

A Data-Based Survey and Foregrounding Analysis on Chinese Chunk Research

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Abstract

In light of the Chinese journal full-text database resources in CNKI, articles of chunk study over the past decade within China are retrieved from 14 core journals on foreign languages studies, 93 articles from which are selected for the survey and analysis. Statistical results indicate that: a) The scale of chunk research is on steady rise year by year though in infant stage; b) The research topics touch upon five respects; c) There exist certain problems and shortcomings against some research achievements in respective fields; d) Research breakthroughs are expected with regard to interdisciplinary and multi-dimensional perspectives.

Key words: Chunk research; Status quo; Shortcomings; Expectations of breakthrough

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INTRODUCTION

The research of chunk outside China can be traced back to the study on children's utilization of chunks 150 years ago (Wang & Chen, 2009, p.90). Firth and new Firth school's word study since 1950s and 1960s can be counted as the

beginning of chunk research. Against the background of TG grammar occupying dominant position, Bolinger (1976) believed that language contents could not be generated infinitely merely with grammatical rules and a language also provided us with a large amount of pre-fabs. Bolinger's theory served as the watershed in the field of chunk research. During the following several decades, chunk research has always been the focus of linguistics studies. The subsequent studies like the study of lexicalized sentence stems (Pawley & Syder, 1983), the study of formulae (Cowie, 1988), the study of lexical phrases (Nattinger & De Carrico, 1992), the parallel study of chunks and syntactic system (Sinclair, 1991), the multimodal approach (Wray 2008, 2009), the phonetic processing study of chunks (Amon, 2013) all conducted on the premise of dualism though with different points of foci and paradigms. However, unlike the syntactic system, chunks have not yet been built as a system, as a result of which its research does not have regulations to abide by. To date, the status quo of chunk research outside china is also in a stage of lingering or stagnation.

The research of chunk started relatively late in China. According to the statistics, a sizable research trend only began from early this century. However, the achievements in the past ten years can be considered as remarkable. The following are some examples: Wei (2002), Pu (2003), Chang (2004), Ding and Qi (2005), Wang and Zhang (2006), J. J. Xu and Z. R. Xu (2007), Yu (2008), Ma (2009), Yuan and Guo (2010), Huang and Zhan (2011), Zhong and He (2012), Zhang (2013), Wu (2014), Xu and Wang (2015) and so forth. Then questions about the above literatures arise: What are the distinguishing features? What are the extant problems? What is the research trend likes? Aiming at these issues and based on the retrieve data from fourteen Chinese core journals, this study makes a rational description of the status quo of chunk research in China and proceeds to make a prediction of the future research trend in China.

1. RESEARCH DESIGN

1.1 Piloting Retrieval

Considering that Chinese full-text journal database (CNKI) is characterized by large quantity, extensive coverage, constant renewal, convenient application method and strong academic nature, this study counts on CNKI as the data source.

A piloting retrieval is conducted before deciding on a retrieval range. It turned out that if searching all the journals in the database the retrieved literatures would be numerous and jumbled, ranking different academic levels. However, the piloting search of core journals produced literatures of relatively high academic level, which displays various research orientations and small repetitive rate. Accordingly, the analysis foundation is fixed on China's fourteen core journals of foreign studies. They are *Foreign Language Teaching and Research*, *Foreign Language World*, *Journal of Foreign Languages*, *Modern Foreign Languages*, *Foreign Language Research*, *Journal of PLA*

University of Foreign Languages, *Foreign Languages and Their Teaching*, *Foreign Language Teaching in Theory and Practice*, *Foreign Language Education*, *Foreign Languages Research*, *Shandong Foreign Language Teaching Journal*, *Foreign Language and Literature*, *Computer-Assisted Foreign Language Education*.

1.2 Approach of Corpus Extraction

By using the advanced literature retrieval, setting key words "chunks" as the retrieval item and leaving out time span, the retrieval results (see Table 1) indicate that articles with the title of "word block", "prefabricated chunks" or "formulaic expressions" occasionally appear. In order to achieve a proper selection of argument basis, these articles' contents should be further explored (as shown on items 7, 8 and 9 in Table 1. Though without finding keywords "chunk" in the titles, the contents of the three articles actually belong to chunk research, so they are also employed as samples. The N-data in Table 4 is the number of articles after retrieving and filtering).

