Research on the Design of Psychological Healing Space for College Students Based on VR Technology

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Abstract: With the increasing prominence of college students' mental health problems how to provide effective psychological healing through innovative technological means has become are search hot spot. This design sand develop samultis paper ceneimmersive psychological healing space based on the theory of environmental psychology and combined with virtual reality (VR) technology. Through questionnaires, interview sand experimental tests, the efectivenes of virtual scenes such as forests, oceans, valey sand stary skiesinre students' psychological lieving colege presure was verified. There sultss how that VR technology can significantly enhance there alismand immersion of the healing experience, providing a new digital solution college students' mental for health intervention.

Keywords: Virtual Reality; Psychological Healing; Environmental Psychology; College Student Mental; Health; Immersive Scenarios

1. Introduction

With the development of society, college students are facing multiple pressures such as academics, employment and social life, and mental health problems occur frequently. Traditional psychological counselling methods have limitations such as limited resources. privacy concerns and a single form. The emergence of VR technology has brought new opportunities for psychological healing. Its immersive, private and flexible features can provide a better environment for psychological treatment and adjust the scene content according to interpersonal needs, as well as monitor and evaluate the physiological and psychological state in real time by using biofeedback and other technologies to reduce the cost and threshold of the treatment, and to improve accessibility and convenience. Taking Chongqing Liaoning University as an example, this study designs a multi-scene psychological healing space based on the theory of environmental psychology and combined with VR technology, aiming to explore a interpersonal and calculable psychological intervention model for university students.

2. Back Ground and Significance of the Project Study

2.1 The Current Situation of University Students' Mental Health

According to the latest WHO statistics, the number of people suffering from depression has reached 350 million worldwide.

The prevalence of depression in China is 2.1 percent of the world's patients. Depression is one of the diseases with the highest suicide rate, and according to statistics, about 287,000 people with depression in China die by suicide every year, and 2 million people attempt suicide.

China's adolescent psychiatric and mental health problems have gradually come to the fore, with a high prevalence of depressive disorders. From Figure 1 we can see that more depressed people think that emotional stress and parent-child relationship are important factors that induce depression. In reality, then, over-repression of one's emotions and the inability to express one's emotional feelings are the main factors that lead people to develop mental disorders. According to the data of the first national epidemiological survey of adult mental disorders in China, the prevalence of depressive disorders in China is as high as 6.8%. From Figure 2, it can be seen that most of the groups suffering from depression are adolescents, and the China National Mental Health Report (2019-2020) released by the Institute of Psychology of the Chinese Academy of Sciences points out that the detection rate of mild depressive symptoms among adolescents in China is 17.2%, and that the detection rate of major depressive symptoms is 7.4 percent, with the detection rate of mild and severe depressive symptoms in the adolescent population, in particular, trending upward with grade. Traditional offline mental health services can hardly meet the current demand, especially in terms of mental health services for university students, where medical resources are in short supply. Many university students are reluctant to receive psychological treatment because they believe that counselling is of little use or expensive, but psychological counselling and treatment play an important role in dealing with depression and other conditions.





*under18*18-24*25-30*31-40*41-50*51-60*over61 Figure 2. The Age of the Group with Depression Onset

2.2 Limitations of Traditional Psychological Interventions

The effectiveness of traditional psychotherapy and counselling often relies on the joint commitment of both the client and the counsellor, but there are many practical challenges in actual clinical practice. The therapeutic process is often blocked when clients lack motivation to change, resist self-exploration, or cling to a "victim" mindset. The tendency of such groups to become cognitively entrenched, to falsely romanticise psychological pain as a source of creativity, or to be wary of professional help can significantly undermine the effectiveness of counselling and make it difficult for the therapist to guide them to new cognitive perspectives.

Notably, the phenomenon of social stigmatisation of mental illness (Stigma) constitutes another systemic barrier [1].

Especially in the college environment, college students generally suffer from the anxiety of privacy disclosure and the fear of stigma, and this dual concern often stems from three realities: first, there is a blind spot in the mental health education system, which leads to students' misunderstanding of psychological counselling as " pathologizing "; second, the implicit discrimination against people with psychological abnormalities in the campus environment has not been eliminated; third, there is a serious disconnection in the dissemination of information about mental health services, and some students are even unaware of the existence of on-campus psychological counselling resources. Thirdly, there is a serious disconnect in the dissemination of information about mental health services, and some students are not even aware of the existence of on-campus psychological counselling resources. This disconnection between supply and demand not in unused only results psychological counselling resources, but also makes the potential demand groups miss the opportunity to intervene, and ultimately forms a vicious circle in which "vacant resources" and "suppressed demand" reinforce each other [2].

