



A Study on the Application of Satir's Iceberg Theory in Improving Examination Anxiety in Adolescents

A Case Study of Examination Anxiety Phenomenon in a Group of Chinese High School Students

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Abstract. In recent years, as the academic and psychological pressures on adolescent students have increased, more and more people have become aware of the situation and are trying to improve it. This paper firstly outlines the Satir's iceberg model, secondly explores the causes of anxiety in adolescent students and finds that the main causes of this anxiety include self and external factors, and then uses the Satir's iceberg theory to improve the examination anxiety of adolescent students. The three main approaches to alleviate the anxiety of adolescent students are self-regulation, adjustment of family education and improvement of the school environment.

Keywords: Satir's iceberg theory · adolescents · examinations · anxiety · family education

1 Introduction

With the release of the “double reduction policy”, the pressure of homework and after-school learning of adolescent students has been alleviated to a certain extent, but the heavy pressure of examinations has yet to be addressed. This paper uses desktop research to examine the causes of examination anxiety among adolescent students and to explore how the Satir model can be used to improve the situation. International research on the Satir model as a solution to adolescent examination anxiety is scarce. This paper will use the Satir iceberg theory as a basis to try to improve adolescent students' examination anxiety.

2 Concept of Satir's Iceberg Theory

The Satir's Iceberg Theory is a widely used psychotherapeutic model for family therapy, individual counselling and family restructuring developed by Virginia Satir. Its main aim is to help people to deal with their problems in a holistic way, from the family to the social system, and to work towards a more coherent body and mind, higher self-esteem and a more 'humane' life.

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Satir's iceberg theory divides the iceberg into two main parts: the external behaviour above the level that can be seen directly by the outside world, and the coping styles, feelings, sensations, opinions, expectations, aspirations and ego below the level that cannot be directly perceived [1]. The behavioural component above the horizontal plane in turn includes actions and story content, as well as the six dimensions contained in the component below the horizontal plane from the top down. Coping is primarily about what one's posture looks like. Feelings on the other hand include a person's joy, excitement, fascination, anger, hurt, fear and sadness. The main role of the feelings of feelings is in the decision to feel. Perspective refers to one's beliefs, assumptions, preconceptions, and subjective realities and perceptions. Expectations can be viewed from a number of perspectives: one's own expectations of oneself; one's expectations of others, i.e. how one expects others to treat oneself or how one expects others to behave; and expectations from others about oneself. Desire, which is common to all human beings, specifically includes the desire to love and be loved, to be accepted, to be recognised, to feel safe and to belong, to be worthy, to be free and to be at peace. The self, which encompasses the vitality, spirit, spirituality, core and essence of a person. Therefore, the Satir Iceberg Theory can effectively help students understand the iceberg they have formed, explore their "inner iceberg", and give them hope, direction, and strength through positive energy input. Through the input of positive energy, students are given hope, direction, and strength. Students are targeted to make and arrange scientific development plans, which ultimately help them realize their self-worth [2].

3 Causes of Examination Anxiety

In contemporary times, there are many factors that cause test anxiety in adolescent groups, the most important of which are self and external factors, and this paper focuses on high school students. For high school students, the most influential factor is the future college entrance examination, which can be considered as a "watershed" in China, and its purpose is to select more outstanding talents to enter higher education institutions. Because the college entrance exam is a major turning point for Chinese candidates, many people in China emphasize the importance of the college entrance exam, and this makes high school students feel a great deal of pressure to take it. Not only that, but before they meet the college entrance exams, Chinese high school students will face various exams in their daily study life, such as classroom exams, weekly exams, monthly exams, half-term exams, stage tests, and so on. These frequent exams will make the students feel nervous, anxious, and stressed and tired. China's Peng Peng News has also proposed to break the "education in-volume", which requires schools, parents and society to take a rational view of the problem in order to effectively reduce students' education anxiety. In 2008, the China-Europe International Study, a national mental health agency, showed that 61% of students had varying degrees of test anxiety, and 26% of them had severe test anxiety. Test anxiety severely affects test takers' performance, especially in math and language subjects, and twice as many girls as boys suffer from severe test anxiety.

3.1 Self-factors

Physiological Causes

The survival pattern of the family of origin will have an impact on the present and future life, but this situation can be changed. Being aware of your survival posture and improving it is an important thing. It is also very important to accept your complete self, and having a clear analysis and understanding of yourself can help improve anxiety situations [3]. As each individual is different and has grown up in a different environment, their neurosensitivity level varies greatly, which in part leads to some students feeling nervous and anxious whenever an exam is mentioned or near to an exam [4]. Some students' externalised behaviours may include looking around in their chairs, scratching their heads, turning their pencils, or going to the toilet frequently. A small number of students may not be able to sleep soundly for several nights before the exam. This can also exacerbate examination anxiety to a certain extent, leading to over-anxiety and a failure to do the examination properly and achieve high grades.