Table 1
A retrieval Sample of An Individual Journal

	Articles titles	Authors	Journals	Year/No.	Citation times	Download times
1	Effects of frequency, congruency and proficiency on the processing of L2 formulaic sequences	Xu, Y., & Wang T.	<i>Modern Foreign Languages</i>	2015/03		116
2	An ideal theoretical conception of a new generation learner's dictionary: Based on theories of second language acquisition	Zhang Yihua	<i>Modern Foreign Languages</i>	2010/03	26	1043
3	An emergentist approach to the acquisition of English relative clauses	Jia Guangmao	<i>Modern Foreign Languages</i>	2014/01	2	343
4	The effect of audio-visual lexicon on Chinese EFL learners' auditory information processing	Yu Cuihong	<i>Modern Foreign Languages</i>	2013/04	5	328
5	Exploring the English L2 mental lexicon via word associations,	Zhang Shanshan	<i>Modern Foreign Languages</i>	2006/02	31	887
6	Metaphor, the eye of cognitive lexicography	Zhao, Y., & Huang, J..	<i>Modern Foreign Languages</i>	2000/02	89	1063
7	The psychological reality of L2 general collocations by low-proficiency Chinese EFL learners	Wang Qi	<i>Modern Foreign Languages</i>	2015/02		175
8	Formulaic sequence processing: Status quo, problems and prospects	Li Gengchun	<i>Modern Foreign Languages</i>	2014/02		255
9	A study of visual and auditory processing advantages of English high-frequency formulas by Chinese EFL learners	Zhong Zhiying	<i>Modern Foreign Languages</i>	2015/03		110
10	A review of <i>Formulaic Language and the Lexicon</i>	Zuo Hongshan	<i>Modern Foreign Languages</i>	2005/01		529

2. LITERATURE STATISTICS AND TENDENCY ANALYSIS

In order to master the tendency of chunk research, this study first keeps a record of the publication

date, then retrieves China's fourteen core journals of the foreign studies one by one, finally introduces the retrieved articles into the table according to the publication date. The statistics results are as follows:

Table 2
The Quantitative Distribution of Published Articles in China's Fourteen Core Journals of Foreign Studies (N=93)

Quantity \ Date		Date													
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1	<i>Foreign Language Teaching and Research</i>		1				1		2		2	1			1
2	<i>Foreign Languages and Their Teaching</i>	1		1	1	1				2	2	2			
3	<i>Foreign Language Research</i>								2			1		1	1
4	<i>Foreign Language World</i>							2	1	5	2	3	1		
5	<i>Journal of Foreign Languages</i>								1		1				
6	<i>Shandong Foreign Language Teaching Journal</i>	1			1	1			1	2	1				
7	<i>Foreign Language Teaching in Theory and Practice</i>						1	1			2		1	1	
8	<i>Journal of PLA University of Foreign Languages</i>		1	1	1				1		2		1	1	
9	<i>Modern Foreign Languages</i>			1	1		1					1		1	3
10	<i>Foreign Languages in China</i>								1	1	1				1
11	<i>Foreign Language Education</i>		1								2		2	1	
12	<i>Foreign Languages Research</i>										1				
13	<i>Foreign Language and Literature</i>											1	2	5	2
14	<i>Computer-Assisted Foreign Language Education</i>						1			1					2

The retrieval results find no articles of chunk study before the year 2002. Since the retrieval was carried in October 2015 and then some journals have not submitted their articles to the database, only a small number of

literatures in 2015 are collected. Then a line chart is made chronologically to visualize the quantity of published articles, which provide a glimpse into the fluctuation trend of chunk research.