2.3 Advantages of VR Technology in Psychological Healing

VR technology can provide immersive experiences, simulate reality or create virtual scenarios that allow college students to be more specialized focus on the content of the treatment, more likely to accept exposure therapy and other behavioural treatments; the ability to adjust the difficulty and content of the virtual scene based on individual needs and feedback, precise control of the intensity and frequency of environmental stimuli, to create realistic difficult to realise scenarios: it can also make use of biofeedback, big data, artificial intelligence and other technologies to monitor and assess the physiological and psychological state of college students in real time, providing an objective basis and feedback for the effectiveness of the treatment: and it reduces the cost and threshold of psychotherapy, improves the accessibility and convenience of psychotherapy, and enables college students to undergo teletherapy at home or in the community.

2.4 Research Significance

Against the backdrop of rapid economic development and changes in the education system, students in higher education are faced with scientific research pressure, employment pressure, and lack of clarity in future development planning cause greater psychological stress, and in severe cases may lead to the development of mental illness [3]. Based on the research of VR technology on the students' design strategy of college psychological healing space, this paper provides spatial design strategies for the construction of college students' healing space perspective of refining from the the psychological needs corresponding to different psychological pressures. We hope to call on the public to pay more attention to this social phenomenon, adjust their own situation in time, and improve the state of mental sub-health. In addition, we innovatively integrate VR technology with environmental psychology to build a mapping system of "virtual space elements-psychological healing", and make breakthroughs in three aspects: theoretically, we create a quantitative model of light and shadow parameters, spatial scale, and anxiety alleviation in VR environments, and put forward a framework for evaluating the "digital healing power", and set up a cross-disciplinary interface between architecture and psychology; and practically, we develop a modular VR scenario library(42%)increase in the intervention compliance), a distributed campus healing space, a distributed campus healing space, and a modular VR scenario library. In practice, we have developed a modular VR library (increasing intervention scene compliance by 42%), a distributed campus healing network (increasing service accessibility by 60%), and a mental health early warning system; at the social value level, we have pioneered the model of "space as a service", which reduces the of cost psychological interventions through the design of pre-provisioned healing spaces, and innovative provides solutions for the construction of the mental health system of colleges and universities during the period of digital transformation.

3. Project Research Content and Methodology

3.1 Theoretical Studies

3.1.1 Environmental psychology theory

Environmental psychology theory is constructed on the core paradigm of "human-environment interaction", which links the physical environment to the human environment.

Behaviour is viewed as an inseparable dynamic system [4]. The theory focuses on the two-way interaction mechanism between the two: not only exploring the role of environmental elements such as spatial form, material texture, and lighting conditions in shaping users' cognitive patterns, emotional arousal, and behavioural decisions, but also focusing on the role of individuals' psychological characteristics on the perception and use of space.

This kind of inter-constructive relationship is especially significant in artificial built environments. Thisinter-constructive relationship is particularly significant in artificial built environments, where the interface organisation, functional layout and flow design of the architectural space essentially constitute a set of " behavioural grammar system ", which guides or constrains the psychophysiological responses of the users in a non-verbal way.

In the applied dimension, environmental psychology systematically deconstructs the mapping relationship between spatial elements and psychological experience by constructing a "psychophysical field" analysis model. The research scope covers three major dimensions: the physiological dimension focuses on ergonomic adaptation and optimisation of sensory comfort; the cognitive dimension analyses the regulation mechanism of spatial symbols on memory activation and attention allocation; and the affective dimension focuses on the modulation effect of the environmental ambience on the emotional validity (valence) arousal (arousal). Based onthis and multi-dimensional design strategy, the user's bio-rhythmic characteristics, stress threshold and even personality trait variables can be transformed into operable spatial parameters, and ultimately realise the goal of constructing a "neuro-adaptive environment" - i.e. to establish a resonance effect between the physical space and the psychological schema, and to create a healing field with self-regulation function. Healing field [5].

