

RESEARCH ON THE “CURE DEPARTMENT” READING PROMOTION SERVICE FOR READERS’ PSYCHOLOGICAL COUNSELING DURING THE EPIDEMIC PERIOD

Yujing Jiang

Library, Shandong University, Weihai, Weihai 264209, China

SUMMARY

Background: The “cure department” reading and promotion service is a project established to provide psychological counseling for residents during the epidemic period. Since community residents are faced with obvious new group psychological pressure and other psychological problems during the epidemic period, the establishment of this project is necessary. The research integrates the intervention theory of metacognitive technology on psychological problems into the design of the project, in order to ensure that residents can relieve their psychological pressure under the epidemic situation through the project.

Subjects and Methods: 173 residents in a community were recruited as research subjects, and they were divided into two groups. One group participated in the reading promotion service combined with metacognitive technology, and the other group participated in the general reading promotion service. The changes of psychological stress and other indicators of the two groups were measured to study the intervention effect of the “cure” reading promotion service combined with metacognitive technology.

Results: The total score of residents’ psychological stress scale test in the metacognitive group decreased from 2.65 before the experiment to 2.07, and the difference was statistically significant ($P < 0.05$). At the same time, the SAS score after the experiment was 61.12 and 65.48 in the traditional group, and the metacognitive group was significantly lower than the traditional group ($P < 0.05$).

Conclusions: The research has proved through experiments that the “cure department” reading promotion service combined with metacognitive technology has a significant effect on alleviating the psychological pressure of residents during the epidemic, and the project has the potential to be carried out in various communities.

Key words: healing - reading promotion - metacognition - psychological pressure - psychological counseling

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INTRODUCTION

The epidemic situation of novel coronavirus pneumonia is one of the major public health emergencies with the fastest transmission speed, the largest coverage and the highest difficulty in prevention and control in modern times. The epidemic situation poses a great threat to the physical and mental health of the public (Goldman et al. 2020). Some studies have shown that the mental health problems of residents during the epidemic are also more serious, showing the characteristics of more and deeper numbers (Shaw et al. 2020). An investigation shows that during the epidemic period, the most common psychological problems were anxiety disorder, depression, insomnia, post-traumatic stress disorder and suicidal ideation (Szturo et al. 2021). In order to alleviate the severity of public psychological problems, scientific intervention is necessary. Among the intervention means for many psychological problems, metacognitive technology is a relatively unique means. It attaches importance to the individual’s cognitive process and believes that individuals can improve their psychological state through their cognition and adjustment of the cognitive process. Under the background of the epidemic situation in which the external objective environment is limited, this means shows higher value (Jessica et al. 2021).

At present, the psychological circle has made a lot of research on the use of metacognitive technology to

intervene in psychological problems. According to the theory of metacognitive technology, Ghaith studied the foreign language reading anxiety of college students when learning a foreign language. He believed that college students’ foreign language reading anxiety actually came from their wrong cognition in the process of learning. According to the metacognitive theory, he designed and conducted experiments to alleviate foreign language reading anxiety, and the results showed that this method was effective (Ghaith 2020). Batebi and his team believe that functional dyspepsia, as a digestive tract problem without organic diseases, has a significant psychopathological nature, and proved its high correlation with anxiety and depression through experiments. Based on this conclusion, the team proposed a drug combination therapy based on metacognitive therapy, and proved that the therapy has a good curative effect (Batebi et al. 2020). Russell and his collaborators studied the psychological problems of young patients with cystic fibrosis, and designed a metacognitive intervention therapy for the narrative intention of this group. The experiment shows that this therapy is highly feasible, which can significantly alleviate the anxiety of young patients with cystic fibrosis and improve their overall psychological state (Russell et al. 2021).

At present, among the strategies of various social organizations to relieve the psychological problems of residents under the background of the epidemic, the

"cure department" reading and promotion service is adopted by many communities. The project promotes the articles and picture books of the "cure department" to the residents, and conducts psychological counseling to the residents through mild and soothing words. The project takes reading and learning process as the core of psychological counseling, and the characteristics of metacognitive technology that requires patients to systematically learn metacognitive theory and related therapies match the core of the project. Through the process of reading and learning, metacognitive technology can be imperceptibly conveyed to readers, and readers can spontaneously use metacognitive technology to alleviate their own psychological problems.