Excessive Self-imposed Demands and Expected Goals

As competition for educational resources becomes more and more intense, the young student population has to gradually raise the bar on their academic performance, which should be good, but some students are so demanding and ambitious that they are under far more psychological pressure than normal, so that they are unable to focus on their studies in the period before the exam. This is a time when students may be thinking and obsessing about whether they can achieve the score they have set for themselves and whether they can get into a better institution with that score, rather than spending their energy on how to deal with the exam and prepare for it. Some students may also demand that they achieve rankings and scores that are far beyond their abilities, or that they get into top institutions, which can make it difficult for them to perform at their best in exams and may even fall short of their normal examination scores, and this anxiety may be further amplified when they face exams for further education or employment that will have a greater impact on their future [5].

3.2 External Factors

Family Educational Environment

From childhood, parents have a strong influence on their children's education. From the early stages of a child's development, their parents' views on education have a direct or indirect influence on the child's development and can have a subtle effect on the child's world view, outlook on life and values. The demands and expectations of parents often have an impact on the child's behaviour, and sometimes if parents are overly concerned about grades, this can lead to excessive stress and anxiety. This can also neglect the child's feelings and put the child under more psychological pressure. When parents have high expectations of their children's performance, the child's stress level rises, and if the child does not achieve the desired goals, this can lead to disappointment, low self-esteem, anxiety and self-denial, and even to fear of exams, boredom and depression. Studies have also shown that excessive expectations, brutal interference and disrespectful practices in family education can have a significant predisposing effect on the development of examination anxiety [6]. Parents spend relatively little time with their children, do not

carefully observe their children's changes, and do not communicate deeply enough can, to a certain extent, have a negative impact on their children. Not only that, when parents are very rough in their education, using scolding discipline, may also bring pressure to the child, resulting in anxiety [7].

The School Education Environment

For most young students, the educational environment of the school also plays a very important part. Therefore, the educational and teaching environment in school also influences students' anxiety. For example, teachers assigning too much homework or making it too difficult, scheduling exams too tightly, and emphasising academic performance and ranking not only do not have much positive impact on students' performance, but also affect their physical and mental health. When students have high levels of anxiety, all of this can hinder their knowledge and ability to perform well in examinations and thus affect academic performance. Some schools and teachers focus more on academic performance than on the physical and mental development of students, over-emphasising the importance of academic performance and class and grade rankings. This situation can also keep students' anxiety levels at an extremely high level. The long school hours and the school climate also have an indirect effect on students' emotions. In addition, good teacher-student and peer relationships can reduce students' anxiety levels to a certain extent. Likewise, when teachers are competent, responsible and relaxed in classroom management, examination anxiety can be significantly reduced [8].

4 Using Satir's Iceberg Theory to Improve Examination Anxiety in Adolescents

4.1 Performing Self-regulation

Knowing and Understanding Yourself

Satir believes that man is born with a sublime power called: the life force. This power needs to be activated in a certain way and one's correct perception is the key to making the life force flourish [9]. Each person is an individual and we need to have a clear identity of ourselves and not blindly set goals that are impossible to achieve. Focus on self-growth and development, understand what you think and what your needs are, don't set too high expectations of yourself, express your emotions in an appropriate way, try to balance yourself, your environment and your expectations, and better accept and trust yourself. A thorough and in-depth analysis of the situation and the development of appropriate and effective plans and preparations will ensure that a state of self-harmony can be achieved [10].

Acceptance of Self with Openness

Once you know and understand yourself, you need to face up to your strengths and weaknesses. Once you know your strengths, you can think carefully about how to build on them, and when you are faced with weaknesses, you need to be open to trying to change them and turn them into your strengths. Consciously create positive emotions and reduce negative emotions like anxiety.