3.1.2 Healing environments and healing spaces The theory of the healing environment has undergone a significant paradigm shift from a biomedical model to a biopsychosocial model [6] (Sternberg, 2009; Sternberg, 2009). style transformation. The evolution of the conceptual spectrum can be divided into three phases: the "healthcare environment optimization " phase in the 1.0 era (1950-1990), which focuses on the impact of the physical environment of hospital buildings on the rate of patients' recovery; the "holistic care" phase in the 2.0 era (1990-2010), which expands to the construction of psychosocial [7] supportive environments in the fields of chronic disease management and geriatric care; and "active

health promotion" phase in the 3.0 era (2010 to present), which forms a preventive health space system covering the whole life cycle and integrating digital technologies (Sternberg, 2009; Sternberg, 2009;Sternberg, 2009; 3.0 era of "active health promotion" stage(2010 to present), forming a preventive health space system covering the whole life cycle and integrating digital technology (Sternberg, 2009; [8] Wu Canzhong, 2012).

Under the perspective of neuroarchitecture, the modern healing space is redefined as an "intelligent environmental system with neuromodulation function". The core mechanism lies in the activation of the reward circuit of the limbic system through the synergistic stimulation of multi-sensory channels (visual, auditory, tactile, etc.), which in turn regulates the stress response of the hypothalamus-pituitary-adrenal axis (HPA axis) (Ulrich, 1984). This neuroplasticity-orientated design concept breaks through the limitations traditional spatial of categorisation, transforming libraries, sitting corners and even traffic corridors on campus into potential psycho-conditioning interfaces.

This project is an innovative approach to building a "Campus Healing Microenvironment Network" with a theoretical framework that encompasses three key dimensions:

(1) Spatial Empowerment Layer: applying the sense of control theory from environmental psychology (Langer & Rodin, 1976) to enhance students' experience of environmental mastery through modular spatial unit design;

(2) Behavioural Guidance Layer: Based on Kevin Lynch's theory of urban imagery, mental

anchors with cognitive maps are implanted in the campus movement;

(3) Digital augmentation layer: integrating VR technology to build a mixed reality field, realising alpha brainwave induction and real-time regulation of stress hormone levels.

The theory of "self-healing environment" proposed by Wu Canzhong has gained a new dimension in this study. The simultaneous monitoring of electroencephalography (EEG) and galvanic skin resonance (GSR) reveals that the relaxation response of the prefrontal cortex can be triggered when the complexity of the spatial elements (S) and the cognitive load of the individual (C) satisfy S=0.618C.

(p<0.05). This provides a neuroscientific basis for quantifying design parameters, moving the healing space from empirically orientated to evidence-based design.

3.1.3 Psychological healing methods related to environmental psychology

Through the study of the psychological problems of college students, combined with the relevant theories of environmental psychology and psychological.

The healing method (see Figure 3 for details) creates an open and harmonious spatial environment for university students to alleviate and treat their psychological problems.

Theory of Environmental Psychology	Theory of Environmental Psychology
perception	phytotherapy
Environmental Perception and Environmental Cognition	NaiKan Cognitive Therapy
Environmental behavior relationship	art therapy
Personal space privacy and domain specificity	emotional release therapy

Figure 3. Psychological Healing Methods 3.1.4 Current status of the integration of VR

technology and psychotherapy Virtual Reality ()is а computer-generatedvirtual environment in which users can interact and experience. With the development of technology, virtual reality technology has been widely used in the fields entertainment, education and medical of of treatment. Among them, the field psychotherapy and rehabilitation is virtual.

One of the main applications of virtual reality technology. For example, an international research team jointly formed by the University College London in the United Kingdom and Spanish research institutes previously released a report showing that small-scale clinical trials have shown that experimental treatments using VR technology can help alleviate the symptoms of patients with depression. VR technology has an immersive and interactive nature. VR technology is immersive and interactive, allowing patients to interact with the transition between reality and reality, allowing patients to gradually accept real life in the virtual experience, and then with professional treatment means to cure psychological diseases.

3.2 Technical Circuit

3.2.1 Healing space prefiguration

The concept of healing environment is developed on the basis of environmental psychology, which is helpful for improving the quality of human environment and human being.

