

Study on the Application of Satir's Iceberg Theory in the Psychological and Emotional Relief of College Students

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Abstract. In today's society, college students are facing greater pressure to study. On the one hand, they don't fit into colleges after leaving home and their lively schoolmates; on the other hand, they have to make early plans for the future in society. As all this burdens adult students with great strain, they often suffer from depression during their studies and become less confident after self-denial. This paper proposes to design a dialogue system based on Satir's iceberg theory to help alleviate the psychological emotions of the college students mentioned above.

Keywords: Satir's Iceberg Theory; Psychological and Emotional Relief; College Students.

1. Introduction

As China has made great progress across the board and competition is becoming highly fierce in today's society, Chinese college students are facing tremendous pressure from competition, family, employment, interpersonal relationship, and the workplace, which renders them dog-tired. If their pressures are not properly handled, their mental health will be affected, which will bring about large or small consequences. Smaller consequences include severe psychological depression, autism, and crash-type personality tendencies, while larger consequences can lead to suicide. Over the past couple of years, some Chinese college students have committed suicide by jumping off buildings, which further proves the gravity of the above-mentioned problems in society. Such a dialogical intelligent robot system based on adjuvant therapy and auxiliary diagnosis methods of psychological communication guided by Satir's iceberg theory can be used to offer help and guidance to Chinese college students in their life, thus virtually improving their mental health.

1.1 Current Situation of College Students' Psychological Pressure

As college students who have just graduated from high school feel the huge gap between their ideal life and the university they have entered, they are confused about their future life and face dual pressure from life and study because they can't fully accept what they have learned, which affecting their mental and physical health. This not only applies to freshmen but also sophomores and juniors who have more mental problems and remain unclear about whether they should further their studies or enter the workplace in the future. Besides this, the academic burden also partly explains their psychological problems. Therefore, it is imperative to take sound measures to promote students' mental health.

1.2 Questionnaire

An online questionnaire has been conducted, with a total of 100 questionnaires with prizes targeted at the stress level of college students of different gender and different regions.

The survey indicates that when answering their pressure, nearly sixty-four percent of college students explicitly express that they are occasionally stressed from their major and the academic atmosphere; twenty-three percent of college students are very stressed while thirteen percent of students are under less stress. This conclusion indicates that undergraduate students have certain pressure from their college studies, and the proportion of students feeling serious pressure cannot be ignored.

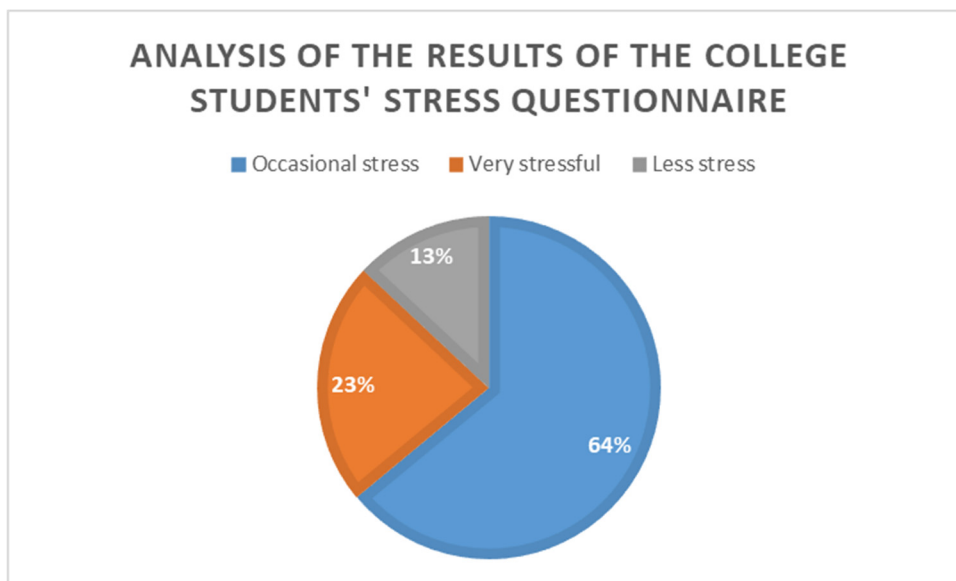


Figure 1. Analysis of the results of the college students' stress questionnaire (Drawn by the author)

2. Satir's Iceberg Theory

Satya mode is a process of experiencing. One of its advantages is that it focuses more on developing each person's dignity, promoting communication, and making people become more fully, which is more important than simply trying to eliminate symptoms. This theory can help people to understand that every way of life is developed based on its features, and the old development models that offer people different life experiences deserve to be respected, so the ultimate goal of such treatment is to achieve harmony between body and mind, between inside and outside, in order to unlock individuals' maximum potential.

