Epistemological approach to peer ostracism and knowledge hiding in HEIs in China: Does altruism mitigate the competitive spirit of peers towards international students?

Zhe Peng [1]*
Criminal Justice school, Zhongnan University of Economics and Law, Wu Han 430000, China
pz13995903069@163.com

Menghuan Bai [2]
School of Marxism, Hankou University, Wu Han 430000, China

Abstract: Research has focused on knowledge sharing in educational institutions; however, limited attention has been given to knowledge hiding in higher education institutions (HEIs) in terms of academic competition. The present study proposed to evaluate the role of peer ostracism and knowledge hiding in Chinese higher education institutions. The research examined the role of altruism in moderating competitiveness toward international students. Data was collected from Chinese students through a survey-based approach. A sample of 350 respondents was evaluated by applying statistical techniques, including structural equation modelling. The statistical analysis revealed that peer ostracism has a significant influence on academic competition in higher education institutions. However, it was found that knowledge hiding did not have a significant effect on academic competition. In terms of the indirect effect, altruism was revealed to have no significant moderation between the dependent and independent variables. The study intends to contribute to the existing literature. In addition, the study provides practical implications for higher education institutions and policymakers for promoting an environment of inclusivity and knowledge sharing. The study concludes by addressing the limitations and offering recommendations for future research.
Keywords: Academic competition, Altruism, Higher education, Knowledge hiding, Peer ostracism, China

1. INTRODUCTION

China has increased its attraction to international students during the past ten years, and as a result, it has surpassed all other countries as the source of international students worldwide. Studies on their experiences have increased as a result of the expanding numbers and diversity of international students attending Chinese higher education institutions. A preliminary interview survey indicates that obtaining a degree that would

lead to work is the main reason foreign students chose China (Wu et al., 2015). Ostracism is a widespread social phenomenon that includes separating a person from social relationships, such as rejection, abandonment, or social exclusion. On the other hand, the notion of workplace ostracism refers to a worker's experience of being disregarded, excluded, or ignored by their coworkers or groups at work. Workplace ostracism can occur when coworkers shun the targeted employee or forbid them from participating in social activities like going out for coffee breaks. Recent research has emphasized the detrimental impacts of workplace exclusion on an employee's behavior, attitudes, and productivity (H. Zhang et al., 2022). Racial discrimination, language problems, housing issues, homesickness, food constraints, financial stress, and feelings of isolation are just a few of the difficulties that international students face when adjusting to life in a new society. The fact that many young adults establish their emotional and intellectual independence in their late teens might also complicate matters. International students thus frequently experience culture shock, which is characterized by feelings of powerlessness, perplexity, social alienation, and loneliness (Bailey, 2006). When adjusting to a new culture, international students face a variety of difficulties, including racial prejudice, language limitations, trouble locating acceptable accommodation, homesickness, food constraints, financial pressure, and feelings of isolation. The fact that many young individuals develop their emotional and intellectual independence throughout their late teens makes the situation more challenging. International students thus frequently experience culture shock, which is characterized by feelings of powerlessness, perplexity, social isolation, and being alone (Beck et al., 2014). Organizations trying to improve their knowledge management practices face a substantial barrier in the form of knowledge hiding. It is a tough problem to solve since it is difficult to identify its presence and unknown about its possible effects (Abubakar et al., 2019; Donnelly, 2019). However, if people purposefully keep information from others, it can negatively impact the organization's fundamental operations, resulting in delays, blunders, and a lack of creative ideas. As a result, the organization's ability to carry out important duties and enhance its procedures may be seriously jeopardized. When detected, information concealing not only degrades social ties and interpersonal connections but also negatively impacts an individual's or team's performance. Additionally, KH is a moral problem that is quickly contagious (Connelly et al., 2019; Friedrich et al., 2020). This study can aid in determining the elements that contribute to academic competition and how it may influence the learning environment,

students' well-being, and their academic performance. Additionally, examining the moderating impact of altruism on academic competition might offer guidance on how to promote a more encouraging and collaborative learning culture. The results of this study can aid in the creation of practices and policies that support inclusion, equity, and excellence at HEIs, particularly in China, where foreign students have a significant impact on the development of the academic environment. When harmful or unfavorable information is hidden from the recipient, hiding knowledge can occasionally be seen as a positive action. This kind of hiding can improve workplace relationships and support the smooth operation of the company. An illustration of this is when human resources staff hold onto a list of employees who will be let go before the company makes an official announcement. While certain knowledge hiding may benefit peer connections (Connelly & Zweig, 2015). There are numerous schools and institutions where international students can further their studies in each of the 50 US states. They enrich the neighborhoods, institutions, and schools with variety and a global viewpoint. These students improve everyone's academic experience by presenting their distinctive points of view and encouraging respect for cultural diversity. Accepting international students is essential for US colleges because of their favorable effects on the student body as a whole, including academic achievement, cultural interchange, and financial gain (Wu et al., 2015).