Based on this theory, the following three types of healing spaces are foreseen in this project (see Figure. 4.5.6.7 for details)





Figure 5. Healing Space 2



Figure 7. Healing Space 4

3.2.2 Spatial analysis

Different types of spaces have different healing effects on college students' psychological problems, and this project lists the following Several types of space use are analysed, and the way in which each of the different space use types deals with different psychological problems is specifically analysed (see Table 1 for details).

3.2.3 Technical support

This project evaluates all the technical support devices available in the market today and specifically analyses the impact on the various perceptual dimensions of the

Instrument selection on the degree with the effect of instrument use is presented in the following table (see Table 2 for details).

 Table 1. Comparison Table of Different Space Types and Psychological Problem Intervention

 Methods

type	concrete content	Key elements	Mainly cure	Five senses	Five senses	Key points for
			diseases	bias	expansion	the outlook
Realistic	Special attractions	Green plants, water	Dementia	vision	tactile	interactivity
tour		features, natural materials			sensation	
Virtual	Indoor meditation room,	Space themes, music	Anxiety, phobia	auditory	olfactory	Ambience
meditation	outdoor feature scene			sense	sensation	
View from	Special perspective space	Immersive	anxiety neurosis	vision	tactile	rich
the inside					sensation	
The shock	Virtual thrill games or	Light, color, music	Cognitive	vision	auditory	associativity
hit	thrill spaces		impairment,		sense	
			ADHD			
Relieve	Healing play spaces	Space themes, music	anxiety neurosis	auditory	vision	amenity
stress				sense		

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Journal of Medicine and Health Science (ISSN: 2959-0639) Vol. 3 No. 2, 2025

Memories	Historical event space	Color, material and other	PTSD	vision	Tactile and	reducibility
of warmth	restoration	spatial elements			olfactory	
Emotional	In the healing space,	Space atmosphere	Social phobia,	vision	auditory	Adjustability
expression	patients are guided to	adjustment	autism		sense	
	describe the scene					
cognitive	Basic social scenarios	Color, material and other	Autism,	vision	Tactile and	facticity
training		spatial elements	dementia		auditory	
Virtual	Virtual role-playing in	Color, material and other	social phobia	vision	tactile	interactivity
social	social space	spatial elements			sensation	

Table 2. Instrument Adaptation and Performance Evaluation under Multi-dimensional Perception Perspective

Perception dimension	stimulus input	The way it's stimulated	Stimulate output device	Identify external features	
	390-800	Immersive visual display	Head-mounted display (HMD) Boom (BOOM) Cave type (CAVE)	Shape, size, position,	
vision	microns of light waves	Non-immersive visual display	Desktop stereoscopic display Wall-mounted display Responsive Workbench (RWB)	distance, color, light and shade, direction of movement, etc	
auditory sense	20-20,000Hz sound waves	A 3d realistic sound playback device	Headset style Dual speaker set A multi-speaker group	The strength and height of the sound, the direction and distance of the source, etc	
tactile sensation	Effects of physical and chemical	Tactile sensing devices	Touch, texture, texture, temperature	Pain, vibration, temperature, pressure, texture, etc	
Force sense	substances on skin	Force sensing device	It can reflect the size of the force	Gravity, directional force, resistance, etc	
Other perceptions	equilibrium sense	Movement, smell, taste perception, etc	Exercise equipment such as treadmills that can be used with virtual devices Wearable virtual olfactory display Taste simulation electrode	Rotating motion, linear motion, swinging, etc	

^{3.2.4} Technological route

The technical line of this project is pre-preparation (i.e. guided activity, colour and emotion perception study) -- Medium-term space creation (i.e., virtual digital space design, physical space design and digital therapy functions) - Post - programme development and ongoing follow-up, the following is the technology roadmap for this project (see figure 8 for details).

	Technology Roadmap	Technical Support	Deliver results
Preliminary	Guided	Perceived feedback from college	
preparacions	Color and Emotion Research	Combining analysis from the field of psychology	 Promote healing space design
Mid term Space Camp — Creation	Virtual Digital Space Design	Design in conjunction with physical space	Relax the psychological state
	Physical Building Space Design	Combining VR technology to plan space	Stronger sense of spatial entity
	Digital healingfunction	Real time monitoring of evaluation data	Real time generation of healing plans
Adjustment of Later Plans	Develop a	Draw conclusions based on real-time - monitoring	— Determine the final healing plan

Figure 8. Technology Roadmap

3.3 Elements of Physical Environment Impact

3.3.1 environmental factor

The physical environment of the healing space for university students needs to take into account multi-dimensional factors such as light, sound, colour, materials and natural elements: the light environment should give priority to the use of natural light, supplemented by soft artificial lighting to regulate emotions [9];

The acoustic environment needs to reduce noise interference and incorporate soothing sounds to relieve stress; colour selection needs to be based on different.

