Research Article

Research on Mental Health of Migrant Children Based on Wireless Communication Detection Technology

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The current domestic survey of children in large and medium cities shows that the mental health of children in my country is generally not optimistic, and the mental health problems are worsening year by year. Due to the lack of research on the mental health of migrant children, the purpose of this paper is to study the mental health of migrant children based on computer technology. Methods. According to the definition of migrant children and psychological problems, the functional requirements of the system were analyzed, and a mental health assessment system for migrant children with advanced technology, safe data management, and efficient information management was established. The server uses the most secure WINDOWSXP operating system and large-scale distributed SQL server database for database management. Taking the students from the sixth grade to the ninth grade of the compulsory education M primary school as the survey objects, the mental health problems of their stores were analyzed. The experimental results showed that compared with children in other grades, migrant children in grade 9 were significantly more sensitive and impulsive.

1. Introduction

With the development of society and cities, the number of migrant children from cities has increased significantly [1, 2]. In the process of living with their parents, they face many challenges such as inability to adapt to urban life, basic education that cannot meet the teaching requirements of the new school, and the need to establish new social relationships [3, 4]. These problems can lead to heart problems such as low self-esteem, a strong sense of helplessness and anxiety, a high level of education, and a sense of insecurity among immigrant children [5]. At the same time, elementary school students are in a critical period of physical and mental development, personality, understanding, and behavior, which is also an important social moment.

Teachers should use this important space to build a higher education system for immigrant children and provide and create necessary conditions for their development at a higher level of brains. Hoagwood K E outlined two joint programs that can increase productivity and have a positive impact on children’s mental health due to their impact on families and communities; both programs are facing difficult cuts. We recommend that states adopt a systematic approach to promote policies and programs in public health, mental health, housing, education, social and social services, and youth justice, as a sustainable way to bring families and communities together and promote integration. The overall goal is to promote the country’s mental health policy to strengthen cross-sectoral cooperation and strengthen families and communities, which is especially important for children living in remote areas [6]. Lyon AR describes how to use human-based compression (HCD), a way to promote product development with people and communities who use these products, which can be used to improve mental health services that are beneficial to young people. They explained how HCD enhances life, performance, and authenticity and specifically addresses the unique aspects of youth mental health services [7]. Research on the mental health of migrant...
children based on computer technology is of practical significance.

Section 1 of this study discusses the issues related to the psychological status of migrant children and analyzes the related work and research background significance of this paper. Section 2 expounds the definition of migrant children and their mental health and analyzes the needs of migrant children’s mental health system. Section 3 designs the overall structure of the system and sets up the experimental methods for system testing. Section 4 introduces each module of the system and tests the mental health of migrant children. Finally, it summarizes the full text and summarizes the contributions of this paper.

2. Research on the Mental Health of Migrant Children Based on Computer Technology

2.1. Migrant Children. With the rapid development of Chinese society, there are many migrant workers, and some are migrant workers who are family-based. Immigrant children have many titles, such as “migrating children and young people,” “migrating workers children,” and “migrating children” [8], often referred to as “floating children” in psychology. In this study, “migrant children” are defined as school-age children with compulsory education who once lived in rural areas, then obtained rural household registration, and lived in cities with their parents or one of their parents. The migrant children studied in this study are mainly migrant children in grades 4, 5, and 6 who came to cities from rural areas [9, 10].

2.2. Mental Health. Mental status includes healthy people and general adaptability. The inner body is mainly related to self-awareness, experience, and control [11]. The normal state of mental health has four meanings: the normal state of health is based on the presence or absence of mental illness and the normal position is the average position. From a statistical point of view, the standard is that alpha is in the middle of the normal distribution. Normality is a precise position, mainly used to calculate behavior; law is a process of rehabilitation and also a process of mental health. The individual must continue to learn improvement techniques for dealing with tension. Meeting the following requirements can be regarded as mental health: positive emotions and stability, reducing stress, wanting to work, being able to demonstrate one’s ability to work, wanting to be social, understanding oneself well in interpersonal relationships, understanding self-identity and acceptance, and understanding the living environment have a good understanding, be able to adapt to the environment well, and solve some psychological problems [12].

The migrant children surveyed in this study are in the early stage of school age; combined with children’s “developmental education,” it will be found that this period is an important period when children begin to receive formal school education. The knowledge and skills of the teaching and learning system and their cognition of themselves have become more complex, and their peers have begun to play an increasingly important role. This study believes that the mental health of primary school students can be explored from the three levels of learning, interpersonal communication, and “individual.”

