A Visualized Analysis of the Hot Spots of Educational Anxiety Research in Mainland China

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Abstract

Taking the academic papers in the field of education anxiety included in the CNKI database from 2011 to 2020 as the research object, using CiteSpace V visualization software to sort out the time distribution and research hotspots, the following conclusions are drawn: Research on Educational Anxiety in Mainland China It started late, but developed rapidly; research hotspots mainly focus on three aspects: research on the main groups of education anxiety, research on formation factors and research on mitigation strategies.

Keywords

Education anxiety; Research hotspots; CiteSpace V; Visualization.

1. Introduction

In the era of globalization and intelligence, the economic competition of various countries has gradually evolved into competition of knowledge and technology. Education as the most direct way to increase knowledge reserves and enhance professional skills has become the consensus of various industries in mainland China. It is an important factor related to personal future development. With the rapid development of the times and the great importance and recognition of knowledge and skills, the situation of education anxiety has become more and more intense, and its related research has been valued by education researchers all over the world. The educational anxiety mentioned in this article only refers to the different forms and degrees of anxiety generated by all educational participants in educational activities. This article combines scientometric methods and traditional literature research methods to visually analyze the relevant literature on education anxiety research in mainland China from 2011 to 2020 in the CNKI database. By drawing a knowledge map, the time of education anxiety research in the past ten years Visual analysis of the distribution and research hotspots, combing the status quo and development trend of education anxiety in mainland China, in order to provide effective theoretical and practical references for alleviating the objective status quo of education anxiety in my country.

2. Data Sources and Research Methods

2.1. Data Sources

In this paper, by using CiteSpace V software functions and related important keywords co-occurrence data multidimensional visual analysis, and then explore the field research status in a specific period of time, hot fields and research characteristics. [1] The "Educational Anxiety" was searched as the subject word, key word, abstract and paper title respectively, and the retrieval time was set as 2011-2020 (searched in January 2021). A total of 269 articles were collected after excluding newspapers, conferences and unrelated subject literature, which were exported in the text format of RefWorks.
2.2. Research Methods
Refworks text through CiteSpace V tools of CNKI can be analyzed into the data source. Time Slicing range 2011-2020 is selected, Time slice 1 is selected, Node Types Keyword is selected for visual analysis. Selection Criteria Select Top N mode and set the value to 50. Purning Pathfinder and Purning sliced networks algorithm, run CiteSpace V get visualization mapping in the study of mainland China education anxiety and obtain relevant data.

3. Results and Discussion
3.1. Quantity Analysis of Literatures Published
The time distribution of papers in a certain discipline reflects, to a certain extent, the progress speed and theoretical level of academic research in this field [2]. The number of published literatures on educational anxiety in mainland China from 2011 to 2020 is shown in Figure 1, and the number of published literatures in recent ten years is generally on the rise. As can be seen from Figure. 1, there was a small amount of research on educational anxiety from 2011 to 2013, and the literature tended to elaborate and analyze the educational anxiety of family groups, which was in the initial stage of research. On August 21, 2013, the Ministry of Education issued the Ten Rules for Primary School Students to Reduce Burden (Draft for Public Opinion), referred to as the "Order for Reducing Burden", which took the lead in showing the attention to the current problem of students' excessive study caused by education anxiety. The regulation aims to reduce the schoolwork burden of primary school students, as part of a shift from exam-oriented education to quality-oriented education. Therefore, the problem of educational anxiety has been paid more attention since 2013. From 2014 to 2016, there was a slight increase in the number of studies, with an annual average of more than 10. From 2016 to 2019, the number of studies on educational anxiety has increased dramatically. During this period, due to the voice of the Ministry of Education, such as "Reducing the Burden on Students", "Reducing the Burden on Teachers" and "Reducing the Burden on Parents", it reached its peak in 2019, and the research field has been gradually refined. The research objects have expanded from parents to teachers and students. The content of the study has developed from anxiety representation to anxiety factors. Scholars' research enthusiasm in the field of educational anxiety also fully shows that its influence on society, school and family is becoming more and more significant, indicating that educational anxiety has become a necessary and urgent social problem since this period.

