

Anxiety and Executive Function Relations Review

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Abstract: This paper mainly introduced domestic and international research results, concerning the relationship between anxiety and executive functions in recent years, and take into a simple comment.

Introduction

Anxiety is the human common emotional state and behavioral coping styles, is penetration throughout human history of civilization, psychology and psychiatry in a common variable, is all personality theory including the concept of self is a core structure. Anxiety emotional experience for the further development of the results is the most common anxiety, recent research shows that anxiety in the crowd is all sorts of mental disease the most common^[1].

Executive function to individual normal life has important significance, such as working memory refresh people involved in many activities of daily life, such as learning and required organization information, etc. Garavant ,etal.points out that [2], inhibit or anti-interference ability is individual to normal thinking, and ultimately successful life basic or the essence of the executive function. Due to a variety of nerve psychological disease can be performance for the dysfunction, Wang Shuzhen,Wang Yuzhi from the perspective of the neuropsychological disease symptomatology to explore the relationship between anxiety and subcomponents of executive functions, and deepen their understanding of the information processing characteristics and laws of the state of human neuropsychological diseases understanding[3].

Anxiety and Related Executive Function

Anxiety is refers to the individual to the upcoming, may cause dangerous situation which is a new kind of tension, restlessness, worry of a state of emotional experience [4-5].The system of anxiety began to research in Freud (s. Freud), he will be the anxiety is divided into nerve anxiety, realistic anxiety and moral anxiety three states[6].

Executive function refers to a complex cognitive processes of individuals in the process of implementation of the purpose of behavior in a dynamic and flexible way to coordinate multiple cognitive subsystem activities, a meta-cognitive process control all other cognitive activities[7]. This literature, the most mentioned three Executive Function components: Inhibition Control, Mental shifting, and Updating. Which Inhibition Control is a core component of executive function, inhibition dominant responses tendency to achieve our goals. Miyake people confirmatory factor analysis also showed that[8], Inhibition, Mental shifting, and Updating three implementation, mainly by the contribution of Inhibition.

In recent years, the mood disorders cognitive processing characteristics research caused the researchers of great interest. Eysenck pointed out that anxiety for the effect of attention in clinic is very obvious. Note that the barrier is the main reason for such patients in a variety of tasks operating performance declined, attention disorder plays a central role in anxiety disorders. In addition, the study of individual differences show that the high state of anxiety individual executive dysfunction, due to the state of anxiety and psychomotor vigilance; performance with high trait anxiety individuals similar clinical generalization anxiety disorder (GAD), due to trait anxiety related to the perceptual vigilance[9].96 years ago, 10 years in this field of research is mainly "hot" cognition research methods (with the emotional implications of stimulus) on the way, little is

known about the latter three ways. These results show that the two dimensions of anxiety has a different effect on executive function (attention to functional aspects).

Anxious selective attention bias that contain threats significance information from Bower and Beck two theories [10]. They believe that this selective attentional bias is a result of the role of trait anxiety and state anxiety . In Stroop naming task, high trait anxiety in the individual state anxiety higher condition, to the negative meaning of the vocabulary reaction time is longer, show Stroop interference effect, i.e., the interaction between the three. Anxiety about individual selective attention to study reflects trait anxiety and state anxiety and emotional color the complicated relationship between words [10].

In fact, this kind of research have been involved in the specific executive function, belong to the anxiety executive function of the field of study, but no clear use "executive function" this terminology, and only the selective attention function, has touched the executive function of the other son function, let alone is executive function of systematic research. From the executive function point of view , the results of such studies suggest that: the phenomenon of high anxiety individuals (including TA and SA) have some degree of executive function disorders.

In addition to the results of the study support the anxiety state there is a certain degree of executive dysfunction, with the progress of brain science, more and more evidence that the share of the material foundation of the anxiety state and executive function. The Clinical Statistics show that comorbid OCD and generalization of anxiety disorder (GAD) in clinical low, they ERN characteristics are the same between the two is likely to have a common foundation. To this, Luu and other people think that[11] the ERN and negative emotions associated with, high negative emotions and anxiety associated with . In summary, the results of ERP prompted anxiety and anxiety disorders are associated with high activity in the ACC. Enhance sexual the ERN with more personality dimension, such as positive and negative emotions, this model can well explain the monitoring capabilities of individual differences.

Summary

The above studies have shown that contact not only of anxiety and executive dysfunction on neuropsychological and behavioral levels, but there is a common neurological material foundation; executive dysfunction is not unique performance, anxiety disorders may be the common dimension of a variety of anxiety disorders -- performance anxiety symptoms of executive dysfunction; anxiety state may affect the normal function of the execution. But from the current research situation look, involving anxiety executive function research literature more referring to some study, research results relatively less.

View from more than longitudinal research literature, most of the previous studies have the following deficiencies.

(1) Point of view from the topic of the study, most of the research on the anxiety aspect is to investigate descriptive, less involved in cognitive processing. Although in recent years the cognitive research gradually increased, but the study is relatively fragmented system. Especially research about anxiety within the field of executive function is still relatively small, the existing research is also very dispersed.

(2) From the research paradigm, the previous involves limited anxiety executive function aspect - anxiety state of selective attention to study, use is "hot" cognitive test paradigm. Although the "hot" cognitive consider to try motivation and emotion involved, is the study of executive function of a new trend 3, but this kind of research paradigm itself was also some limitations, such as difficult to design a specific experiments each specific subjects are sensitive experiment stimulus material, which makes this kind of research is a higher experiment in validity, but cannot come to more general conclusion.

(3) From the the task selection point of view of the study,because the previous research executive function as a single structure, used in the study of the test task is not "pure", apply more

WCST, TOH, etc, this kind of test task contains some non cognitive component, cause the results explain difficulties.

(4) Most previous research on anxiety and executive function not consider the effects of age and education were.

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