2.3. Analysis of the Needs of Migrant Children’s Mental Health System. Manage user information, including login name and password, modify password and password, modify personal information, etc. Administrators can enter child user names and passwords through an Excel file to register users in groups or add users at one time by adding a user section; students can also register by themselves. After migrant children log in, they can change their password and personal information. When children forget their password and cannot log in, they can also ask the supervisor to reset the password.

The scientific test and early warning science module is used to evaluate and understand the scientific status of migrant children and to provide scientific early warning for migrant children to the maximum extent. First, the consultant conducts a brain size test. After the test is over, the system will combine the size of the psychological test and release the test. Then, students connect to the system to answer test questions, the data automatically selects test questions for students, and migrant children take part in the test. The program analyzes and processes data and collects the results of brain tests. Finally, scientists will review the results of scientific tests and send psychological warnings to migrant children who are sensitive to psychological problems. The purpose of this column is to facilitate students to understand their mental health in a timely manner and to help migrant children discover potential problems as soon as possible.

The psychological consultation part includes online consultation, online dating, and SMS consultation. Migrant children can directly choose online consultation or seek the guidance and help of expert consultants through online appointments or messages. Online consultation is the first part of the psychotherapy module. Make full use of virtual and distributed networks to promote communication between students and psychotherapists. On the contrary, when the favorite psychotherapist of migrant children is not online, online dating and text messaging are usually used. They can contact technical staff in time to improve the quality of customer service and improve the overall performance of the project.

The role of psychological files is mainly to record the basic information and important mental state information of migrant children, so as to better manage the mental health of students and guide the mental health of migrant children. Part of brain file management is mainly the tasks of creating, viewing, modifying, and deleting files. Only if the director has the ability to create and delete files in his mind, the counselor can understand the scientific situation of migrant children based on the results of scientific tests and psychological consultations and thus understand the exact creation of psychological files.
3. Investigation and Research on the Mental Health of Migrant Children Based on Computer Technology

3.1. The Overall Structure Design of the System. The mobile child health management system adopts a modular bottom-up approach to gradually solve the problem, transform the problem into a smaller, independent problem, and then easily solve it. In this way, it not only plans the system development process but also maintains the system security. Obtain a B/S model and structure based on a three-tier website, and each user has an account for compatibility and influence. Now that you can connect to the Internet, you can connect to the Web server through a browser to complete tasks related to roles and permissions.

3.2. Test Object. In this study, students from grade six to grade nine of M primary school in compulsory education are the subjects of investigation. Among the urban migrant children, there are 23 in sixth grade, 35 in seventh grade, 45 in eighth grade, and 52 in ninth grade.

3.3. Test Scale. The mental health of immigrant children has 6 content categories, which are divided into general stress levels such as anxiety behavior, physical symptoms, anxiety towards others, fear perception, self-esteem, and impulse release. It should be noted that if the validity scale is greater than 5 points, the test result is considered unreliable. There are only "yes" and "no" options. Participants must make choices based on their own position. The internal consistency calculation of the system meets all the requirements of technical measurement.

3.4. Psychological Testing Techniques. The advantage of the half-reliability estimation method is that there is no need to use two tests to make two measurements. The specific method is to divide the entire test item into two halves according to odd and even numbers and then use the Spearman–Brown formula to calculate its reliability, namely,

$$R_{tt} = \frac{2R_{hh}}{1 + R_{hh}}$$  \hspace{1cm} (1)

where $R_{tt}$ is the reliability coefficient of the entire test and $R_{hh}$ is the correlation coefficient of the two half scores.

The internal consistency reliability is to use the degree of consistency of the responses between the various questions of the test as the presumed value of the reliability, which can be calculated using the Kuder–Richardson formula, namely,

$$R = \frac{n}{1 + n} \frac{Q_1^2 - \sum p q}{Q_1^2}$$  \hspace{1cm} (2)

where $n$ is the number of items in the test, $p$ is the correct answer rate for a question, $q$ is equal to $1-p$, and $Q_1^2$ is the variance of the entire test.

4. Investigation and Analysis of Migrant Children’s Mental Health Based on Computer Technology

4.1. Mental Health System of Migrant Children. The psychological test module and the psychological early warning management module are used to diagnose and understand the scientific situation of students and provide early psychological early warning to migrant children with multiple problems. The scientific consultant develops the scientific test scale. After review, the scientific test scale is added to the system and the test is released. Then, the student accesses the program to answer the test questions, the database automatically selects the questions for the student to take the test, and the student gives up the test. The program analyzes and processes data and collects psychological test results. Finally, psychologists check the results of cognitive tests and send scientific warning messages to students who are sensitive to heart problems. The function of this module enables students to understand their mental health status in time and helps students find possible problems as soon as possible. The flowchart of the scientific test and scientific warning module is shown in Figure 1.

