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Developing a Framework to Explore Local Researchers' Engagement with Global Academia: The Case of Vietnamese Social Sciences Scholars

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Abstract

In recent years, local scholars have been playing an increasingly significant role in the global knowledge system. However, in the context of Vietnam, interaction and engagement between Vietnamese social sciences researchers (VSSRs) with the global academic world are limited despite efforts from the Vietnamese government and tertiary institutions. This study explores the barriers that prevent Vietnamese scholars engaging with the international academic community. Eighty-two Vietnamese scholars in various fields of social sciences responded to an online self-reporting questionnaire including 13 closed-ended and nine open-ended questions. The results show that various individual factors (e.g., the researchers' inadequate proficiency in English or limited research capacities), organisational factors (e.g., the lack of a supportive research environment, the lack of funding and resources, and unsupportive policies), and broader factors (e.g., political censors or the tradition of social research) could significantly influence VSSRs' engagement with global academia. The study underlines the need for in-depth scholar-centred research to understand the process in which local researchers, who are disadvantaged by their contextual factors, participate in the international academic community. More importantly, findings are used to develop a potential framework to study local researchers' academic engagement with global academia.

Keywords: Academic engagement, Vietnamese social sciences, global academia, research communities

1. Introduction

While a growing body of research has largely addressed academic engagement (Perkmann, Salandra, Tartari, McKelvey, & Hughes, 2021), it is an underexplored area in developing countries such as Vietnam. Academic engagement (AE), in a broad sense, is conceptualised as "knowledge-related interactions" among researchers with non-academic organisations. Such interactions include for example, research collaboration, research contracts, consulting activities, and networking with practitioners (Perkmann et al., 2021, p. 1). Academic engagement, in research, can include, but is not limited to, publishing research findings, disseminating research papers at international conferences, and participating in international research projects. Although universities in Vietnam require lecturers to achieve a certain degree of AE to ensure their research has a significant contribution to the field, it is AE in research especially with global academia (research engagement with global academia) that seems to have challenged researchers in this context. Publications by Vietnamese academics in international journals have been quite modest in number as compared with those of their Asian counterparts. The evidence of this is that only three articles in the area of social sciences from Vietnam were published in Institute of Scientific Information of United States (ISI) journals in 2008 (Hien, 2010). In the last decade, although there has been an increase in the number of international articles published by Vietnamese social sciences researchers (VSSRs) (Vuong et al., 2018; Vuong et al., 2019), Vietnam's research publication is still modest considering its research potential and publication capacity.

Evidence from previous research (Hien, 2010; Nguyen, 2020; Turpin et al., 2015) shows that published articles in social sciences in Vietnam are limited even though this area is believed to play an important role in shaping and constructing human society. Gerke and Evers (2006), for instance, maintain that social science knowledge, as an essential part of the epistemic culture, creates "an image of society and social processes" (p. 8). Thus, the work of social science academics and scholars is very significant for the development of society and the engagement of researchers in the society and amongst themselves is essential for their research capacity development. However, research evidence from AE in the area of social sciences is inconclusive or limited (see the review in Perkmann et al., 2021). Furthermore, social sciences in Vietnam are somewhat left behind its counterparts in developed countries and Vietnamese social scientists are still underrepresented nationally and internationally (Hoang, 2021). This provides an impetus for conducting the present research into barriers for Vietnamese scholars' engagement with the international academic community.

This study used an exploratory approach to understand the experience that VSSRs had when engaging with global academia via three main channels: disseminating research through publication, presenting research in international conferences, and participating in international research projects. The findings reported in this article are preliminary data from a doctoral research project on the discursive identities of Vietnamese social science scholars in Vietnam and the diaspora, aspects of which have been published by Hoang (2021), Hoang and Nguyen (2021), Hoang and Turnner (2000), and Hoang (2015). Although this study adopted an exploratory design framed by a grounded theoretical approach, the findings were used to develop a framework to explore researchers' engagement with global academia. To foreground the discussion of this framework, the article starts with an introduction about social sciences in Vietnam. The nature of the local researchers' engagement is then framed from a broader context of an interconnected local-global knowledge relationship. After that, the research method and findings sections are structured to answer the three explorative research questions. Finally, the discussion section discusses the findings in relation to the presented literature and proposes a framework for future research on academic research engagement in other countries.

2. Social Sciences in Vietnam

Social sciences and humanities in Vietnam were formed on the foundation of Confucian institutions, Buddhism, Taoism, French colonial heritage and Communist ideology. These various ideologies and institutions have shaped the way Vietnamese people interpret and reflect on their social issues. On the one hand, this circumstance can provide Vietnamese researchers with rich foundations and various approaches toward social knowledge. On the other hand, it might influence the researchers' work, especially when these different ideologies did not fully develop into grand theories and reach their peak in Vietnam. Vietnam social sciences might suffer the same theoretical deficit as other Asian countries. Clammer (2000) discussed how, despite cultural specificities and their status being an interesting subject for international scholars, Asian societies have not produced a "high theory" for themselves. They often have to depend on Western or Eurocentric knowledge (which has, to a certain extent, been considered as "universal knowledge") due to the process of colonisation, intellectual imperialism, the forces from Western societies to modernise as well as the globalisation process (Selvadurai, Choy, Maros, & Abdullah, 2013). Nevertheless, with a long history of development and an East-West fusion background, social science in Vietnam has a great potential to become a strong area of study.

The modern social sciences in Vietnam have been strongly influenced and orientated by the national Communist Party. The government has implemented several policies to guide social science activities which, despite affirming the attention of the government to the development of social sciences, indicate the "top-down" regulation and Communist line direction towards social science activities. For instance, the Resolution 51-HDBT states that social sciences must "focus its research on the problems regarding economic and social management aimed at promoting socialist transformation and restoring socialist order" (Ho, 1987, p. 136). According to Ho (1987), social sciences were aimed to assist the ideological and cultural revolution. Hence, research projects in social sciences used to revolve around the main theme of developing a socialist country and have been relatively restricted in their contents and approaches.

The research activities in social sciences in Vietnam have been largely oriented in accordance with socialist precepts. Social sciences subjects are taught at a variety of universities where these subjects are directed by the state leadership. There are a large number of research institutes focusing on or orientated by Communist ideology such as the Ho Chi Minh National Institute of Politics, National Institute of Politics, Politics Institutes for Vietnamese People's Police and other state-funded organisations like the Historians' Association, the Economists' Association or the Folk Cultural Workers' Association. Being founded and funded by the state, the research activities carried out by these institutes and organisations are supposed to contribute to "the building of socialism and defence of their socialist motherland" (Ho, 1987, p. 140). These boundaries could perhaps limit voices from different groups of people who want to critically investigate the efficiency of the state as well as to critically discuss some theoretical issues that do not fit with the accepted ideology. However, in recent years, thanks to the Open Door policy in 1986 as well as the globalisation in education especially internationalisation of higher education in Vietnam, VSSRs have been able to use various research approaches to conduct research on a wide range of topics in social sciences – some of which used to be regarded as sensitive and controversial.

Nevertheless, the development of social sciences at Vietnamese higher institutions has not been remarkable. Although Vietnamese universities have proliferated in recent years with many practical courses such as business, economy, and tourism, the development of social sciences in Vietnamese higher institutions is much less impressive (London, 2013). London discussed that this might directly result from Vietnam's political economy in which social sciences are largely subordinated by the state interest. Hence, social science research productivity is often policy-driven. The research production of Vietnam in the field of social sciences before 2000 was recorded as very low especially when compared with other ASEAN countries like Thailand, Malaysia, and the Philippines. The dilemma is that although Vietnam received a much higher global output than most ASEAN countries before 2000, the local contribution of Vietnamese scholars to global knowledge was very small (Gerke & Evers, 2006). This trend was in contrast with Singapore which only received minimal interest from international social scientists while their local contribution to world knowledge was greater than that of Vietnam. This dilemma of Vietnamese social science partly revealed the knowledge dependence of Vietnam on outside sources.

The development of Vietnam's social sciences and their contribution to world knowledge are considered limited despite being regarded as an interesting topic of research (Gerke & Evers, 2006; 2010). For this reason, this study seeks to gain an understanding of the VSSRs communities as well as the challenges they face when engaging with the global academic community.

3. Global and Local Knowledge

3.1 The Interconnected Relationship between Global and Local Knowledge

Local knowledge refers to the knowledge specific to a nation (Lord & Ranft, 2000) or knowledge that is "unique to a given culture or society" (Warren, Brokensha, & Slikkerveer, 1991, p. 1). Such knowledge is often embedded in a culture and contextually dependent (Li, Easterby-Smith, Lyles, & Clark, 2006). It often describes the social capacities in addressing issues and providing solutions which do not belong to the globally dominant pattern but relate to "a geographically or socially limited spread" (Renn, 2012, p. 369). On the other hand, global knowledge refers to the knowledge systems and methodologies which are "developed, codified, and institutionalised in the context of the modern West" (Tauxe, 2009, p. 122). These knowledge systems and methodologies are internationalised and accepted as "the standard of rational thought on how things really are" (Tauxe, 2009, p. 122). This codified knowledge has then been able to travel the world thanks to the globalisation process, especially the advances in information and communication technologies (Bathelt, Malmberg, & Maskell, 2004).

The interplay between local and global knowledge has been described as mutually interdependent and interconnected (Li et al., 2006). The exchange of knowledge between the two systems is believed to have lasted for more than a century thanks to the globalisation process (Gough, 2002) and thus the local and international knowledge are naturally inclusive and "socially and historically constructed" (Akpan, 2011, p. 125). Knowledge not only comes from the academic centers in the Western hemisphere but also from countries such as China, India, and South Korea (Hébert & Abdi, 2013). In many fields of study, researchers have discussed the importance of "thinking globally, acting locally" and argued for the significance of the connection of local knowledge with global knowledge. For instance, in the field of environmental education and science, Gough (2002) believed that Western science should be enforced by local knowledge traditions to understand and resolve environmental issues. In other words, the development of society needs both local knowledge and knowledge from outside.

From a business perspective, Li et al. (2006) identified three interactive modes to capture the relationship between global and local knowledge: global penetration, local-global bending, and local-global integration. Firstly, global knowledge penetration indicates that the global knowledge system creates a platform for local communication in which the direction of knowledge movement is one way: from global to local. The second mode involves expanding the cooperative common knowledge base so that it experiences two ways of knowledge movement: from local to global and vice versa. With this mode, global knowledge can be used for local contexts and local knowledge can be transferred into global knowledge. The third model considers local knowledge as a significant component of global knowledge and the relationship between global and local knowledge are interdependent. This model explores the full value of local knowledge because it posits the local knowledge in the centre and as an essential part of global knowledge.

Overall, global and local knowledge are discussed as integrated and cooperatively constructed. Various perspectives and frameworks have tried to combine the global with local knowledge, the knowledge from the East with the West, and other places in research. Although the hierarchical relationship between the two systems is inherent in various platforms and contexts, the integration of knowledge has become increasingly significant in the modern world.

3.2 Knowledge Exchange in the Global Academia Platform and Academic Engagement

The process of globalisation and internationalisation in higher education has significantly contributed to the production of knowledge in higher education platforms and especially the exchange of knowledge. Globalisation in higher education brings opportunities for academics to learn, to connect, and to collaborate with their international peers (Altbach, 2004). Higher education institutions at the academic centre in developed countries become essential components of the global knowledge network and many of those from the periphery try to participate in this network in various ways. In addition, information technology helps to not only store and search for scholarship but also assist learning, researching, and teaching activities. The international knowledge network becomes a central aspect of academia thanks to the Internet, the increased use of English in science, and the closer connections between academic institutions (Altbach, 2013). Finally, the publishing industry and knowledge ownership worldwide require researchers from higher educational institutions to strive for better-qualified research articles.

As mentioned in the introduction, a great number of studies have been conducted on the topic of AE between academics and outsider organisations (Perkmann et al., 2021). Perkmann shows that AE is decided by individual characteristics, institutional contexts and organisation and relational contexts. First, AE is largely influenced by individual motivations and attributes rather than by universities' characteristics (Lam, 2011; Tartari & Breschi, 2012). Second, the relational context (especially peer effects) and organisational context (such as organisational support, incentives) can positively influence AE (e.g., departmental peers' engagement encourages junior faculty members to engage with the industry (Tartari, Perkmann, & Salter, 2014) or mobilising research funding and resources encourages research engagement). Third, the institutional context, especially disciplinary affiliation, regulations, and policies, can play significant roles in shaping AE activities (Perkmann et al., 2021). These three overarching groups of factors decide research productivity, quality and the societal and economic impact of research.

However, so far research on EA has been centred mainly on the AE activities of academics from hard science backgrounds and universities in the global north, focusing more on the engagement between academics and industry. Not many studies have been conducted on research engagement of social science scholars from the global south in their process of engagement with global academia. Thus, it can be assumed that factors influencing global south academics' engagement with the global academic community can be very different from what Perkmann et al. (2021) described. Given the recent strong knowledge exchange amongst institutions and academics, especially between those from the developing countries with developed ones, a study on the experience and difficulties that acadmics in developing countries have when engaging with global academia is of paramount importance.

4. Research Method

This article uses a self-reporting questionnaire extracted from a larger study to explore the experiences of VSSRs in engaging with global academia through three channels: publishing their research, disseminating their research in international conferences, and involving themselves in international research projects. The self-reporting questionnaire was used to obtain an overview of the Vietnamese scholars' backgrounds, their experiences with peer-reviewed publications, research collaboration, and conference presentations. According to Harris and Brown (2010), questionnaires can "provide evidence of patterns amongst large populations" (p. 1). The use of a questionnaire not only provided a sketch of a Vietnamese scholars' community but also revealed some patterns within this community. The patterns discovered helped the researcher learn about the researched phenomenon.

Since the questionnaire was considered a preliminary investigation to gain an understanding of the community of VSSRs, it aimed to answer broad questions about this community as well as providing space for researchers to share their personal experience in engaging with the global academic community. The research questions were to gain understandings about who the VSSRs were and the challenges they faced when engaging with global academia. Assuming the English language and research skills to be important factors, the study also asked participants to self-evaluate their academic English competence and research skills. The research questions are as follows:

1. Who are the Vietnamese social science scholars aspiring to engage with global academia?

2. How do they evaluate their academic English and research skills?

3. What are the challenges that they face when they interact with global academia through three channels:

1. *participating in international research projects,*
2. *presenting research results at academic conferences,*
3. *and publishing in international peer-reviewed journals and edited books?*

As an exploratory investigation, the study did not limit the number of participants as long as they met the basic criteria of the study - VSSRs who were working or had worked in Vietnam. Potential participants were invited to join the research through an email letter explaining the research and containing the link to the online questionnaire. Their email addresses were sourced in two ways: via their online profiles and other publicly available websites and through a snowballing technique. The snowballing strategy involved identifying cases of interest from sampling participants who knew people who shared similar characteristics with other possible sampling participants (Patton, 2002). This technique helped to recruit the participants who met the criterion of the study. Those who chose to participate were asked to forward the information to other potential participants. Despite the researcher's attempts to involve as many participants as possible, the number of participants was small and could not represent the entire community of Vietnamese scholars. Hence, instead of providing a general picture of the entire community of VSSRs, the study provides detailed descriptions of those who agreed to be involved in the study and had a strong desire to participate in the global academic community.

For the participants' recruitment, two main ethical issues, namely confidentiality and anonymity, and power relations, were addressed carefully during the design and resultant reporting stages. These two aspects were managed by ensuring that the questionnaire was anonymous, online-based and that no personal questions were asked. Hence, the anonymity and confidentiality were safeguarded because there would be no way to track down which questionnaire response belonged to whom unless the respondents chose to be contacted for the second stage. In terms of power relations, the online questionnaire caused no power relation conflicts since our respondents were independent researchers and, hence, they were well aware that their participation or non-participation would not cause problems or affect them in any way, especially when we (the authors) and the participants did not know each other before the research. In addition, the invitation emails included explanatory statements and the ethical approval document, which explained clearly the purpose of the study, the anonymity of the questionnaire and the voluntary nature of the research.

The questionnaire was written in both English and Vietnamese and the participants could choose the language in which they felt most comfortable to respond. The questionnaire, which was developed conceptually, statistically analysed, and embedded in the Qualtrics software, including 13 closed-ended multiple-choice questions and 9 open-ended questions. The closed-ended questions focused on factual information such as the number of publications, the ranking of the challenges influencing their research job and international engagement, and their number of teaching and researching years. The open-ended questions asked participants to reflect on their research experience in conducting research in Vietnam and especially their research engagement experience with global academia.

The open-ended questions in the questionnaire, aiming to collect participants' perceptions of experience and challenges when conducting research in Vietnam, were analysed qualitatively. The approach to understanding these data was content analysis (Vaismoradi, Turunen, & Bondas, 2013). This method refers to the use of systematic coding to explore a great deal of textual information to identify trends, patterns, frequency, structure and the relationships of words used in the data set (Vaismoradi et al., 2013). Following the work of Perkmann et al. (2021) the challenges listed by participants were grouped into three main categories: personal characteristics, organisational contexts, and broader contexts. This aimed to develop a distinct way to classify codes and patterns in participants' responses to frame these challenges in a logical way.

5. Findings

Findings are presented to answer the three research questions sequentially. When possible, responses from different groups of participants are compared and underlying implications are drawn.

5.1 Research Question 1. Who Are the VSSRs?

5.1.1 Participants' Demographic Information

After three months of posting the questionnaire through online channels, responses of eighty-two Vietnamese researchers from various fields in social sciences were collected. The questionnaire did not result in an equal distribution of researchers across different fields although the study utilised the snowballing technique, and the researchers responded to the questionnaire via emails, research groups, and academia forums in Vietnam. The participants with qualifications of Teachers of English to Speakers of Other Languages (TESOL) outnumbered those in the fields of education, literature and anthropology, history, and public relations. This might be explained by the fact that we had been in contact with some participants in these fields through our common educational background. As such, there might have been some bias in the results, and that required caution when interpreting the data.

Tables 1 and 2 show the biographical data and academic background of participants. These demographics have been previously discussed in Hoang (2015).

Table 1. Distribution of Participants

	Age range				Gender	
	<25	25-35	35-45	>45	Male	Female
Number of participants	4	48	26	4	30	52

Table 2. Participants' Education Background

Degree		Major						
		TESOL	International Relations	History	Literature and Anthropology	Education	Psychology	Others
Bachelor	53 (29 missing)	20	2	2	6	2	2	19
Master	66 (16 missing)	24	3	4	6	5	1	26
Doctorate	19	1	0	0	5	8	0	5

Degree		Countries in which participants obtained qualifications					
		Vietnam	The USA	Australia	New Zealand	European countries	Other countries
Bachelor	53 (29 missing)	43	0	0	0	1	1
Master	66 (16 missing)	29	6	13	6	7	5
Doctorate	19	4	4	9	0	1	1

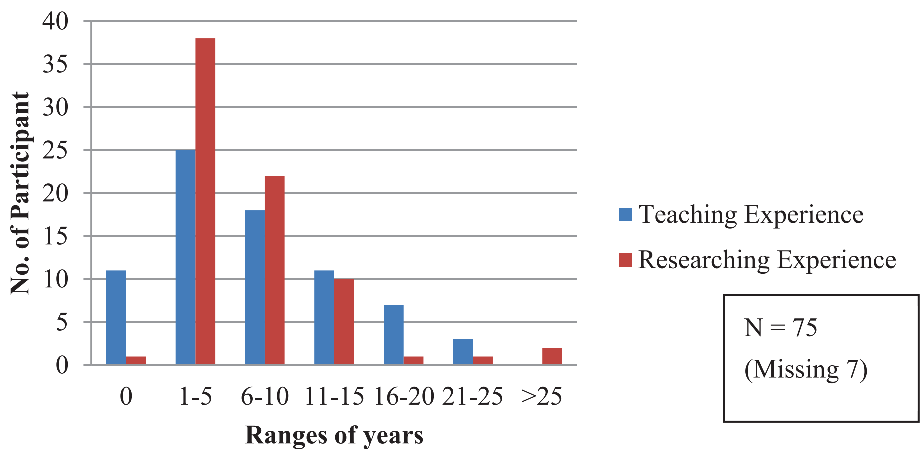
Table 1 clearly shows that most respondents, aged from 25 to 35, are early-career researchers. Table 1 reveals that female participants outnumbered their male correspondents. It can be seen from Table 2 that most participants obtained their Bachelor qualifications in Vietnam (N= 53). Among the 66 respondents having Master degrees, 37 participants (56%) obtained their qualification in a Western country, most commonly including Australia, the United States of America and New Zealand. There were also nineteen participants who had finished or conducted their doctoral studies in other areas, but education, literature, and anthropology were the most popular fields.

The follow-up, open-ended question revealed that participants from other fields of social sciences listed a wide range of fields that interested them. For instance, one participant majoring in international relations showed his interest in human rights, social policies and human ecology. Another participant who specialised in journalism expressed her research interests in media, power, nationalism and the theories of Foucault. The variety of participants with different research interests is beneficial as voices from different fields of social sciences were able to be represented. The results indicate that VSSRs have a wide range of research interests and can shift between different juxtaposing topics.

Nearly seventy per cent of participants (n = 57) are employed in tertiary institutions while the rest (n = 16; missing =9) work in NGO organisations, research organisations or the field of publication. It can be seen from Figure 1 that the teaching experience and researching experience of the participants have varied: from zero to 24 years of teaching experience and from one to 40 years of researching experience. The participants' years of teaching and researching are divided into seven different groups as represented in the horizontal axis.

It can be seen from Figure 1 that participants who had from 1-5 years of experience in lecturing and researching represented the largest age-range group. Among 73 participants with experience in conducting research, two respondents had experienced more than 25 years of research while other participants are early researchers and lecturers, which may affect the quality of their academic research. Although they had been working as early lecturers, their engagement with the academic community is evidence of active and potential researchers.

Figure 1. Number of Participants' Teaching Years and Research Experience



Regarding language skills, all respondents self-identified that they were able to use English while some were able to use Chinese (n = 4), Russian (n = 3), Japanese (n = 2), German (n = 1) and French (n = 1). The profile of participants clearly reveals that they came from various research backgrounds; most were early career researchers while the majority were experienced ones.

5.1.2 Participants' Research Outcomes

The results shown in Table 3 below report participants' research outcomes. These data, which were previously presented in Hoang (2015), have been expanded to reflect more details relevant to the present reporting of the study.

Participants' responses to the questionnaire show that they had had quite limited interaction with global academia in terms of publishing, conferencing and participating in international research projects. Many researchers responded that they had not had any of these experiences.

Table 3. Number of Participants' Research Outcomes

Question	Number of research outcomes				Total Responses	Mean of four groups
	0	1-3	4-5	>5		
Number of research projects funded by the Vietnamese government in which you have been involved	31	31	5	10	77	1.92
Number of research projects funded by foreign organisations in which you been involved	33	39	3	1	76	1.63
Number of articles that you have published internationally in peer-reviewed journals	52	19	3	2	76	1.41
Number of articles that you have published internationally in edited books	53	21	0	2	76	1.36
Number of articles that you have published domestically in peer-reviewed journals	22	33	13	8	76	2.09
Number of articles/book chapters that you have published domestically in edited books	43	23	4	4	74	1.58
Number of academic articles submitted for publication in an international journal being rejected	58	15	0	1	74	1.24
Number of academic articles submitted for publication in domestic journal being rejected	58	16	1	0	75	1.24
Number of international conferences organised overseas at	29	29	10	10	78	2.01

which you have presented						
Number of domestic conferences at which you have presented	25	33	9	12	79	2.10
Number of international conferences organised in Vietnam at which you have presented	29	34	5	10	78	1.95

It can be seen from Table 3 that a majority of the VSSRs did not have either experience in international research projects (33 participants) or internationally published peer-reviewed journals or edited books (52 and 53 respectively). Neither had they presented in international conferences organised overseas or in Vietnam (29 and 29 respectively). It can be inferred from the data that participants might not yet have been very active in their research.

The participants' research outputs have been recognised in global academia. However, the number of peer-reviewed publications and published chapters in edited books is lower than that of local publications. The analysis in Table 3 shows that the international peer-reviewed publications have higher means than those of local publications: 1.41 for international peer-reviewed journals, 1.36 for international edited books, and corresponding types of domestic publications 2.09 and 1.58 respectively. Two respondents had five (or more) academic papers published in international peer-reviewed journals. The higher means values reflect that the participants were more involved in domestic research projects than in international projects. Overall, their participation in academia is still quite limited.

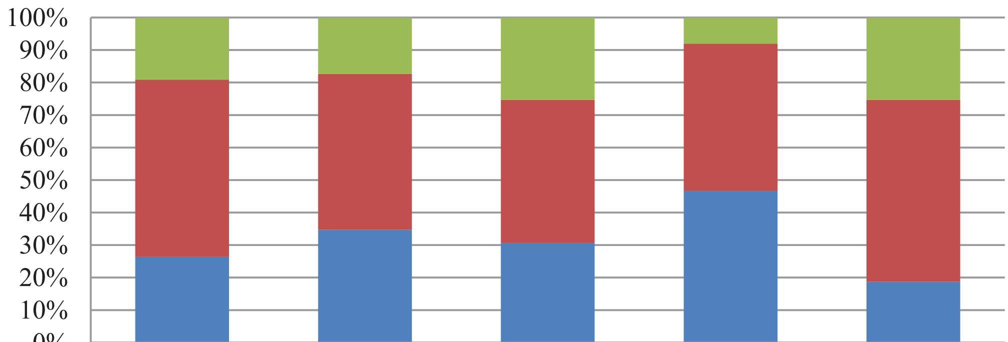
5.1.3 Participants' Commitment and Desire to Engage in Global Academia

The responses to the open-ended question on their research engagement plan showed that more than 90 per cent of participants said that they expected to publish their study in an international peer-reviewed journal, to attend international conferences and to take part in international research projects. However, they also mentioned various difficulties that they needed to overcome. These difficulties are analysed in respect of research question 3.

5.2 Research Question 2: How do They Evaluate Their Academic English and Research Skills?

Figure 2 presents the results of participants' self-assessment of their English language competence. Respondents felt confident in their English competence; however, it should be noted that a large number of participants have a TESOL qualification. Therefore, they were more confident with their English competence than other groups of participants. The skill that most participants felt most confident in was reading, while speaking was their least confident skill. The variance also showed that reading had the smallest variance while speaking had the highest. Figure 2 provides participants' self-assessment on their English academic competence. The number in the table is the number of responses for each item.

