introversion Psychology	I1	0.820	0.705	0.794
	I2	0.853		
	I3	0.867		
	F1	0.825	0.742	0.777

Table 2: (continued).

	F2	0.826		
	F3	0.661		
	F4	0.765		
Negative Social Experiences	N1	0.917	0.741	0.890
	N2	0.915		
	N4	0.885		
Educational Environment	E1	0.721	0.637	0.650
	E2	0.765		
	E5	0.815		
Social Environment	S1	0.763	0.649	0.647
	S2	0.739		
	S3	0.795		
Psychological Factor	P1	0.849	0.689	0.784
	P2	0.758		
	P3	0.753		
	P4	0.764		

4.3. Results

The results of regression analysis are shown in Table 3. It can be seen that family environment, negative social experiences, social environment, and psychological factor have significant effects on the formation of introverted psychology. H1a, H1b, H1d, H2 pass the test. The effect of educational environment on the formation of introverted mentality is not significant ($\beta = 0.003, p > 0.05$), and H1c does not pass the hypothesis test.

Table 3: Regression analysis results.

Variable	Model 1	Model 2
	Introversion Psychology	
Gender	0.151	0.136*
Age	0.004	0.031
Education	0.047	0.014
Career	0.123	0.083
Family Environment		0.596***
Negative Social Experiences		0.221**
Educational Environment		0.003
Social Environment		0.194*
Psychological Factor		0.428***

Table 3: (continued).

R ²	0.040	0.667***
F	0.797	19.028***

According to the results of empirical research, this study finds that the formation of introverted psychology is affected by a combination of factors. In addition to individual physiological characteristics, family environment, negative social experiences, social environment, and psychological factor factors all have significant effects on the formation of introverted psychology. Combined with the research hypotheses, this paper proposes appropriate intervention strategies to mitigate and prevent the development of introverted psychology.

First of all, family members should provide support and encouragement to help introverted individuals establish a positive self-perception. Specifically, by encouraging individuals to participate in social activities and expand their social circles, or by engaging in in-depth conversations and exchanges frequently, they can help introverted individuals develop their social skills and communication abilities, and better adapt to the social environment.

Secondly, Secondly, it is crucial to correctly guide the public's understanding of introverted psychology to create an inclusive social environment. The introverted psychology is not a disease or a shortcoming, but a character trait. The public should be more inclusive and less derisive of the individual's personality diversity.

In addition, creating a positive psychological environment, including providing safe and supportive interpersonal relationships and encouraging active participation in social activities, can help the psychological growth and development of introverted individuals.

5. Conclusion

Through empirical research methods, this study thoroughly explored the influencing factors of the formation of introverted psychology and proposed corresponding intervention strategies. The findings suggest that the formation of introverted psychology is influenced by a combination of factors, including individual traits, environmental factors, and psychological factors. In terms of interventions, providing support, creating an inclusive social environment, and establishing a positive psychological environment can effectively mitigate and prevent the development of introversion. These findings have important implications for promoting the psychological growth and development of introverted individuals.

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