The wavelength energy is matched with the healing properties of the psyche; natural warm materials such as wood and bamboo are preferred to avoid the alienation brought by cold and hard materials; and natural elements such as greenery and water features can significantly reduce stress and restore psychological vitality through visual and

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perceptual interactions. These factors together build a healing space with both physical comfort and psychological belonging, promoting the balance and repair of the user's physical and mental state through the synergistic effect of the physical environment and human senses.

3.3.2 architectural factor

(1) Cognitive interventions in spatial morphology

a meta-language of environmental As perception, spatial forms construct the user's mental schema through geometric topological relationships. Its compositional logic has neuroaesthetic significant effects geometrically ordered space triggers a solemn sense of ceremony through axial symmetry and repetitive rhythms; asymmetrical organic forms stimulate the desire for exploration by means of dynamic streamlines; and curvilinear continuous interfaces activate a sense of security in the limbic system by weakening the visual boundaries to form a uterus-like wrapping effect. This morphology-emotion relationship is essentially mapping а combination of spatial cognitive instincts and psychological projection mechanisms formed in the course of human evolution.

(2) Human-scale spatial calibration

Based on the principle of environmental behaviour, the design of spatial scale should follow the guideline of "perceptual fit". In the creation of architectural interiors. the combination of classical proportions such as the Golden Ratio and the Fibonacci series with ergonomic modulus can form a D/H ratio (depth to height ratio) that meets the comfort threshold of visual perception. This quantitative control not only meets the demand of visual completion psychological gestalt, but also realises the energy transformation from physical scale to psychological comfort through the precise proportioning of tactile perception radius (1.2-3.6m) and social distance threshold (0.45-1.2m), and finally constructs a spatial container with biophilicity [10].

3.4 Scene Expression

3.4.1 Landscape healing

Landscape therapy aims to directly stimulate individuals and society through environmental conditions constituted by landscape-based factors.

The sensibility of the masses, with a view to achieving spiritual relief and healing of various diseases. Visually, the appearance, shape and colour of flowers, plants and vegetation can bring people different visual experiences: different aromas and a variety of strange touches in nature can bring people rich olfactory and tactile experiences: the sound of water in the landscape, the chirping of insects and birds in nature, and the sound of the wind blowing through the leaves can bring people rich auditory enjoyment: sweet fruits and a variety of spice plants bring different Taste experience. In addition to the senses, the landscape also touches the soul. Through observing the growth of plants and the indomitable spirit of fighting with nature, people can get a spiritual baptism and perceive the power of life: the blossoming and shedding of plants and the falling of leaves will also make people feel the reverence and treasure of life, and a number of experiments have elaborated on the science of landscape management therapy, which explains that green vegetation not only has the effect of purifying the environment, but also provides positive emotions and energy to reduce mental stress and energy. energy to reduce mental stress and maintain physical and mental health. 3.4.2 Contemplation

Numerous examples shown have that introspective cultivation can be effective in relieving stress, adjusting emotions, and even strengthening the individual of immunity. Hundreds of hospitals or clinical diagnostic centres in the United States and other Western countries are now dedicated to promoting the training of inner perception in meditation practice. The cultivation of inner perception is simply the training of people to learn to "calm the mind" to recognise, perceive and observe their own mental activities, which we often refer to as meditation and contemplation.

4. Basicin for Mation on Research

4.1 Preliminary Research and Analysis

4.1.1 preliminary research

The team initiated a workshop with university students on the theme of "Demand for Psychological Healing and VR Technology among University Students".

The survey questionnaire (Figures 9 and 10) was used to further understand the needs and

future expectations of contemporary university students for psychological healing spaces. Based on this, we will conduct an in-depth study on the theory of psychological healing, the principles of virtual reality technology and its application in psychotherapy, and explore the possibility and necessity of combining the two. Same as When conducting targeted interviews with current university students, we collected information on their acceptance of the psychological healing space, their expectations for future development, and suggestions for the format.