Figure 2. Participants' Assesment on their English Academic Competence

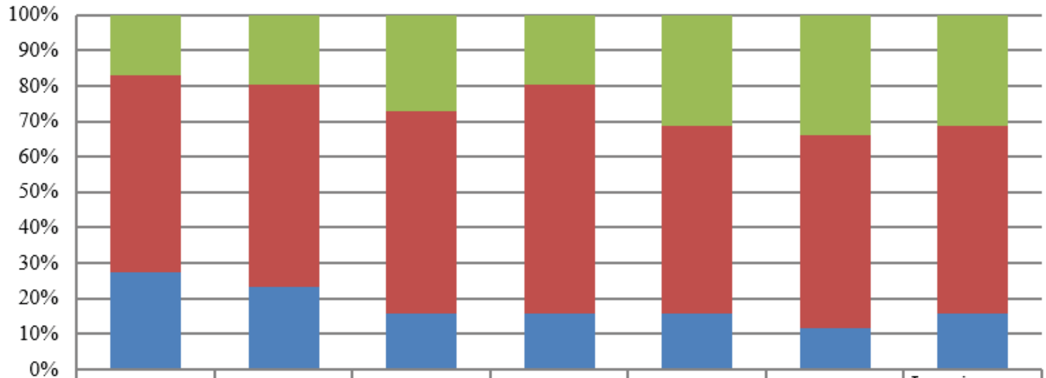


	Overall	Listening	Speaking	Reading	Writing
Not confident	13	13	19	6	19
Confident	37	36	33	34	42
Very confident	18	26	23	35	14

When asked in the follow-up open-ended question about the number of English articles in their fields that participants read per year approximately, 23 participants claimed that they read fewer than 10 articles per year. On average, participants read approximately 30 articles per year, a number that seems to be quite modest for an active researcher. The two most reported reasons for the infrequency of reading English articles were their inability to access international peer-reviewed articles (67%) and the inability to allocate time for reading (61%).

The analysis in Figure 3 below shows different levels of engagement with aspects of research skills. The research question on participants' confidence in carrying out research shows that the participants were most confident in collecting and analysing data. They were less confident in writing up their findings and designing a research study. Figure 3 shows participants' self-evaluation of their confidence in conducting different aspects of a research project.

Figure 3. Participants' Confidence in Conducting Different Tasks in a Research Project



	Identifying a research problem	Searching for relevant literature	Designing a research study	Collecting data	Analysing data	Writing up findings	Locating your research results in the relevant literature
Not confident	13	15	21	15	24	26	24
Confident	43	44	44	50	41	42	41
Very confident	21	18	12	12	12	9	12

The responses to these questions suggest that English or limited knowledge of research skills might not be the only barriers preventing social researchers from Vietnam from engaging with global academia.

5.3 Research Question 3. What Are the Challenges That They Face When They Interact with Global Academia?

Given the aim of investigating the participants' challenges, the questionnaire was designed to ask the participants to list five challenges that they had faced and overcome during their engagement with the global community. In addition, the participants were also asked to rank some given challenges.

5.3.1 The Challenges When Participating in International Research Projects

Participants responded that when participating in international research projects, the most considerable challenges for Vietnamese scholars included personal characteristics (English competence, research experience/skills, limited connections) and organisational factors (limited funding, lack of institutional supports, and professional development training). English language proficiency was given as the foremost personal reason followed by research experience, communicative issues, high expectations of their Western peers, information on the projects and networks of researchers. In addition, a number of participants were concerned about their lack of research ability and skills and confidence to become involved in international research projects to meet international standards. Second, participants responded that they rarely received support from their employers, especially in terms of funding, to participate in these projects. They also pointed out that they had not had opportunities to keep up with research trends at a global level (partly due to the lack of research development programs and support). Interestingly, three participants reported that limited connections with other researchers and research communities was one of the significant challenges.

Figure 4 indicates the participants' 10-rating score scale of challenges for VSSRs to participate in international research projects. A significant challenge was equal to ten while zero was equal to not being a challenge for them. Below are results described as standard deviation and average value.

Figure 4. Rating of Challenges for Participating in International Research Projects (10-score scale)

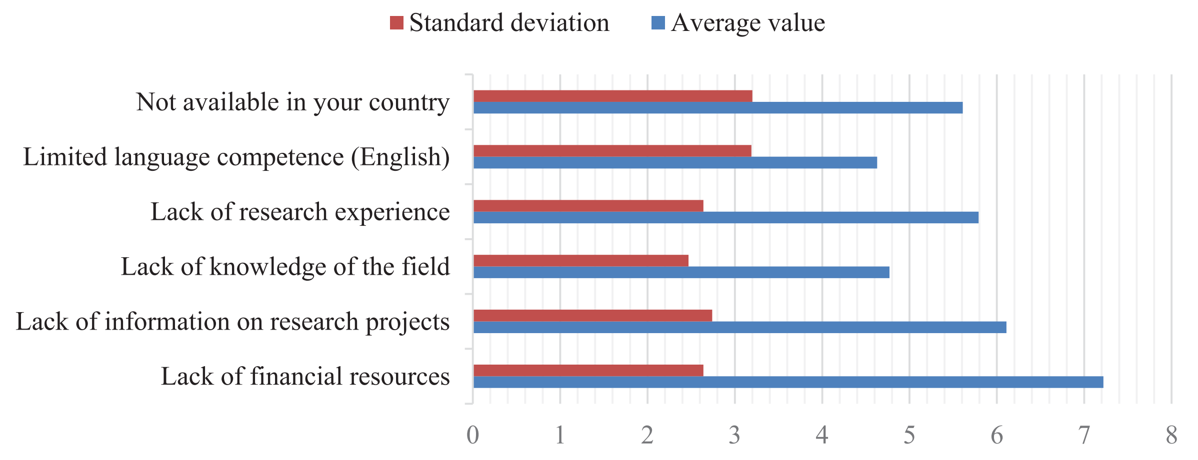
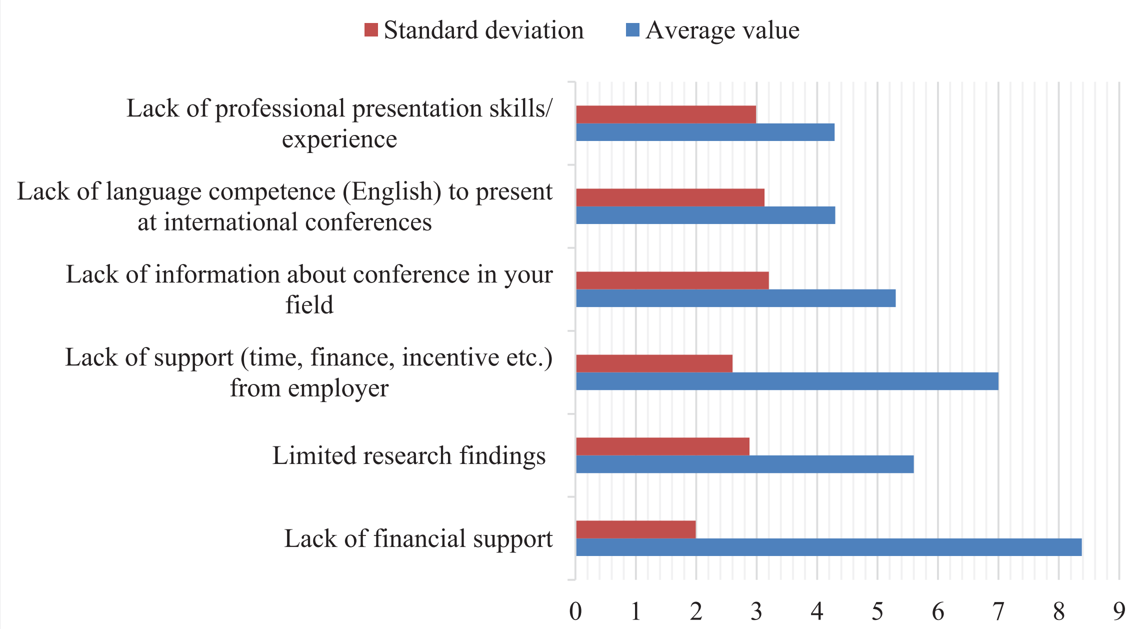


Figure 4 shows that a shortage of finance is ranked as the most significant challenge for researchers participating in international research projects. In contrast, English competence only scored 4.5 (on average) on the 10-rating score scale for challenges. Limited English competence also had the highest standard deviation (3.31). This means that participants gave it either a very high or a very low score. The participants might be either fluent in or not very influent in their English, as a large number of participants in the study have TESOL qualifications. The statement that international research projects may not be available in Vietnam can indicate either the small number of international research projects in social sciences in Vietnam or the participants' lack of information about these projects.

5.3.2 The Challenges-When Presenting Their Research at International Research Conferences

Figure 5. Rate of challenges for presenting at international conferences (10-score rate)



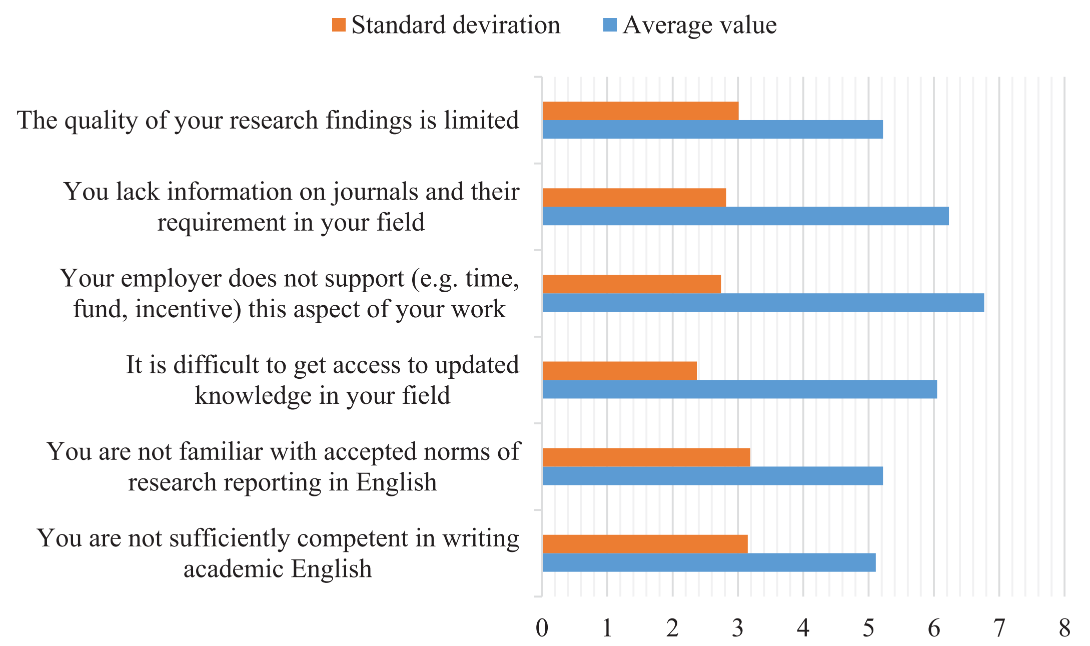
Participants responded that two organisational and relational context factors (funding and support in terms of time), four individual attributes (English competence, presentation skills, family support, lack of information), and one broader factor (political censorship) were main challenges for their participation in international research conferences. *Funding* and *supports* were the two most prominent challenges that all participants perceived. Many participants (80%) responded that they had not received employer support in terms of finance or time. This challenge was followed by English competence and presentation skills; for example, they were concerned about their ability to speak to a large audience or to disseminate their research in an international context. Lack of family support, long hours of work, and difficulty finding information about the conferences in their field were also added. Some participants stressed that they could not find prestigious conferences in their field or the right audience for the topic of their research. They found difficulty finding audiences who are familiar with the context of Vietnam. In addition, one participant acknowledged that his research topic was "politically sensitive" and hence he did not want to present on it.

Figure 5 indicates the participants' 10-rating score scale of challenges for VSSRs to present their research at international conferences. Ten was equal to a significant challenge while zero was equal to not being a challenge for them. Results are presented as average value and standard deviation.

The ranking of challenges was consistent with the listed challenges for presenting at international conferences. Lack of financial support, which had the smallest standard deviation, was marked as the most significant challenge (8.38/10). Lack of support from the employer came second. Different from results from the earlier listing question, the quality/quantity of research was scored 5.38, higher than the rest of the reasons given. English competence, however, was ranked as the second least significant challenge.

5.3.3 The Challenges When Publishing their Research in International Academic Journals or Edited Books

Figure 6. Rate of challenges for publishing internationally (10-score rate)



Similar to the challenges for participating in international research projects, individual characteristics (English capacity, research capacity, and publication quality) are mentioned as the most important barriers, followed by organisational factors (institutional supports, incentives, and resources as well as research-support colleagues) and broader factors (disciplines and research traditions in social science). First, participants' responses to the open-ended questions indicated that English competence (and English writing skills specifically) was the most popularly-listed challenge in publishing internationally. They perceived that they were unsure about the quality of their research due to the "theoretical inadequacy" and their limited knowledge of research methodology. They further expressed their concerns about the originality and the novelty of their study, and whether their research could have any impact on the theoretical framework or whether they had critical arguments on the issue investigated. Second, responses also indicated that participants did not receive support from their employers to engage in the global academia in ways such as research publications and dissemination. Given the fact that the employer did not acknowledge AE, a participant noted "*there is no difference between international publication and domestic publication*". The respondents also acknowledged that they had lacked access to potentially well-esteemed and high-ranking journals and they doubted the quality of peer-reviewed journals published in Vietnam which are often regarded as being of limited quality and lacking in authenticity. Others believed that the academic environment in Vietnam did not provide them with the opportunities to share and cooperate with their peers. They had no communities of researchers who could support and give them feedback. Third, approximately one in five participants thought that differences in academic cultures and research traditions in social sciences caused it to be harder to publish internationally.

Figure 6 indicates the participants' 10-rating score scale of challenges for VSSRs in publishing their research in international peer-reviewed journals and edited books. Ten was equal to a significant challenge while zero was equal to not being a challenge for them. Average value and standard deviation are presented.

It can be seen from the chart that lacking support from the employer is the greatest challenge the participants faced. Limited information on journals as well as access to knowledge in their field also challenged the VSSRs. However, research quality and English writing proficiency were acknowledged as being the least significant challenges, although writing research reports for peer-reviewed journals was considered more challenging than English writing competence itself. Some participants believed that their field of study had not developed in Vietnam so they did not have many opportunities to update themselves with recent developments in their field.

6. Discussion and Recommendations

The findings provide a snapshot of VSSRs' community through the sketch of the scholars who had a strong desire to engage with the global academia. Most participants formed part of the younger generation of researchers with limited research experience and research outcome but good English competence and a strong desire to engage with the global academic community. The findings indicate that the VSSRs had to cope with a wide range of challenges when they interacted with global academia. The study identified four organisational and relational contextual factors (including institutional research policies, funding and resources, research communities, and professional programs) that influence VSSRs' engagement with global academia. It also found three influential individual factors (research skills/experience, family support, and foreign language competency) and three broader contextual factors (research traditions, disciplinary characteristics, and political supervision) that are important to VSSRs' research engagement with global academia. The factors are presented in the following figure, which is an adaptation of the analytical framework of AE presented by Perkmann et al. (2021, p. 8).

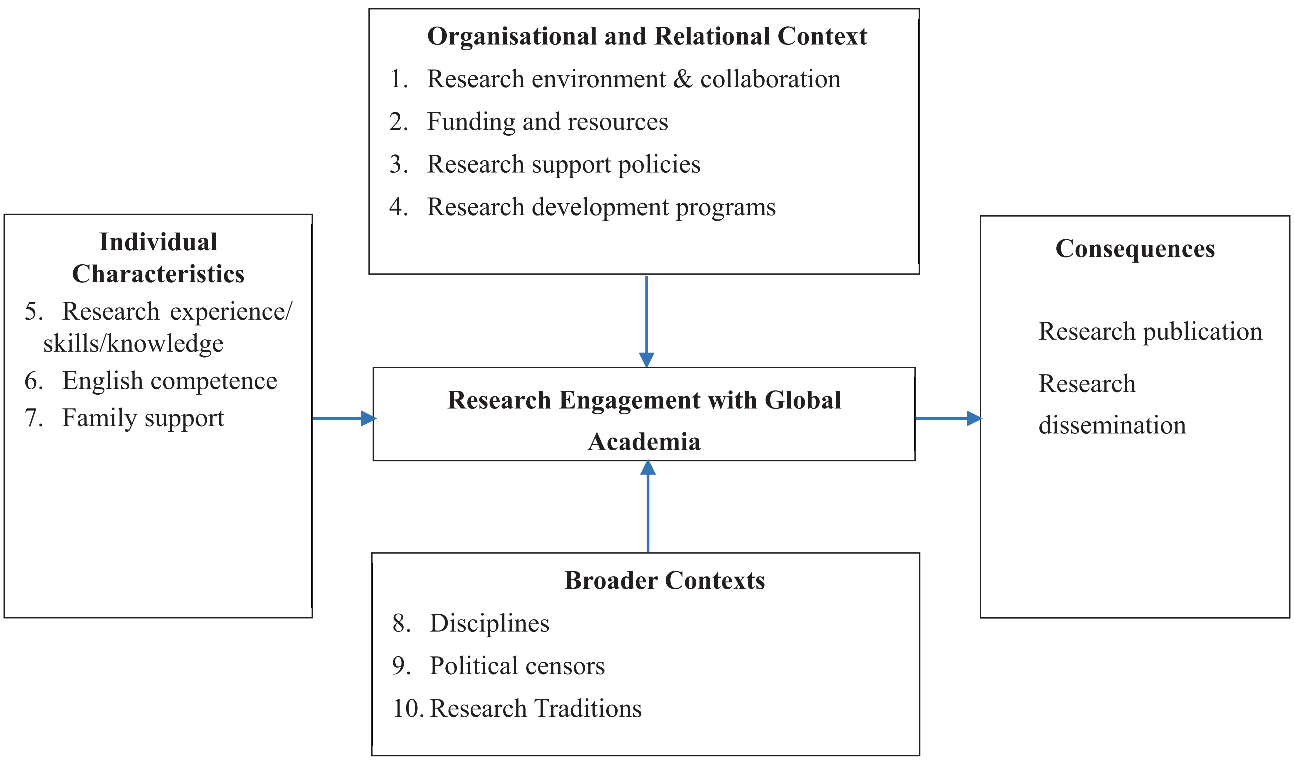


Figure 7. A Proposed Framework to Understand the Engagement with Global Academia by Local Social Science Researchers

As discussed in the findings, these interwoven factors played a significant role in scholars' research engagement with global academia, positively or negatively influencing their research outcomes. Findings suggest that VSSRs have the desire to engage with the global academia yet the challenges stopped them doing so. Interestingly, many major barriers were reported to come from organisational and relational as well as broader factors rather than from individual factors. In other words, sometimes it might not be the limits of their English or the limited research capacity that blocked many participants from what they wanted to do. For instance, the results suggest that the underdeveloped environment for researchers and the lack of supportive policy for researchers in social science were substantial challenges. The participants did not receive support from their employers and their peers, and thus they might not have had a community in which they could participate, and where they could collaborate with and learn from other researchers. As such, they might not have known how to improve their professional development or to organise a community of practice to position themselves in a friendly research environment. On a broader scale, issues such as the influence of a socialist orientation to social science, or the complex history of social science development (see Section 2) also create various challenges for VSSRs. The findings resonate with Altbach's claim that for some particular fields in humanities and social sciences such as politics and history, the research topics remain 'largely nationally based' (Altbach, 2004, p. 16) and thus integration in global academia is much more challenging in these fields.

The findings show the attempts and desire of VSSRs to engage with the outside world and become a part of the global academic community. They support the claim that knowledge, in this globalised world, is globally and locally shared and the interconnected relationship between global and local knowledge is becoming stronger. The exchange of knowledge occurs in various platforms and contexts. However, the study shows various potential disadvantages that local researchers often have to cope with when interacting with global academia. As can be seen, apart from individual factors such as English capacity and research skills, local researchers are also disadvantaged when not receiving organisational and institutional support. Therefore, the study suggests that the interaction between the local (Vietnam) and the global academia might still be occurring in accordance with the global knowledge penetration mode (Li et al., 2006) rather than under a more productive mode of interaction like local-global knowledge bending or local-global knowledge integration. In other words, the hierarchy between the two systems is still inherent and local researchers are disadvantaged.

The importance of AE has been locally and internationally recognised. Following previous research in the field, this study has identified that the interaction between the global and local knowledge manifests the hierarchy between global and local knowledge - local researchers are somewhat disadvantaged in the process of integration with global academia. In the context of Vietnam, VSSRs have to cope with various local barriers to participate in international research projects and disseminate their research in international conferences or publish their research outcomes in peer-reviewed journals. The study suggests that further research should be undertaken to understand the in-depth personal experience of local researchers when conducting research in the global and local contexts and the role of institutional and organisational factors in supporting local researchers.

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Factors Affecting Chinese Consumers' Impulse Buying Decision of Live Streaming E-Commerce

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Abstract

From the perspective of consumers, this research studied four factors including price promotion, time pressure, interpersonal interaction and visual appeal influencing the impulse buying decision of live streaming e-commerce consumers in China. This research used a quantitative design by developing questionnaires to collect data through the convenience sampling approach from 477 Chinese users who has live streaming shopping experience in social commerce platform Taobao.com. within the past 1 year in Kunming, City. Structural Equation Model (SEM) was used to analyze the data and the hypotheses accordingly. The results confirmed that price promotion, time pressure (promotional time limit, perceived opportunity cost), interpersonal interaction (consumer-streamer interaction, consumer-consumer interaction) and visual appeal these six factors have a significantly positive effect on consumer impulse buying decision. Meanwhile, perceived risk was found negatively related to consumer impulse buying decision. Besides, price promotion and visual appeal played the most important role in influencing consumer impulse buying decision of live streaming than any other factors. Additionally, the results also show that the promotion, the perception of opportunity cost, the interpersonal interaction (the interaction between consumers and streamers, the interaction between consumers), and the visual appeal all have a significant negative impact on consumers' perceived risk. However, for time limit of time pressure, our research hypothesis that promotion time limit has a significant negative effect on consumers' perceived risk has not been verified. Finally, perceived risk was found plays a mediating role in the relationship between price promotion, perceived opportunity cost, interpersonal interaction, visual appeal and impulse buying decision. However, it did not play a mediating role in the effect of promotion time limit on impulse buying decision. The findings suggest that managers and merchants of live streaming e-commerce should make a reasonable price promotion plan and provide good visual experience for consumers, at the meantime, strengthen interpersonal interaction and try to reduce the purchase risk of consumers.

Keywords: China, Impulse buying decision, Live streaming e-commerce, Perceived risk, S-O-R model

1. Introduction

Live streaming e-commerce has been growing in China recent years. It combines live streaming video experience with online shopping experience to provide consumers with commodities-related video content to influence their purchase decisions and promote the conclusion of transactions between buyers and sellers (Yang & Lee, 2018). With the development of e-commerce and the widespread popularization and application of the Internet, live streaming e-commerce has become an important retail e-commerce model. In China, at present, many retail e-commerce platforms has launched the operation mode of live-streaming e-commerce, such as Taobao Live, Red book, Tik Tok, etc. Taobao live streaming is a representative product in the field of live streaming e-commerce (Huang, 2018). The users of Taobao live streaming platform include three roles: merchants, streamers and consumers. Merchants are providers of products and services that would like to increase sales and brand awareness. By providing live streaming content, streamers sell goods and services for merchants and help merchants to promote their brands. Streamers themselves could also act as merchants. Consumers are the receivers of information. By watching live streaming video, consumers could meet their both purchasing needs and entertainment needs (Yang & Lee, 2018). Taobao Live streaming was founded in 2016. Since its establishment, it has achieved rapid growth of business. In 2018, the conversion rate of store entry exceeded 65% and the turnover exceeded 100 billion yuan, creating a brand-new market, so live streaming e-commerce has become an important marketing channel currently (Huang, 2018). In the whole consumption process of live streaming e-commerce, streamers' recommendation, consumers' feedback, discounts, emotional drive and other factors may stimulate consumers' demand, stimulate their purchase motivation, and then generate purchase behavior. Therefore, the topic merchants need to deliberate is that how to develop effective marketing programs, enhance consumers' impulse purchase desire, and promote the completion of the transaction between the buyer and the seller. Most of the existing researches on impulse buying mainly focus on traditional e-commerce (Fajar, Ketut & Maulita, 2020; Seema, Richa, Vikas, & Anita, 2019; Umair, Peng, Muhammad, Chen, & Zubair, 2018). According to the prior studies, the influencing factors of impulse buying could be summarized into two aspects: internal factors and external factors. Internal factors include demographic characteristics, personal factors, etc. External factors, namely situational factors, refer to the specific situation that consumers are in, such as product, environment, time, interaction, etc. (Nasreen et al., 2015; Louis et al., 2016; Li et al., 2018). Live streaming e-commerce is an emerging e-commerce model developed on the basis of traditional e-commerce, and it is an upgrade of traditional e-commerce. However, compared with the booming field of live streaming in practice, there is a lack of in-depth research and discussion on impulse purchase behavior under its background. Therefore, based on management, psychology and marketing, unlike previous studies, this paper takes Taobao Live Streaming as an example to study and explore the influencing factors and influencing mechanism of consumers' impulse buying behavior in live e-commerce. Our results could provide a theoretical basis for the development of marketing strategies of live streaming merchants. When making marketing strategies, merchants would first consider the factors that have a greater impact on consumers' impulse purchase intention, so as to provide consumers with a better shopping experience and then enhance consumers' purchase desire.

This research is structed as follows. Firstly, the literature review and relevant generalizations are defined, and then the hypotheses and conceptual framework are put forward according to the relevant theories. Thereafter, the research methodology is discussed, and the data analysis and hypothesis testing are carried out in the next chapter. Finally, discussion, implications and limitations of this study and recommendations for future studies are given in the last section.

2. Literature Review

2.1 S-O-R Model

S-O-R (Stimulus-Organism -Response) model is derived from psychology. This model effectively explains the influence of external environment on human behavior (Mehrabian & Russell, 1974). Later, as environmental psychology, it has been widely applied in retail environments to study the influence of environmental factors on consumer behavior in traditional stores and online stores (Figure 1). This model shows that physical environment, as an external stimulus, will influence the occurrence of approach or avoidance behavior by influencing people's internal organism state (Mehrabian & Russell, 1974). Stimulus variables are the stimulus factors that may cause changes in consumers' cognition and emotions in the shopping environment (Wu, 2012). Organism is an internal process link the external stimulus and the final response. In this process, the external stimulus was transformed into effective information, which serves as the basis for subsequent behavior. Response is the behavioral result of the final approach or distancing of the stimulus object, including psychological response and behavioral response. In short, the S-O-R model states that there is a stimulus that triggers a response based on the internal feelings or behavior of an organism (person).