4.2 Adapting Family Education Models

Learning to Communicate Effectively

Albert Mehrabian famously proposed a communication formula: the effectiveness of parent-child interaction = 7% written language + 38% vocal tone + 55% body language. Effective communication is therefore also key to improving your child's self-esteem. Communication is also an important way of bonding with children and parents need to choose specific ways of communicating in order to further stimulate their child's inner energy. In the early years of a child's life, parents need to meet the child's desire for love and let the child know that he or she is loved, accepted and recognised by the family. Through communication and understanding of the child's innermost thoughts and feelings, understand why the child is feeling the way he or she is and what the reasons behind the emotions are. When setting goals for exams, it is important that parents don't just aim for high grades and that they don't leave it up to the parents to decide, but that they communicate with the child to determine short-term and long-term goals that are within the child's ability to achieve. In addition, once the desired goals have been set, the process can be discussed with the child to see if the goals need to be further refined. Parents need to be patient during this process and be as gentle as possible so that the child feels respected and that you are talking to each other rather than being set up. When your child has done well in school exams, encourage and recognise the results with words and appropriate rewards, and set tasks and goals for the next stage with your child to motivate him/her to face the next challenges in a more positive way. If your child gets a less than stellar result in an exam, the first thing you should do is not to scold or beat your child, but to find out if he or she is under too much stress after the setback and how he or she is feeling at the moment, so that he or she can talk to him or herself and listen to what is on his or her mind. After that, do not talk too much about grades, so that your child can focus on the future and always stay positive and not depressed. When your child is stressed or anxious, let your child talk about it and share it with you so that you can help your child work through the negative emotions and get better.

Proper Guidance for the Child

The views and ideas instilled by parents during childhood will play a key role in a child's future growth and development, and it is important to educate children from a young age about all kinds of emotions, not only happiness, joy and delight, but also about the fact that everyone experiences negative emotions like anxiety, which is a normal thing and everyone may experience such emotions at different times. It is normal and everyone may experience such emotions at different times, so there is no need to worry or panic. When your child is about to face or is facing anxiety, guide your child in a positive direction and show him/her how to cope with it, so that he/she can overcome it successfully.

Create a Harmonious Atmosphere

The family of origin is the environment in which children first grow up and learn and has a strong influence on their future emotional expression, behaviour, attachment styles and the formation of intimate relationships [11]. A good family environment is essential

for a child's development, allowing the child to feel happy, secure and to develop a sense of belonging. Children should also be given enough freedom in their daily lives to know that they are not being disciplined, thus enhancing their vitality. A good marriage and parent-child relationship also affects the development of children, respecting them and creating a relaxed and positive family atmosphere. Show your child as much love and affection as possible when you are with him/her, respect his/her choices and understand his/her decisions. Recognise and appreciate your child when he/she does something well to boost his/her confidence in the future. When it comes to learning, parents should not set high expectations for their children and should not set impossible grades or rankings for their children, as this will indirectly put more pressure on them. Parents should actively participate in their children's learning life and pay more attention to their children's psychological state when they are studying. It is also important to guide the child in a positive direction, helping the child to understand the reasons for not achieving satisfactory results and trying to help the child to solve the problem. In this way, the child's self-confidence is nurtured and the child develops a sense of self-worth, which effectively stimulates the child's inner motivation, thus relieving the child's academic stress at school. In daily family life, more meaningful positive cues will make the child feel that the family is warm and that meeting the child's psychological needs will help the child to become more vital and to become more harmonious, loving, responsible, motivated and confident in the future.

4.3 Improving the Teaching and Learning Environment in Schools

Appropriate Adjustment of Teaching Arrangements

Too tight a teaching schedule, too difficult after-school exercises and too frequent examinations can all lead to anxiety and undermine children's self-confidence. School teachers should make appropriate adjustments according to the different learning abilities of each class and classmate, speeding up or slowing down the teaching schedule to better equip students with knowledge and examination focus. Exercises should be chosen to suit each level of student, not just in terms of difficulty and number of questions, but also in terms of the degree of mastery of the students, the precise assignment of homework, and the appropriate broadening of students' thinking. For exams, they should not be too tightly scheduled, and the difficulty of the questions should be based on the students' actual level of mastery, so that the exams are more focused and allow students to identify their own problems. Some studies have pointed out that pre-examination anxiety has a general debilitating effect on cognitive performance [12]. As a result, China has enacted a series of measures to improve the situation. For example, in September 2021, the city of Chengdu officially issued the "Implementation Plan on Further Reducing the Burden of Homework and Off-Campus Training for Students in Compulsory Education", which proposes that the "5 + 2" model will be implemented for after-school services in primary and secondary schools. That is, schools should carry out after-school services five days a week, at least two hours a day. To prevent academic overload from crowding out sleep time, primary and secondary schools to enhance the effectiveness of classroom teaching, strengthen the co-ordination of homework management, in strict accordance with the requirements of the relevant regulations, reasonable regulation of the total amount of