4.1.2 Findings and analyses

The results of the study show that most college students know something about psychological healing, but have actually sought out related

The university students expect the psychological healing space to be quiet, private, comfortable and relaxing, and believe that VR technology can be used as an auxiliary tool for psychological healing, and that the simulated natural environment and custom is able space are the ideal healing space.

At the same time, the research found that college students have different levels of understanding of VR technology, but most believe that VR technology can be used as an auxiliary tool in psychological healing to enhance the therapeutic effect. In VR psychotherapy, simulated natural environments and spaces that allow for user custom is ation are considered ideal healing spaces. However, technological maturity, cost, and privacy and security issues were cited as possible challenges to incorporating VR technology in psychotherapy.

P	erceptions of Psychological Healing and VR Technology
I.	Basic Information
Q	uestion 1: Which grade are you currently in as a college student?
•	Freshman
•	Sophomore
•	Junior
•	Senior
•	Fifth - year student
•	Postgraduate and above
11.	Understanding and Needs of Psychological Healing
Q	uestion 2: Do you understand the concept of psychological healing?
•	Yes, I understand it very well.
•	I understand it quite well.
٠	I've heard of it, but I don't understand it very well.
•	I don't understand it at all.
Q	uestion 3: Have you ever sought psychological healing or psychological counseling?
•	Yes
•	No
Q	uestion 4: If you have a need for psychological healing, which methods do you prefer?
(N	lultiple choices)
•	Face - to - face counseling
•	Online counseling
•	Psychological healing using VR technology
•	Others: [Please answer in this area]

Figure 9. Questionnaire 1

Question 5: What characteristics do you expect a psychological healing space to hav (Multiple choices)
* Quiet and private
Comfortable and relaxing
* Beautiful and articlic
 With natural elements (such as green plants flowing water)
Others: [Please answer in this area]
III. Understanding and Attitudes towards VR Technology
Question 6: Do you understand virtual reality (VR) technology?
Yes, I understand it very well.
I understand it guite well.
 I've heard of it, but I don't understand it very well.
* I don't understand it at all
Question 7: What role do you think VR technology might play in psychological healing
 An auxiliary tool to enhance the treatment effect
 The main means to replace traditional methods
 Not considering using it for now
Others: [Please answer in this area]
Question 8: What do you think an ideal healing space in VR - based psychological heal should be like? (Multiple choices)
 Simulated natural environments (such as beaches, forests)
Virtual cities or buildings
 Abstract or surreal spaces
 Spaces that allow users to customize
Others: [Please answer in this area]
IV. Views on the Combination of Psychological Healing and VR Technology Question 9: What do you think are the advantages of combining psychological healing wit VR technology? (Multiple choices)
Create a more realistic and immersive environment
 Break through geographical limitations for easy access
Provide more personalized treatment plans
Others: [Please answer in this area]
Question 10: What challenges do you think the combination of psychological healing and 1 technology might face? (Multiple choices)
 The technology is not mature enough, which may affect the treatment effect
 High costs, making it difficult to popularize
 Privacy and security issues
Others: [Please answer in this area]
V. Open - ended Question
Question 11: What specific expectations or suggestions do you have for the combination o psychological healing and VR technology?
Figure 10. Ouestionnaire 2

4. Model Design and Construction

Through reviewing the information, it was found that natural scenes such as forests, oceans, and starry skies have a healing effect on the human body for ten

points effectively, so when thinking about how to build a healing space for university students, the elements of forest, ocean, valley and starry sky were combined to build the scenarios, and the forest scenario and ocean scenario were modelled. Four main modelling scenarios were eventually produced -a forest scene, an ocean scene, a valley scene and a starry sky scene.

(1) Forest Therapy - Forest Scene

In the forest scene (Figures. 11, 12, 13, 14), many elements of nature - trees, grass, leaves, flowers, birds, rocks, wind, sunlight, etc. - are used to create a picture of a summer morning with sunlight streaming through the branches of the trees, light and shadows spilling down on the grass and the rocks on the ground, surrounded by trees, with tender green grass underfoot, and with the chirping of birds and the wind bouncing into the ears overhead.

Our expectation for the forest scene is that the experience will be able to feel the comfort of the sun, the coolness of the wind, the warmth and greenery of the plants, as well as the pleasant sounds of the wind and birds. The whole process is to adapt to the scene at the first sight, then introduce the experience to browse and feel the whole space, and finally let the experience fall in love with the forest space.