SUBJECTS AND METHODS

Study setting

In this study, 173 residents in a community were recruited as research objects and divided into two groups, one group of 87 and the other group of 86. One group is called metacognitive group, which participated in the reading promotion service combined with metacognitive technology, and the other group is called traditional group, which participated in the general reading promotion service. The residents who were the subjects of the study signed the informed consent form. The Self-rating Anxiety Scale (SAS) and the subjective rating scale of typical situational emotional experience are the main psychological measurement tools used in this study. In addition, there is a resident psychological stress scale designed according to the specific situation of the epidemic and the situation of community residents. This scale is designed with reference to the Symptom Checklist 90 (SCL-90), which shows high reliability in terms of reliability and validity. The half split reliability test method is used to calculate the reliability of the table. The calculation process is shown in formula (1).

$$\beta = \frac{\sum_{i=1}^n (a_i - \bar{a})(b_i - \bar{b})}{\sqrt{\sum_{i=1}^n (b_i - \bar{b}) \sum_{i=1}^n (a_i - \bar{a})}} \quad (1)$$

In formula (1), a_i and b_i represent the odd and even terms of variables, \bar{a} and \bar{b} are the average values of a_i and b_i , n refers to the total number of samples, and β is the reliability coefficient.

Design

Metacognition is a theory based on the research of psychology on individual cognition. The theory holds that individuals can observe and evaluate their own cognitive activities, and regulate their own cognition and behavior accordingly. This kind of individual cognition of their own cognition is metacognition (Shi & Cheng 2021). The concept of metacognition includes two parts: metacognitive knowledge and metacognitive control. Its

structure and relationship are shown in Figure 1. Metacognitive knowledge is the individual knowledge about the cognitive process, results and influencing factors, which can be divided into three categories. The first is about the knowledge of individual learners, which is the knowledge of individual characteristics as cognitive processors in learning and thinking activities, such as the cognition of their own learning ability and interests. Secondly, the knowledge about cognitive tasks, that is, the subject should have correct knowledge of cognitive materials and cognitive purposes. Finally, there is the knowledge about learning strategies, that is, the strategies adopted to achieve the task after the cognitive task (Bouchkioua 2021). On the other hand, metacognitive control refers to the individual's control of cognitive behavior. Individuals need to constantly monitor, control and adjust their cognitive activities through metacognitive control. Metacognitive control can be divided into three aspects. The first is cognitive planning, that is, estimating and planning the process before cognitive activities, selecting strategies, anticipating results and problems, and presupposing solutions to problems. The second is cognitive monitoring, that is, in cognitive activities, individuals timely evaluate the progress and shortcomings of cognitive activities according to their goals and specific conditions. The last is cognitive regulation, that is to take corresponding measures according to the results of cognitive monitoring, and if there are problems, improve and remedy them. Metacognitive knowledge and metacognitive control have an action and reaction relationship, that is, individual metacognitive knowledge determines the way and effect of metacognitive control, and the results of metacognitive control react on metacognitive knowledge. Individuals will adjust and update their metacognitive knowledge according to the results of metacognitive control (Christian 2020).

Combined with the metacognitive theory, the "cure department" reading promotion service should be carried out from the following aspects. First of all, it is necessary to build a screening mechanism for information on public emergencies. Under the special situation of the epidemic, the organizer should check the information source well, and eliminate articles that lack factual information and induce people's negative emotions. In addition, the organizer should pay more attention to the presentation of information, focusing on the processing and reorganization of information resources. In this process, readers should be imperceptibly made aware of the metacognitive process. In the promotion of "cure department" reading, we should make good use of reading channels, establish a scientific reading guidance mechanism with personalized and attractive language expression and humanistic care, and finally let readers shape their metacognitive awareness through reading, and realize that individual views and feelings on the epidemic and the psychological problems caused by it can be optimized and improved through their own metacognitive technology intervention. Second, it is

necessary to carry out the targeted service for crisis response according to the special situation of the epidemic. One of the important factors of the targeted mode is to correctly judge the needs of users. In this study, users' needs are considered to be the need to alleviate their negative feelings and psychological problems under the epidemic through the reading experience of the "cure system". Under the metacognitive theory, the cognitive results will react on the metacognitive knowledge. Therefore, after the appropriate topic service brings comfortable cognitive

results to the readers, the results will react on the readers' metacognitive knowledge, thus forming a virtuous circle. Finally, according to the metacognitive theory, the content of the "cure department" reading promotion activities should partially point to the metacognitive theory itself, so that readers can realize the impact of their own cognition on their own cognitive process through the content of the "cure department", and consciously intervene themselves through metacognitive technology.