With the convenience brought by the intelligent era, the theoretical concept of the Satir model is combined with the big data of the network and is integrated into people's daily life in the form of intelligent products, so as to solve more initial psychological problems.

At present, Satir's iceberg theory has been widely used in many disciplines, such as psychology, sociology, and education, especially important in family education [1]. Meng Yali (2013) [2] believes that Satir's theory offers much guidance for college students' psychological development, as it can make them aware of their special meaning of existence, so as to promote modern Chinese college students' sustainable development of psychological health and the healthy growth of their mind. As there is no systematic explanation about the mental health course in an online environment, combining mental health and intelligent network will be the development trend of modern society. Wang Yu (2016) [3] has proved in practice that Satir's model can effectively enhance the self-survival ability of freshmen, helping them realize self-cognition, and making them interested and confident in accepting themselves and making changes, which also shows that illustrates the universality and the ability to invigorate people of the model. Cai Jieping (2018) [4] believes that with the help of the iceberg theory, people can have a clear understanding of their values and objectives, and discover their potential; if they can apply the cognition of different stages in the iceberg to their life and activities, they can make improvements. It also indicates that the iceberg theory has great power for exploring oneself. However, virtually no studies are conducted to apply Satir's model to intelligent products. Based on the above case study and Satir's theory, developing an intelligent dialogue system based on the existing network intelligent technology has broad prospects.

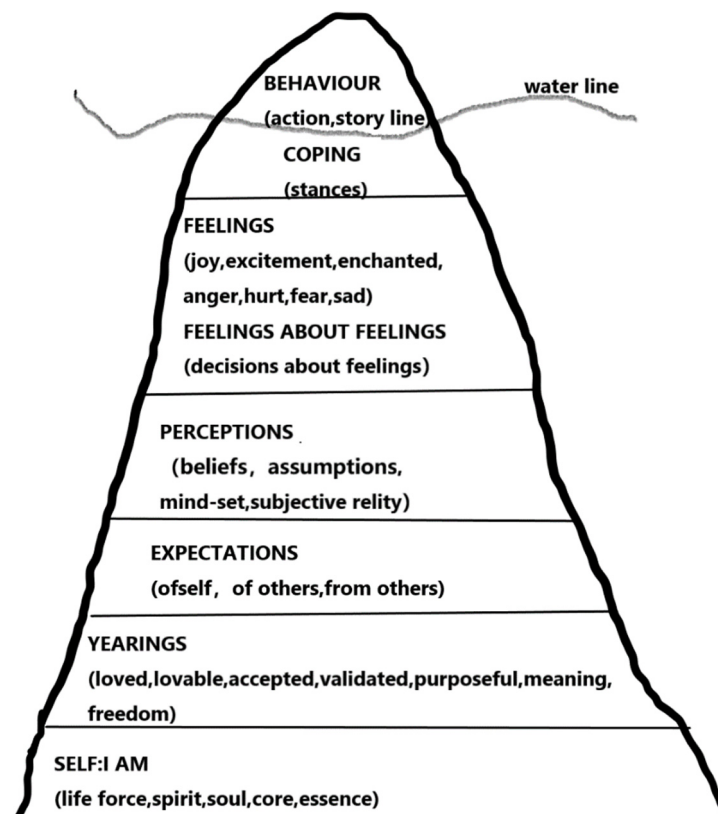


Figure 2. Metaphor of a personal iceberg (Drawn by the author)

3. Design Conception and Expectations of an Intelligent System

Man-machine dialogue systems are usually divided into the following two categories: a task-based dialogue system and an open-domain dialogue system [5]. Among them, the latter one is a non-task-based dialogue system which is more inclined to chat with users, while the task-based dialogue system is aimed at users' special needs to carry out conversations [6,7]. The intelligent system in this paper intends to combine two dialogue systems to meet the requirements.