The function of the psychological file management module is mainly to record the basic information and important mental state information of the students, so as to better manage the development of the students’ mental health and the guidance of the students’ mental health. The psychological file management module mainly includes the functions of creating, viewing, converting, and deleting brain files. Only administrators have the authority to create and delete brain files, and scientific consultants can teach students the state of science based on the results of scientific tests and scientific knowledge and understand the normal creation of brain files. Each image of the brain file manager is shown in Figure 2.

4.2. Psychological Health Test of Migrant Children. The system uses migrant children’s overall learning adaptability and overall self-monitoring scores as independent variables, and migrant children’s psychological stress is the dependent variable for multiple stepwise regression analysis. The results show that learning adaptability and self-control enter the regression; adaptability and self-control have a predictive effect on the psychological stress of urban migrant children and can explain 21.5% of the total stress change, as shown in Figure 3. Among them, self-monitoring has a greater prognostic effect, which can explain 18.4% of the total variance, as shown in Table 1.

Multistep regression analysis shows that learning motivation and learning are independent variables such as learning adaptability and self-control of urban immigrants, and the degree of psychological anxiety of urban immigrants is dependent variables. The three dimensions of learning adaptability and autonomy dimension control entered the regression equation, explaining 23.1% of the total variation of anxiety. As shown in Table 2, significant predictive effects were achieved. Its role is to consider emotional self-control,
behavioral self-control, learning motivation, self-control, and learning autonomy in descending order (Figure 4).

In terms of mental health, urban migrant children of different grades have significant differences in the dimensions of learning anxiety, sensitivity, and impulsive tendencies. From the perspective of learning adaptability, urban migrant children of different grades have overall learning adaptability. There are differences in learning motivation, learning autonomy, learning strategies, learning environment, etc.; from the perspective of self-management, the children of urban immigrants of different grades have comprehensive self-management, emotional self-management, behavior self-management, and self-control of thinking. The dimensions vary greatly, as shown in Table 3.
Later, we discovered that children from urban migrants in the eighth grade are significantly higher than children from other classes in terms of training stress and anxiety. This may be because the eighth grade students have passed all the grades of the seventh grade, and now, they pay more attention to learning and maintaining the relationship between themselves, thus showing a strong emphasis on training and pressure to others.

Children in ninth grade migrants are more important than children in other classes in predicament and indifference. The reason is that the grammar school students in the ninth grade encountered difficulties in the grammar exam. Many students feel that the current education is difficult to change. This is a problem, so they are convinced, such as their training or going out to work. They pay more attention to the changes around them, seeing and thinking about what they want to have. As a result, migrant children in the ninth grade showed sensitive reactions and negative emotions.

From the perspective of changing training and self-management and their different degrees, the higher the level, the lower the level. This may be due to the fact that urban migrant children enter high school from the highest level of elementary school, gradually enter adolescence, develop rapidly in body and mind, and even enter the second “transition period” of the development.

### Table 2: The prediction of anxiety degree by each dimension of learning adaptability and autonomous control.

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Beta</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning motivation</td>
<td>Anxiety level</td>
<td>-0.211</td>
<td>0.062</td>
<td>0.088</td>
</tr>
<tr>
<td>Learning autonomy</td>
<td></td>
<td>0.187</td>
<td>0.068</td>
<td>0.084</td>
</tr>
<tr>
<td>Learning strategy</td>
<td></td>
<td>-0.021</td>
<td>0.058</td>
<td>0.001</td>
</tr>
<tr>
<td>Learning environment</td>
<td></td>
<td>-0.032</td>
<td>0.064</td>
<td>0.002</td>
</tr>
<tr>
<td>Emotional self-control</td>
<td></td>
<td>-0.325</td>
<td>0.185</td>
<td>0.095</td>
</tr>
<tr>
<td>Behavior control</td>
<td></td>
<td>-0.362</td>
<td>0.195</td>
<td>0.099</td>
</tr>
<tr>
<td>Self-control</td>
<td></td>
<td>-0.314</td>
<td>0.231</td>
<td>0.072</td>
</tr>
</tbody>
</table>