Figure 1. Stimulus-Organism-Response Model

Source Mehrabian & Russell (1974)

Donovan and Rossiter (1982) applied the S-O-R model to the retail environment for the first time to study the influence of the atmosphere of the retail environment on consumers' purchasing behavior. With the development of online shopping, S-O-R model has been widely used in the field of online retail. Based on the S-O-R model, Yang (2009) studied the purchase intention of consumers in the online shopping environment. His results showed that the better the atmosphere and image of the online store and the higher the perceived quality, the stronger the purchase intention of consumers would be. He and Gong (2010) studied the impact of online shopping experience on consumers' behavioral tendency based on S-O-R model. The study revealed that shopping experience had little direct impact on consumers' behavioral tendency, and it mainly influenced customers' behavior indirectly through influencing consumers' emotions and trust. Zhao (2010) applied the S-O-R model to the research on impulsive buying of online consumers, and the results showed that environmental factors of websites could indirectly influence consumers' impulsive buying behavior by affecting their emotions. Based on the specific characteristics of live streaming e-commerce and S-O-R model, this study explores the influencing factors and influencing mechanism of consumers' impulse buying behavior of live streaming e-commerce.

2.2 Impulse Buying Decision

Impulse buying behavior is an unplanned decision to buy a specific product or a service, which before a real purchase (Cangelosi & Dill, 1964; Liu & Li, 2008). Parsad (2020) describes the impulsive buying pattern, which occurs when a consumer experiences an expected, strong, and persistent impulse to buy something immediately. Weinberg and Gottwald (1982) pointed out the impulse buying are the consumer due to the stimulation of the shopping environment and the intense emotional reactions and take immediate purchase behavior in the process of buying. Rook (1987) believes that impulse buying behavior is a behavior that occurs when consumers enjoy themselves more than they control themselves. In the absence of rational analysis, consumers make a quick purchase decision because they are immersed in the joy of obtaining a certain product while ignoring other choices. As we mentioned earlier in introduction, the influencing factors of impulse buying could be summarized into two aspects: internal factors and external factors. Nasreen et al. (2015) found that demographic factors are the most important influencing factors for consumers to have impulse buying behavior, followed by situational factors and personal factors. Li and Cui (2010) conducted a study on the specific situational factors influencing consumer behavior, pointing out that the main situational factors influencing consumer behavior include six factors, namely psychology, environment, marketing, time, material and interaction. In their study, individual psychological factors were attributed to the category of situational factors. Louis et al. (2016) showed that web page design and promotional activities positively influence consumers' impulse buying behavior. Li et al. (2018) found both the quality and quantity of online comments have a positive impact on consumers' impulse buying behavior. Relevant studies have been found that the probability of consumers' impulse buying behavior is proportional to their age and income, and female consumers are more likely to have impulse buying behavior than male consumers (Yang & Lu, 2013). Promotional activities, advertisements, store decoration style, background music, smell and other marketing stimuli could stimulate consumers to make impulse purchases (Peck, 2003). In addition, personal factors such as emotion, lack of control, hedonism, and impulsivity are closely related to consumers' impulsive buying behavior. Based on the above research, this paper proposes that consumers' impulse buying is mainly influenced by personal characteristics and situational factors. Personal characteristic factors include demographic characteristics and personal factors. Situational factors are the specific situation during the whole shopping process, including psychological, marketing, product, environment, time, interaction and other factors. Factors such as promotion, website quality, online word-of-mouth, product introduction and other factors are the main influencing factors of consumers' purchasing behavior in traditional e-commerce online shopping (Xiong, 2017). Live streaming e-commerce is an emerging e-commerce model developed on the basis of traditional e-commerce, and the above influencing factors also have a significant impact on the impulse buying behavior of consumers in live streaming e-commerce. In addition, it is easy to find that stronger promotion activities, more intuitive product display and more frequent interpersonal interaction in live streaming e-commerce. Hence, compared with traditional e-commerce, consumers are more likely to be encouraged to have impulse buying behavior in live streaming e-commerce.

2.3 Price Promotion

Price promotion is a common way of promotion in daily life, mainly including two types of promotion: one is the direct price discount, that is, by directly reducing the sales price of goods to give the consumer price concessions, such as discounts, coupons, full reduction, etc.; The other one is indirect price preference, is through giving the additional income different from the original price of the commodity, such as additional gifts, lottery, product quality assurance, etc. are indirect price preference. Zhao and Luo (2008) analyzed the promotion activities of e-commerce websites such as Dangdang and Taobao, and summarized eight commonly used promotion methods on e-commerce platforms, including discount, special price, lottery, coupon, large-volume discount, freight discount, flash sale, and limited promotion. In live streaming e-commerce, direct price promotion generally include: discount, coupon, full reduction, cash return, shopping voucher, time-limited low-price secs kill, limited low price secs kill, etc., while indirect price discounts include additional gifts, lottery, etc.

2.4 Time Pressure

As for the sources of time pressure, scholars' studies mainly include two viewpoints: one is that time pressure comes from time limitation. Ariely and Zakay (2001) believed that time restriction would cause time pressure, which would further affect individual psychological and emotional changes. There is no time pressure when individuals do not perceive time constraints. Another view holds that the generation of individual time pressure is closely related to the perception of opportunity cost caused by individuals giving up buying or delaying decisions in time emergency situations. Perceived opportunity loss will cause individuals to have anxiety and thus form time pressure. Payne et al. (1996) mentioned that individuals will hesitate in the speed of decision-making, because too fast decision-making may affect the quality of decision-making, and too slow or delayed decision-making may lead to the loss of relevant opportunities. Rieskamp and Hoffrage (2008) showed that time constraints allowed decision makers perceive the loss of opportunities, thus enhancing their time pressure and affecting the quality of decision making. Hence, two aspects will lead to time pressure, one is the time limit of promotion; the second is the perception of opportunity cost, that is, in a very short time, if consumers give up or delay the purchase, they will perceive the opportunity that may be lost.

2.5 Interpersonal Interaction

Interpersonal interaction is a communicative process in which two or more people exchange information, feelings and meaning through verbal and non-verbal information (Zhao, Wang, & Zhou, 2015). Interaction could decrease transactional distance and help to deep understand each other. Interpersonal interaction in live streaming e-commerce includes two aspects: the interaction between consumers and streamers, and the interaction between consumers. Therefore, interpersonal interaction here means the process of information exchange through the internet among consumers and streamers and other consumers.

2.6 Visual Appeal

Sensory marketing could trigger consumers' feelings, influence their perception and judgment, and then influence consumers' behavior (Krishna, 2012). "Vision" is a common cognitive way of human beings. As an incentive factor, it is quickly able to attract the attention of consumers and stimulate consumption to produce psychological and cognitive changes. Liu (2013) pointed out that visual merchandising is a way by showed consumer goods information to achieve the goal of boosting sales. It is to stimulate the demand of consumers by bringing visual impact to them, and then urge them to have buying intention. Meanwhile, the application of visual merchandising could deepen consumers' impression on the brand and enhance the brand influence.

3. Hypotheses and Conceptual Framework Development

3.1 The Effect of Price Promotion on Impulse Buying Decision

In the purchase process, there are many factors that affect consumers' impulse purchase, but the most likely to enhance consumers' impulse purchase behavior is the price incentive, because the price has an essential impact on consumers' purchase decision, especially for those consumers who are more sensitive to the price. Price promotion is an "economic incentive" in promotional activities, in which consumers hope to obtain goods of the same or higher quality at a lower price, or to purchase more goods at a constant price. Price promotion could improve consumers' perceived value by delivering profit information, thus changing their perception of goods and influencing their purchasing decisions. Therefore, price promotion is a key factor that affects the impulse purchase behavior of consumers. Li et al. (2018) stated that price promotion directly or indirectly positively influences consumers' impulsive buying behavior. Dawson and Kim (2010) mentioned that both price discounts and additional giveaways can enhance consumers' impulse purchase intention. Yin (2013) found that price discounts have a positive impact on consumers' purchasing behavior, and different price promotion methods have different effects on consumers' impulse buying. Based on this, this paper proposes the first hypotheses:

H1: Price promotion has a significant positive impact on consumers' impulse buying decision.

3.2 The Effect of Time Pressure on Impulse Buying Decision

Wang and Liu (2008) revealed that under high time pressure, no matter which style is attributed to consumers, the quality of their decisions will be reduced. Aminilari and Pakathm (2005) proposed that the greater the perceived opportunity cost of consumers is, the greater the time pressure will be caused, which will lead to the sense of urgency, anxiety, not buying regret and other emotions. In order to alleviate this emotion, consumers will make decisions and judgments based on intuition, so it is easy to have the desire to buy impulsively. Wu and Huan (2010) found that consumers with high time pressure or rich economy have a higher degree of impulse buying. Xie (2015) conducted situational simulation experiments on the relationship between consumers' expected regret direction and impulse purchase under different time pressures, and the results revealed that in the presence of time pressure, the impulse purchase intention of consumers with promoting focusing tendency and defensive focusing tendency was both stronger than that without time pressure. In live streaming e-commerce, live seckill is adopted to carry out promotional activities. In a limited time, consumers need to make a quick purchase decision. Therefore, time pressure will exert a certain influence on consumers' impulse purchase desire. Hence, we put forward the following hypotheses:

H2a: Promotion time limit has a significant positive effect on consumers' impulse buying decision;

H2b: Perceived opportunity cost has a significant positive influence on consumers' impulse buying decision.

3.3 The Effect of Interpersonal Interaction on Impulse Buying Decision

Currently, more and more scholars have carried out researches on the relationship between interpersonal interaction and consumers' purchasing decisions. There are mainly two views. One is that interpersonal interaction directly influences consumers' impulse buying behavior (Shen & Zhao, 2018). Larose (2001) pointed out that the feedback of buyers on goods will prompt consumers to make an immediate purchase. Another view is that there is an indirect effect between interpersonal interaction and consumers' impulse buying behavior. Zhang et al. (2019) found interaction in online communities has a significant impact on consumers' impulse buying behavior, and cognition and emotion play a mediating role in it. Chen et al. (2018) revealed that the interactive atmosphere of online communities would positively influence the community consciousness of community members and further promote consumers' impulse buying behavior. Jiang et al. (2014) stated that online interaction would create a sense of presence among consumers, which would further affect consumers' impulse buying behavior. Zhang and Wei (2019) found that interpersonal interaction between users positively impact on their perception of pleasure, which in turn would enhance users' impulse buying decision. In live streaming e-commerce, consumers could have real-time interaction with streamers and other consumers at any time according to their own needs, so as to have an in-depth understanding of the quality and function of products, and then make purchase decisions. Based on this, we put forward the following hypotheses:

H3a: The interaction between consumers and streamers has a significant positive impact on consumers' impulse buying decision;

H3b: The interaction between consumers has a significant positive influence on consumers' impulse buying decision.

3.4 The Effect of Visual Appeal on Impulse Buying Decision

Visual merchandising has become an essential marketing means in the field of e-commerce. Zhao et al. (2014) mentioned that online commodity display could make consumers generate virtual sense of touch, which can enhance consumers' purchase desire in online shopping. Yang et al. (2017) showed that the product mini-video display of WeChat business not only has a direct positive influence on consumers' impulse buying behavior, but also has an indirect positive influence on impulse buying behavior through virtual touch. Liu et al. (2013) stated that visual appeal is able to stimulate the excitement of users and stimulate their emotional appeals. In the online shopping environment, GIFs, videos and other information released by merchants will arouse consumers' strong interest, make them have good associations, and then generate the motivation and willingness to buy. Live streaming e-commerce providers show products to consumers through real-time live streaming videos. Streamers' display and explanation of products, clothing fittings and cosmetics trial can arouse consumers' interest, stimulate consumers' beautiful associations, and then stimulate consumers' desire to buy. Based on this, we propose the following hypotheses:

H4: Visual appeal has a significant positive impact on consumers' impulse buying decision.

3.5 The Effect of Perceived Risk on Impulse Buying Decision

Perceived risks refer to the spirit cost associated with customers’ purchasing behavior, which represents a kind of uncertainty about the future (Venkatraman, 1989). Bauer (1960) believed that any purchase is risky, and consumers will have uncertain consequences after purchasing products, which consumers may not expect to see. Cui (2007) explained that perceived risk in the network refers to the uncertainty and loss perceived subjectively by buyers over online shopping. Gao (2004) emphasized that perceived risk is the main obstacle in consumers' purchasing decision-making process, and directly affect consumers' purchasing decisions and behaviors. Vellido and Meehan (2000) pointed out that in online shopping, the higher consumers' perceived risk is, the lower their purchase intention will be, and the less they will produce purchase behavior. Zhou (2011) believed that the higher the consumer's perceived uncertainty, the higher the perceived risk and the lower the consumer's purchase intention. Cui (2019) found in the network environment, the six dimensions of perceived risk, including product risk, financial risk, social risk, psychological risk, service risk and system risk, all had negative influences on consumers' impulse buying behavior to varying degrees. Based on above discussion, we propose the following hypotheses:

H5: Perceived risk has a significant negative impact on consumers' impulse buying decision.

3.6 The Effect of Price Promotion on Perceived Risk

Price promotion is an important means of promotion for merchants, which increase sales volume and create profits in a short time. Compared with traditional online shopping, the most important reason why more and more consumers tend to buy goods through network live streaming is that it usually adopts the way of time-limited kill with greater price discount to promote sales. Since the severity of currency loss marked by price is positively correlated with consumers' perceived risk, under the premise of a certain probability of loss, the lower the commodity price is, the smaller the consumers' perceived risk is. Wang et al. (2014) found that price discounts have a negative impact on consumers' perceived risk. Therefore, price promotion will weaken consumers' perceived risk in the context of live streaming e-commerce. Based on this, this paper proposes the following hypotheses:

H6: Price promotion has a significant negative impact on consumers' perceived risk.

3.7 The Effect of Time Pressure on Perceived Risk

According to the Construal Level Theory, a person's reaction to an event depends on the mental representation of the event (Liberman & Sagristano, 2002). Psychological distance determines the degree of abstraction of people's mental representation of things (Nussbanum, Trope, & Liberman, 2003) Psychological distance could be represented as temporal distance, spatial distance and social distance (Nussbanum et al., 2003). When individuals perceive a large psychological distance from the object, they are more willing to perceive and understand the object from the core, abstract and other perspectives, which is a high level of interpretation. When individuals perceive a small psychological distance from the object, they are more willing to perceive and understand things from the perspective of surface and specific external characteristics, which is a low level of interpretation (Liu et al., 2012). In the promotion situation, consumers may perceive greater time pressure, so they will perceive a close psychological distance between them and the goods. In this case, consumers might be more likely to be affected by the superficial information of the goods in their purchase decisions, instead of making a rational and comprehensive evaluation of the goods. Under this situation, the perceived risk of the consumer would be lower than in the case of low time pressure, so the promotion time limit may reduce the perceived risk of the consumer. In addition, in a promotional activity, if consumers do not make a purchase decision within the promotional deadline, there will be a certain opportunity cost. Lu et al. (2013) revealed that in the promotion activity, both the promotion time limit and the opportunity cost perception would make consumers exaggerate perceived benefits and ignore perceived risks. Hence, we propose the following hypotheses:

H7a: Promotion time limit has a significant negative impact on consumers' perceived risk;

H7b: Perceived opportunity cost has a significant negative impact on consumers' perceived risk.

3.8 The Effect of Interpersonal Interaction on Perceived Risk

In online shopping, there is a negative correlation between online interaction and consumers' perceived risk (Zhang, 2009). Mitchell and Boustani (1994) revealed that in the five stages of consumers' purchasing process, consumers have different levels of perceived risk. In the need recognition stage, because consumers have not determined their own needs and cannot solve their own demand problems, the perceived risk is constantly increasing; In the information search stage, consumers have determined the desired products and begin to collect product information. At this time, with the increase of product information, perceived risk begins to decrease gradually. In the alternative evaluation stage, consumers have mastered the relevant information and knowledge of products, so the perceived risk will continue to decrease; In the process of purchasing decision, perceived risk increases slightly, because consumers are not sure whether their decision is correct, their perceived risk still exist. In the post-purchase stage, perceived risk of customers is different. If consumers are satisfied with their purchase decision, the risk will continue to decrease; while if they are not satisfied, the perceived risk may increase (Mitchell & Boustani, 1994). It can be seen that information search can reduce information asymmetry and uncertainty, and thus reduce consumers' perceived risk. In live streaming e-commerce, interpersonal interaction is the main way for consumers to obtain product information. By interacting with streamers, consumers could learn more about the details and functions of products. And by interacting with other consumers who have purchasing experience, consumers could make better purchasing decisions and improve the quality of their decisions. Based on this discussion, we propose the following hypotheses:

H8a: The interaction between consumers and streamers has a significant negative impact on consumers' perceived risk;

H8b: Interaction between consumers has a significant negative impact on consumers' perceived risk.

3.9 The Effect of Visual Appeal on Perceived Risk

Kim and Lennon (2010) found that the more consumers' perceived information and the better their perceived quality, the lower the consumer's perceived risk. The biggest difference between live e-commerce and traditional e-commerce is in the way the products are presented: traditional e-commerce uses text, pictures and other flat information to introduce products, and it is impossible to intuitively feel the details and quality of the product, while live streaming e-commerce has real videos dynamics which can create a virtual sense of touch for consumers and make consumers feel on the spot. Live streaming e-commerce could show consumers the details of products through clothing try-on and product trials. In addition, the streamer's explanation of the product may enable consumers to have a clear understanding of the quality and function of the product, thereby reducing the consumer's perceived risk. Hence, we propose hypotheses

H9: Visual Appeal has a significant negative impact on consumers' perceived risk.

3.10 The Mediating Role of Perceived Risk

Based on the above discussion, various influencing factors may have a negative impact on perceived risk, and perceived risk has a significant negative impact on impulse buying behavior. Therefore, this research proposes that price promotion, time pressure (promotional time limit, perceived opportunity cost), interpersonal interaction (consumer-streamer interaction, consumer-consumer interaction) and visual appeal may indirectly affect consumers' impulse buying decision by affecting consumers' perceived risk. Hence, we propose the following hypotheses:

H10: There will be a mediating effect of perceived risk between price promotion and impulse buying decision.

H11: There will be a mediating effect of perceived risk between attitude promotional time limit and impulse buying decision.

H12: There will be a mediating effect of perceived risk between perceived opportunity cost and impulse buying decision.

H13: There will be a mediating effect of perceived risk between consumer-streamer interaction and impulse buying decision.

H14: There will be a mediating effect of perceived risk between consumer-consumer interaction and impulse buying decision.

H15: There will be a mediating effect of perceived risk between visual appeal and impulse buying decision.

In summary, based on S-O-R model, the factors influencing the Chinese consumers' impulse buying decision of live streaming e-commerce could be hypothesized as follows (Figure 2). The independent variables are four factors including price promotion, time pressure (promotional time limit, perceived opportunity cost), interpersonal interaction (consumer-streamer interaction, consumer-consumer interaction) and visual appeal, while dependent variable is impulse buying decision, and the mediating variable is consumers' perceived risk.

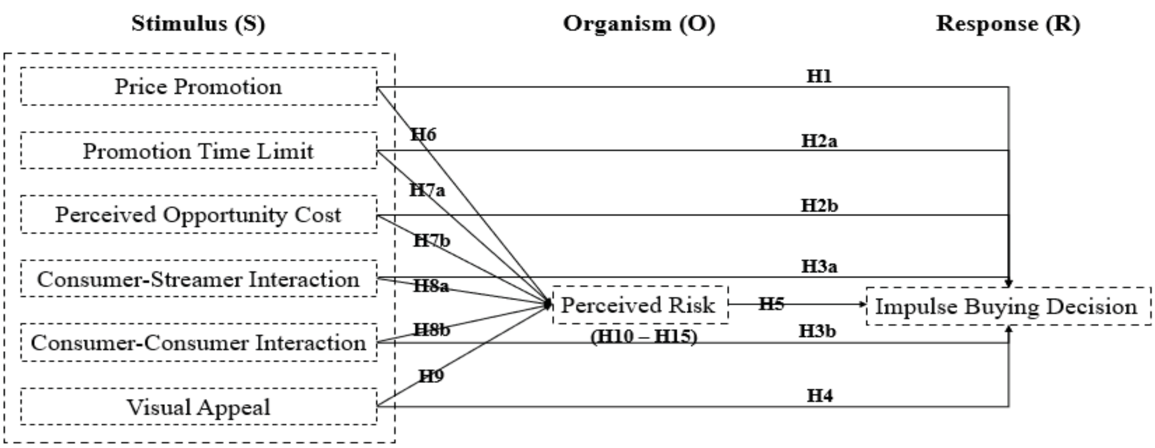

Figure 2. Conceptual Framework

4. Research Methodology

4.1 Sample and Data Collection

This research is a quantitative design using online self-administration questionnaire to collect data with convenience sampling approach from Chinese users who has live streaming shopping experience in social commerce platform Taobao.com. within the past 1 year in Kunming, City. Taobao.com, the largest e-commerce platform in China, has added "live streaming shopping" functions to their websites. Since the size of the target population of this study is difficult to define in actual size, the formula of Cochran (1977) will be chosen for calculating the sample size used in the quantitative analysis. Hence, the actual sample size was 385. Among the collected questionnaires, 27 were invalid resulting in 477 usable questionnaires finally.

4.2 Measurement Scales

Our questionnaire is divided into three parts. The first part allows the author to identify whether the respondent is eligible to take part in this research (screening questions); the second part contains some multi-choice questions which are shown to collect basic personal information. The third part elaborated each variable that would be tested in the survey. In measuring the constructs, five-point Likert scale anchored by: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree was used in the questionnaire with adoption from different sources of the existing literature. Table 1 shows the details of the measurement items in the research.

Table 1. Source of Measurement Item in Questionnaire

Variable	Measurement Items	Source
Price Promotion (PP)	I am easily attracted by price promotions.	Liu (2016)
	When it comes to price promotions, I cannot help buying	
	The price promotion gave me a strong impulse to buy.	
Promotion Time Limit (PTL)	I feel that streamers usually give a short promotional period.	Payne, Bettman & Luce (1996)
	I feel like I have less time to decide whether to buy a sale or not.	
	I have a feeling that the sales deadline for the seckill product will run out very soon.	
Perceived Opportunity Cost (POC)	I feel that the opportunity to buy a seckill product is fleeting and it is too bad not to buy it	
	I feel like seckill products are so cheap that if I do not buy them, someone else will snap them up	
	I feel like the product has a very short promotional time, and if I do not buy it, I'll miss it.	
	I feel like the number of items on seckill is limited, and if I do not buy it, someone else will snap it up.	
Consumer-Streamer Interaction (CSI)	Streamer is very happy to communicate with me.	Zhao et al. (2015)
	Streamers give corresponding feedback to my inquiries.	
	I get a lot of good advice from streamers	
Consumer-Consumer Interaction (CCI)	I will share my shopping experience and feelings with other consumers.	
	I can communicate with other consumers smoothly.	
	What other consumers said about the product helped me make my purchase decision.	
Visual Appeal (VA)	Streamers make a clear presentation of the products for sale.	Mathwick et al. (2001)
	The way the streamers present the products is very attractive	
	The overall visual effect of the live streaming room is very good	
	I like the overall layout of the live streaming room.	
Perceived Risk (PR)	I am afraid the product is not as good as the streamer says.	Zhao et al. (2015)
	I am afraid after-sales service is not good.	
	I always feel uneasy about buying goods in the live streaming room.	
	I worry that the prices on offer in the studio are higher than in other similar markets.	

Impulse Buying Decision (IBD)	I did not plan it at all until I went into the live streaming room and decided to buy it. I bought the product without thinking it through at all. I was completely influenced by the mood of the moment when I made the purchase. In the process of shopping, I have a strong desire to buy some goods that I would not have intended to buy.	Beatty & Ferrell (1998)

5. Research Analysis and Results

5.1 Demographic Profile

As presented in the Table 2, there are obviously more female consumers than men, out of 477 respondents, there are 367 female consumers, accounting for 76.94% of the total. Most respondents are students with bachelor degree, aged between 19-30. The reason might be that students, compared with consumers of other occupations, have more disposable time to spend on online live streaming. Furthermore, most respondents spend between 2,000 and 4,000 a month on online purchase because of live streaming. Nearly 70% of respondents spend 10 and above hours on live streaming every week. The detailed descriptive statistics of the respondents are listed in Table 2.

Table 2. Demographic Profile of the Respondents

Demographics Characteristics		Frequency	% (n=477)
Gender	Male	110	23.06%
	Female	367	76.94%
Age (years old)	Under 18	65	13.63%
	19-30	307	64.36%
	31-40	52	10.90%
	41-50	33	6.92%
	Above 51	20	4.19%
Education Level	High school or less	61	12.79%
	Diploma	112	23.48%
	Bachelor's Degree	233	48.85%
	Master's Degree	56	11.74%
	Doctoral Degree	15	3.14%
Monthly Spending on Live Streaming	＜2,000 RMB	107	22.43%
	2,001-4,000RMB	271	56.81%
	4,001-6,000 Years	73	15.30%
	> 6,001 RMB	26	5.45%
Occupation	Student	286	59.96%
	Office worker	131	27.46%
	Self-employed	29	6.08%
	Others	31	6.50%
Weekly Watch Live Hours	<5 Hours	49	10.27%
	6-10 Hours	99	20.75%
	11-15 Hours	203	42.56%
	16-20 Hours	91	19.08%
	>21 Hours	35	7.34%

5.2 Reliability and Validity

All the data were analyzed by creating structural and measurement models in AMOS software. Reliability was estimated by using composite reliability (CR) and Cronbach's Alpha, which measures the stability and equivalence of the construct (Hair et al., 2009). A value of composite reliability and Cronbach's Alpha greater than 0.7 is acceptable (Fornell & Larcker, 1981). As Table 3 shows, the composite reliabilities and Cronbach's Alpha for all constructs exceed 0.7, which are acceptable reliabilities of the constructs. Construct validity was determined by the convergent and discriminant validities. Convergent validity was measured using the average variance exacted (AVE) (Hair et al., 2009). All the AVEs shown in Table 3 were above 0.72, which is greater than the recommended level of 0.5. Thus, the convergent validity is satisfied. Discriminant validity indicates whether the construct is distinct from other constructs and is calculated by comparing the square root of the AVE of each construct to the correlations between the construct and all other constructs (Fornell and Larcker, 1981). As can be seen in Table 4, all the square roots of AVEs are higher than the correlation value of the factor and all other factors, which means the discriminant validity of each construct is acceptable.