Figure 3. Task-based dialogue system (Drawn by the author)



Figure 4. Open-domain dialogue system (Drawn by the author)

This paper is aimed at the dialogue system of companion intelligent robots, and the system is divided into two parts: ordinary chat and Satir's communication mode. the dialogue system can determine users' intentions by antecedent dialogue content or user options, and choose ordinary chat or Satir's communication mode according to the intentions. To apply the system in practice, the system can be deployed on the cloud server, and the front end of the web is designed so that users can also use the system on the web page. In addition to the dialogue system, some professional scales are added appropriately, and some tests are changed into game systems, such as the painting of house-tree-person and the placement of specific sand tables into electronic versions, etc.

The generation method of sequence to sequence, the text generation method of attention mechanism and multiple rounds of other dialogues is adopted for ordinary small talk. Moreover, the correlation between words in sentences is increased, and the single round of sentence generation is designed through long and short-term memory networks. In order to determine whether the topic has shifted and how the topic has changed in multiple rounds of dialogue, the topic shift has been detected by analyzing the relevance of contextual words. At the same time, the correlation between sentences in the context is used as a constraint to increasing the number of rounds of dialogue.

In terms of the design of Satir's communication mode, the user's data for psychological analysis is recorded, and when the preset psychological danger warning is shown, it will prompt the user to call for professional help.

3.1 Examples of Expected Effects of Part of Satir's Communication Mode

For example, a user in his third year of university is going to take the postgraduate entrance exam, but he is very reluctant to learn English because he thinks he has no talent for learning and has not passed College English Test Band 4. Therefore, he is in a poor mood and gives himself up, feeling that he cannot learn well and pass the examination. In this context, Satir's dialogue system will first analyze his situation and diagnose his problem as English boredom and behavior avoidance, which is done by searching the database of the system. The iceberg theory is used to help him to see his problems from more perspectives to improve his self-confidence. For example, if he is not good at English, then what subjects is he good at? How does he do it? Such questions are asked to affirm and compliment himself. In the iceberg theory, the ego is at the bottom, which serves as the cornerstone

of all and the aspect that deserves the most attention in the system. After that, the system will stimulate the desire through dialogue. In this example, the progress of English learning can be recorded through daily dialogue to encourage the student to get a sense of accomplishment. After expectations are stimulated through progress data, he is getting better step by step, changing his initial opinion that he has no talent through a dialogue system. A change in perspective can be followed by a change in mood, and each aspect of the system is changed, which leads to a positive change in behavior. The intelligent system will then store all the above data in his database to analyze his behavior pattern and psychological characteristics, which will be the data basis for the next conversation.

3.2 Market Purchase Survey of Intelligent Companion System

A questionnaire has been conducted among college students at Chongqing University of Science and Technology. According to the data of the survey report, 73.5 percent of college students have purchase demand for the aforementioned companion chat intelligent robots, while only 26.5 percent have no purchase demand. This indicates a majority of college students need such an intelligence system that will have great potential. Those who are not inclined to buy it in the survey show great interest when they are interviewed in the follow-up conversation. Some students decline to buy such a system due to privacy and economic consideration, so privacy is one of the main aspects that should be paid attention to when this system is designed.

WHAT IS THE PURCHASE DEMAND FOR
COMPANION CHAT INTELLIGENT ROBOTS?

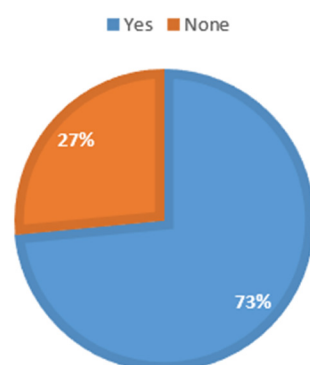


Figure 5. Intelligent Companion System Market Purchase Survey (Drawn by the author)

4. Conclusion

Today's society is filled with conflicts. Although people face greater pressure and pay more attention to privacy, increasingly losing trust in others and remaining psychologically unstable, they have a bias toward psychological professionals, which turns their ailments that could be cured at the beginning of mental illness into serious diseases. Therefore, it is urgent to popularize some excellent psychological theories and treatments. In order to conform to the current situation that people attach great importance to privacy, the intelligent robot designed with the professional knowledge of psychological therapy mentioned above can solve some of the above-mentioned problems.

Satir's iceberg theory can help college students mitigate the adverse consequences caused by pressure, and improve their learning ability and sense of self-worth, while intelligent products also consider users' privacy and apply the theory to practice. Therefore, it is suggested to apply Satir's iceberg theory and consulting skills to the development of companion chat intelligent robot systems. Such a model can not only help more people but also enable the public to appreciate more excellent psychological theories so that they won't feel that psychology is far away from life.

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