written homework students, guide students to make full use of self-study classes or after-school service time, so that elementary school students in the school to complete the basic written homework, secondary school students in the school to complete most of the written homework, to avoid students home after the homework time is too long, crowding out the normal Sleep time. The end of training at out-of-school training institutions shall not be later than 20:30, and no homework shall be assigned in any form such as pre-course prep, after-course consolidation, homework practice, or WeChat group punch cards. At the same time, the Ministry of Education has made clear provisions for school work and rest time, requiring that elementary school morning classes are generally no earlier than 8:20, and secondary schools are generally no earlier than 8:00, and schools may not require students to arrive early to participate in unified educational and teaching activities. In the evening bedtime, high school students are generally no later than 23:00. High school schools also refer to compulsory education schools to carry out after-school extended hours services. In addition, the Ministry of Education in 2022 to try to establish “academic level test results + comprehensive quality evaluation” admissions model, to overcome the score theory, improve the quality of education, and promote educational equity. At the same time, it is clearly pointed out that the content and number of exams need to be strictly controlled to reduce the burden of student preparation.

As a result of the measures taken, students’ overall ability and quality have been significantly improved. Not only that, but the sleep time of high school students has also been improved to a certain extent due to the policies enacted in the area of sleep. The appropriate adjustment of the teaching schedule within the school, the reduction of the amount of homework, and the adjustment of the content and number of examinations not only allow high school students to improve their anxiety to a certain extent, but also give high school student groups more time to develop their hobbies and thus better achieve all-round development. The establishment and application of the admissions model of “academic level exam results + comprehensive quality evaluation” has also allowed students to look beyond their usual academic results and to care about their overall development.

Not only that, it is also necessary to provide psychological counseling to students before the examination, pay more attention to students’ learning status and psychological condition before the examination, and help them to channel their anxiety in time when they encounter it, so that students can better play their strengths in the examination and achieve the desired results [13].

Focus on Students’ Physical and Mental Health

In the “Guideline for Health Education in Primary and Secondary Schools” issued in December 2008, it is pointed out that schools and teachers need to take care of students’ mental health, which mainly includes appropriate ways to reasonably vent and confide in them, and to look at things objectively; principles and methods in interpersonal communication, to be active, sincere, fair, modest and generous with others; basic methods to relieve stress; understanding the positive meaning of competition; correctly dealing with failure and frustration; common psychological problems and ways to cope with them during examination periods, etc.

In school, students' emotions are easily influenced by the outside world. Sometimes, when academic pressure increases it may lead to, students becoming emotionally anxious and depressed to the extent that it may affect their normal learning and daily life. Therefore, school teachers should pay great attention to the physical and mental health of students. Focusing on physical exercise and guiding students to actively participate in physical activities and relaxing their bodies will facilitate the completion of the next learning tasks. Pay attention to the mental health of students, always pay attention to the psychological changes of students and guide them in a positive and optimistic direction. When a student is experiencing high levels of negative emotions or stress, you should understand the reasons for this and try to help the student get through it. After exams, you can take the initiative to talk to students, not only to help them solve problems with the exam questions, but also to get them out of a slump if the exams are not going as well as they should. It is important not to over-emphasise the student's academic performance, but to show more concern for the student's feelings, recognise their efforts over time and give appropriate advice to encourage them to be more focused and attentive in the coming period. School teachers should aim to create a non-threatening school and classroom environment, so that students' focus can shift to learning itself [14]. In addition, teachers should focus on the all-round development of students and the development of a sound personality.

Fostering Good Interpersonal Relationships

Having good relationships can also help with anxiety, including relationships between classmates, friends and teachers. A good relationship with your classmates will help you to understand the important points you don't understand, and a good relationship with your friends will give you a place to talk when you are depressed and make you happier in life. A good teacher-student relationship will not only help you in your studies, but will also help you find the right direction for your future and encourage you when you are confused.

5 Conclusion

The causes of adolescents' examination anxiety include self-factors and external factors, among which self-factors mainly include physiological reasons and over-ambitious demands and goals, while external factors mainly include family education environment and school education environment. The Satir iceberg theory is then used to try to improve the examination anxiety problem of adolescents from three perspectives: self-regulation, adjustment of the family education model and improvement of the school teaching environment. The core of the Satir model is love and relationships, so the main approach to improving examination anxiety in adolescents is to express love and build relationships. Specifically, it begins with knowing and understanding oneself and accepting and loving oneself openly. Secondly, it is important to establish effective communication with parents, who should also guide the child properly and create a harmonious atmosphere in which the child knows that he or she is loved and cared for. Finally, schools need to adjust their teaching arrangements, pay attention to students' mental health and development, and help them develop good interpersonal relationships. In addition, there are many ways