Table 3. Results of Validity and Reliability Analysis

Factors	Indicators	Factor Loadings (>0.5)	AVE (>0.5)	CR (>0.7)	Cronbach's Alpha (>0.7)
Price Promotion (PP)	PP1	0.79	0.72	0.84	0.92
	PP2	0.83			
	PP3	0.78			
Promotion Time Limit (PTL)	PTL1	0.81	0.83	0.91	0.93
	PTL2	0.78			
	PTL3	0.80			
Perceived Opportunity Cost (POC)	POC1	0.81	0.85	0.95	0.96
	POC2	0.82			
	POC3	0.79			
	POC4	0.76			
Consumer-Streamer Interaction (CSI)	CSI1	0.81	0.88	0.92	0.91
	CSI2	0.81			
	CSI3	0.82			
Consumer-Consumer Interaction (CCI)	CCI1	0.86	0.89	0.96	0.84
	CCI2	0.88			
	CCI3	0.85			
Visual Appeal (VA)	VA1	0.76	0.89	0.88	0.90
	VA2	0.75			
	VA3	0.74			
	VA4	0.78			
Perceived Risk (PR)	PR1	0.83	0.93	0.86	0.89
	PR2	0.84			
	PR3	0.81			
	PR4	0.82			
Impulse Buying Decision (IBD)	IBD1	0.83	0.85	0.91	0.93
	IBD2	0.86			
	IBD3	0.84			
	IBD4	0.82			

Table 4. Discriminant Validity Fornell-Larcker Table

Constructs	PP	PTL	POC	CSI	CCI	VA	PR	IBD
PP	0.87							
PTL	0.42	0.86						
POC	0.13	0.48	0.89					
CSI	0.21	0.42	0.33	0.93				
CCI	0.26	0.49	0.39	0.49	0.93			
VA	0.32	0.52	0.31	0.38	0.46	0.94		
PR	0.36	0.47	0.35	0.34	0.31	0.49	0.94	
IBD	0.38	0.42	0.38	0.35	0.27	0.37	0.44	0.88

5.3 Measurement and Structural Model Analysis

A model is considered suitable if the covariance structure implied by the model is similar to the covariance structure of the sample data, as indicated by an acceptable value of goodness-of-fit index (GFI) (Cheung & Rensvold, 2002). Firstly, the measurement model was verified and evaluated then the structural model analyzed and fitted. According to Kline (2011), fit statistics greater than or equal to 0.9 for GFI, CFI and NFI, greater or equal 0.80 for AGFI indicate a good model fit. In addition, the recommended value of $\chi 2/df$ is smaller than 3 and RMSEA values smaller than 0.05, which is acceptable. The results of the indexes of model fitness are described in Table 5. All of these values exceed their common acceptable range, suggesting high construct reliability and convergent validity of the internal structure of research model.

Table 5. Fit Indices of Measurement and structural models

Fit indices	$\chi 2$ /df	GFI	AGFI	CFI	NFI	RMSEA
Recommended Values	<3	≥0.9	≥0.8	≥0.9	≥0.9	<0.05
Measurement Model	1.15	0.93	0.91	0.92	0.95	0.03
Structural Model	1.16	0.92	0.93	0.93	0.94	0.04

5.4 Hypothesized Direct Relationship

Table 6 showed the standardized path coefficient and path significance for each hypothesis. With regard to H1, it can be observed that a significant and positive correlation between price promotion (β= 0.548, $p<0.001$) and customers impulse buying decision on live streaming, which means that H1 was fully supported. Concerning H2a and H2b, promotion time limit (β= 0.187, $p<0.001$) and perceived opportunity cost (β= 0.251, $p<0.01$) are significantly positive affect customers impulse buying decision, Thus, H2a and H2b were supported. Similarly, interpersonal interaction including consumer-streamer interaction (β=0.179, $p<0.001$) and consumer-consumer interaction (β= 0.136, $p<0.001$) were found have positive effect on customers impulse buying decision. Thus, supporting H3a and H3b. Regarding H4, a positive link existed between relationship visual appeal and consumer impulse buying decision (β=0.484, $p<0.01$), Hence, H4 was supported. In addition, our results show that perceived risk had a negative impact on customers impulse buying decision on live streaming (β=-0.515, $p<0.001$). Hence, H5 was supported. In line with our hypothesis, price promotion (β= -0.436, $p<0.001$), perceived opportunity cost (β= -0.186, $p<0.01$), consumer-streamer interaction (β=-0.159, $p<0.001$), consumer-consumer interaction (β= -0.326, $p<0.01$) and visual appeal (β=-0.258, $p<0.001$) were found to generate a significant effect on perceived risk of customers (β= .110, $p<.001$) in a negative way; Thus, H6, H7b, H8a, H8b and H9 were all fully supported. However, when H7a is examined, it is found that promotion time limit (β= -0.193, $p>0.05$) had no impact on perceived risk of customers. Thus, H7a was rejected.

Table 6. Test Results of Research Hypothesis

Hypothesis	Path	Path Coefficient (β)	S.E.	P	Results
H1	PP→IBD	0.548	0.035	***	Supported
H2a	PTL→IBD	0.187	0.026	***	Supported
H2b	POC→IBD	0.251	0.036	**	Supported
H3a	CSI→IBD	0.179	0.052	***	Supported
H3b	CCI→IBD	0.136	0.057	***	Supported
H4	VA→IBD	0.484	0.041	**	Supported
H5	PR→IBD	-0.515	0.034	***	Supported
H6	PP→PR	-0.436	0.046	***	Supported
H7a	PTL→ PR	-0.193	0.053	0.069	Rejected
H7b	POC→ PR	-0.186	0.045	***	Supported
H8a	CSI→ PR	-0.159	0.038	***	Supported
H8b	CCI→ PR	-0.326	0.024	**	Supported
H9	VA→ PR	-0.258	0.056	***	Supported

*p <.05; **p <.01; ***p <.001

5.5 Mediation Analysis

The findings of Table 7 exhibit the mediating influence of perceived risk in the relationship of independent variables, such as PP, PTL, POC, CSI, CCI and VA, as well as dependent variable impulse buying decision. The outcomes of mediation have been measured through bootstrapping method which could be regarded as the most accurate way to test mediation and other intervening effects (Biesanz, Falk, & Savalei, 2010)). 5000 samples were set to judge whether there was a mediating effect under the 95% bias-corrected bootstrapping confidence interval. If zero was not occur between the upper and lower limits of the bias-corrected confidence interval, the mediating effect was established (Hayes, 2009). As can be seen from Table 6, the presence of total effects means that there are indirect effects. The findings of Table 7 establish that the mediating variable perceived risk has had a mediation between each independent factor and the impulse buying decision of Chinese customers on live streaming except promotion time limit this factor. Consequently, H10, H12, H13, H14 and H15 are all supported while H11 was rejected.

Table 7. Test Results of Mediating Effect

Hypotheses	Paths	Point Estimation	Bootstrapping 95% Confidence Interval		Whether Mediating Effect or Not?
			Lower	Upper	
Total Mediation Effect		0.856	0.398	0.752	YES
H10	PP→PR→IBD	0.239	0.083	0.324	YES
H11	PTL→PR→IBD	0.151	-0.035	0.206	NO
H12	POC→PR→IBD	0.201	0.012	0.025	YES
H13	CSI→PR→IBD	0.104	0.007	0.101	YES
H14	CCI→PR→IBD	0.143	0.102	0.256	YES
H15	VA→PR→IBD	0.018	0.119	0.319	YES

6. Discussion and Conclusions

6.1 Discussion

This study examines the effects of price promotion, time pressure (promotion time limit, perceived opportunity cost), interpersonal interaction (consumer-streamer interaction, consumer-consumer interaction) and visual appeal on impulse buying behavior of Chinese consumers in live streaming ecommerce. Based on the effective questionnaire collected from 477 Chinese users who has live streaming shopping experience in social commerce platform Taobao.com. within the past 1 year in Kunming City. the model proposed by this research is verified, and the following conclusions are further obtained:

First of all, the results show that all the influencing factors including price promotion, time pressure (promotion time limit, perceived opportunity cost), interpersonal interaction (consumer-streamer interaction, consumer-consumer interaction) and visual appeal have a direct positive impact on consumers' impulse buying decision, among which the weight of price promotion and visual appeal is significantly higher than other factors. This means that the price discount and visual stimulation in the purchase process are more likely to stimulate the impulse purchase decision of consumers. In the environment of live streaming e-commerce, compared with other influencing factors, price promotion has a greater impact on impulse buying. This may be because consumers are more sensitive to price discounts, and the reduction of commodity prices could stimulate consumers' desire to buy more. At the same time, the display of products by streamers (such as cosmetics trial, clothing fitting, etc.) will bring a visual impact to consumers, which also stimulate the demand of consumers and increase their purchasing behavior. Besides, due to consumers' impulsive characteristics, self-inconsistency and other characteristics, during the short promotional period, consumers will have time pressure, and thus may have impulse buying behavior. In addition, the interaction between consumers, streamers and consumers also could improve consumers' emotions, make them feel happy, and then increase their purchasing behavior.

Second, the results show that the promotion, the perception of opportunity cost, the interpersonal interaction (the interaction between consumers and streamers, the interaction between consumers), and the visual appeal all have a significant negative impact on consumers' perceived risk. However, for time limit of time pressure, our research hypothesis that promotion time limit has a significant negative effect on consumers' perceived risk has not been verified. The reason might be that it is difficult for consumers to understand all the information of the products during the short promotional period of the merchants. The uncertainty of information will stimulate consumers to make an immediate purchase decision in a relatively short period of time, thus perceiving a higher purchase risk.

Third, this study verifies that perceived risk has a significant negative impact on consumers' impulse buying decisions. Therefore, in order to improve consumers' purchasing decisions and increase product sales, merchants could take effective measures to reduce consumers' perceived risks, such as reducing prices, providing service guarantees, and introducing product information in detail, etc.

Finally, we also found that perceived risk plays a mediation effect on the relationship between price promotion, perceived opportunity cost, interpersonal interaction, visual appeal and impulse buying decision. However, perceived risk did not play a mediating role in the effect of promotion time limit on impulse buying decision. When the price of products is preferential, the consumers’ perceived value and perceived benefits will increase, and the perceived risk will decrease, thus stimulating the desire of consumers to purchase. At the same time, the interaction between consumers and streamers and consumers could enhance the sense of trust between them. The introduction of products by streamers and feedbacks from other consumers could reduce consumers' perceived risks and thus enhance their purchase decision. In the limited promotion time, consumers will perceive greater opportunity cost if they give up the purchase or delay the decision. In order to avoid the loss of opportunity, consumers will make purchase decision. In addition, because streamers display and explain details and functions of products, consumers could fully perceive the quality of products, reduce their perceived risks, and thus stimulate consumers' buying decision.

6.2 Implications

In terms of theoretical implication, this study abstracts the main influencing factors of live streaming e-commerce consumers' impulse buying decision. It not only analyzes the influence of each influencing factor on impulse buying decision and its influencing mechanism, but also compares the weight of each influencing factor. Our findings supplement the theories related to impulse buying and have a certain theoretical contribution to the research in the field of live streaming e-commerce.

The findings of this paper also provide practical and beneficial management inspiration for live streaming businesses such as merchants, marketers and managers. First of all, live streaming e-commerce marketers need to develop reasonable price promotion schemes and strategies. Promotion is a common marketing method used by merchants, which prompt consumers to have immediate purchase behavior. Among various promotion activities, price promotion is an important factor affecting consumers' impulse purchase decision. Merchants could properly carry out low-price limited-time seckill and limited buying promotions. Price promotion also make consumers' perceived benefits higher than perceived risks. In the case of limited time, consumers may perceive the loss of opportunities if they give up the purchase or delay the decision. Therefore, making reasonable price promotion scheme could enhance consumers' impulse purchase decision. However, in the process of promotion, managers must grasp the intensity of price promotion, because once consumers are accustomed to buying products at a lower price in the live streaming room, when the product is restored to the original price, consumers will feel it difficult to accept the original price of the product, which might lead to no repurchase, thus affecting the profits of the merchants.

Additionally, live streaming e-commerce providers should pay attention to providing consumers with good visual experience. Visual appeal significantly increases consumers' impulse purchase decision. First, marketers should pay attention to the overall style of the live streaming room. The layout should be neat and clear, and the color collocation should be warm and comfortable. A good consumption environment will bring consumers a pleasant feeling, and then enhance consumers' desire to buy. Besides, streamers should fully show the quality and details of commodities to consumers (such as clothing trying on, cosmetics trial, etc.), stimulate the demand of consumers through strong visual impact, and encourage consumers to have impulse purchase desire. Thirdly, streamers should explain the functions of the products in detail, deepen consumers' understanding of the products, reduce consumers' perceived risks, and make consumers feel at ease to purchase.

Furthermore, live streaming e-commerce marketers need to strengthen interpersonal interaction. In interpersonal interaction, both the interaction between consumers and streamers and the interaction between consumers will affect consumers' impulse purchase decision. First, during the live streaming, streamers should actively interact with consumers, activate the atmosphere in the live streaming room, give detailed and accurate answers to consumers' questions, and enhance consumers' trust in them. Second, some interesting activities (such as lottery, etc.) can be properly carried out to create an interactive atmosphere and increase the fun of the live streaming room. Finally, marketers could create a fan base (such as WeChat fan base, taobao fan base, etc.), by chat, the red envelope in the fan base, etc., not only could increase the active fans, but also can deepen the interaction between consumers and the streamers, between consumers and consumers, which would help streamers and consumers to establish a close interpersonal network, and enhance the intimacy between fans and streamers.

Finally, live streaming e-commerce providers should pay attention to the impact of perceived risk on impulse buying decision, so as to reduce consumers' purchasing risk. Merchants should attach importance on the impact of perceived risk on impulse buying and take measures to reduce consumers' purchasing risk. In addition to the price promotion in this research, factors such as time pressure, interpersonal interaction and visual appeal also could reduce perceived risk, marketers could also through the provision of related services to ensure (such as: freight risks, product quality assurance, 7 days no reason to return, etc.) to reduce consumer's perceived risk, and enhance their purchase desire, promote deals agreed upon between the seller and the buyer.

6.3 Limitations and Recommendations for Further Research

There are some limitations. The first limitation of the study lies in samples. Live streaming e-commerce is a wide field. This research only selects the consumers with online live shopping experience in Taobao live streaming, and does not carry out a survey on the consumers of other online live shopping platforms such as Jindong. Com, red book, etc. In the future, researchers can further expand the survey scope and increase the sample size. Secondly, this research studies the impact of price promotion, time pressure, interpersonal interaction and visual appeal only on consumers' impulse buying decision, using perceived risk as the mediating variable. In the future, researchers could make further investigation on other influencing factors such as attitude towards streaming services, personality with streaming services or product-related factors of live streaming e-commerce consumers. Thirdly, besides S-O-R model theory we used in the present study, a few other relevant theories such as satisfaction theory, motivation theory could be applied in the future studies. Finally, in a future study, the researchers could find out why perceived risk does not play a mediating role in the effect of promotion time limits on impulse buying decisions. Factors leading to consumer disagree in this questionnaire should also be investigated in future studies to better understand the causes of consumers disagree with live streaming, so as to effectively improve the services of live streaming operators and merchants.

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A Mathematical Analysis of Historical Papers After the Reissue of *Journal of Silk*

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Abstract

After the reissue of *Journal of Silk*, the historical papers published can reflect the academic history of Chinese Textile and Apparel History research. The mathematical analysis of these papers is helpful to clarify the territory and important towns of the research on Chinese Textile and Apparel History. Through literature collation and mathematical analysis, the paper believes that: ① The changes in the types of historical papers in *Journal of Silk*, especially the decline in the amount of papers published by corporate personnel, indicate that the Journal has transformed from a journal that integrates education, academia, and training into an academic publication. ② For a long time, authors from Zhejiang and Jiangsu have published more than half of the papers. This phenomenon is related to the earliest research on historical theory in the two places, especially the Zhejiang Silk Institute of Technology, which was the first organization to engage in professional research on historical theory in China. ③ Authors in Zhejiang Province had the largest number of papers before 2003. But after 2004, authors in Jiangsu had the largest number of papers. And after 2004, authors in Shanghai had more papers published, which is related to the strengthening of relevant majors by Suzhou University, Jiangnan University and Donghua University. At the same time, the experience of Jiangnan University shows that restricting the graduation conditions for master's students is conducive to research in the field of Historical Theory.

Keywords: *Journal of Silk*; historical papers; mathematical analysis

Journal of Silk was founded in 1956, ceased publication in 1966, and resumed publication in 1971. It is the longest-run Textile and Apparel Publication since the founding of the People's Republic of China. Analyzing its historical papers is helpful to clarify the territory and important towns of the research on Chinese Textile and Apparel History. This paper will conduct a mathematical description and analysis of the historical papers published in *Journal of Silk* after the resumption of publication in 1971, with a view to exploring the factors behind the data.

1. Trend Analysis of Historical Papers in *Journal of Silk* After Its Reissue

The author had conducted statistics on the historical papers in *Journal of Silk* after the reissue, and found that during the 5 years (1971-1975), the column on historical studies did not revert until the political situation improved in 1977. Under the circumstances, the column would be doubled. The author made a statistical map of the historical papers in *Journal of Silk* from 1977 to the present (Figure 1). Based on this trend map, the author made the following stages: ① The period from 1977 to 1986 was a period of infancy, and the number of papers was less than 10 per year. ② The period from 1987 to 2003 was a wandering period. Some years contained less papers, but some years contained more papers. Not all columns existed in the period. ③ The period from 2004 to 2014 was a stable period, and there were columns for each issue, basically about 2 papers per issue. ④ From 2015 to present is a period of accelerated development, and the proportion of papers is getting higher and higher.

The author draws the statistical data of the proportion of papers in the history of *Journal of Silk* (Figure 2), and finds that it is consistent with the situation of every phase. This figure can prove the correctness of the stage division. Because the annual proportion of papers published in the history of textiles and apparel from 1977 to 1986 was less than 1%, and only 1.09% in 1986, which was the embryonic period. The annual proportion of papers published in the history of textiles and apparel from 1987 to 2003 was 0-3.9%, which was a period of wandering. The papers published in the history of textiles and apparel from 2004 to 2014 accounted for 20-30% each year, which was a period of stable development. Since 2015, the annual proportion of papers on textile and apparel history has been 15-25%, which is a period of rapid development.

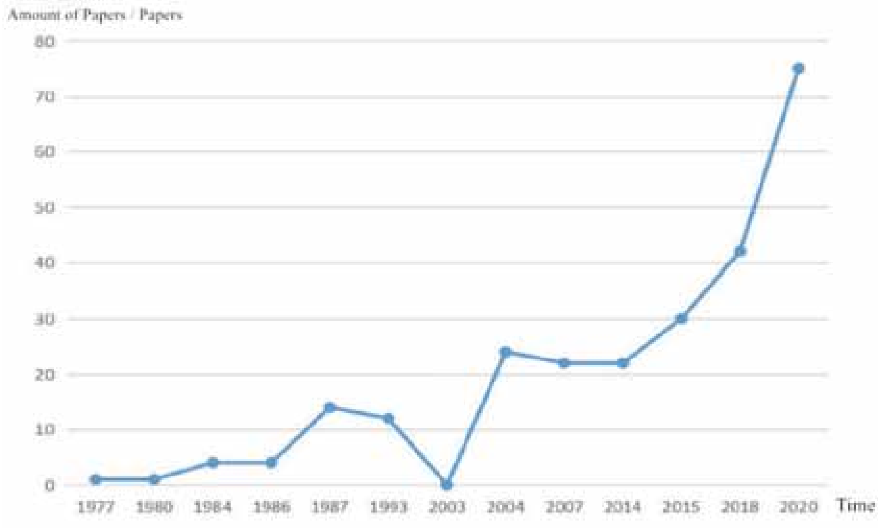

Figure 1. The annual volume of historical papers in *Journal of Silk*

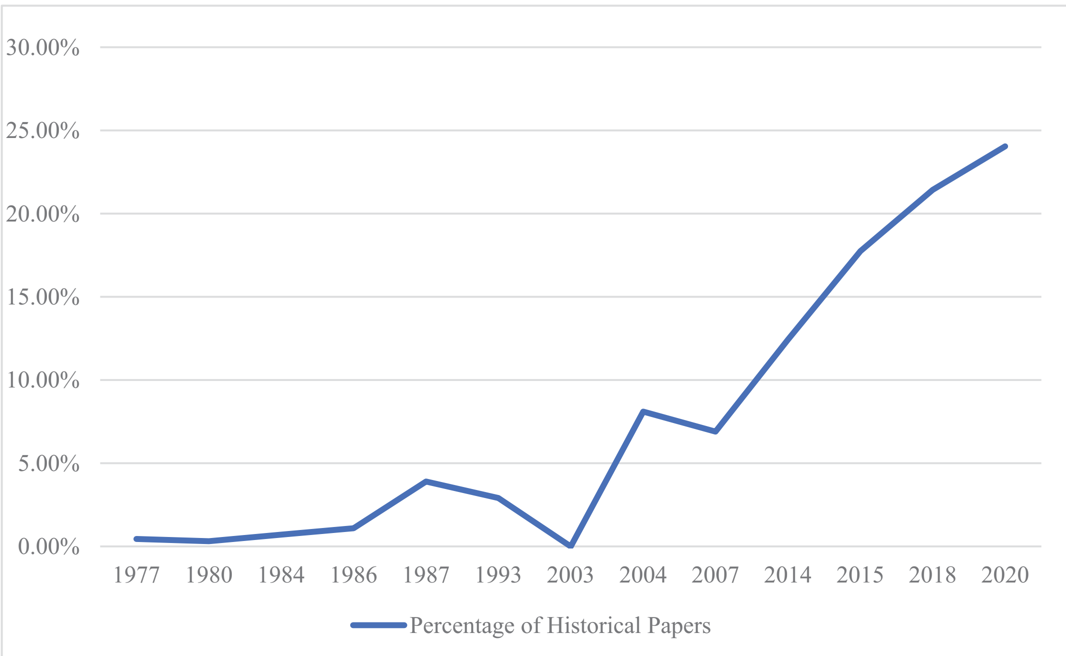

Figure 2. The annual proportion of historical papers in *Journal of Silk*

2. A Mathematical Analysis of the Development of Papers in *Journal of Silk* History and Theory Columns (1977-1986)

2.1 The Mathematical Representation of the Embryonic Development of the Columns of History in Journal of Silk

In this period, the first author of papers (Figure 3) accounted for more than half of the papers of universities, a quarter of enterprises, and more than 10% of research institutions. With Zhao Feng from Zhejiang Silk Institute of Technology as the best, who published five papers; Followed by Liu Manchun from Northwest Normal University and Yu Tao from Sichuan Silk Industry Research Institute, each of them published three papers; Bao Mingxin from East China Institute of Textile Technology (now Donghua University) and Zhou Dehua from Shengze Xinsheng Silk Factory each published two papers. The province where the first work was located

(Figure 4) was basically concentrated in places where the silk industry had been relatively developed since ancient times in Jiang (Jiangsu), Zhe (Zhejiang), Hu (Shanghai), and Shu (Sichuan).

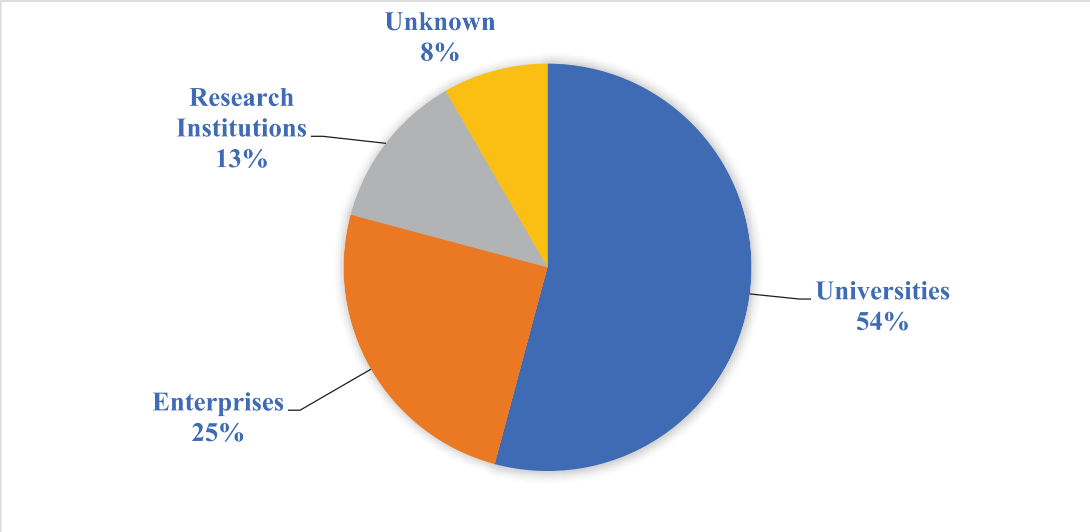

Figure 3. Proportion of first papers on Historical Theory in *Journal of Silk* from 1977 to 1986

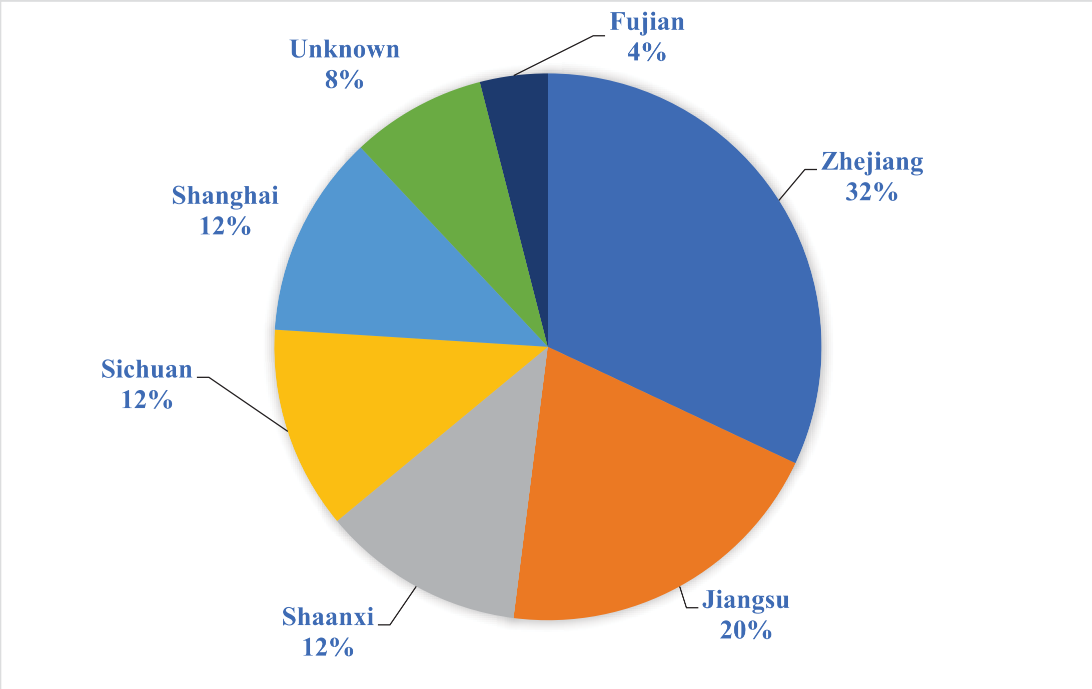

Figure 4. Proportion of the location of the first paper on Historical Theory in *Journal of Silk* from 1977 to 1986

2.2 Analysis of the Reasons for the Mathematical Representation in the Embryonic Period of the Papers in the History Category of Journal of Silk

During this period, there were many academic authors in *Journal of Silk* history category papers, mainly Zhu Xinyu, president of Zhejiang Silk Institute of Technology, who founded the Silk History Research Office in 1980 and concurrently served as the director of the research office. He was a master tutor, whose postgraduate named Zhao Feng. *Journal of Silk* was founded by Zhu Xinyu, which had a natural connection with Zhejiang Silk Institute of Technology. At this time, Liu Manchun of Northwest Normal University paid attention to the problems of the Western Regions, and incidentally studied the problems on the Silk Road. Therefore, in his life, he only published three papers related to silk, all of which were in the journal Silk. Yu Tao of the Sichuan Silk

Industry Research Institute is an engineer who is interested in the History of silk, so he has always insisted on writing about silk. Bao Mingxin came from a professional background and later became an expert in Clothing History. Inspired by Zhao Chengze, Zhou Dehua continued to write papers in *Journal of Silk* and became an expert in the history of silk. At this time, *Journal of Silk* is a reading material for silk professionals, which has low requirements for historical papers, but only requires readable ones. In addition, there are not many researchers engaged in the field of historical theory, and some enthusiasts in enterprises also get the opportunity to publish papers.