![Figure 1. The number of publications on education anxiety research in Mainland China from 2011 to 2020](image)
3.2. Research Hotspots

Research hotspots can be understood as a series of internally linked articles, focused topics or topics in a certain research field within a period of time. [3] Keywords are the condensing and condensing of the main content of academic papers. They are a high-level summary of the main points and themes of the paper. The high-frequency keywords that appear in multiple articles reflect the research hotspots of the research field in a certain period. In the main window of CiteSpace V, the time partition is set to 1, the node type is "Key-words", and the hotspot map of education anxiety research and research obtained in the past ten years has been obtained. A total of 253 network nodes and 403 connections are obtained (Figure 2 Shown). The larger the circle in Figure 2, the higher the frequency of the keyword, and the more important it is. Frequency and centrality are important indicators to measure the core degree of keywords. A node with high centrality is usually a key hub connecting two different fields, also known as a turning point [4]. Based on the visualized knowledge graph and the top 10 high-frequency and high-centrality keywords (see Table 1), the research hotspots of education anxiety in mainland China can be fully determined in the past ten years.

Figure 2. 2011-2020 Hot Knowledge Map of Educational Anxiety Research in Mainland China

<table>
<thead>
<tr>
<th>Number</th>
<th>Key words</th>
<th>Centrality</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Education Anxiety</td>
<td>0.81</td>
<td>149</td>
</tr>
<tr>
<td>2</td>
<td>Quality Education Resources</td>
<td>0.12</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Middle Class</td>
<td>0.06</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>Kindergarten</td>
<td>0.05</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Off-campus Training Institutions</td>
<td>0.04</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Home-School Cooperation</td>
<td>0.04</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Burden Reduction Order</td>
<td>0.04</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Family Education</td>
<td>0.03</td>
<td>11</td>
</tr>
<tr>
<td>9</td>
<td>Shadow Education</td>
<td>0.03</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Education Equity</td>
<td>0.03</td>
<td>4</td>
</tr>
</tbody>
</table>
By interpreting the knowledge graph and combining the high-centrality and high-frequency keyword tables, we can see that "Education Anxiety" is the most frequently occurring and most central keyword, and the second to fourth most frequent keywords are "Family Education", "Kindergarten" and "Middle Class", the centrality is 0.03, 0.05 and 0.06 respectively. The centrality second only to the subject heading "Education Anxiety" (0.81) is "Quality Educational Resources" (0.12). It can be seen that the research on education anxiety in mainland China in the past decade can be divided into three research hotspots: the main groups of education anxiety, the forming factors and the mitigation strategies.

3.2 1 The hot spots centered on the educational anxiety group can be found in keywords such as "Middle Class", "Family Education", and "Study Burden". Students, teachers and parents are the main participants in education, but from the knowledge map and reading of the literature, it can be known that the anxiety of the parent group is the highest, followed by the students. Some foreign scholars have pointed out that with the current increase in social risks, parents find that income inequality in society is increasing, and they are worried about whether their children can be in an advantageous position in the education competition, and gradually develop into a state of out of control. [5] Class decline due to academic performance is the primary concern for parents, especially among the parents of the "Middle Class" who are in a linking position, the performance of education anxiety is particularly obvious. The stratification gap caused by educational resources maintains or even aggravates the social stratification, which leads to the most common manifestation of parents’ educational anxiety. [6] With the rapid rise of China's economy and the rapid development of a knowledge-based society, the importance of knowledge and skills is self-evident, but blindly emphasizing performance has also brought negative effects on China's education, such as under strong control Problems such as parent-child conflicts, depressive tendencies caused by academic burdens, and school violence are frequent.