to adjust and improve the system. From the policy aspect, the government can take relevant measures, such as: appropriately limiting the number of examinations organized in schools; appropriately guiding schools to take examinations in classrooms and weekly examinations without public ranking; trying to transition the public's concept of "one examination determines a lifetime" to "process evaluation of learning career", etc. The public's perception of "one test is a lifelong decision" should be changed to "learning career process evaluation". From the social level, the public should not only promote the importance of college entrance exams, but also make more parents pay more attention to the development of their children in all aspects. Parents should be encouraged to care about the process of their children's academic growth, rather than just the final grades achieved. From the perspective of industry development, many psychological institutions and clinics can provide help to students who have developed test anxiety, so that their emotions can be relieved accordingly, in addition, schools can also organize relevant institutions to come into the campus to educate students about test anxiety, so that students can understand its causes, how to adjust themselves and the corresponding solutions. From the public's point of view, the college entrance examination is indeed very important, and to a certain extent affects the development of the rest of one's life. But the public should not overemphasize its importance and ignore the self-development process of children. Families are encouraged to care more about the physical and mental health of their children's development process, not just the final exam results.

Finally, in the study of this paper, it is mainly based on the Satir's iceberg theory and proposes corresponding solutions at the individual, family and school levels in an attempt to alleviate and improve the test anxiety of the Chinese high school student population. From different perspectives, the causes of test-taker anxiety and how to apply the Satir's iceberg theory to change the situation are analyzed, and some actionable suggestions are proposed appropriately. However, there are still some shortcomings in this paper. The paper only offers some suggestions from the standpoint of other social groups, but it still needs to be investigated, analyzed and studied in depth and in detail. In addition, the main target of this paper is Chinese high school students, and its generalizability is still to be proven. It is hoped that more scholars will pay attention to the problem of test anxiety and conduct more in-depth and detailed research from the perspective of more social groups using Satir's iceberg theory, and it is also hoped that other groups can be selected as research objects in the future to further investigate whether the findings of this paper are universal.

References

1. Wu Yuwei.(2017).On the influence of family of origin on individual development - from family system theory. *Journal of Quanzhou Normal College*(03),88–92. <https://doi.org/10.16125/j.cnki.1009-8224.2017.03.016>.
2. Liang Shuyan.(2022).Exploration of Home School Collaborative Education Mechanism Based on the Applied Research of Satir's Iceberg Theory. *University*(35),57–60.
3. Chen Wei.(2023).An Exploratory Application of the Satir Family Therapy Model to the Psychological Problems of Secondary School Students. *Psychological Month-ly*.(01),202–204. <https://doi.org/10.19738/j.cnki.psy.2023.01.062>.

4. Wang Qing.(2016).Exploring the relationship between test anxiety and achievement goals. *Asia-Pacific Education*(25),252–253. <https://doi.org/10.16550/j.cnki.2095-9214.2016.25.197>.
5. Yan Peihong.(2014).The transmission and development of the Satir model. *Mental Health Education in Primary and Secondary Schools*(16),7–10.
6. Yin Zhongze &Gao Zhili.(2014).An Exploration of the Satir Therapy Model Based on Growth Orientation. *Journal of Changchun Normal University*(05),25–28.
7. Lai Hui.(2023)”The application of Satir’s iceberg theory in a case study of communication to resolve adolescent behavior deviation. *Guangdong Education (Comprehensive Edition)*(01),68–69.
8. Hong Anning.(2014).A Study on the Facilitation of Satir Model Group Counseling on the Improvement of Self-Harmony among College Students (Master’s Thesis, Shanxi Normal University). <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD201402&filename=1014225883.nh>
9. Chen Yiming.(2011).Analysis of the causes of adolescent students’ test anxiety and corresponding countermeasures. *Health Professions Education*(08),33–34.
10. Ao Tianxia & Zhao Zhiyu.(2010).An applied study related to test anxiety. *Journal of Jilin Provincial College of Education*(06),17–19. <https://doi.org/10.16083/j.cnki.1671-1580.2010.06.042>.
11. Zhang Jingchu.(2022).Using Satir’s Iceberg Theory to Resolve Deviant Behavior in Children and Adolescents... (eds.) *Teaching Methodology Innovation and Practice Research Academic Inquiry Paper Collection*(pp.56–58).
12. Liu Huijun,Guo Dejun.(2003).A study of the relationship between pre-test anxiety, achievement goals, and test scores. *Psychological Development and Education*.(02),64–68.
13. Luo Xueli.(2020).The Satir Model for the Growth of Young Students: Practices and Reflections. *Education and Teaching Forum*(44),339–340.
14. Cheng Nianzu, Gong Zhengxing.(1996).A preliminary analysis of test anxiety and personality traits and family education. *Chinese Journal of Mental Health*(05).

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