3. A Mathematical Analysis of the Wandering Period (1987-2003) of the Columns of History in *Journal of Silk*

3.1 The Mathematical Representation of the Wandering Period of the History Columns in Journal of Silk

During this period, *Journal of Silk* was ranked first among the research institutes, second in enterprises, and third in universities (Figure 5). This phenomenon is very strange. The papers of research institutes and enterprises account for more than 60%. The main contributors of this period in research institutes are China Silk Museum (Zhao Feng team), Sichuan Silk Industry Research Institute (Yu Tao), Suzhou Silk Museum (Zhou Dehua and Wang Chen), Palace Museum (Zhang Fengrong and Li Yinghua), Suzhou Embroidery Research Institute (Sun Peilan), Zhejiang Academy of Silk Science (Yuan Xuanping, Sun Liying), Zhejiang Academy of Agricultural Sciences (Jiang Youlong, Zhou Yaozu), Jingzhou Museum (Peng Hao), Cultural Relics Department of Hunan Provincial Bureau of Cultural Relics (Hou Liang). The main contributors of this period in universities are Zhejiang Silk Institute of Technology (Zhao Feng, Liang Jialong, etc.), Anhui Agricultural University (Zhao Zexiang), Dandong Textile College (now Liaodong College, Jiang Shuyuan), and Suzhou University College of Art (Miao Liangyun, Zhuge) Kai et al.), College of Humanities and Arts, Zhejiang University of Technology (Yuan Xuanping, etc.), etc. The representative of the author in the enterprise is Zhou Dehua, who has never stopped writing.

The provinces where the first author is located are still concentrated in Jiangsu and Zhejiang, but the geographical distribution of excellent work has expanded from 7 provinces in the previous period to 21 provinces (Figure 6), which shows that its influence is gradually expanding. But on the other hand, the regional imbalance of the first work is intensified. There is also a very strange phenomenon here. The number of papers in Shanghai has always not been high. This is not in line with common sense, because there were relatively high-level colleges and universities such as China Textile University and a large number of textile enterprises in Shanghai at that time.

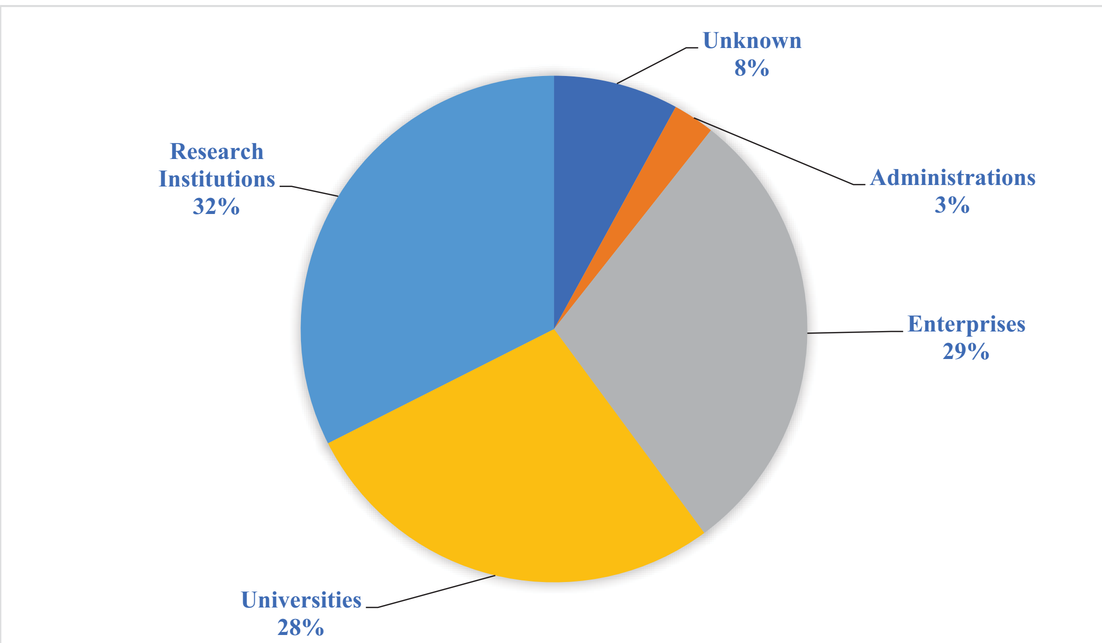

Figure 5. Proportion of the first papers on Historical Theory in *Journal of Silk* from 1987 to 2003

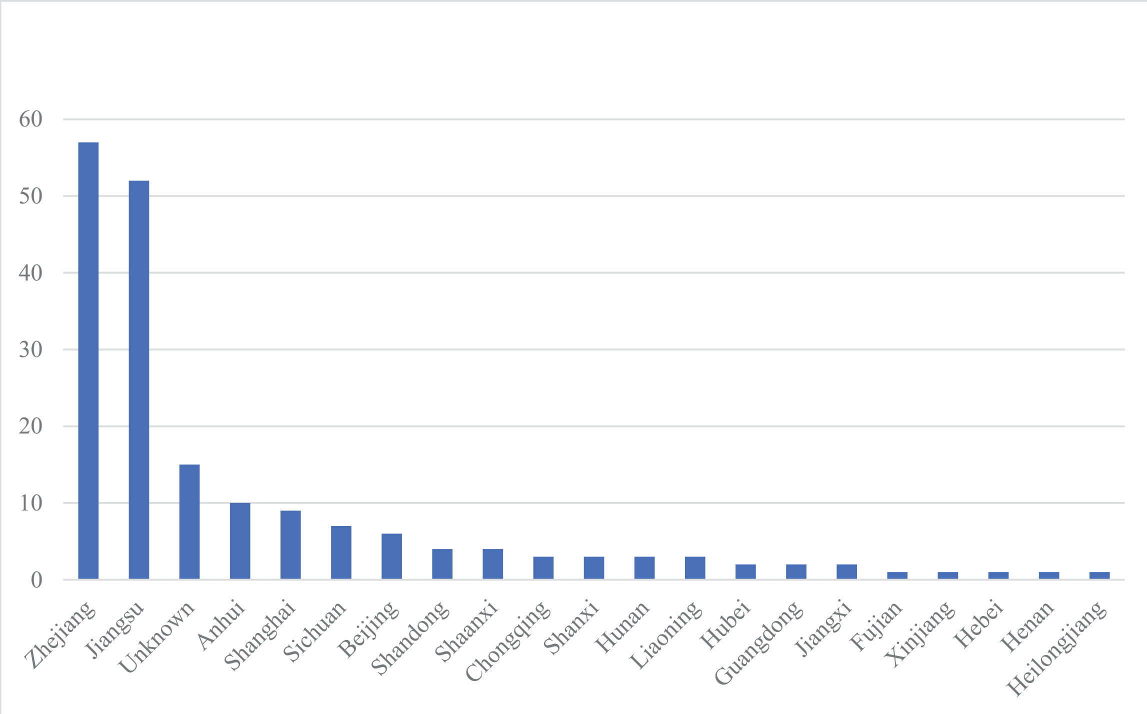

Figure 6. Location distribution of the first paper on Historical Theory in *Journal of Silk* from 1987 to 2003

3.2 Analysis on the Reasons of the Mathematical Representation of the Development of the Historical Columns in Journal of Silk

Among the organizations to which the first author belongs, the research institute ranked first. The reason is that Zhao Feng of the Zhejiang Silk Institute of Technology was transferred to the China Silk Museum (opened to the outside world in 1992) that was under preparation at the time. Zhao Feng is a great writer, and his departure caused one to ebb and flow. On the other hand, *Journal of Silk* has always been included in the core catalog of Peking University. Major institutions have requirements for the evaluation of professional titles, and *Journal of Silk* can be used as its evaluation condition, which has been welcomed by many research institutions and colleges.

The reason why Shanghai, Jiangsu, and Zhejiang had fewer papers during this period was due to two points: ① There were not as many textile and art universities in Shanghai as Jiangsu and Zhejiang at that time, and the insufficient supply of manuscripts would inevitably lead to an insufficient amount of manuscripts and application of manuscripts. ② At that time, China Textile University had many journals on campus. As homogenized products of *Journal of Silk*, they attracted a large number of papers that could have been submitted to *Journal of Silk*.

4. A Mathematical Analysis of the Stable Development Period (2004-2015) of the Historical Columns in *Journal of Silk*

4.1 The Mathematical Characterization of the Stable Development Period of the Columns of Historical Theory in Journal of Silk

During this period, the first author of historical papers for *Journal of Silk*'s ranked first among universities, second in research institutes, and third in enterprises (Figure 7). Since 2007, there were no research papers from enterprises. During this period, the provinces where the first author was located were still concentrated in the Jiangsu and Zhejiang provinces. But compared with the previous stage, it changed a lot from the fifth place (Figure 8) which shows that the quality of the manuscripts is increasing year by year, and the competition for manuscripts is becoming more and more fierce.

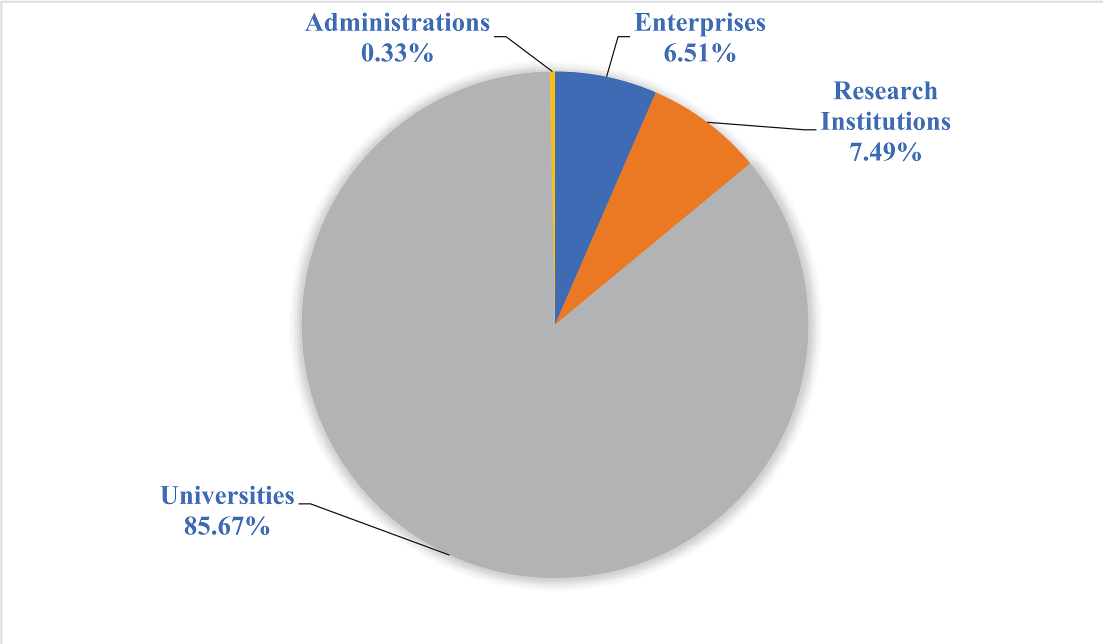

Figure 7. Proportion of the first author of papers on History in *Journal of Silk* from 2004 to 2015

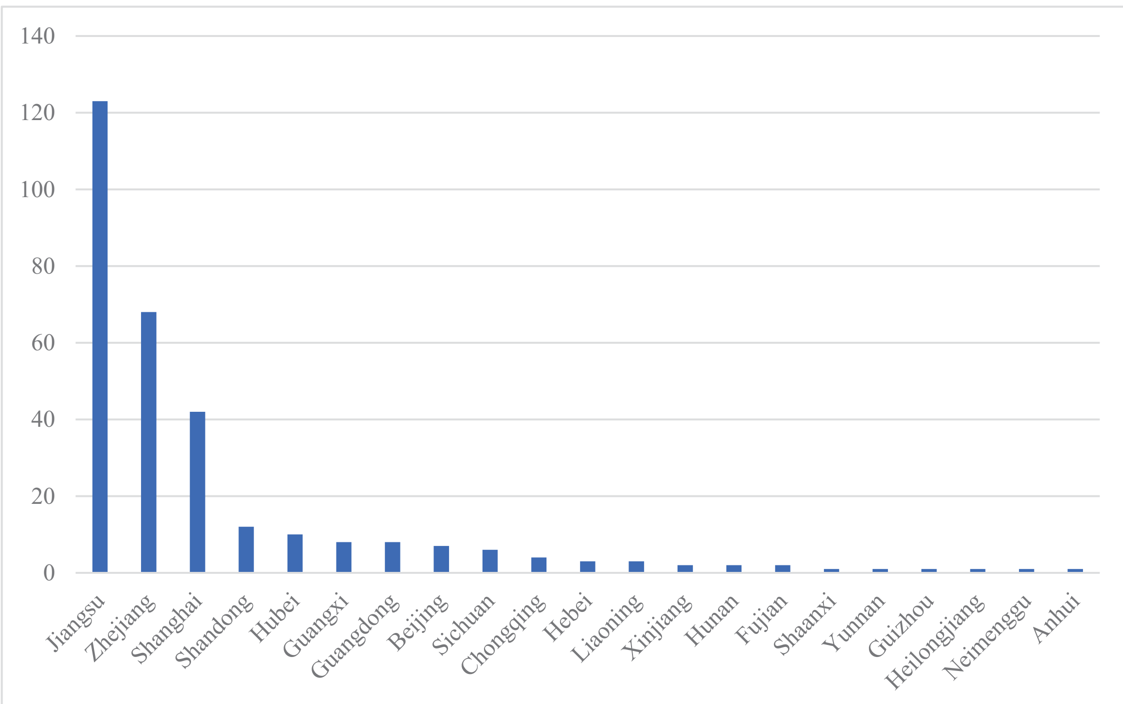

Figure 8. Location distribution of the first paper in the direction of History in *Journal of Silk* from 2004 to 2015

4.2 Analysis of the Reasons for the Mathematical Representation of the Stable Period of the Development of the Historical Columns in Journal of Silk

To *Journal of Silk*, the institution of the first author of the Historical Theory column paper is the institution in the first place. Since 2000, Suzhou University has increased its team building and research efforts in the field of art, and published a large number of papers in *Journal of Silk*, which strongly supported the college's submission in *Journal of Silk* (Figure 9). The reason for this is that at the turn of the 20th century and the 21st century, the art discipline of Suzhou University was granted the right to confer a doctoral degree, and related teachers had been encouraged to make academic achievements (Liao, 2001). However, as the popularity of the art discipline of Suzhou University of *Journal of Silk* has become more and more popular, its publishing channels have increased. However, *Journal of Silk* is a scientific and technological journal and has not been included in the CSSCI. For the art discipline, its title and calculation of the academic achievements are weaker than important ones, and it is inevitable that there will be a decrease in the number of publications in the art disciplines of Suzhou University. This can be seen from the "Reward for Papers" in paper 3, paragraph 1, of the "Notice on Printing and Distributing the "Reward Measures for Scientific Research Achievements of Suzhou University (Humanities and Social Sciences)" in Suda Social Science [2017] No. 9 Notice. Because of the stipulation that journals like *Journal of Silk* are included in the core journal catalog of Peking University, publishing an paper in *Journal of Silk* will not receive any rewards(Office of the President of Suzhou University, 2017) .

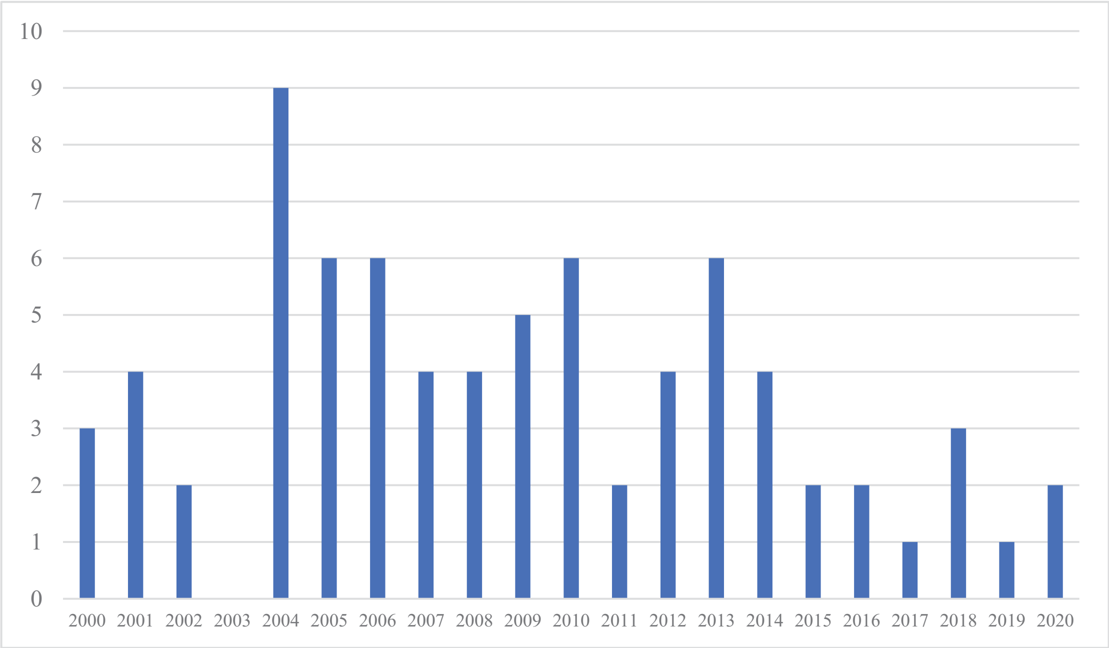

Figure 9. The publication situation of teachers and students of Suzhou University in the history column of *Journal of Silk* from 2000 to 2020

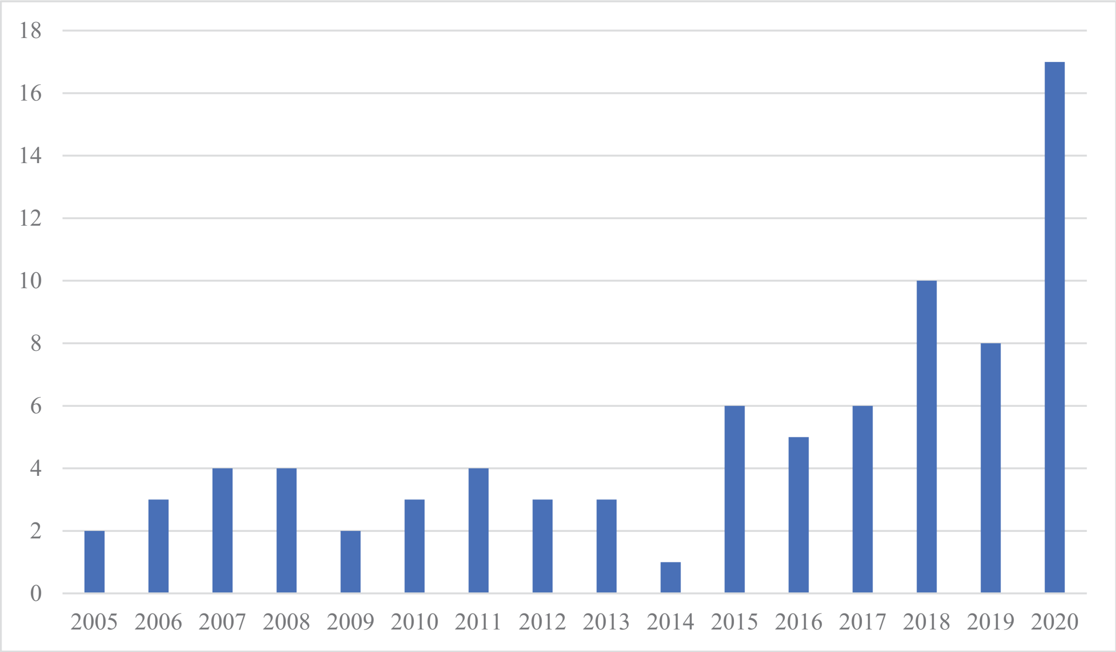

Figure 10. 2005-2020 Jiangnan University teachers and students published in *Journal of Silk* history category

In addition, the research results of the teams of Cui Rongrong, Liang Hui'e, and Zhang Jingqiong from Jiangnan University strongly supported the historical column of *Journal of Silk* (Figure 10).

The Yang Xiaoming research team in the history of textile technology at Donghua University and the Bian Xiangyang team in the history of clothing also published some papers in Silk during this period.

These papers are mostly written by masters and PhD students, because Jiangnan University and Donghua University have rigid requirements for doctoral graduates. Donghua University requires an paper from Peking University for PhD students. The core is one of the basic conditions, therefore, Donghua University Doctoral students in the research direction of Textile Technology Hhistory and Clothing History mostly publish papers in *Journal of Silk*. Jiangnan University also has similar regulations, but some teams even stipulate that masters must publish two core papers from Peking University in order to graduate. As a result, most of the papers published by Jiangnan University in *Journal of Silk* are issued by master students. An important reason for the decline in the proportion of research institutes at this stage is that the Zhao Feng team of the China National Silk Museum has slowed down in essay writing and went to concentrated on writing monographs. The disappearance of enterprise Historical Theory papers indicates that the quality of the journal Historical Theory column has increased.

5. Mathematical Analysis of the Accelerated Development Period (after 2016) of the Historical Column in *Journal of Silk*

5.1 The Mathematical Representation of the Accelerated Development Period of History Columns in Journal of Silk

After 2016, *Journal of Silk* has accelerated the development of the historical column. In 2016, there were 35 historical papers, 54 in 2019, and 75 papers in 2020. All papers of the historical ones in the three years came from colleges and universities. In 2017, there were 32 papers in the history column, of which 31 were from colleges and universities and 1 was from research institutes. In 2018, there were 42 papers in the history column, 39 of which were from universities, 1 from research institutes, and 2 from foreign non-governmental organizations (associations). Because of that colleges and research institutes are all professional researchers, judging from the above data, the papers in the Historical Theory column are more professional. However, the decline in the proportion of research institutes indicates that higher-level papers have been diverted by other publications, such as “Hundred Artists”, “Decoration”, and “Art Observation” included in CSSCI.

During this period, the provinces where the first work was located were still concentrated in the three provinces of Jiang, Shanghai, and Zhejiang, and Beijing and Hubei made rapid progress (Figure 11). There are few manuscripts in minority areas, indicating that their research foundation is weak.

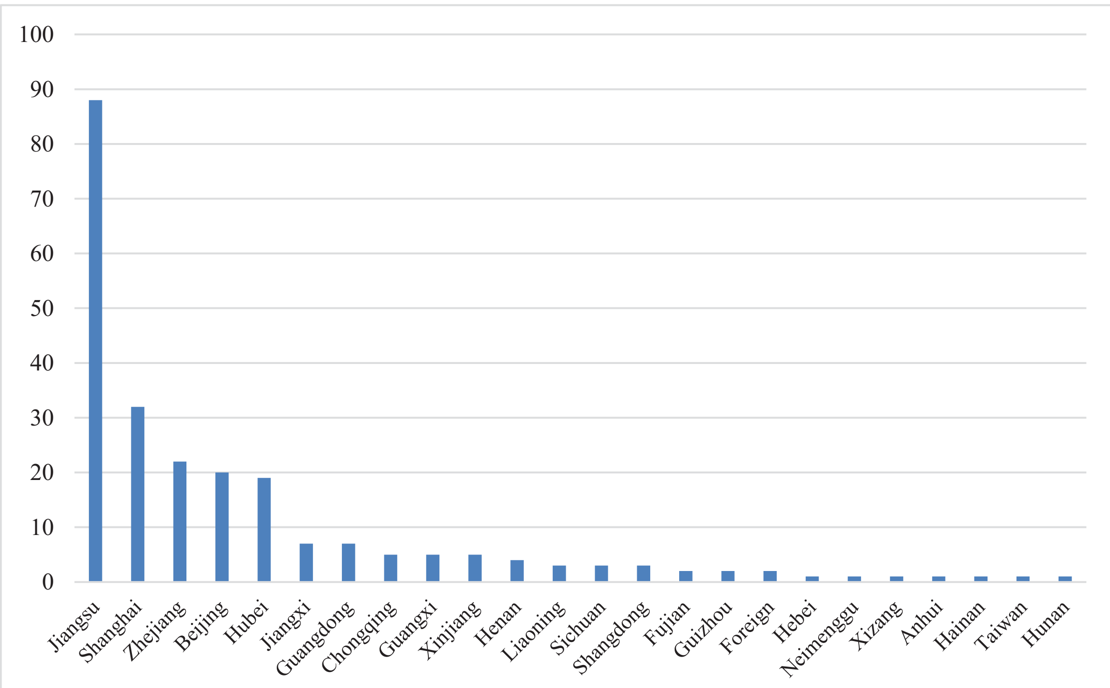

Figure 11. Location distribution of the first paper on history in *Journal of Silk* from 2016 to present

5.2 An Analysis of the Reasons for the Accelerated Development of the Historical Columns in Journal of Silk

The high number of papers in Jiangsu Province in *Journal of Silk* in the history and theory column is due to the Jiangnan University Department. Jiangnan University's Textile and Apparel Majors account for the majority of the postgraduates, all due to the limitations of the master's graduation requirements. The rapid growth of Shanghai's papers in *Journal of Silk* in the history category is due to the graduation conditions of Donghua University's doctoral students. Because the enrollment of doctoral students and master's students is different, the difference between the two regions is obvious. Therefore, the limitation of graduation conditions has a significant role in promoting the improvement of the overall scientific research strength of colleges and universities. The number of papers in Beijing has remained stable, mainly due to the contributions of teachers and students in relevant majors of Beijing Institute of Fashion Technology. The rapid growth of Hubei's papers in *Journal of Silk* is due to the fact that Li Qiang and Li Bin from the Donghua Department came to Wuhan Textile University for teaching. The small growth of published papers in *Journal of Silk* in Jiangxi is due to the work of Wuhan Textile University master's students entering Jiangxi Institute of Clothing Technology. Due to Most historical papers from Jiangxi Institute of Clothing Technology's published in *Journal of Silk* are directed by Li Qiang, these authors are classified into the Department of Wuhan Textile University. The downward trend of papers in Zhejiang Province is directly related to the decline in the publication of papers by the China Silk Museum, Zhejiang Sci-Tech University, and Zhejiang University of Technology. Following the similar situation of lacking of researchers like Zhao Feng, Luo Qun, etc., the scientific research of China Silk Museum, Zhejiang Sci-Tech University, and Zhejiang University of Technology may appear the shortage of researchers to publish papers in *Journal of Silk*, who focus mostly on writing monographs. The researchers of the above three scientific research institutions are cross-cutting and closely cooperating with each other.