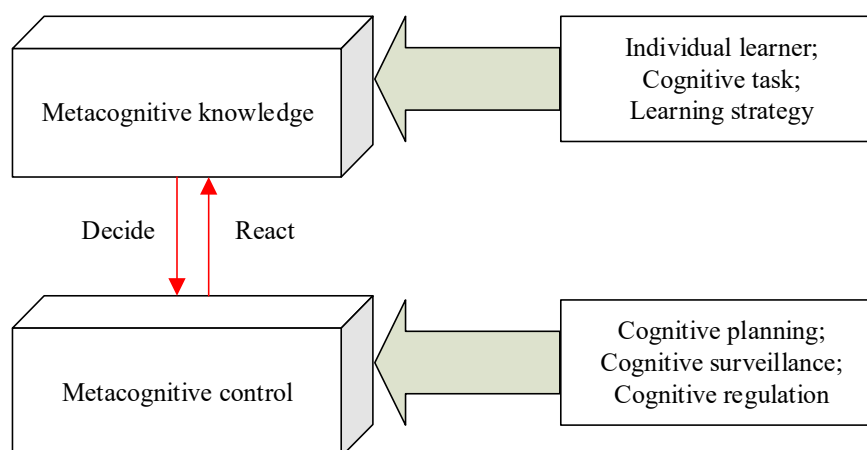


Figure 1. Structure of metacognitive theory

RESULTS

Test results of residents' psychological stress scale

Table 1 shows the test results of the residents'

psychological stress scale of the two groups before and after the experiment. It can be seen that the metacognitive group showed a decrease in stress in many items, while the traditional group showed no significant fluctuations in most items.

Table 1. Measurement results of residents' psychological stress scale

	Metacognitive group		Traditional group	
	Before	After	Before	After
Family	3.75	2.88*	3.25	3.27
Health	1.80	1.20*	1.80	1.80
Adaption	1.40	1.30	1.60	1.50
Relationship	1.83	1.24*	2.14	2.11
Inferiority	2.00	2.00	2.67	2.58
Career	2.60	2.50	2.40	2.20
Studies	2.60	2.40	2.80	2.70
Emotion	3.20	2.60*	3.60	3.40
Composite	2.65	2.07*	2.34	2.36

Note: * indicates that there is a statistical difference between this item and the same group before treatment ($P < 0.05$).

SAS evaluation results of subjects

Table 2 shows the average SAS levels of the two groups before and after the experiment. The SAS scores

of the metacognitive group after the experiment were significantly lower than those before the experiment ($P < 0.05$), while the traditional group showed no significant change.

Table 2. SAS experimental results

Project	Before	After
Metacognitive group	68.33	61.12*
Traditional group	66.75	65.48
<i>P</i>	>0.05	<0.05
Number of people with score below 50	42	56

Note: * indicates that there is a statistical difference between this item and the same group before treatment ($P < 0.05$).

Evaluation results of subjective evaluation form of emotional experience in typical situations of subjects

Figure 2 shows the evaluation results of the subjective assessment form of typical situational

emotional experience of the two groups of subjects before and after the experiment. It can be seen that the metacognitive group showed a significant increase in emotion after the experiment, which was significantly higher than that of the traditional group ($P < 0.05$).

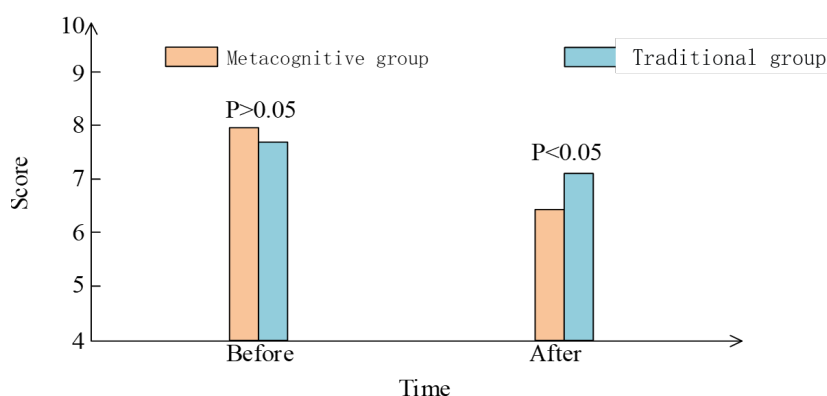


Figure 2. Evaluation results of subjective evaluation form of emotional experience in typical situations

DISCUSSION

Metacognitive technology focuses on the individual's cognition of their cognitive process and mechanism. It is a treatment that has attracted attention in related fields in recent years. Some studies believe that metacognition guides individuals to consciously use their cognitive ability as a tool to learn and control their cognitive process, subconscious state, emotion and behavior (Kannis-Dymand et al. 2020). In the specific intervention mechanism of metacognition on psychological problems, individuals first need to master relevant metacognitive knowledge, realize that they can regulate cognition through cognition, and have an objective understanding of their irrational thinking. Through the intervention of metacognitive technology, they can produce a benign metacognitive emotional experience and arouse the corresponding positive emotions, and finally further solidify the efficacy of metacognitive technology intervention from the positive cognitive results. This mechanism can be internalized into excellent personality characteristics after a long-term virtuous cycle (Hussain 2021). Under the current epidemic situation, Wang has various psychological problems under great living pressure. In addition to trying to improve the external objective conditions, it is also necessary to improve the psychological status of residents through psychological intervention. Based on this concept, the "cure department" reading promotion

service is launched, hoping to appease the mood through the art that fits the psychological needs of the masses. Metacognitive technology has a good fit with the project. The research can integrate its intervention theory on individual cognitive process into the reading promotion service project.