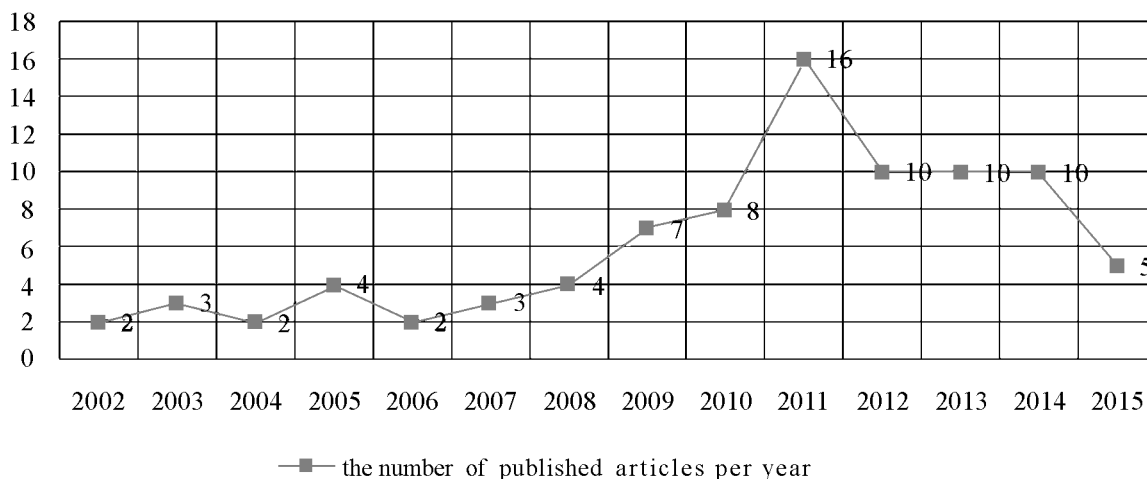


Figure 1
An Overall Trend of Chunk Research (N=93)

The analysis results of Table 2 and Figure 1 are as follows: Compared to chunk research outside China for about half a century, Chinese domestic research of chunk began from early this century and is still at the initial stage. The line chart reveals that during the period of 2002 and 2006, there are only a few academic articles centering on chunks, which clearly show no fluctuation in the research tendency. This period can be

reckoned as a chunk theory introduction period from abroad. Before the coming of research wave, usually there are some introductions of relevant theories such as chunk's concept, category and function, the period of theory richness and development subsequently following up.

Actually, since 2006 the chunk research in China is in its upward channel. The year 2011 witnessed

“an expected rising”. The abrupt rise mainly resulted from the development of cognitive linguistics in China and domestic research enthusiasm of corpus linguistics, the corpus research particularly boosting the study of chunks. From the research boom in 2010 and 2011, it is also easy to reason that the chunks symposium held in University of International Business and Economics in 2009 played an important part as well.

Table 3
The themes distribution of chunk research (N=93)

No.	Themes	Main contents	Quantity	Notes
1	Chunks cognition	The basic attributes and effect analysis of chunks	15	Chunks' terms, definition, category; various cognitive processing of chunks' cognitive motivation and definition
		The research of formulaic sequence processing	10	
2	Lexical chunks teaching	The study of teaching theory based on chunks' cognitive motivation	12	The application possibility of chunks' cognitive theory to foreign language teaching; chunks' cognitive theory and teaching practice improve language skills
		The study of teaching practice based on chunks' attributes	20	
3	Correlational study of chunks and language Proficiency	The theoretical study of chunks and language proficiency's correlation	3	Most study seek to verify a positive correlation between chunks' utilization and language proficiency; the majority belong to empirical study
		The empirical study of chunks and language proficiency's correlation	8	
4	Features of chunks' utilization	The features study of English learners' utilization of spoken language	9	The study of chunk's category and frequency used by language learners, some comparative study focus on a comparison with native speakers' utilization of chunks; the features of chunks distribution in some special texts of individual cases
		The features study of English learners' utilization of written language	5	
		The contrastive study of Chinese English learners' and native speakers' utilization of chunks	2	
5	Literature review and comments	Documentation review and research trend outside China	2	The review of chunk research domestic and overseas; introduction of works abroad and research trend
		Comprehensive review of research domestic and overseas	7	

3.1 Analysis of Theme Contents

(a) Chunks Cognition

Cognitive study of chunks involves two different aspects. The first is about chunks' scientific cognitive motivation or features of “overall processing”. Articles of this type appear at the early research stage, for at that time Chinese domestic research of chunks just started out and most based on the introduction of chunks' scientific cognition. The other type focuses on problems of formulaic sequences processing. Articles of this type are mostly found in the latest two years. By the lights of psycholinguistics and neurolinguistics, these articles mainly carry out empirical studies, such as Sang and Zhang (2013), Li (2014), Xu and Wang (2015) and so on, which indicate that chunk research develops in depth and breadth. However, Chinese research in this area interleaved with the research abroad for a time. For example, scholars like Ehrlich and Rayner (1981) once made a survey of “eye tracking” in formulaic sequence

3. CHUNK RESEARCH'S THEMES DISTRIBUTION AND ITS FEATURES

As shown in Table 3, the 93 articles screened out are classified roughly into five categories of theme contents: chunks cognition (语块认知), lexical chunks teaching, correlational study of chunks and language proficiency, features of chunks' utilization, literature review and comments of chunk research.

processing.