6. Conclusion

Through research, this paper believes that the development of the historical column of *Journal of Silk* is consistent with the development of the times. The changes in the types of historical papers in *Journal of Silk* are dominated by papers from universities, and the gradual disappearance of corporate papers indicates that the journal has changed from a journal integrating education, academia, and training to an academic publication. Authors from Zhejiang and Jiangsu have published more than half of the papers. This phenomenon is related to the earliest research on historical theory in the two places, especially the Zhejiang Silk Institute of Technology, which was the first organization to engage in professional research on historical theory in China. Authors in Zhejiang Province had the largest number of papers before 2003, and authors in Jiangsu after 2004 had the largest number of papers. After 2004, authors in Shanghai had more papers, which is related to the strengthening of relevant majors in Suzhou University, Jiangnan University, and Donghua University. At the same time, the experience of Jiangnan University shows that restricting the graduation conditions for master's students is conducive to research in the field of Historical Theory.

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Research on Dispute Settlement Mechanism of Economic and Trade Cooperation Between China, Mongolia and Russia

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Abstract

The dispute resolution mechanism of economic and trade cooperation between China, Mongolia and Russia is a kind of dispute resolution mechanism specially used to solve the disputes of economic and trade cooperation between China, Mongolia and Russia. It is not only has the practical necessity, but also has the political and legal feasibility. The main problems of the dispute resolution mechanism are that the dispute resolution methods are too scattered, the dispute resolution basis is too old, and the cohesion and effectiveness of the dispute resolution methods are poor. Under the guidance of the concept of "coordinated development, win-win and mutual benefit, fair procedure, inclusiveness and harmony", it is reasonable to build a dispute resolution mechanism of economic and trade cooperation between China, Mongolia and Russia, which covers the way of political diplomacy and judicial characteristics. Specifically, the dispute resolution mechanism needs to establish special dispute resolution institutions, unified applicable rules, diversified dispute resolution procedures and sound supporting systems.

Keywords: China, Mongolia and Russia; Economic and trade cooperation; Dispute resolution mechanism

1. Introduction

With the proposal and practice of "the belt and road initiative", "China-Mongolia-Russia Economic Corridor", "Russia's Trans-Eurasian Railway" and "Prairie Silk Road", China-Mongolia-Russia economic and trade cooperation has continued to advance in depth. However, in economic and trade activities, the differences in politics, economy and culture, and the complexity of relations, interests and exchanges have caused complicated disputes in economic and trade cooperation. Complex and diverse economic and trade cooperation disputes between China, Mongolia and Russia need a unified and pluralistic dispute resolution mechanism. At present, the way of dispute resolution is too scattered, the basis of dispute resolution is too old, and the convergence and poor effectiveness of dispute resolution procedures are the main problems in the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation. Constructing an effective docking, unified and diversified dispute resolution mechanism is an important guarantee to protect the interests of all subjects in China-Mongolia-Russia economic and trade cooperation. The purpose of this study is to build and improve the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation, analyze its necessity and feasibility, summarize its practical difficulties and specific problems, clarify its concept, model and principles, and finally put forward specific countermeasures.

2. The Necessity and Feasibility

2.1 The Necessity

The economic and trade cooperation between China, Mongolia and Russia has a long history, and the proposal and practice of the "China-Mongolia-Russia Economic Corridor" has upgraded the economic and trade cooperation between China, Mongolia and Russia in depth and breadth. After China, Mongolia and Russia signed the outline of the Plan for the Construction of China-Mongolia-Russia Economic Corridor in 2016, the platform for economic and trade cooperation between China, Mongolia and Russia has been further expanded to cover transport infrastructure, port construction, production capacity and investment, and economic and trade cooperation.

With the deepening of economic and trade cooperation, a large number of funds, labor and technology are concentrated in the Sino-Mongolian-Russian economic and trade market, various interest factors are surging, and all kinds of disputes in Sino-Mongolian-Russian economic and trade cooperation are increasingly frequent. According to the statistics of the court department, the number of trade cases received by the courts in Inner Mongolia (mainly cases involving Mongolia and Russia) has increased year by year. Between 2005 and 2009 alone, the number of cases received has more than tripled, from 41 in 2005 to 90 in 2009.The disputes of economic and trade cooperation between China, Mongolia and Russia are breaking through the original state in terms of quantity and characteristics, and the complexity, diversification and uniqueness are becoming more and more prominent. Driven by the highly integrated economic and trade relations, the level of economic and trade cooperation between China and Mongolia and Russia has changed from commodity trade to economic and technological cooperation, and joint ventures have changed from commercial enterprises to productive enterprises. cooperation projects have also gradually changed from small-scale to resource development and large-scale processing industry projects.This is followed by the complexity, diversification and uniqueness of economic and trade cooperation disputes. First of all, the dispute of economic and trade cooperation between China, Mongolia and Russia is becoming more and more complicated. The main body of the dispute is complex, including not only individuals, enterprises, but also the state and government; the causes of disputes are complex, including personal reasons such as infringement and breach of contract, as well as economic, policy, legal and other macro reasons; the nature of disputes is complex, there are not only ordinary commercial disputes, but also international trade disputes, as well as investment cooperation disputes. Secondly, the types of disputes in Sino-Mongolian-Russian economic and trade cooperation show a diversified development trend. With the transformation of the level of economic and trade cooperation, the types of disputes in Sino-Mongolian-Russian economic and trade cooperation have expanded from a single sale contract dispute to a variety of disputes including intellectual property disputes, land use disputes, labor contract disputes, ecological environment disputes and so on. Finally, in addition to complexity and diversification, the dispute over economic and trade cooperation between China, Mongolia and Russia has gradually formed a certain particularity. In terms of types, compared with the heated trade disputes between China and the United States and other developed countries, the economic and trade disputes between China and Mongolia and Russia are mostly commercial disputes and investment disputes, while there are fewer trade disputes between countries. In terms of types, the economic and trade disputes between China and Mongolia and Russia are mainly sales contracts, construction contracts, labor cooperation and other disputes.

In a word, the increasing and complicated disputes in economic and trade cooperation between China, Mongolia and Russia need a unified and diversified dispute resolution mechanism. The construction of a dispute resolution mechanism for Sino-Mongolian-Russian economic and trade cooperation and providing a diversified dispute resolution platform for Sino-Mongolian-Russian economic and trade cooperation is the basic guarantee for promoting people-to-people connection and political mutual trust, and is an inevitable requirement for accelerating trade exchanges and promoting regional economic development.

2.2 The Feasibility

2.2.1 Political Foundation

The political foundation of mutually beneficial cooperation is the operational premise of the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation. In order to safeguard national sovereignty and protect national interests, the construction and implementation of the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation must be based on good and mutually beneficial political relations. Adhering to the cooperative spirit of peaceful coexistence, mutual non-aggression and mutual respect, since the formal establishment of diplomatic relations between China and Mongolia and Russia, high-level exchanges have been frequent and a series of political exchanges have been carried out. Up to now, China and Mongolia and Russia have signed many important political treaties and issued many joint statements. At present, an overall political relationship is that China and Mongolia have established a comprehensive strategic cooperative partnership, and China and Russia have been upgraded to a comprehensive strategic cooperative partnership in the new era.

Generally speaking, since the establishment of diplomatic relations between China and Mongolia and Russia, although there have been twists and turns during the period, the cooperative relations between the two sides have been continuously upgraded and are maintaining a good momentum. The political relations of mutual trust and mutual benefit, close exchanges and normal development between China and Mongolia and Russia have laid a solid political foundation for the operation of the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation.

2.2.2 Legal Basis

The feasibility of judicial assistance between China, Mongolia and Russia, especially the feasibility of recognition and implementation of dispute resolution results, is the effective guarantee of the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation. China, Mongolia and Russia have joined the international treaties for the purpose of judicial assistance and the judicial assistance treaties signed between China and Mongolia and Russia, which make the dispute resolution mechanism of economic and trade cooperation between China, Mongolia and Russia really fit the original intention of the establishment of the system and realize its entity, procedure and political and economic value. As far as international multilateral treaties are concerned, China, Mongolia and Russia are all members of The New York Convention,which was signed in new york in June 1958, and mainly solves the problems of recognition and enforcement of international commercial arbitration in different countries. According to The New York Convention, every member state should recognize the binding force of the arbitral award and implement it according to the prescribed procedures.

In July 2001, China and Russia signed “the Implementation Outline of the Treaty of Good Neighborliness, Friendship and Cooperation between the People's Republic of China and the Russian Federation”, which emphasized that the judicial organs of China and Russia should provide judicial assistance in civil, family, criminal and other cases and improve the legal basis of judicial assistance. In 1992, “the Treaty between the People's Republic of China and the Russian Federation on Judicial Assistance in Civil and Criminal Matters”was signed, which aims to further promote the judicial cooperation between China and Russia. According to the treaty, the two sides assist each other in serving judicial documents and extra-judicial documents, questioning parties, witnesses and experts, conducting identification and inquest, and completing other investigations and evidence collection. In addition, the judgments of the courts of both parties should be recognized and enforced if the conditions are met. In addition to the treaties between the two sides at the national level, in 1996, the China International Chamber of Commerce and the Russian Federation of Trade Unions signed “the Cooperation Agreement on Commercial Arbitration”, which encouraged the settlement of disputes arising from or based on contracts between the two sides through arbitration, and affirmed the final effect and enforcement effect of the arbitral award; In addition, the agreement also encourages China and Russia to use their respective potentials to develop mutual cooperation in international arbitration. China and Mongolia also have special bilateral treaties on judicial assistance.

In 1989, China and Mongolia signed “the Treaty between the People's Republic of China and the People's Republic of Mongolia on Judicial Assistance in Civil and Criminal Matters”, which aims at developing and strengthening friendly cooperation between the two countries in the judicial field, and becomes the main basis for judicial assistance in civil and commercial matters between the two countries. According to the Treaty, China and Mongolia should provide judicial assistance in economy, marriage and labor, including serving documents, investigating and collecting evidence, requesting and notifying the implementation, etc. “The Medium-and Long-Term Development Outline of China-Mongolia Strategic Partnership”signed by the two countries in 2013 further emphasizes that China and Mongolia should strengthen cooperation in the field of civil and criminal judicial assistance.

3. Practical Problems

3.1 Analysis from the Perspective of Dispute Resolution

3.1.1 Litigation Settlement

Litigation settlement refers to the way in which the law of the country where one of the parties is located is applied in the court of the country where one of the parties is located, and the dispute is resolved by the procedural rules of court trial. China has signed “the Treaty between the People's Republic of China and the Russian Federation on Judicial Assistance in Civil and Criminal Matters”and “the Treaty between the People's Republic of China and the People's Republic of Mongolia on Judicial Assistance in Civil and Criminal Matters”. There are no legal obstacles to the delivery of documents, investigation and evidence collection, and execution of judgments. In addition, China has also set up a special international commercial court and formulated the Rules of Procedure of the Supreme People's Court for International Commercial Court (for Trial Implementation), which has become a powerful support for litigation to resolve disputes between China, Mongolia and Russia in economic and trade cooperation. However, there are some problems in the specific application: First, litigation settlement is vulnerable to protectionism. For the protection of national interests, the protectionism in economic and trade cooperation is inevitable, which makes it difficult to guarantee the fairness of litigation settlement, and the acceptance of dispute settlement results will be greatly reduced. Second, the dispute resolution procedure is cumbersome and the litigation period is long. Although China and Mongolia and Russia have signed mutual legal assistance treaties, due to their involvement in different countries, each link of service, evidence collection and execution is bound to be more complicated than the procedures within one country, which will affect the litigation cycle. Third, implementation is difficult to guarantee. Execution is the landing link of litigation and the ultimate guarantee of litigation effect. Although there are no legal obstacles, the procedures of transnational enforcement are complicated and the cost is high, so it is difficult to guarantee the legitimate rights and interests of applicants.

3.1.2 Arbitration Settlement

Arbitration settlement refers to the way that both parties submit the dispute to a neutral arbitration institution according to the agreement and settle the dispute according to the international commercial arbitration rules. Arbitration has legal basis and realistic basis for settling disputes in economic and trade cooperation between China, Mongolia and Russia. The Treaty on Judicial Assistance in Matters and Criminal Matters signed or acceded by China, Mongolia and Russia, the Convention on the Recognition and Enforcement of Foreign Arbitral Awards and the Cooperation Agreement on Commercial Arbitration signed by the Chamber of Commerce of China and Russia are the legal basis for the arbitration settlement of economic and trade cooperation disputes between China, Mongolia and Russia. China International Economic and Trade Arbitration Commission, Shanghai International Economic and Trade Arbitration Commission, Shenzhen International Arbitration Court and Russia International Commercial Arbitration Court are the realistic basis for arbitration settlement of disputes in economic and trade cooperation between China, Mongolia and Russia. However, in fact, only a few parties are willing to choose arbitration.The reasons can be summarized as follows: First, the lack of professional arbitrators, especially the lack of arbitrators who not only understand international commercial arbitration rules and related professional knowledge, but also understand the legal system and economic and trade cooperation status of China, Mongolia and Russia; Second, the temporary arbitration institution is missing. Compared with the permanent arbitration institution, the temporary arbitration institution is more desirable, efficient and economical. The lack of temporary arbitration institutions makes the advantages of arbitration settlement unable to give full play; Third, property preservation, evidence preservation and property execution are difficult to achieve. Like litigation settlement, arbitration settlement is also affected by complicated procedures, more links and higher costs, which reduces the effectiveness of dispute settlement.

3.1.3 Mediation Settlement

Mediation has a long history in China, and it is a dispute resolution system known as "Oriental Experience". Because it is conducted on the basis of consensus between both parties, mediation has the characteristics of strong agreement, flexible way, low cost and easy implementation, which has become an important part of the wave of diversified dispute resolution, and has been widely used at home and abroad, and achieved good practical results. Based on this, quite a few parties are willing to choose mediation in the economic and trade cooperation disputes between China, Mongolia and Russia. It is feasible to settle the economic and trade cooperation disputes between China, Mongolia and Russia through mediation. On one side , China joined the United Nations Convention on International Settlement Agreements Resulted from Mediation in August 2019, which mainly solved the cross-border recognition and enforcement of settlement agreements reached through mediation.On the other side, there are many mediation organizations in China, Mongolia and Russia, such as China International Chamber of Commerce, Russian Chamber of Commerce and Industry, Mongolian Chamber of Commerce and Industry and various branches. The above-mentioned non-profit organizations mainly aim at supporting and encouraging trade and investment activities, which is an important support for mediating and resolving disputes between China, Mongolia and Russia in economic and trade cooperation. However, due to the limited radiation range of mediation organizations, the lack of management and service capabilities, and the lack of professional mediation talents, mediation has not fully played its due role in solving the disputes between China, Mongolia and Russia.

In addition, diplomatic can solve international economic and trade cooperation. Diplomatic consultation settlement has the advantages of peace, friendship, non-confrontation and no harm to the spirit. However, due to the influence of national strength and international relations, dispute settlement is unstable, which can be used as one of the ways of dispute resolution mechanism in China-Mongolia-Russia economic and trade cooperation. How to effectively integrate and link diplomatic consultation with litigation, arbitration and mediation is the key and direction of China-Mongolia-Russia economic and trade cooperation dispute resolution mechanism.

3.2 Analysis from the Perspective of Dispute Types

3.1.1 The Commercial Disputes.

The biggest feature of commercial dispute resolution is that both parties can agree on the methods, rules and applicable laws of dispute resolution by contract. Although both parties can choose the way of court trial to solve the dispute, because both parties are unwilling to go to the court of the other country to try and solve the dispute, the court trial has no advantage. From a global perspective, commercial arbitration and mediation attached to it are the main ways to solve ordinary commercial disputes at present. Although China, Mongolia and Russia also have specialized international arbitration institutions and arbitration rules, for example, the influence of Arbitration Rules of China International Economic and Trade Arbitration Commission is gradually increasing, but there is still room for development, which needs to be further promoted. Establishing a special litigation, arbitration and mediation system for commercial disputes in China-Mongolia-Russia economic and trade cooperation is the success or failure of building a dispute resolution mechanism in China-Mongolia-Russia economic and trade cooperation.

3.2.2 The Trade Disputes.

Trade disputes between countries generally depend on international treaties. Important trade dispute resolution systems include the World Trade Organization WTO and NAFTA dispute resolution mechanism. At present, the WTO dispute settlement mechanism is a feasible solution to trade disputes between China, Mongolia and Russia. On the one hand, because the WTO dispute resolution mechanism is relatively mature, covering consultation, mediation, adjudication, appeal, enforcement and other links, it can solve disputes more comprehensively; On the other hand, because China, Mongolia and Russia are all members of the World Trade Organization, it is logical to use the dispute resolution mechanism of the WTO. However, there are obvious defects in applying the dispute resolution mechanism of WTO to solve the trade disputes between China, Mongolia and Russia. The WTO dispute settlement mechanism adopts a forward-looking attitude and takes the principle of "treating diseases and saving people". After ruling, if it does violate the treaty, the member States should correct the measures or policies and laws that violate the provisions of the treaty. Otherwise, the winning party can take corresponding revenge after authorization, and the means of retaliation should be advocated in the same field involved. The execution of the whole application for adjudication and retaliation must be carried out in the name of the member States, and the affected enterprises and individuals can not only participate, but also get any compensation from them. In addition, the dispute resolution procedure has a long cycle, and even if a fair adjudication is finally obtained, the losses of enterprises and individuals are huge. Therefore, the incompleteness of dispute resolution has become the biggest problem in the WTO settlement mechanism, and the establishment of a dispute settlement mechanism with effective docking and comprehensive rights protection is an important guarantee to protect the interests of all subjects in China-Mongolia-Russia economic and trade cooperation.

3.3.3 The Investment Dispute.

Investment disputes are mainly settled according to investment agreements. With the development of globalization, in order to avoid the infringement of local protectionism in international investment, more and more controversial subjects give up the way of resolving disputes through the courts of the host country, and instead settle investment disputes through investment agreements. The international specialized multilateral investment agreements are mainly“ the Convention on Settlement of Investment Disputes between Countries and Nationals of Other Countries”(Washington Convention) and the “North American Free Trade Agreement”, and the institutions specializing in settlement of investment disputes are mainly the International Investment Dispute Settlement Center. As China, Mongolia and Russia are all members of the Washington Convention, investment disputes in China-Mongolia-Russia economic and trade cooperation can be settled in the International Investment Dispute Settlement Center by applying ICSID investment dispute settlement mechanism under the Washington Convention. However, due to the fact that most enterprises in China know little about ICSID investment dispute resolution mechanism and lack of practical experience in ICSID arbitration in China, ICSID investment dispute resolution mechanism is seldom used by Chinese investors.

As far as bilateral treaties are concerned, “The Agreement between the Government of the People's Republic of China and the Government of the People's Republic of Mongolia on Encouraging and Mutual Protection of Investment”signed in 1991 and “the Agreement between the Government of the People's Republic of China and the Government of the Russian Federation on Promoting and Mutual Protection of Investment”signed in 2006 are the main basis for the settlement of investment disputes in economic and trade cooperation between China and Mongolia and Russia. According to Article 8 of the“Agreement between the Government of the People's Republic of China and the Government of the People's Republic of Mongolia on Encouragement and Mutual

Protection of Investment", investment disputes in economic and trade cooperation between China and Mongolia can be settled through diplomatic channels, litigation in the court of the receiving country or arbitration in a special arbitration tribunal, but the third way is limited to disputes involving the collection of compensation amount. According to Article 9 of "the Agreement between the Government of the People's Republic of China and the Government of the Russian Federation on the Promotion and Mutual Protection of Investment", investment disputes in economic and trade cooperation between China and Russia can be settled through diplomatic channels, litigation in the courts of the countries receiving investment, arbitration in the International Center for Settlement of Investment Disputes (ICSID) established by Washington Convention or arbitration tribunal established by Arbitration Rules of UNCITRAL. It can be said that China, Mongolia and Russia have sufficient basis for solving investment disputes in economic and trade cooperation, and they are diverse in many ways, but there are also some shortages in operation. In the case of investment dispute between Heilongjiang International Economic and Technical Cooperation Corporation and Mongolian Government, Heilongjiang International Economic and Technical Cooperation Corporation considered that the Mongolian government's revocation of its mining license violated the bilateral investment protection agreement signed by the two countries, and initiated international investment arbitration. However, because the arbitration matters stipulated in the Agreement between the Government of the People's Republic of China and the Government of the People's Republic of Mongolia on Encouraging and Mutual Protection of Investment were limited to disputes involving the collection of compensation amount, the arbitration tribunal rejected the arbitration on the grounds of "no jurisdiction". The above cases fully show that the relevant investment agreements can not meet the needs of China-Mongolia-Russia economic and trade cooperation and investment dispute resolution under the vision of "the belt and road initiative" and "China-Mongolia-Russia Economic Corridor".

4. The Concept and Mode Choice

4.1 The Concept

4.1.1 The dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation should be based on the concept of coordinated development, win-win and mutual benefit, fair procedure, tolerance and harmony. From the purpose of dispute resolution, the foundation and end point of the construction and improvement of dispute resolution mechanism in China-Mongolia-Russia economic and trade cooperation lies in providing a legal environment of good law and good governance for China-Mongolia-Russia economic and trade cooperation, which promotes the sustainable development of China-Mongolia-Russia economic and trade cooperation and promotes the prosperity and development of "China-Mongolia-Russia Economic Corridor" and "the belt and road initiative". Therefore, in the process of constructing the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation, the basic idea should be coordinated development and mutual benefit. Specifically, it is to solve disputes as a means and maintain order for the purpose; The process is to check for leaks and fill vacancies, and the result is to improve the system. In short, the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation is to resolve economic and trade conflicts, maintain economic and trade order, improve economic and trade system, and provide judicial guarantee for China-Mongolia-Russia economic and trade cooperation.

From the essence of dispute resolution, dispute resolution is a process of restoring justice through dispute resolution procedures. No matter litigation, arbitration, mediation and negotiation, they are all set up for safeguarding rights and interests and realizing justice. However, justice is not static, sticking to the same mathematical formula, and justice will show different features with different contents. As Bodenheimer said, "Justice has a Prooteanface, which is just, equal or harmonious, fickle, can take on different shapes at any time and has a very different appearance. When we carefully looked at this face and tried to unlock the The Secret Behind hiding its surface, we were deeply confused when we joined the club. "Pet-name ruby Therefore, different ways of resolving disputes contain different pursuit of justice. If litigation should take procedural justice as the primary pursuit and reconciliation should take tolerance and harmony as the primary essence, then in the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation, the concept of procedural justice and harmonious and inclusive justice should coexist. There are two reasons: First, according to the current basic situation, the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation covers litigation, mediation and other dispute resolution methods, which inevitably contain different justice concepts; Secondly, unlike domestic economic disputes, international economic and trade cooperation disputes are more diversified and complex, and the corresponding dispute resolution mechanism should not only guarantee fairness, but also take into account inclusiveness, providing institutional buffer for open, inclusive and developing international economic and trade relations. In a word, the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation should take procedural justice, tolerance and harmony as its core concept. Procedural justice is to guarantee basic justice elements such as equality and neutrality in dispute resolution process, and inclusive harmony is to enhance the importance of autonomy, consensus and negotiation in dispute resolution process.

4.2 The Mode Choice

Due to the influence of economic, political, legal, cultural and other factors, international or regional dispute resolution mechanisms are different. However, looking at different international practices, the dispute resolution mechanisms can be summarized as political diplomacy-oriented mode, judicial-oriented mode, and comprehensive mode of political diplomacy+quasi-justice.

The mode of political diplomacy is to coordinate and solve economic and trade cooperation disputes through diplomatic channels, mainly including consultation, mediation, mediation and good offices. The ASEAN dispute resolution mechanism under the Charter of the Association of Southeast Asian Nations (hereinafter referred to as the ASEAN Charter) encourages the resolution of disputes through political diplomacy. According to Articles 22 and 23 of the ASEAN Charter, member States should resolve all disputes quickly and peacefully through dialogue, consultation and negotiation as much as possible; Member States involved in disputes can reach an agreement at any time through mediation, conciliation and mediation, so as to settle disputes within the time specified in the agreement. Although the ASEAN dispute resolution mechanism introduced arbitration procedure into the original political and diplomatic model in 2010, the political and diplomatic model is still its main way to resolve disputes. The advantage of political diplomacy mode is that it can solve disputes flexibly, and the non-confrontational way of resolving disputes can get more friendly results. The disadvantage is that there are many levels of games and contests in this mode, which easily leads to the deadlock in negotiations, which is protracted and consumes manpower and energy.

The judicial mode is to set up supranational international regional judicial institutions and make binding judgments according to existing rules. According to the “Treaty Establishing the European Economic Community”,the European Union has gradually formed a highly judicial dispute resolution mechanism. The judicial mode has been established in the EU dispute resolution mechanism, which has independent judicial organization and strict procedural rules, and its judgment results have direct and highest binding effect on member countries. Compared with the political and diplomatic model, the judicial model has better predictability, stability and higher binding force. However, since the judicial model is related to national sovereignty and judicial jurisdiction, it will undoubtedly challenge the sovereignty of member States, so it is necessary to take the high trust and tolerance of member States as the premise. In addition, the judicial mode, as a rigid way to resolve disputes, will not be conducive to the promotion of harmonious relations among member States if it is mandatory.

Political diplomacy+quasi-judicial mode is one of the most widely used modes. Generally, it is solved through political diplomacy modes such as dialogue, consultation and negotiation, and then submitted to arbitration institutions for arbitration procedures. The arbitration results are binding. Because this mode has certain characteristics of political diplomacy and judicial mode, it is also called comprehensive mode. For example, NAFTA dispute resolution mechanism under North American Free Trade Agreement and CAFTA dispute resolution machine under China-ASEAN Comprehensive Economic Cooperation Framework Agreement are comprehensive models including consultation, mediation, mediation and arbitration procedures. This mode not only provides a platform and opportunity for both parties to the dispute to settle through consultation, but also provides a binding legal guarantee for the settlement of relevant disputes, because it has become a popular mode.