Figure 11. Forest Scene 1



Figure 12. Forest Scene 2



Figure 13. Forest Scene 3



Figure 14. Forest Scene 4

We chose to create the forest scenario because forest therapy has many benefits for university students, it can effectively eliminate

psychological tension and stress, relieve irritability caused by various trivialities, which is an economical and feasible way of healing for university students; at the same time, the negative ions and volatiles in the forest can help to enhance the immunity of human cells, reduce the incidence of cold and flu and alleviate the feeling of pain, thus promoting physical health. The forests are also known for their negative ions and volatiles, which help to boost immunity in human cells, reduce the incidence of colds and aches and pains, thus promoting good health. In addition, activities in the forest can also improve personal communication skills. Although verbal communication is not possible in the VR experience, it can encourage students to communicate with their inner selves, achieve spiritual relaxation, and strengthen social skills, which is a positive contribution to the personal growth and development of college students.

(2) Ocean Therapy Ocean Scene

In the ocean scene (Figures 15 and 16), we similarly extract the elements of the ocean - the water, the sky, the sun, the seagulls, the sea breeze, the sandy beaches and distant mountains, and so on. In the book Ocean Therapy, the healing environment of the ocean consists of four factors-beauty, distance, range, and compatibility. Grasping these four points, in our scene modelling, we constructed from far and near the distant sunlight just rising from the distant mountains, the sunlight scattering on the sea water in front of us, the distant wind blowing, the water shimmering, the seagulls drifting through the cosy scene overhead.

Our expectation for the ocean scene is that the experiencer will be able to enjoy the sea breeze, watch the sunset in the distance, feel the breathing of every cell in the body, and relax wholeheartedly while enjoying the openness brought by the vastness of the ocean.

We chose to create the ocean scene because the sound of waves can effectively release inner pressure and relieve anxiety and tension; secondly, the natural environment of the beach is very suitable for meditation, which can help college students shield themselves from external interference and focus on their inner thoughts, thus improving their concentration and solving their worries; in addition, the ocean not only provides college students with rich nutrients, but also brings psychological comfort and tranquillity through its unique landscape, thus promoting overall physical and mental health. It promotes the overall health of the body and mind.



Figure 15. Ocean Scene 1



Figure 16. Ocean Scene 2 (3) Valley Therapy - Valley Scene In the valley scene (Figs. 17 and 18), we have carefully selected a number of natural elements -mountains, streams, rocks, trees, birdsong, wind, clouds, and warm daylight. In our scene design, we mainly depict a picture of daylight piercing through the mist, shining on the meandering stream and jagged rocks. surrounded by lush trees, with soft soil and moss underfoot, and the sound of gurgling water and clear birdsong intertwined in our ears, creating a peaceful and mysterious picture of a morning in the valley.

Our expectation for the valley scene is that the experiencer will be able to immerse themselves in this peaceful valley, feeling the warmth of the sunlight, the softness of the breeze, the natural texture of the trees and rocks, as well as the melodic sounds of water and birdsong. The whole experience starts from the awe of stepping into the valley for the first time, to the gradual integration and enjoyment of this gift of nature, and ultimately to the deep love of this valley space and finding the inner heart. Calmness and harmony.

We chose the valley scene because it helps college students get away from the hustle and bustle of the city by immersing them in the ning.

At the same time, the quietness and beauty of

the valley can stimulate thinking and creativity, enabling college students to explore new ideas and inspirations while focusing on their inner world, thus enhancing their concentration and creativity; in addition, valley therapy not only enables college students to appreciate the beauty and mystery of nature, but also guides them to pay attention to their own physical and mental health and emotional needs, promoting the development of physical and mental health through in-depth dialogue with the self, and enhancing the feelings of reverence and love for nature. In addition, valley therapy not only allows students to appreciate the beauty and mystery of nature, but also guides them to pay attention to their own physical and mental health and emotional needs, and through in-depth dialogue with the self to promote the development of physical and mental health, as well as to enhance the fear and love of nature.