In the assessment results of the residents' psychological stress scale, the post test scores of the metacognitive group in family, health, interpersonal relationship, emotion and general evaluation were significantly lower than those before the experiment ($P < 0.05$), while the traditional group did not show a significant decrease, and showed an increase in the level of stress in the family dimension. According to the theory of metacognitive technology, individuals can make corresponding improvements according to their cognition after they are aware of their cognitive process errors, and the adjusted cognition will affect their psychological state (Kocher et al. 2021). In this "cure department" reading promotion service experiment, the metacognitive group has integrated the knowledge related to metacognitive technology into the publicity and promotion stage and the reading materials sent to the readers, which are subtly conveyed to the readers through the emotional calming and inducing effects of the "cure department" works. According to the metacognitive point of view, the readers should be able to find and improve their own psychological problems through metacognitive skills. When the external

environment of the two groups of subjects is the same and there is no significant change during the experiment, the difference in psychological stress between the two groups of subjects can be considered as the difference caused by the learning of metacognitive technology, which also verifies the viewpoint of metacognitive technology theory.

In the SAS evaluation results, the average SAS scores of the two groups of subjects before the experiment were similar, which was 68.33 in the metacognitive group and 66.75 in the traditional group. After the experiment, the score of the metacognitive group was 61.12 and that of the traditional group was 66.75. At this time, the score of the metacognitive group showed statistical significance compared with that before the experiment and after the experiment of the traditional group ($P < 0.05$). According to the relevant research of cognitive psychology, the individual's psychological anxiety does not directly come from the external factors that cause anxiety, but the individual's perception of external factors leads to negative psychology. The treatment of psychological problems should focus on the transformation of individual cognition (Sahraei et al. 2020). Based on this theory, metacognitive technology intervention is actually to change the individual's cognition of anxiety stimuli to reduce the patient's anxiety level. This process does not make any actual changes to external factors. The conclusion of this experiment is also consistent with this theory.

The subjective evaluation form of emotional experience in typical situations is an evaluation method jointly agreed by the subject and the research object. This method is rated according to the subjective emotional experience intensity brought to the subjects by the stimulus factors that easily stimulate the pressure of the research object. The highest score of this system is 10 points. The higher the score, the greater the pressure on the research object (Reiss et al. 2021). According to the results, it can be seen that the scores of the subjects in the two groups after the end of the experiment are lower than those before the experiment, that is, the subjective pressure decreases, but there is no significant difference between the scores of the subjects in the two groups before the experiment ($P > 0.05$), but the scores of the metacognitive group after the end of the experiment are significantly lower than those of the other group ($P < 0.05$). Relevant studies on metacognition believe that people's cognitive activities are monitored and adjusted by metacognition. Some studies have conducted control experiments on individuals with psychological problems with this mechanism as the core. The results show that the monitoring and adjustment mechanism of metacognition does have a significant impact on the psychological stress of individuals (Lenzo et al. 2020). This study obtained the same results through the "cure department" reading promotion service experiment. According to the discussion, this study has achieved relatively successful results, but there are still some imperfect problems. The

psychological measurement tools and evaluation dimensions used in the study are not diversified enough.

CONCLUSIONS

Metacognitive technology is a therapy to improve the psychological problems of individuals through their cognition of their psychological cognitive process. This therapy does not have an effect on the stimulation factors of the external environment, but is committed to improving the psychological problems by changing the patients' own cognitive process. The "cure department" reading promotion service for readers' psychological counseling is a community activity set up to relieve residents' psychological pressure and appease residents' negative emotions during the epidemic period. Based on this goal, the research integrates the intervention techniques of metacognitive technology into the project. Analyzing the experimental results, it can be found that the metacognition group shows a decrease in stress levels in the stress scores of families, health, interpersonal relationships, and emotions, and the decline is significant. ($P < 0.05$). At the same time, the SAS test results showed that the anxiety level of the metacognitive group decreased from 68.33 to 61.12, and the difference was statistically significant ($P < 0.05$). According to the experimental results, the "cure department" reading promotion service combined with metacognitive technology has a positive impact on the psychological pressure of residents under the epidemic situation. The psychological measurement tools and evaluation dimensions used in this study are not diversified enough. Using more dimensional evaluation systems to judge the intervention results of the "cure system" reading promotion service combined with metacognitive technology is the next research direction.

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Correspondence:

Yujing Jiang,
Library, Shandong University, Weihai, Weihai 264209, China
E-mail: mikelhd@sdu.edu.cn