(b) Lexical Chunks Teaching

Lexical chunks teaching is a hot spot in the field of chunk research. On account of research contents, it can be classified into two categories: the first deals with the application possibility of cognitive chunk theory to teaching, such as the study of Wu and Wang (2002), Ma (2009) etc.. The second category aims to combine cognitive chunk theory with teaching practice and further improve language skills, such as the study of Yu (2008) and Xu (2010). The former mainly bases on chunk's scientific justification and explores its facilitation function to language listening, speaking, reading, writing and translation; while the latter mainly bases on empirical approach to explore the way of utilizing chunks in teaching practice and then measures the study subjects' language proficiency, however, some unsettled issues like the control of many variables which take effects on chunk's acquisition leave the the scientificity of research

in this field questionable. The cognitive study of chunks outside China is not limited to empirical case study. The research scope includes the optimization of chunk contents and the compilation of chunk dictionary, also covers the area of teaching materials' development which includes system of lexical chunks, like the research of L. Soars and J. Soars (1998).

(c) Correlational Study of Chunks and Language Proficiency

The extracted articles of this area indicate that the correlational study is mainly to prove the positive correlation between language learner' chunk recognition ability and second language proficiency (e.g. Zhang, 2008, Xu, 2010). Note that the correlational study slightly differs from the above mentioned teaching study. The correlational study starts with chunk's usage characteristics in texts to speculate language users' proficiency; while lexical chunk method in practical teaching study starts with the cultivation of chunk awareness and the illustration of chunk usage, and then assigns language learners some tasks or carries out some tests to see whether their language proficiency is promoted. Apparently, the former is more static while the latter is more dynamic. To date, the text selection of "positive correlation" study in China is mainly confined to speak and written corpus of general range, which, in effect, should be beyond general texts and focus on different correlation degrees between chunk and language proficiency.

(d) Features of Chunk's Utilization

Most study of chunk's utilization concentrates on the features of spoken and written language (e.g. Wang

& Chen, 2013), while some make a contrastive features analysis between Chinese EFL's and native speakers' usage of chunks (e.g. Qi & Ding, 2011). In general, the study in this field, most of which are empirical studies, constitutes a paradigm of chunk research and serves as an indispensable part in the area of chunk research. However, almost all the articles in this field lack description and explanation of the following questions: what is the significance of the discovered features? What kind of chunk's function those features reveal? What kind of chunk's effects those functions illustrate? And what is chunk's position in a language?

(e) Domestic and Overseas Literature Reviews and Comments

Articles in this field, mainly consists of book reviews and introductions of overseas research trend, are relatively insufficient. Moreover, both book reviews and overseas research trend discussion are only built on personal views out of some contingent factors, without a "panoramic" viewpoint.

4. A CONTRAST BETWEEN SPECULATIVE AND EMPIRICAL STUDY OF CHUNKS

Figure 2 demonstrates a classification of the 93 extracted articles into two categories—speculative and empirical research. The classification and display of these two categories aims to guide people to correctly understand and objectively evaluate the empirical studies that computational linguistics and corpus linguistics involve with.