The above models have their own advantages and disadvantages. It needs to be decided by combining the political relations between China, Mongolia and Russia, the level of economic development and the existing basic conditions. With the release of a series of statements such as“the Joint Statement of the People's Republic of China and Mongolia on Deepening the Development of Comprehensive Strategic Partnership”and “the Joint Statement of the People's Republic of China and the Russian Federation on Strengthening Contemporary Global Strategic Stability”, and the great ideas such as "the belt and road initiative", "Prairie Silk Road" and "Eurasian Economic Union" put forward one after another, the political and economic relations between China, Mongolia and Russia are getting closer and showing a good trend. However, according to the current situation, China, Mongolia and Russia are far from having the conditions to establish supranational international regional judicial institutions and procedural rules. Therefore, the supranational judicial model is not applicable to the current disputes between China, Mongolia and Russia in economic and trade cooperation. The mode of political diplomacy is more flexible, but because it is greatly influenced by the state power, its predictability and stability are poor, so it is suitable for the treatment of "one case, one discussion", and it is totally dependent on the mode of political diplomacy to solve the disputes of China-Mongolia-Russia economic and trade cooperation, which is not conducive to building a pluralistic, stable and lasting dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation. The comprehensive mode of political diplomacy+quasi-judicature is widely used to solve trade and investment disputes. As mentioned earlier, compared with the political and diplomatic model and judicial model, the comprehensive model is a more reasonable choice model for China-Mongolia-Russia economic and trade cooperation disputes. From the feasibility point of view, this model does not need to be based on strict judicial organization, but can also ensure the consensus of both parties to the greatest extent and maintain the friendly economic and trade relations between China, Mongolia and Russia; From a realistic point of view, at present, China has established the "the belt and road initiative" commercial court, which covers litigation, mediation, arbitration and other procedures, and has the application basis of comprehensive mode.

5. Conclusion

5.1 Setting Up a Special Dispute Resolution Center.

The establishment of specialized dispute resolution centers will further enhance the popularity, competitiveness and legalization of international regional organizations. Internationally, the international investment dispute settlement center is the first permanent institution specialized in resolving investment disputes between the contracting parties and nationals of other contracting parties. The establishment of the center has greatly enhanced the international influence of the Washington Convention. In fact, in order to promote the long-term development of the "the belt and road initiative", the Supreme People's Court of China has made some explorations and efforts. On June 29, 2018, in order to implement the"Opinions on Establishing the" the belt and road initiative "International Commercial Dispute Settlement Mechanism and Institution",and to solve the "the belt and road initiative" international commercial disputes, the International Commercial Court of the Supreme People's Court, which is located in Shenzhen, Guangdong Province (the first international commercial court) and Xi' an, Shaanxi Province was establishmented. On October 18, 2016, "Beijing Rongshang the belt and road initiative Legal and Commercial Service Center and the belt and road initiative International Commercial Mediation Center" was established. The center aims to solve international commercial or economic and trade disputes in the belt and road initiative through mediation, and it is an important stage for exerting "Chinese experience" and flexibly resolving economic and trade disputes in the belt and road initiative. In addition, a number of "the belt and road initiative" dispute resolution centers are under construction, for example, "the belt and road initiative" International Arbitration Center will be completed in Shanghai

5.2 Signing a Unified Dispute Resolution Agreement.

Many international regional organizations have clearly defined dispute settlement rules and applicable laws, such as the Understanding on Dispute Settlement Rules and Procedures based on the World Trade Organization (WTO) and the Agreement on Dispute Settlement Mechanism of China-ASEAN Comprehensive Economic Cooperation Framework Agreement based on CAFATA. At present, China, Mongolia and Russia have signed the Outline of the Plan for Building China-Mongolia-Russia Economic Corridor in 2016. According to the outline, China, Mongolia and Russia will carry out multi-level and in-depth cooperation in the fields of transportation infrastructure, production capacity and investment cooperation and port construction in the future. However, at present, China, Mongolia and Russia have formed a unified dispute settlement agreement oriented to China-Mongolia-Russia economic and trade cooperation, which has to be said to be a shortcoming.

5.3 Diversified and One-stop Dispute Resolution Procedure.

With the acceleration and frequency of transactions, there are more and more places where domestic and international interests combine and collide, and disputes become more and more extensive. Diversified dispute resolution procedures have become the product of resolving the pressure of dispute resolution at home and abroad and achieving justice. Looking at the various dispute resolution procedures of international regional organizations, the popularity of the comprehensive model covering political diplomacy and judicial factors is closely related to its diversified dispute resolution procedures. In addition to coping with the pressure of dispute resolution, there are two reasons why China-Mongolia-Russia economic and trade cooperation dispute resolution procedure adopts a diversified comprehensive model: First, it meets the diversified dispute resolution needs of China-Mongolia-Russia economic and trade cooperation. As mentioned earlier, in a broad sense, international economic and trade cooperation disputes include ordinary commercial disputes between enterprises and enterprises or individuals, international trade disputes between countries, and investment disputes between enterprises and host countries. The different subjects and types of the above disputes greatly increase the difficulty of resolving disputes in economic and trade cooperation, and it is inevitable to construct diversified dispute resolution procedures to meet different dispute resolution needs; The second is to improve the effectiveness of dispute resolution procedures in China-Mongolia-Russia economic and trade cooperation. The diversified dispute resolution procedure of "soft and hard combination" can not only meet different dispute resolution needs, but also integrate the soft model (consultation, negotiation, mediation) based on "consensus" and "tolerance" with the hard model (arbitration, litigation) based on "rigidity" and "justice" to jointly expand the justice basis of China-Mongolia-Russia economic and trade cooperation dispute resolution procedure, enhance the effectiveness of dispute resolution procedure and boost China and Mongolia.

5.4 The Perfect Assistance System

The First, the treaty of assistance should be refined. Take the Treaty on Judicial Assistance in Civil and Criminal Matters between the People's Republic of China and Mongolia as an example. Although the law stipulates that China and Mongolia can exchange legal information, it does not specify specific procedures. In practice, many people will still choose other ways to find out legal information. It is the basic basis for strengthening judicial assistance between China, Mongolia and Russia to sign a more detailed judicial assistance treaty matching with the dispute resolution mechanism of economic and trade cooperation between China, Mongolia and Russia. The second, set up assistance centers. Because of the importance of assistance system, special foreign law identification centers have been set up in Chongqing, Shanghai and other places, which will provide legal application support for the smooth settlement of disputes in international economic and trade cooperation. In order to better cooperate with the implementation of the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation, a judicial assistance center can be set up under the China-Mongolia-Russia economic and trade cooperation resolution institution to provide institutional support for simplifying assistance procedures and streamlining assistance procedures. The third, enrich the means of assistance. Abundant assistance means are the basic guarantee of assistance efficiency. In the future, we can try to use information technology and Internet technology to improve the convenience and mutual assistance in document delivery, investigation and evidence collection, legal identification, judgment enforcement, etc., and provide formal support for the dispute resolution mechanism of China-Mongolia-Russia economic and trade cooperation.

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School Bullying Among Teen Students: Its Causes and Methods of Modification from Public School Teachers' Perspectives at Lewa Al Jamea Directorate of Education in Jordan

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Abstract

This study aims to identify school bullying among teen students, its causes, and modification methods from public schools' teachers in the University Directorate of Education, Jordan. The study sample consists of (2128) male and female teachers selected by the stratified random sampling method. Moreover, a descriptive survey approach has been utilized in this study. Results indicated that the means of bullying modification methods and their causes came at the medium level on the tool as a whole. There were statistically significant differences in the bullying modification scale and its causes attributed to the variable of gender and favored female participants. The results also indicated statistically significant differences on the bullying modification scale and its causes that are attributed to the variable of educational qualification in favor of higher studies, in addition to statistically significant differences on the bullying modification scale and its causes that are attributed to the variable of years of experience in favor of those with experience of more than ten (10) years.

Keywords: bullying, teen students, public schools teachers, abuse

1. Introduction

Interest in studying bullying stems from the destructive effects of this phenomenon (Smith, 2000) as it is a general phenomenon practiced by individuals with various forms and methods and emerges when the appropriate conditions are available (Abu-Addayyar, 2012). The problem of bullying became a serious problem in schools, especially in schoolyards, corridors, classrooms, departures, and others (Bidwell, 1997). So (Abu Ghazal, 2009). indicates that the bullying problem negatively affects the school environment and the students' personal, emotional, and behavioral development, and in the same vein (Alsoufi & Almalikim, 2012). state that school bullying is a form of aggression that occurs when a child is continuously exposed to negative behavior that causes him/her pain. Bullying comes in various forms, such as physical, verbal, sexual, or social (Schuiz et al., 2012). Therefore, the causes of bullying and its treatment methods should be identified to stop this dangerous phenomenon, which leads to negative effects on students and their parents. Hence, it is vital to spread awareness among school principals, administrators, teachers, and parents regarding dealing with bullies and addressing this phenomenon to reduce its spread within the education sector.

1.1 Implications of the Study

The importance of current school study.

1-Teachers and principals benefit by recognizing the reasons and ways of dealing with bullying.

2-Guidance, supervisors, and interested people benefit by preparing guiding programs to decrease the phenomena

3-It paves the way to increase researches to make them wider.

1.2 Objectives of the Study

This study leads to:

1-Recognizing the bullying phenomena among teenage students from the teacher's point of view.

2-Recognizing the reasons for bullying among teenage students.

3-Providing recommendations which help to minimize the bullying phenomena among students.

1.3 Statement of the Problem

Causes of bullying stemmed from self and familial factors related to the student's school environment (Ghouli & Al-I'kili, 2018). This phenomenon's negative effects differ at both the psychological and social levels for the bullying person. The victim, as the bullying, exhibits several psychological disorders characterized by aggressive behavior, anti-behavior against social values and traditions, poor social harmony, and adjustment (Albahhas, 2012). A study conducted by the National Center for Child Health and Human Resources Development indicated that more than one million American school students suffer from bullying, and more than 160,000 students run away from schools because of bullying (Bahshawi & Hassan, 2015).

The researcher believes that the problem of school bullying is among the problems that cause psychological and physical harm for the bullied student, as the presence of bullying within school hinders the learning process among students and leads to psychological and physical harm, and creates issues and disturbances for both the bullied and his/her parents. Thus, the factors and causes for the occurrence of bullying behavior should be identified to stop its spread and reduce its risks within the school environment. The researcher also sees that bullying behavior has become a phenomenon that threatens school safety and affects students at all levels, including the psychological, social, and emotional aspects, so the causes and effects of this phenomenon should be addressed to stop its spread among teen students.

1.4 Research Questions

This study attempts to answer the following research questions:

1- What are the causes of school bullying from teachers' perspectives?

2- What are the methods of school bullying modification from teachers' perspectives?

3- Are there statistically significant differences at the value (α= 0.05) in teachers' perspectives about bullying causes and modification methods based on the variables of gender, educational qualification, and years of experience?

1.5 Limitations of the Study

1-Subjective limits: Bullying phenomena among the school students.

2-Location: Government schools (capital state/ Amman).

3-People: teachers in the capital state schools

4-Timing: Second term 2019/2020

1.6 Significance of the Study

This study's significance lies in that it addresses school bullying among teen students and attempts to offer a source for excluding this dangerous phenomenon from schools. Moreover, it will represent a reference for researchers to expand the topic and address it about other variables and different age groups of students.

2. Literature Review

Bullying is a form of violence, abuse, and harm directed from a person or a group of people towards another person (Fikri & Ali, 2015). (Stanford & Schulz, 2002). emphasize that bullying is the frequent exposure of an individual to a negative behavior from one or more parties, and is intentional and causes harm for the victim (Alsobhiyeen & Alqdah, 2015). and educational bodies should draw plans to limit the spread of the bullying phenomenon through increasing students' and parents' awareness regarding the concept of bullying, its causes, and how to address and treat it (Alyafi'I, 2018).

Bu-Nab (2017) states that among the causes of the behavior of students bullies are: 1- Familial causes: as a student who witnesses and sees violent acts at home tends to be more violent at school, 2- Personal causes: bullying may be due to feeling bored or the lack for awareness about its dangers to others or due to anxiety, unhappiness at home, or due to being a victim of bullying before, 3- Individual's psyche related causes: based on feelings, emotions, instincts, anxiety, stress, and frustration; and 4- School related causes: the various changes, the lack for clarity of instructions and systems, and the crowded classrooms, all of this stimulates the students' bullying behavior.

Of the methods that limit and reduce the bullying behavior phenomenon (Bilmahi, 2017). follows up the behaviors of hostiles and their victims at school and asks parents to observe their behaviors at home and during and after therapy. The school counselor also has a significant role in the therapy and in providing a safe familial environment and strengthening the relationship between the children and their parents by continuously providing support, discussion, and communication with children and by encouraging them to share their problems with their parents, besides, helping the bullied children to gain self-confidence at various life aspects, not forgetting the teachers' role in offering flexibility and non-authoritarian personality at the classroom.

2.1 Early Studies

Al-Omari (2019) investigated the school bullying problem among elementary-level students on a sample of 14 principals, 10 teachers, and 36 supervisors who were randomly selected, and the results indicated that school bullying among elementary-level students came at a high level, and the causes of school bullying among them came at a high level, too. Also, results indicated statistically significant differences for school bullying among elementary level students, preventing the problem of bullying and treating it. These differences are attributed to the variables of age and parents' job position.

The study of Lisa, De. Luce et al. (2019). investigated whether the correlation amongst teachers' (Such as efficiency, job satisfaction, and self-efficiency) limits school bullying. Results indicated that teachers' efficiency does limit school bullying and also reduces bullying among students.

Ken Rugb (2018) conducted a study to determine the aspects of teachers' belief in agreement or disagreement regarding the school bullying phenomenon. The sample included 451 Australian teachers. Results indicated the agreement of more than 75% of the responses on most of the questions. However, there were notable disagreements in other questions. Many teachers agreed the beliefs were different from the claims offered in the research. The difference in claims is attributed to the general knowledge and the source of information about bullying.

The study Gholi's (2018) aimed to identify the reasons for first intermediate grade students' bullying behavior and its modification methods from male and female teachers' perspectives on a random sample of 84 male and female teachers from Alrafidin Alrahmah intermediate schools. Results indicated various reasons for bullying, including self, familial, school environment, social environment, and media.

Aberrahim (2017) investigated high school principals' role in facing school bullying from teachers' perspectives at Alsharqeyyah governorate. The sample included (473) teachers from technical high schools. Results indicated a weak availability percentage for technical high school principals' role in facing school bullying from teachers' perspective.

The study of Bilmahi's (2017) addressed mitigation methods for teens' bullying from teachers' and supervisors' perspectives on a sample of (120) teachers and supervisors. Results indicated that among the most successful methods to mitigate bullying was to help students become self-independent, which increases self-confidence and helps to avoid teachers' blamed for the student in front of his/her peers, as well as creating a competitive spirit am students.

The study of Alqahtani (2015) aimed to identify the extent of awareness about bullying among elementary level female teachers and the procedures followed to prevent it within public schools in Riyadh city (Kingdom of Saudi Arabia) from their perspective. The study sample included (597) female teachers, and the results indicated their awareness of bullying and its forms and negative effects on the victims.

Alraqqad et al. (2017) studied the effect of school bullying on students' academic achievement from teachers' perspectives in Jordanian schools. The sample of the study included (200) teachers from West Amman region schools. Results indicated that the phenomenon of school bullying exists at all schools, whether public or private. Moreover, the phenomenon of school bullying affects students' academic achievement, whether victims or bullies.

Finally, Salhi et al. (2016) investigated the bullying behavior among students in Iran and teachers' and parents' perspectives in this regard. Four teachers and eight parents of bullies and victims were interviewed. Their view of the phenomenon is seen as a physical and verbal assault and somewhat associated with psychological factors, and they emphasized that the effect of religious beliefs should be taken into account in terms of bullying within the Iranian society due to parents' strictness with their children.

2.2 Population and Sample of the Study

According to the ministry of education, the study population included all public-school teachers in the University Directorate of Education in Amman, Jordan (2128 male and female teachers) during the first semester of the academic year 2019/2020 statics (2019/2020).

A stratified random sample of (289) male and female teachers was selected from this population, representing approximately 13.58% of the original population of the study. The sample was selected based on the individuals' distribution within the original population according to the study variables using the Proportional Allocation for stratified random samples as shown in Table 1 below:

Table 1. Study population and sample distribution

Gender	Experience	Educational Qualification				Total	
		Bachelor		Higher Studies			
		Number	%	Number	%	Number	%
Males	Less than 5 years	21	7.3%	5	1.7%	26	9.0%
	5-10 years	24	8.3%	5	1.7%	29	10.0%
	Above 10 years	20	6.9%	18	6.2%	38	13.2%
	Total	65	22.5%	28	%9.7	93	%32.2
Females	Less than 5 years	26	9.0%	7	2.4%	33	11.4%
	5-10 years	19	6.6%	31	10.7%	50	17.3%
	Above 10 years	65	22.5%	48	16.6%	113	39.1%
	Total	110	38.1%	86	29.7%	196	67.8%
Total		175	60.6%	114	39.4%	289	100%

3. Study Instruments

After reviewing the related early literature and early studies such as Gholio AL-I'kili's (2018) study, the researcher developed the Bullying Behavior Modification Methods' Scale, and in its initial version, the tool consisted of (32) items. Also, the researcher developed the Bullying Causes Scale based on reviewing the theoretical literature and the early studies on the topic, such as Sahloul et al. (2018) study and consisted in its initial version of (18) items.

Instruments' Validity:

A- Content Validity for Both Instruments:

To verify the study instruments' face content validity, the researcher subscribed them to 10 faculty expert members specialized in psychological and educational counseling at faculties of education in Jordanian universities. This is for experts to offer their views on the accuracy and correctness of the tools in terms of clarity of items, linguistic formulation, appropriateness for assessing what they are supposed to assess, and items belonging to the dimension they listed within. Experts were asked to add and modify or exclude items as they see appropriate. Their opinions were taken into consideration, and some items were reformulated, and the items agreed upon by less than (80%) of them were excluded. Thus, the tools in their final versions were the scale of bullying behavior modification methods consisted of (32) items and the scale of the bullying causes of (12) items.

B- Instruments' Construct Validity:

To verify the instruments' construct validity, both were applied on a pilot sample of (30) male and female teachers from the population of the study and other than its original sample to identify the internal consistency and the extent of the items' contribution by calculating the Pearson correlations for the items as a whole as shown in Table 2 below:

Table 2. Items correlation coefficients for the dimension score as a whole

Scale	Item no	correlation	Sig	Item no	correlation	Sig	Item no	correlation	Sig
Bullying Behavior Modification Methods	1	*0.534	0.000	12	0.544*	0.000	23	0.613*	0.000
	2	*0.443	0.000	13	0.660*	0.000	24	0.446*	0.000
	3	*0.793	0.000	14	0.615*	0.000	25	0.553*	0.000
	4	*0.522	0.000	15	0.772*	0.000	26	0.703*	0.000
	5	*0.491	0.000	16	0.643*	0.000	27	0.644*	0.000
	6	*0.442	0.000	17	*0.555	0.000	28	0.613*	0.000
	7	*0.423	0.000	18	0.654*	0.000	29	*0.521	0.000
	8	*0.488	0.000	19	0.554*	0.000	30	0.607*	0.000

	9	*0.501	0.000	20	0.774*	0.000	31	0.499*	0.000
	10	*0.504	0.000	21	0.666*	0.000	32	0.564*	0.000
	11	*0.423	0.000	22	0.584*	0.000			
Bullying Causes	1	0.604*	0.000	5	0.643*	0.000	9	0.493*	0.000
	2	0.773*	0.000	6	*0.624	0.000	10	0.541*	0.000
	3	0.793*	0.000	7	0.833*	0.000	11	0.584*	0.000
	4	0.844*	0.000	8	0.544*	0.000	12	0.611*	0.000

*Statistically Significant at (α= 0.05)

From Table 2, it is noticed that the items' correlation coefficients on the bullying behavior modification methods' scale ranged from (0.423) to (0.793), and all values were statistically significant at α = 0.05, which indicated a degree of discrimination validity for the items. It is also noticed that the items' correlation coefficients on the bullying causes' scale ranged from (0.493) to (0.844), and all values were statistically significant at α = 0.05, which indicated a degree of discrimination validity for the items.

Instruments' Reliability:

To verify the instruments' reliability, the instrument's reliability coefficients were calculated using the split-half method and calculating the internal consistency coefficients for items using the Cronbach Alpha, which measures the consistency of participants' responses to the items included in each instrument. Both instruments were applied on a pilot sample of (30) male and female teachers from the study population and other than its original sample, and Table 3 shows each of the internal consistency coefficients based on the Cronbach Alpha and reliability coefficients of half split for the items of both scales.

Table 3. Internal consistency coefficient Cronbach alpha and the split-half reliability coefficient for the two instruments

Items' No	Split-half	Cronbach Alpha	Instrument	
32	0.927	0.944	Bullying behavior modification methods	1
12	0.744	0.813	Bullying causes	2

Table 3 indicates the reliability coefficients based on Cronbach alpha and half split methods for the bullying behavior modification methods' scale where the Cronbach alpha coefficient was (0.944) for the scale as a whole, and the split-half coefficient was (0.927). Table 3 also indicates the reliability coefficients based on Cronbach alpha and half split methods for the bullying causes' scale. Besides, the Cronbach alpha coefficient was (0.813) and the split-half coefficient was (0.744).

4. Results of the Study

First: Results related to the research first question: What are the causes of school bullying from teachers' perspective?

To answer this question, means and standard deviations were calculated together with estimation and ranks of the schools bullying modification score on the items as a whole from public school teachers' perspective in the university province directorate of education. Table 4 shows the results.

Table 4. Means and standard deviations of the schools bullying modification methods' score from the perspective of public-school teachers in the university province directorate of education

No	Item	Mean	SD	Rank	Level
30	The method of continuously encouraging the student to talk about his/her suffering	4.06	1.00	1	High
24	Social and logical persuasion method	3.88	1.05	2	High
25	Using tolerance and withdrawing revenge from others	3.85	1.05	3	High
27	Using the problem-solving method	3.79	1.05	4	High
26	Method of training in self and social skills	3.76	1.05	5	High
11	The method of self-affirmation and self-education training	3.75	0.99	6	High
13	The method of firmness, application of the school system, and the issuance of deterrent penalties	3.73	0.98	7	High
29	The method of learning the skills of peaceful coexistence with others	3.73	1.10	7	High

1	Using the verbal confrontation method	3.70	0.96	8	High
8	Using the method of integration and interaction with others	3.67	1.07	9	High
31	The method of encouraging students to take their rights through dialogue	3.67	1.05	9	High
7	The method of directly correcting mistakes	3.66	1.10	10	Medium
6	The method of psychological, school, and familial support	3.63	1.10	11	Medium
28	The method of encouragement and self-confidence enhancement	3.63	1.21	11	Medium
2	Method of effective participation of the parents of the bullies in finding solutions	3.60	0.95	12	Medium
5	Behavioral contracting style and structured reinforcement method	3.60	1.08	12	Medium
3	Periodic instruction method within the classroom	3.58	0.94	13	Medium
32	Using the method of avoiding removal and isolation	3.57	1.06	14	Medium
10	method of discussion and open dialogue	3.56	1.08	15	Medium
23	The method of teaching the bullying student to ask for help from the educational counselor	3.56	1.06	15	Medium
9	Using a preventive school program that reduces bullying behavior	3.54	1.01	16	Medium
19	Using intermittent and continuous reinforcement schedules	3.52	1.12	17	Medium
4	Using the method of praising the student in front of peers	3.47	1.09	18	Medium
14	The method of school interest in the bullying student and his sense of his value	3.44	1.05	19	Medium
18	Using a calming and self-reassuring technique	3.44	1.09	19	Medium
20	Counseling and advising method	3.44	1.07	19	Medium
22	The method of stopping the irrational thoughts of the bullying student immediately	3.38	1.05	20	Medium
17	The method of teaching the bullying student to accept criticism from others	3.34	1.09	21	Medium
21	A method based on understanding and responding to the needs of peers	3.33	1.07	22	Medium
15	Using the instant reward method	3.29	1.09	23	Medium
16	The method of teaching the bullying student the sense of psychological security skills	3.25	1.10	24	Medium
12	The method of training the bullying student to take personal responsibility	3.23	1.12	25	Medium
	Total	3.58	0.91		Medium

Table 4 shows that the means of the score of the school bullying behavior modification methods' scale from teachers' perspective in the university province directorate of education schools ranged from (3.23) to (4.06) at a level from medium to high of estimation score on the items, for the instrument as a whole, the mean was (3.58) and the standard deviation reached (0.91) at a medium level.

In the first rank came the item number (30)," The method of continuously encouraging the student to talk about his/her suffering" at a high level with a mean of (4.06), followed by the item number (24)" Social and logical persuasion method" with a mean of (3.88) at a high level, too. Finally came item number (12), "The method of training the bullying student to take personal responsibility," with a mean of (3.23) at medium level.

Second: Results related to the research second question: What are school bullying modification methods from teachers' perspective?

To answer this question, means and standard deviations were calculated, estimated, and ranks of the school bullying cause' score on the items as a whole from public schools’ teachers' perspective in the university province directorate of education. Table 5 shows the results.

Table 5. Means and standard deviations of the bullying causes’ score on the items as a whole from public schools’ teachers in the university province directorate of education

No	Item	Mean	SD	Rank	Level
10	The psychological and emotional state of the bullying student has a role in increasing this behavior	3.68	0.98	1	High
8	Media such as television and the Internet have a role in increasing students' bullying behavior	3.65	1.06	2	Medium

5	School can affect students' behavior	3.56	1.13	3	Medium
6	Bullying of some students arises from the lack of clarity of school regulations and instructions	3.55	0.97	4	Medium
3	The student's upbringing style has a role in the emergence of this behavior	3.54	1.08	5	Medium
1	Family breakdown has a great role in increasing the aggressive behavior of a bullying student	3.53	1.06	6	Medium
2	Parents' educational and cultural level has a role in students' bullying	3.48	1.07	7	Medium
7	Bullying of some students arises from a weak relationship between the school and the family	3.43	1.07	8	Medium
11	The student bullying because he/she was a victim of bullying before	3.42	1.08	9	Medium
4	The economic situation is one of the factors that push the student to bully	3.38	1.16	10	Medium
12	The negative influence of peers plays a role in the emergence of this behavior	3.36	1.05	11	Medium
9	Bullying student has a strong personality	3.26	1.09	12	Medium
	Total	3.49	0.91		Medium

Table 5 shows that means of the bullying causes scale from public school teachers' perspective in the university province directorate of education ranged between (3.26) and (3.68) for the items from high to medium level, while the total mean for the scale as a whole was (3.49) with a standard deviation of (0.91) at a medium level. The 10th item, "The psychological and emotional state of the bullying student, has a role in increasing this behavior, "first with a mean of (3.68) a high level. The 8th item followed this, "Media such as television and the Internet have a role in increasing students' bullying behavior," which emerged with a mean of (3.65) at a medium level. And finally came the 9th item, "Bullying student has a strong personality," with a mean of (3.26) at a medium level.