3.2 2 Keywords such as "Kindergarten", "School District Housing", "High-Quality Educational Resources", "Out-Of-School Training Institutions", "Education Equity", "Shadow Education", and "Helicopter Parenting" refer to the impact of educational anxiety Factor-centric research hotspots can be further summarized into two main factors, educational resources and educational methods. "School District Housing" and "Out-Of-School Training Institutions" directly refer to educational resources. It is the wish of many Chinese parents to prevent their children from losing on the "starting line". It is also a panic about "education backwardness". For this reason, schools, residences, training, etc. Become the first step for parents to provide quality educational resources for their children and make unremitting efforts for them. Although the "Compulsory Education Law of the People's Republic of China" explicitly prohibits the opening of key schools and key classes, the effect is minimal. The hot discussion of "Tiger Mom, Cat Dad" and "Thirty Only" and other life TV dramas reflect the compromise and efforts made by parents due to educational resources. The high centrality of "High-Quality Educational Resources" also proves that educational resources are a prominent cause of parental group education anxiety. The pressure of the burden of parent group education is a lateral manifestation of the issue of "Education Equity" and a reflection of the distribution of social resources. In addition, "Shadow Education" and "Helicopter Education" both refer to parents' excessive support for their children. "Shadow Education", also known as educational tutoring and private tutoring, refers to a supplementary education that is paid by private individuals and is oriented to a supplementary education other than mainstream school education. The content of its courses varies with the changes in mainstream school curriculum and exam content.[7] The term "Helicopter Parent" was put forward by Dr. Haim Ginott. It refers to an excessively "responsible" way of participating in a child's life in a way of excessive attention, excessive control, excessive protection, and excessive pursuit of perfection. Parenting methods.
Behind the excessive participation of parents in education is the blind obedience and anxiety of parental rearing methods.

3.2.3 In order to alleviate the negative status quo of education anxiety, including "Burden Reduction Order", "Parent Education", "Home-School Cooperation" and other research hotspots centered on education anxiety alleviation strategies, they are mainly divided into two categories. The adjustment of the environment to the transformation of the individual thinking of the education participants. Strategies that point to the external environment of education mainly include: providing "Parent Education", reversing parents' traditional education awareness, changing extreme parenting methods; optimizing school management systems, updating talent training programs, adjusting student evaluation systems; accelerating the construction of "Burden Reduction Orders" And other relevant systems and rules, coordinate the allocation of educational resources, and control the learning mechanism inside and outside the class. The strategies that point to the internal of the individual mainly include: strengthening psychological intervention, changing cognitive styles; focusing on emotional education, focusing on perfecting personality, and cultivating rational power. Li Yinuo once proposed that education should pay more attention to the undetectable but vital parts such as attitude, emotion, comprehensive ability, thinking mode, etc. below the iceberg surface, because when it is strong enough, it can help the knowledge and skills above the water surface. Wait for the development of the visible part. The true collapse of education anxiety needs to start from the social system and talent evaluation standards. Only by maintaining the stability of the education environment can the "Home-School Cooperation" be maximized, and jointly promote the real all-round development of students, and achieve the role of alleviating education anxiety.

4. Summary and Reflection

This article uses CiteSpace V software to carry out a quantitative study on the research literature on education anxiety in Mainland China included in the China Knowledge Network Journal database from 2011 to 2020, and finds that the research on education anxiety in Mainland China started late, but has developed rapidly and has achieved some results; Over the years, the number of articles published has fluctuated occasionally, and has risen steadily, and the trend of publication has only increased. The research objects have become more detailed and the research content has become richer. But at the same time, there are some shortcomings, which are mainly reflected in the following aspects: (1) The research method is mainly qualitative research, and there is a lack of empirical research. (2) The factors affecting education anxiety have changed with social development and lack theoretical construction. (3) Research topics are scattered and relevant researchers are not concentrated.

In view of the problems in existing research, several suggestions are made: (1) Increase the intensity of positivism research, make research based on models or scales, use data for quantitative analysis, and avoid subjectivity; (2) Construct localized theories, To make the research on the theoretical perspective, to push the development to a deeper level, to make the research more convincing; (3) to establish relevant research institutes, focus on the school or subject researchers, and increase the depth and breadth of research.

References