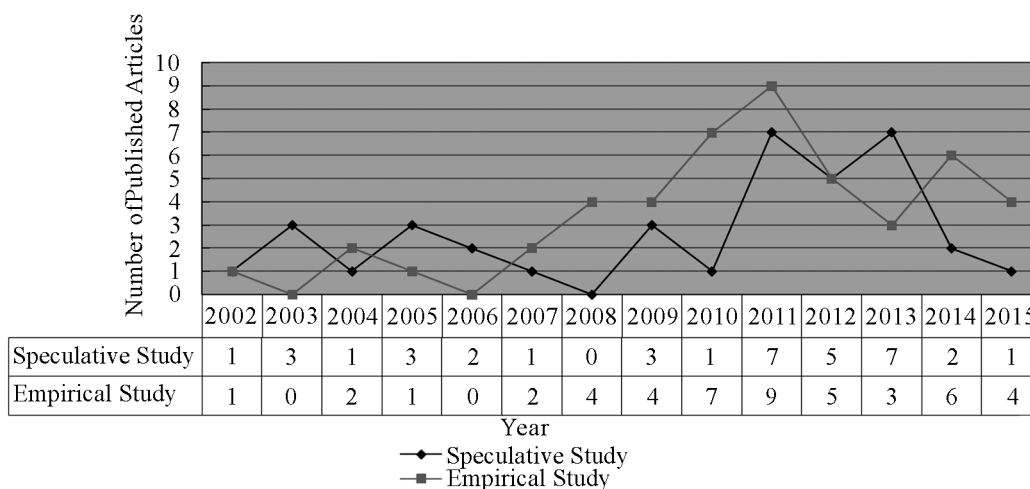


Figure 2
A Contrast Between Speculative and Empirical Study of Chunks (N=93)

Figure 2 shows that from early 2002 to 2007 speculative studies generally outnumber empirical studies, which are understandable since these five years are a period of theories introduction. From 2007 to 2011, the amount of empirical study is gradually increasing

and most of them have a corpus basis. Two causes can be inferred from this change: First, the introduction of scientific cognitive theories of chunks expired, so scholars turned to individual fields; second, computational linguistics and corpus linguistics developed rapidly in

this period, and the scientificity of empirical study was praised highly by a lot of Chinese scholars at that time. After the year 2011, a turning period appeared; from then until the year 2013 is another waning period of empirical study; then it was rising again between 2014 and 2015. The analysis of collected literatures indicates that most Chinese research of chunk between 2014 and 2015 is about cognitive processing and resort to the paradigm of data exemplification, which is determined by the research themes. As for the trend after the statistical node, whether chunk research can keep the “heat” of cognitive processing depends on the effects of various factors.

5. COMMON PROBLEMS AND DRAWBACKS OF CHUNK RESEARCH

Through the analysis of the 93 sample articles, there exist the following common problems and drawbacks in the area of chunk research in China: a) In view of diverse definitions of chunk, many Chinese scholars study different contents or study different levels of contents under a general concept of chunk. For example, the study of three words chunk and the study of idioms and collocations may have identical theoretical basis. Clearly the chunk research of initial contents fails to live by strict guidelines. b) Even the research of chunk itself lacks theoretical model. We can easily find the description of chunks convenient processing features at early stage, the development of chunk and language teaching at middle stage and the empirical study of processing advantage at later stage, whereas we can rarely find the study about the regularity and irregularity of structure, the regularity and irregularity of semantics and features of dynamic development, which, however, scholars abroad like Wray and Perkins (2000) once made theoretical construction in this aspect. c) Most existing empirical study is confined to general texts, a particular scope of subjects and a college foreign language environment. The conclusions they reach are nearly all result descriptions, meanwhile they avoid discussing the theoretical improvement of empirical study about the utilization features of chunks, and how chunks correlate with language proficiency and the correlation degrees. d) The advantages of chunk’s corpus research are self-evident. Leaving out intuitive data and introspective data, it adopts samples from genuine daily communication, which enables the results seemly more persuasive. Actually, chunk’s corpus research is only a kind of paradigm that takes frequency as standard, thus it can merely study chunk’s one particular type of contents. In addition, its drawbacks are obvious and various: First, whether the sample chunks taken from the corpus can be approved by learners and communicators from different nations remains to be unknown. Second is the problem of extraction length. For example, the samples can be two words chunks, three words chunks or four words chunks.

The extraction choice also involves with the problem of psychological reality. Third, some discontinued words can be regarded as chunks as well but it is still quite difficult for corpus to extract discontinued chunks. Fourth, in case the corpus extracts chunks at a rather low abstraction level, the efficiency might be reduced; but if the abstraction level is too high, it is very likely to lose effects. Fifth, the phenomenon that many chunks bear different degrees of variability, some even being immutable, makes it harder to define chunk. Sixth, some lexical chunks are semantically opaque while others are transparent, which is also a problem about the frequency standard of extraction. Currently, too many studies stay at the stage of affirming corpus; few are found to specially explore the deep layers of the problem. e) The research of chunk lacks crossing with traditional linguistics, with frontier theory of linguistics and with theories beyond linguistics. Many studies with limited perspective are deficient in philosophical evaluation, which is found in overseas studies as well.