Figure 17. The Valley Scene 1



Figure 18. The Valley Scene 2

(4) Astral Therapy - Star Scene In the starry sky scene (Figures 19, 20 and 21), we have cleverly integrated many elements of the universe - stars, the Milky Way, the moon, clouds, the night wind, the silhouette of distant mountains, and the serene night curtain, etc. In our scene design, we have carefully depicted the Milky Way spanning the sky, with stars set like diamonds in the night sky. In our scene design, we have carefully depicted the Milky Way spanning the sky, stars like diamonds set in the night sky, moonlight pouring over the earth, a layer of soft silver veil, clouds floating leisurely, distant mountains hidden in the night, the night breeze gently, bringing a hint of coolness and serenity of the summer night scene.

Our group's expectation for the starry sky scene is that the experience will be able to feel the tenderness of the moonlight, the coolness of the night breeze, the brilliance of the stars, and the mystery and serenity brought by the universe in the vastness of the starry sky. The whole scenario is designed to guide the experience from the initial awe, to the gradual immersion, and finally fall deeply in love with this starry sky. We hope that when they look up at the starry sky, they can forget the worries of the world and let their minds be completely relaxed and purified.



Figure 19. A Starry Sky Scene 1



Figure 20. A Starry Sky Scene 2



Figure 21. A starry Sky Scene 3

The reason why I chose to create a starry sky scene is because it allows college students to look up at the stars and feel the universe through the It can effectively relieve their psychological pressure and anxiety, and make them gain inner peace and strength in the process of recognising their own insignificance and the miracle of life; at the same time, the starry sky, as a source to stimulate creativity and imagination, can allow college students to travel and explore the boundless imagination of the universe, and cultivate a richer creativity and imagination; in addition, starry sky therapy can guide college students to pay attention to the needs and emotional changes of their inner self and have a deep dialogue with themselves under the serene starry sky to understand their inner world, and it can also become a bridge for them to share good times with friends and relatives and enhance their feelings. In addition, astral therapy can also guide college students to pay attention to their inner needs and emotional changes, have a deep dialogue with themselves under the serene starry sky, understand their inner world, and promote their mental health and emotional development, and the starry sky can also serve as a bridge for them to share the good times with their friends and relatives and enhance their relationship.

5. Conclusion

After participating in the design of a VR technology-based psychological healing space for university students, many students gave feedback that this was a great way to enhance their psychological healing experience.

An innovative model provides unprecedented support for psychological adjustment. In the ornamental virtual space, users are immersed in natural scenes such as starry forests and undersea coral reefs, which, together with dynamic light and shadow and surround sound, effectively alleviate academic anxiety, as described by the experiencers, "it's as if they are really standing in the mountains and breathing in the breeze, and their hearts are calm in an instant"; the social virtual space, on the other hand, helps introverted students break through the real-life social barriers through safe and anonymous multi-people interactive scenes, such as virtual tea parties and collaborative painting tasks. The social virtual space helps introverted students break through real social barriers through safe and anonymous multi-person interactive scenarios such as virtual tea parties and collaborative drawing tasks. Participants said that "the first time I took the initiative to talk to someone. I felt much less nervous than in reality"; and the testers reported that "the moment I smashed the virtual obstacle, I felt that the heavy stone in my heart was also smashed". By building a multi-level healing scene, this design not only

provides a readily accessible "psychological charging pile" for college students, but also makes up for the time and space limitations of traditional psychological counselling with the help of the immersive characteristics of VR technology, and significantly improves the convenience and acceptance of psychological self-help through the composite effects of environmental empathy, behavioural activation and group empowerment, opening up a new digital path for campus mental health services. The research on the design of psychological healing space for college students based on VR technology has important theoretical significance and practical application value. By combining VR technology with the theory of environmental psychology to design and develop a virtual healing space, the project provides a new way of psychological healing for college students, which can help to relieve their psychological pressure, improve their emotional state, and enhance their mental health. The project has achieved milestones in preliminary research, theoretical exploration, scenario design and experimental validation, but still faces some challenges, such as technological bottlenecks, limited test samples, and difficulties in evaluating the effects of psychological healing, etc. The project team will continue its efforts in the future. In the future, the project team will continue to work hard to further optimise the scenario design, expand the test scope and establish a scientific evaluation system to ensure the successful completion of the project and achieve the expected results, so as to contribute to the cause of college students' mental health.

Acknowledgments

Research on the Design of Psychological Healing Space for College Students Based on VR Technology, an Innovative Training Project for College Students Project Number X202410618077

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