Third: Results related to the research third question: Are there statistically significant differences at the value (α= 0.05) from teachers' perspectives about bullying causes and its modification methods based on the variables of gender, educational qualification, and years of experience?

To answer this question, means and standard deviations for the participants' responses on the bullying modification methods' scale and the bullying causes' scale were calculated based on the study variables. To explain the statistical differences between the means, the t-test of independent samples was used with the gender, educational qualification variables, and the One-Way ANOVA was used with the experience variable as shown in the tables below.

First: Gender

Table 6. Means, standard deviations, and the t-test for the effect of gender on the causes of bullying and its modification methods from public schools teachers' perspective

Scale	Gender	Number	Mean	SD	t-value	Freedom scores	Sig
Bullying modification methods	Male	93	3.30	0.93	3.741	287	0.000
	Female	196	3.72	0.87			
Bullying causes	Male	93	3.23	0.89	3.304	287	0.001
	Female	196	3.61	0.90			

Table 6 indicates statistically significant differences at the value (α = 0.05) between participants estimations' means on the scale of bullying behavior modification methods as a whole from public schools teachers' perspective in the university province directorate of education. Those are attributed to the variable of gender in favor of female participants where the value of the t-test was (3.741) on the scale as a whole with a significance of (0.000), and this is a statistically significant value at (α = 0.05).

Table 6 also indicates statistically significant differences at the value (α = 0.05) between participants estimations' means on the scale of bullying causes as a whole from public school teachers' perspective in the university province directorate of education that is attributed to the variable of gender in favor of female participants where the value of the t-test was (3.304) on the scale as a whole with a significance of (0.001) and this is a statistically significant value at (α = 0.05).

Second: Educational Qualification

Table 7. Means, standard deviations, and the t-test for the effect of the educational qualification on the causes of bullying and its modification methods from public school teachers' perspective

	Scale	Qualification	Number	Mean	SD	t-value	Freedom scores	Sig
1	Bullying modification methods	Bachelor	175	3.19	0.93	10.563	287	0.000
		Higher Studies	114	4.80	0.87			
2	Bullying causes	Bachelor	175	3.10	0.89	10.257	287	0.000
		Higher Studies	114	4.07	0.90			

Table 7 indicates statistically significant differences at the value ($\alpha = 0.05$) between participants estimations' means on the scale of bullying behavior modification methods as a whole from public school teachers' perspective in the university province directorate of education that is attributed to the variable of educational qualification in favor of higher studies where the value of the t-test was (10.563) on the scale as a whole with a significance of (0.000), and this is a statistically significant value at ($\alpha = 0.05$).

Table 7 also indicates statistically significant differences at the value ($\alpha = 0.05$) between participants estimations' means on the scale of bullying causes as a whole from public school teachers' perspective in the university province directorate of education that is attributed to the variable of educational qualification in favor of higher studies where the value of the t-test was (10.257) on the scale as a whole with a significance of (0.000), and this is a statistically significant value at ($\alpha = 0.05$).

Third: Experience Years

Table 8. Means and standard deviations of the effect of experience on the causes of bullying and its modification methods from public school teachers' perspective

Scale	Experience	Number	Mean	SD
Bullying modification methods	Less than 5 years	59	2.88	1.09
	5 to less than 10 years	79	3.72	0.84
	10 years and above	151	3.78	0.74
	Total	289	3.58	0.91
Bullying causes	Less than 5 years	59	2.79	1.08
	5 to less than 10 years	79	3.65	0.84
	10 years and above	151	3.66	0.74
	Total	289	3.49	0.91

Table 8 indicates apparent differences between the means on the bullying behavior modification methods' scale from public school teachers' perspective in the university province directorate of education based on the variable of experience on each dimension and the tool as a whole.

To determine the statistical differences between the means, the One-Way ANOVA was used to identify the extent of the existence of statistically significant differences in participants' responses as shown in Table 9 below:

Table 9. One Way ANOVA for the effect of experience on the causes of bullying and its modification methods from public school teachers' perspective

Scale	Variance source	Squares' sum	Freedom scores	Squares' mean	F Value	Sig
Bullying modification methods	Within groups	36.448	2	18.224	25.537	*.000
	Among groups	204.102	286	.714		
	Total	240.550	288			
Bullying causes	Within groups	35.480	2	17.740	24.754	*.000
	Among groups	204.960	286	.717		
	Total	240.440	288			

*Statistically Significant at (α= 0.05)

Table 9 indicates statistically significant differences at the (α= 0.05) value between the participants' estimations' means on the scale of bullying behavior modification methods that are attributed to the variable of experience with an F value of (24.754) on the scale as a whole and a significance of (0.000) which is a statistically significant one at the (α= 0.05) value.

The table also indicates statically significant differences at the (α= 0.05) value between the participants' estimations' means on the scale of bullying causes that are attributed to the variable of experience with an F value of (25.537) on the scale as a whole and a significance of (0.000) which is a statistically significant one at the (α= 0.05) value.

To determine the statistically significant differences' locations based on the experience variable, post comparisons based on the Scheffe test were used as shown in Table 10 below:

Table 10. Post comparisons results of the Scheffe test for the experience variable

Scale	Experience years	Mean	Less than 5 years	5 to less than 10 years	10 years and above
Bullying modification methods	Less than 5 years	2.88	-	*.000	*.000
	5 to less than 10 years	3.72		-	.875
	10 years and above	3.78			-
Bullying causes	Less than 5 years	2.79	-	*.000	*.000
	5 to less than 10 years	3.65		-	.996
	10 years and above	3.66			-

*Statistically Significant at (α= 0.05)

Table 10 indicates statistically significant differences at (α= 0.05) between participants estimations' means on the scale of bullying behavior modification methods attributed to the experience variable, and these differences were between those with less than 5 years, those with 5 to less than 10 years, and those with 10 years and above experiences. The differences were in favor of the experiences of 10 years and above.

The table above indicates statistically significant differences at (α= 0.05) between participants' estimations' means on the scale of bullying causes attributed to the experience variable. These differences were between those with less than 5 years, those with 5 to less than 10 years, and those with 10 years and above experiences. The differences were in favor of the experiences of 10 years and above.

5. Discussion of the Results

The study is to recognize school bullying among teenagers. Reasons and modification ways from the side of the teachers. The first questionnaire results showed the statistical average on the bullying modification ways, and its reasons were in an average degree. The second Questionnaire showed statistical differences in bullying for females.

The third Questionnaire showed differences for the scientific qualification of the higher education students and experience years for more than 10 years.

The current study is distinguished from the others in that it studied bullying ways and reasons and recognized the bullying reasons in targeted society. Also, we found that the current study results are adapted with the study of (Al Omary, 2019). from the bullying reasons where the current study result was high and average in some articles, this adaptation is because of the similarity in the study communities' private environment. The study results agreed with the study of (Lisa DeLuca, Analaura, & Ersila, 2019). Which showed the qualification of teachers to minimize school bullying. This agreement goes back to the teachers' availability of awareness and educational sense to decrease and minimize the students' bullying.

Another study result agreed with (ken & right, 2018). which indicates the availability of phenomena among the students, and the current study ensures that the bullying phenomenon is common among the school students. Goal (2018) study meant recognizing the ways and reasons of bullying showed that self and family reasons of bullying showed self and family reasons linked to the student surrounding community environment. This agreement refers to the community similarity where the students live because they have common interests, habits, and traditions. It agreed with Belmndi's (2017) study, which indicates giving the students independence to minimize bullying. This agreement refers to the programs and courses of awareness increase and guidance for the students to minimize bullying.

Al-Gathani (2015) study indicates the availability of bullying understanding in its shapes and effects. The current study agrees with this study that teachers have an awareness degree of bullying reasons because of teachers' experience in dealing with the students. It agreed with Ruyad's (2017) study, which indicates the bullying availability in private and government schools. This agreement comes because the study comes from the same environment where the study happened. It agreed with Salih et al. (2017), which meant recognizing the bullying behavior from the teacher's opinion who ensured the availability of bullying phenomena among students. This study result was disapproved by Abdulrahim (2017), which showed that teachers and principals have a week ability to face bullying, which goes back to the contradiction because they don't know the danger of bullying among students or reasons linked to the surrounding environment and the awareness and cultural degree among the community members. We noticed that the study results agreed with previous studies' results, except the study of Abdul Rahim (2017), which indicates the study result accuracy. Also, it is distinguished by its role to study the result and ways of modification to increase the knowledge of the danger of the phenomena in the communities.

6. Conclusions

1-The reasons and ways of bullying came in average degree among the study group members.

2-Reasons and ways of school bullying were from the side of females.

3-School bullying phenomena are still available in the school environment.

4-The years of experience and scientific qualification for the years help in minimizing that bullying phenomenon.

7. Recommendations

1-Working on increasing the training for teachers and principals in a way to deal with school bullying phenomena.

2-Increasing the guidance programs among students.

3-Preparing school curriculum for the students to be taught in all school stages.

4-Preparing sports gym including all the sports activities in the school.

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Quality of Life Among Multiple Sclerosis Patients in Terms of Mental Health

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Abstract

This study aimed to identify the mental health quality of life among patients with multiple sclerosis in Jordan. Thus, a descriptive quantitative design was used on a total of (N=100) Multiple Sclerosis patients that were randomly selected by using convenience sampling from the Health Insurance Center in the capital Amman, Jordan. Outcome measurement tools were the demographic data form and the Multiple Sclerosis Quality of Life-54 (MSQOL-54) Scale. The demographic data form consisted of questions about: age in years, gender, stage of multiple scleroses, and physical activities. The Multiple Sclerosis Quality of Life-54 (MSQOL-54) consisted of two domains the physical health composite and the mental health composite. In this study the mental health composite were used by the participants. The results revealed that the QOL- Mental Health Composite among patients with multiple sclerosis was 33.9 $\pm$ 33.6. Moreover, there was no significant difference in score for male and females p=.874. In addition, there was no significant difference in QOL mental health scores for the age groups p=.165. Finally, there was a significant difference in scores for participants and non-participants in physical activity p=.000. Accordingly, this research concluded that Multiple sclerosis patients' have a low quality of life in terms of mental health. In addition, practicing physical activities have a positive effect on the quality of mental health among multiple sclerosis patients.

Keywords: mental health, multiple sclerosis, quality of life

1. Introduction

Positive psychology is one of the recent psychological health concepts, which has received the attention of researches as it aims to achieve psychological health in individuals (Slade, 2010). Whereas the quality of life term is considered one of the most important topics in positive psychology fields because individuals face many psychological and social pressures in their life (Keyes et al., 2012). Therefore, the need for the concept of quality became more urgent in both physical and psychological aspects, which led to the interest of specialists in the quality of the life of the individual (Alkhulaifi, 2000).

The quality of life term is considered as a part of the medical terms used recently, whereas, it has been used regularly in the early eighties, it was used with oncology patients when doctors faced the problem of high cost of treating some diseases with the aim of increasing the life expectancy of these patients (Alhams, 2010). The quality of life has made an effective contribution to patient care, and is used to reflect the increasing respect and patient's satisfaction of the provided medical services (Asadi-Lari et al., 2004).

Although scientists differ in defining the quality of life and determining its dimensions, many of them agreed that the quality of life includes functional ability such as activity, psychological health, social harmony, and pathological symptoms and treatment (Kfafi & Ala' Aldeen, 2006). Therefore, psychotherapists must focus in their treatment interventions and programs on the behavioral outcomes associated with these components (Cook et al., 2017).

Where Almarzouqi (2008) pointed out the importance of medical sociology, because when an individual suffers from the disease the quality of his life will be affected, so he feels depression and social isolation as a result of the change in his lifestyle, especially if he feels unable to carry out his daily activities normally. The more the surrounding does not understand the patient's condition, the worse the disease and the greater his suffering (Raune et al., 2004). Here comes the effective role of specialists in psychological and social counselling in improving the quality of the patients' lives to improve their psychological state, control the disease and increase the patient's acceptance of his disease, as well as give him hope in life (Bialuhina et al., 2017). The concept of psychological health is one of the terms that researchers and psychologists are most interested in as it is an important element for individuals, achieving it helps the individual to face different pressures and reach a happy life (Aldahri, 2005).

Among the diseases that a person can have is multiple sclerosis, as it is a chronic immune disease that affects the central nervous system (the brain and spinal cord), where the myelin responsible for transmitting nerve impulses and maintaining the health of nerves disappears (Compston et al., 2006). Nerve signals are very slow, and in the long term, the patient begins to face severe problems related to the functioning of some nerves, such as walking, speaking, muscle control, vision, writing and memory, and this disease often affects the age group between 20-40 years (Noseworthy et al., 2000).

The importance of studying the psychological disorders of multiple sclerosis patients is that the reported completed suicide rates are high, as psychological disorders are the main risk factor for suicide (Stenager et al., 1996), where reviews based on death certificates indicate that the death rate of multiple sclerosis patients due to suicide is 15% (Sadovnick et al., 1991). Through retrospective analyses of completed suicides of Multiple Sclerosis patients, depression is the main factor of suicide (Feinstein, 1997) and the anxiety and self-mutilation connected with suicidal intentions (Korostil & Feinstein, 2007). Social isolation, the history of previous suicide attempts, and recent career decline of the patient are also important determinants of suicide intentions, while the level of neurological disability itself is not a risk factor for suicide (Feinstein, 2002). Therefore, experts agreed that the only step to prevent suicide is to identify and treat the psychological and social disorders of multiple sclerosis patients (Goldman Consensus Group, 2005).

Quality of life is one of the main considerations that should be taken into account in clinical studies for patients with Multiple Sclerosis (Rieckmann et al., 2015). Multiple sclerosis is associated with many psychological and mental disorders that affect the quality of life of patients, as symptoms appear suddenly and with repeated appearances, they reduce patients' abilities and reduce their quality of life (Chwastiak & Ehde, 2007). Therefore, therapists face different challenges in dealing with patients, and due to the interest of specialists in improving the quality of life of patients they used measures related to the quality of life (Nery, 2016). Results revealed that fatigue is the main reason that prevents them from participating in various activities, which in turn leads to a decrease in their quality of life (Nery, 2016).

There are few studies that focused on the quality of life for multiple sclerosis patients in Arab countries for instance; Saudi Arabia, Iran, Khartoum, and Kuwait, which reported the importance of taking into consideration the quality of life of multiple sclerosis patients (Rezapour et al., 2017; Alhazzani et al., 2018; Ibrahim et al., 2019; Alshubaili et al., 2007). Up to the researchers' knowledge, a few studies were conducted to assess the quality of life in general for multiple sclerosis patients in Jordan (Aburub et al., 2020; Hyarat et al., 2019; Al-Sharman et al., 2018). Accordingly, this study aimed to identify the mental health quality of life among patients with multiple sclerosis in Jordan. Consequently, the findings of this study can provide the level of mental health associated with quality of life among multiple sclerosis patients. Furthermore, provide a direction for psychotherapist to identify the factors that negatively affect multiple sclerosis patients' mental health quality of life.

2. Material and Methods

A descriptive quantitative design was used in this study. A total of (N=100) Multiple Sclerosis patients were randomly selected by using convenience sampling from the Health Insurance Center in the capital Amman, Jordan. A self-reported questionnaire was used in this study, the demographic data form and the Multiple Sclerosis Quality of Life-54 (MSQOL-54) Scale. The demographic data form consisted of questions about: age in years, gender, stage of multiple scleroses, and physical activities.

The Multiple Sclerosis Quality of Life-54 (MSQOL-54) Scale consist of 54-item which generates 12 subscales along with two summary scores, and two additional single-item measures. The subscales are: physical function, role limitations-physical, role limitations-emotional, pain, emotional well-being, energy, health perceptions, social function, cognitive function, health distress, overall quality of life, and sexual function. The summary scores are the physical health composite summary and the mental health composite summary. The single item measures are satisfaction with sexual function and change in health. The response scale of the Quality of Life 54 Scale consists of various responses, with minimum response scale (2) and maximum response (10). Two summary scores the physical health and mental health can be derived from a weighted combination of scale scores.

The Multiple Sclerosis Quality of Life-54 (MSQOL-54) was translated to Arabic language using back translation following the WHO guidelines for translation. To ensure validity of the tool, it was judged and reviewed by a (N=5) of academic professors specialist in the subject of study. Cronbach's alpha was used to estimate the reliability of the sample of study. The Cronbach's alpha for the Arabic Multiple Sclerosis Quality of Life (MSQOL-54) was (.997). A pilot study was conducted on (N=10) Multiple Sclerosis patients to ensure content validity.

3. Results

A total of (N=100) multiple sclerosis patients participated in the study. All the participants were categorized under the first stage of multiple sclerosis the relapsing-remitting multiple sclerosis (RRMS) stage. The majority of the sample was females 77%. Nearly two-third of the sample did not participate in any physical activity 74% and only 26% of the sample participated in physical activity. Regarding age in years, more than two third of the sample 67% ranged between 20 to < 30 years and 10% of the sample ranged between 40 to < 50 years. Finally, the results revealed that QOL- Mental Health Composite among patients with multiple sclerosis was 33.9 $\pm$ 33.6. It is present in Table 1.

Table 1. The Number of Individuals, Sum, Mean and Standard deviation for the QOL-Mental Health Composite.

Outcome	N	Sum	M±SD
QOL-Mental Health Composite	100	3397.8	33.978±33.6392

Note. N= Number of Individuals; M= Mean, SD= Standard Deviation.

Independent t-test was conducted to compare the QOL-mental health scores for males and females. There was no significant difference in score for male and females p=.874. It is present in Table 2.

Table 2. Independent t-test for the quality of life in terms of mental health according to gender variable for multiple sclerosis patients

Outcome	Group	N	M±SD	df	t	Sig (2-tailed)
QOL-Mental Health	Male	23	34.959±33.1593	98	.159	.874
	Female	77	33.684±33.9910			

Note. N= Number of Individuals; M= Mean, SD= Standard Deviation, df= degree of freedom, t= t-value, Sig (2tailed)= level of statistically significance at the level of ($\alpha \leq 0.05$).

Moreover, independent t-test was conducted to compare the QOL-mental health scores for participants in physical activity and non-participants in physical activity. There was a significant difference in scores for participants and non-participants in physical activity p=.000. It is present in Table 3.

Table 3. Independent t-test for the quality of life in terms of mental health according to physical activity variable for multiple sclerosis patients

Outcome	Group	N	M±SD	df	t	Sig (2-tailed)
QOL-Mental Health	Participants in physical activity	26	80.696±20.8083	98	14.582	.000
	Non-participants in physical activity	74	17.563±18.3261			

Note. N= Number of Individuals; M= Mean, SD= Standard Deviation, df= degree of freedom, t= t-value, Sig (2tailed)= level of statistically significance at the level of ($\alpha \leq 0.05$).

Finally, a one-way between-groups analysis of variance (ANOVA) was conducted to explore the impact of age in years on the level of QOL mental health. There was no significant difference in QOL mental health scores for the age groups p=.165. It is present it Table 4.

Table 4. ANOVA for the quality of life in terms of mental health according to age in year’s variable for multiple sclerosis patients

QOL- Mental Health		Sum of Squares	Mean Square	df	F	Sig
Age in years	Between Groups	4089.619	2044.810	2	1.838	.165
	Within groups	107938.296	1112.766	97		
	Total	112027.915		99		

Note. df= degree of freedom; F= F-Statistic, Sig= level of statistically significance at the level of ($\alpha \leq 0.05$).

4. Discussion

The results of this study revealed that the quality of life of multiple sclerosis patients in terms of mental health is low, where was below 50. Multiple sclerosis is a disease that is associated with several health complications related to consciousness, memory and mental processes. It affects patient’s mental health negatively, as one of the main causes of neurological disability in youth (Compston & Coles, 2008). Multiple sclerosis impairs the quality of their lives, their psychological symptoms such as depression, anxiety and stress due to the chronic nature of the disease and lack of treatment (Salehpoor et al., 2014). Thus, treating the quality of patients’ mental life is vital in medical care and patient rehabilitation (Patti et al., 2003).

The researchers explain the reason behind mental decline in the quality of life among multiple sclerosis patients was due to fatigue. More than 90% of people with multiple sclerosis suffer from fatigue (Lauren & Krupp, 2010). A study conducted in Jordan consisted of 80 multiple sclerosis patients indicated that all of the study sample have suffered from fatigue (Abu Maloh & Alnahar, 2020). Hence, patients’ life satisfaction depends on their evaluation of their quality of life, where the most important is their ability to meet their needs and requirements. The fatigue that is associated with multiple sclerosis plays a prominent role in changing the quality of life of patients, as it negatively affects their daily practices and their ability to cope with other symptoms (Lauren & Krupp. 2010). Furthermore, fatigue was found to be the main cause for profound social and functional life of patients with multiple sclerosis (Hemmett et al., 2004). A study indicated a correlation between fatigue associated with multiple sclerosis, disease severity, and quality of life for MS patients (Khalil et al., 2019).

The results of our study revealed that the mental health quality of life for multiple sclerosis patients was 33.9 $\pm$ 33.6. Some studies have shown the quality of life for multiple sclerosis patients in terms of mental health, one study revealed results indicated that the quality of life for multiple sclerosis patients in terms of mental health was 64.8 $\pm$ 21.0 (Benedicta et al., 2005). Another study, reported that the quality of life for multiple sclerosis patients in terms of mental health was 59.5 $\pm$ 21.4 (Rezapour et al., 2017). Finally, a study conducted in Al-Khartoum showed that the quality of life for multiple sclerosis patients in terms of mental health was 61.2 $\pm$ 22.4 (Ibrahim et al., 2019).

The current study results also revealed a non- significant difference in the quality of life of multiple sclerosis patients in terms of mental health between males and females This result complies with some studies where the results showed there were no significant difference in the quality of life for multiple sclerosis patients in terms of mental health between male and female (Idiman et al., 2006; Albuquerquea et al., 2015; Rezapour et al., 2017; Janardhan & Bakshi, 2002). On the other hand, one study contradicted the results which showed that the quality of life among females with multiple sclerosis is lower than among males (Sahebalzamani et al., 2012). Although, the incidence rate of this disease is higher among females (Pugliatti et al., 2006). However, multiple sclerosis is one of the mysterious diseases, as the cause of the disease and its treatment have not discovered yet. Multiple sclerosis is a chronic autoimmune disease that destroys nerves and melanin, the cause of the disease is unknown (Mold et al., 2018). Having multiple sclerosis is a real crisis for the patient as a result of the disability and restrictions associated with the disease, which negatively affects the quality of patient’s mental health for male and female. Multiple sclerosis has no cure and negatively affects the patients' emotional, social and economic health (Browne et al., 2014).

The results of our study showed that there were no significant differences in the quality of life for patients with multiple sclerosis in terms of mental health related to age. Some studies supported our results, where they showed no significant differences in the quality of life for multiple sclerosis patients according to age (Idiman et al., 2006; Janardhan & Bakshi, 2002). In contrast, some studies contradicted our results which their results indicated a significant difference in the quality of life for multiple sclerosis patients according to age for the group of less than 40 years old (Ibrahim et al., 2019; Salehpoor et al., 2012.).

The researchers attribute this to the fact that the entire study sample was afflicted with the first type of MS, which is “Relapsing-Remitting Multiple Sclerosis”, where the patient relapses and the symptoms appear for a while, and then the body begins the repair phase. Multiple sclerosis has multiple forms with the present of new symptoms appearing in the form of sporadic attacks, and between attacks the symptoms may disappear completely or accumulate over time especially with the progression of the disease (Jalali-Farahani et al., 2017). Hence, the medicine provided for this type in particular reduces the number of attacks and scars in the brain; therefore the pathological effects and the severity of the symptoms are converging. There is a group of drugs for the treatment of the first type of multiple sclerosis the “Relapsing-Remitting Multiple Sclerosis” which works by reducing the number of attacks and scars in the brain (Food and Drug Administration [FDA], 2011). Among these drugs AVONEX, BETA SERON, EXTAVIA, REBIF and GLATIRAMER ACETATE which are given by injection, as they are considered to be the primary treatment (FDA, 2011). Experts recommend these drugs upon diagnosis of the disease, while additional treatment includes other drugs like (NATALIZUMB and MITOXANTRONE) (FDA, 2011).

The results of this study showed that the mental health quality of life for multiple sclerosis patients is higher for patients who engage in physical activities. Some studies supported our results; one study reported that the quality of life for multiple sclerosis patients practicing physical activities is better than the non- practicing physical activity patients (Stroud & Minahan, 2009). Another study reported that physical activities helped in reducing fatigue among multiple sclerosis patients (Abu Maloh & Alnahar, 2020). In contrast, one study contradicted our results which their results indicated no significant difference in the quality of life for multiple sclerosis patients between practitioners and non-practitioners of water exercise (Bahari et al., 2015).

Due to their fear of exacerbating of the disease symptoms, patients with multiple sclerosis reduce their activities most often (Dalgas et al., 2008). But this in turn will aggravate their disability, lack of fitness, muscle weakness, walking deformities, and a decrease in their quality of life (Pilutti et al., 2014). However, the practice of physical activities is considered to be an important therapy for most multiple sclerosis patients as it relieves symptoms associated with the disease which contributes to enhance their quality of mental health. Physical activities should be considered as a safe and effective way to rehabilitate patients with multiple sclerosis, an individualized program supervised by a specialist can improve their fitness, modifiable disabilities, and their quality of life (Halabchi et al., 2017).

Moreover, low to moderate intensity of aerobic activities leads to the improvements in mood and depression measures among multiple sclerosis patients (Sandoval, 2013). Furthermore, the practice of physical activities also delays the onset of fatigue associated with multiple sclerosis through the development of patients' fitness, which gives them better opportunities to practice their daily activities. A study conducted in Jordan revealed that there is a positive effect of physical activities on fatigue associated with multiple sclerosis (Abu Maloh & Alnahar, 2020). Practicing the appropriate physical activities has several benefits for MS patients, of which; increasing muscle strength, improving aerobic capacity, reducing fatigue, and improving perception and cognition, balance and the patients quality of life (Motl & Sandroff, 2015).

5. Conclusion

Multiple sclerosis patients’ have a low quality of life in terms of mental health. Moreover, there were no significant differences in the mental health of multiple sclerosis patients according to the gender and age in year’s variables. In addition, practicing physical activities have a positive effect on the quality of mental health among multiple sclerosis patients.

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