The fact that a large number of studies fail to propose concrete standards for chunks, offer feasible directional reference, construct systematic model for chunk’s essential traits and comprehensively analyze the function of chunks, neither adopt multi-dimensional perspectives and method of subjects crossing to grasp chunk’s genuine position in linguistics, results in the lack of practicality in those studies, not to mention reaching feasible conclusions. Therefore, it is impossible for these studies to propose guidelines for teaching materials compilers. For example, the following problems remain unsettled: which chunks should be compiled as teaching materials, what system to follow when compiling these chunks, what acquisition strategies to adopt, the overall planning of chunks’ compilation and syntax system, and some specific factors of culture background and language background in chunks’ compilation etc..

6. FOREGROUNDING PROSPECTS AND EXPECTATIONS

Based on the analysis and exploration of the sample literatures, we are justified to say that the inertia of formulaic sequences processing in the year 2014 and 2015 will carry the research trend for some time to come. In the near future, the literatures of formulaic sequences processing will not be limited to foreign language journals. However, in view of the complexity of chunk’s definition, the “hovering stage” of overseas research and the “initial stage” of Chinese chunk research, it will be difficult for Chinese scholars to make a breakthrough in a short term, especially in the area of chunk’s effectiveness evaluation.

Though the trend line of published articles reveals empirical study once gained the upper hand in a period

of time, the effects of empirical studies indicate that their conclusions are unable to provide tangible theoretical guidance for second language acquisition and foreign language learning. With the increasing objective understanding and evaluation of computational linguistics and corpus linguistics, empirical study will not be the dominant research trend. The phenomenon that empiricism is back in the theory fold foresees an equal footing between empirical method and speculative method.

The overseas chunk research has been developing for more than half a century and now is in a hovering state. Unlike syntax and other disciplines, about which people's study can be thorough and penetrating, chunks have not yet possessed a fixed system, or we may say its ontological study has not yet built a model. Without a fundamental supporting point, it is difficult to form a breakthrough. Therefore, after a while of hovering, researchers are most likely to trace back to the origin and committed to the building of a fundamental model.

The positioning of chunk in linguistics is the ultimate goal of chunk research. The evaluation of chunk's positioning is based on the study of chunks' function, which requires a modeling of chunk ontology, a crossover study of chunks and linguistics, for example, interpreting chunks from the perspective of cognitive psychology, neurolinguistics, construction grammar's convenience principle, or examining chunks from the viewpoint of philosophy and philosophy of language. Studies abroad in the above fields haven't formed systematic modeling, while a few Chinese domestic studies touch these questions. At the chunks seminar held in China in 2009, some Chinese scholars also proposed the method of studying chunks from the perspective of construction grammar. For instance, Wang and Chen (2009) suggested interpreting chunks from the angle of central nervous system and chunk system's similarity; Dong (2010) discussed the effectiveness of chunk from the viewpoint of language philosophy; Li (2012) studies chunk from the angle of hermeneutics; Dai (2012) evaluated the position of chunk's acquisition. In view of chunk's complexity and Chinese research foundation, the crossover modeling and the examination from the perspectives of philosophy and language philosophy are just like chunk's ontology modeling, will not be on the track of systematic modeling in a short time. Or rather we may say there are only expectations. Anyway, the breakthrough of chunk research must depend on these multi-disciplinary examinations.

CONCLUSION

This study adopts fourteen common foreign language core journals as statistics foundation but with different viewpoints and aiming to reach different conclusion with other researchers' studies. As for the extraction of literatures, there always exist differences in scholars' views and their standards of correlation degree,

therefore the number of retrieved literatures must differ as well. Besides, the classification of chunk research's achievements is related to personal understanding of generic categories, plus the factor of contents intercross, the number and accuracy of categories are just comparative and relative. Though researchers may hold different perspectives, conduct different analysis and arrive at different prospects, the research foundation of these fourteen authoritative journals ensures the reliability of this study.

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