### Table 3: Comparison of differences in mental health, learning adaptability, and self-control of urban migrant children of different grades.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sixth grade, $n = 23$</th>
<th>Seventh grade, $n = 35$</th>
<th>Eighth grade, $n = 45$</th>
<th>Ninth grade, $n = 52$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning adaptability</td>
<td>74.3</td>
<td>66.2</td>
<td>63.8</td>
<td>59.2</td>
</tr>
<tr>
<td>Learning motivation</td>
<td>26.2</td>
<td>24.6</td>
<td>24.1</td>
<td>23.2</td>
</tr>
<tr>
<td>Learning autonomy</td>
<td>18.9</td>
<td>16.5</td>
<td>14.2</td>
<td>13.5</td>
</tr>
<tr>
<td>Learning strategy</td>
<td>16.2</td>
<td>15.8</td>
<td>15.6</td>
<td>15.1</td>
</tr>
<tr>
<td>Learning environment</td>
<td>10.1</td>
<td>9.5</td>
<td>9.4</td>
<td>9.3</td>
</tr>
<tr>
<td>Self-control situation</td>
<td>162.7</td>
<td>154.6</td>
<td>145.2</td>
<td>138.9</td>
</tr>
<tr>
<td>Emotional self-control</td>
<td>45.2</td>
<td>44.6</td>
<td>43.2</td>
<td>42.8</td>
</tr>
<tr>
<td>Behavior control</td>
<td>43.6</td>
<td>42.8</td>
<td>41.9</td>
<td>41.7</td>
</tr>
<tr>
<td>Self-control</td>
<td>38.2</td>
<td>37.8</td>
<td>37.5</td>
<td>36.6</td>
</tr>
</tbody>
</table>

Later, we discovered that children from urban migrants in the eighth grade are significantly higher than children from other classes in terms of training stress and anxiety. This may be because the eighth grade students have passed all the grades of the seventh grade, and now, they pay more attention to learning and maintaining the relationship between themselves, thus showing a strong emphasis on training and pressure to others. Children in ninth grade migrants are more important than children in other classes in predicament and indifference. The reason is that the grammar school students in the ninth grade encountered difficulties in the grammar exam. Many students feel that the current education is difficult to change. This is a problem, so they are convinced, such as their training or going out to work. They pay more attention to the changes around them, seeing and thinking about what they want to have. As a result, migrant children in the ninth grade showed sensitive reactions and negative emotions. From the perspective of changing training and self-management and their different degrees, the higher the level, the lower the level. This may be due to the fact that urban migrant children enter high school from the highest level of elementary school, gradually enter adolescence, develop rapidly in body and mind, and even enter the second “transition period” of the development.
stage. Therefore, it is not difficult to understand that, in terms of cultivating innovation, self-management, and varying degrees, the scores are the highest and the scores are the lowest.

Migrant children have significant differences in mental health risk factors, physical symptoms, self-harm, and the level of brain self-control. The results of the three-year trial show that children who have just moved get the highest scores in terms of sensitivity and physical symptoms. Because the first ride in a car will make them more sensitive to the environment and cause unhealthy problems, therefore, children who have been moved once will have allergic reactions and physical symptoms. In terms of emotional self-control, children who have not yet transferred to another school score higher. This may be because the environment in which these children live has not changed, and the teachers and friends who have the greatest impact are loyal and unaffected by emotional changes, thus showing strong self-control. With regard to the degree of self-control of thought, with the increase in the number of transfers, the number of migrant children in urban areas has decreased significantly. This may be because children who move to cities often change the environment, prepare for the surroundings, and are distracted, making it more difficult for them to concentrate and show extreme self-control in their thinking.

5. Conclusions

As a vulnerable group formed under the framework of Chinese citizens, the important life and emotional experiences of migrant children determine that they will face more psychological development problems than ordinary urban children. If not treated and corrected in time, it can also lead to human off-site development. Therefore, it is of great value and far-reaching significance to monitor the mental health of migrant children and conduct research on the mental health of migrant children. This study captures the B/S program for the overall definition of a mental health management system for migrant children, mainly divided into cognitive development layers and server groups. Kindergarten teachers can learn about students’ mental health status by checking their children’s assessment results and conduct relevant science courses and guidance. The application of psychological assessment in the mental health education of migrant children not only reduces the tedious manual questionnaire survey but also reduces the analysis time and strengthens the moral education work in colleges and universities. Finally, the functional modules of the program are designed in detail, and codes are written to judge whether the immigrant children’s psychological testing and scientific early warning management functions work normally and find the root of the problem during the testing process.

Data Availability

The data underlying the results presented in the study are available within the article.

Disclosure

The authors confirm that the content of the manuscript has not been published or submitted for publication elsewhere.

Conflicts of Interest

There are no potential conflicts of interest in our paper.

Authors’ Contributions

All authors have seen the manuscript and approved to submit to the journal.

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