2. LITERATURE REVIEW

2.1 Peer Ostracism and Academic Competition

Individuals are impacted by ostracism in various contexts. Be it school, work, or any other place (Horvat & Lewis, 2003). Being ostracized at work is interlinked with job dissatisfaction, increased likelihood to be engaged in unethical behavior as well as increased job turnover. Similarly, threats to belonging can cause poor academic performance, emotional and behavioral problems, and impaired school judgment as mentioned in several research studies. Peer ostracism is generally considered a risk factor for academic competition as it can have a long-term effect that stretches into later in life (Bilal et al., 2021). In terms of higher education institutions and work settings, several examples of ostracism can be observed as they are no exception. Ostracism research has become significant over the last five years. The mistreatments at the workplace are only recognized to be a predictor of all of these outcomes if compared to the prominent mistreatments faced by the higher educational institutions' faculty members (Breidenthal et al., 2020). Academics are known for being caring

professionals whereas higher educational institutions have been well known for the application of an ethical code of conduct. However, HEIs present interpersonal mistreatments but not in evident form (Y. Zhang et al., 2022). To sum up, serious negative and long-lasting effects are demonstrated by threats to belonging. Hence, it can be concluded:

H1: Peer Ostracism increases the academic competition among students.

2.2   Knowledge Hiding and Academic Competition

Students, staff, Alumni, and faculty as members of the campus are generally referred to as universities (Boz Semerci, 2019). Individuals struggle for acceptance instead of getting outcast by other members of their group as has been widely observed other members in their group (Peng et al., 2021). However, ostracism is not only part of everyday life but it has become a normal part of the everyday routine as 2/3 of employees are subject to being ostracized at work (Ghani et al., 2020). This can occur in various forms, out of the loop and linguistic ostracism are the common types that help to be uninformed about the information that is known by others in a mutual way and to be excluded from the groups where a language not understood by all is being spoken by the ones who are present (Hernaus et al., 2019). Moreover, Academic stressor generally conceptualizes workplace ostracism because of its negative effect on work-related behaviors and attitudes and psychological distress (Anand et al., 2022). Ostracism targets usually experience more distress than that nontargets. The behavioral and attitudinal manifestations of strain that result from academic institutions are detrimental to students, peers, and staff of universities (Ruparel & Choubisa, 2020). Workplace ostracism and job-induced intentions are positively linked to each other but Job engagement, as well as satisfaction, have a negative impact on workplace ostracism. Hence, it can be concluded.

H2: Knowledge Hiding has a negative impact on Academic Competition.

2.3   Peer Ostracism, Altruism, and Academic Competition

As stated by victim precipitation theory individuals who are engaged in our civic behaviors do not tend to choose their targets and those individuals are more likely to be targeted who possess specific traits (Wu et al., 2021). According to a few proponents, Ostracism is dependent on the personality traits of the ostracized. Moreover, some inappropriate behaviors or characteristics practiced by these individuals make them a significant part of academic ostracism (Albana & Yeşiltaş, 2022). Individual

differences are usually referred to as altruistic personality which includes kindness, helping, and generosity that affect altruistic behavior (Fatima et al., 2021). Individuals tend to be self-centered and selfish and they don't like to help others as they are low in altruism but as far as highly altruistic individuals are concerned, they tend to be selfless and love to help others (Song & Kim, 2021). This proposition suggests that cooperative individuals are preferred by a group. Thus, this can be suggested that few altruistic behaviors are experienced by individuals who have low altruism and are more likely to be ostracized. Ostracism is influenced by the ostracizer's personality qualities. Furthermore, some of these individuals' incorrect behaviors or features make them a substantial element of academic ostracism (Zou et al., 2022). Individual variations are commonly referred to as altruistic personality, which encompasses traits such as kindness, helping, and giving, all of which influence altruistic behavior. persons with low altruism tend to be self-centered and selfish, and they dislike helping others, whereas highly altruistic persons are unselfish and like helping others. A group prefers cooperative individuals, according to this perspective (Song & Kim, 2021). This suggests that persons with low altruism are more likely to be ostracized and experience less altruistic behaviors in terms of Academic Competition (Cipriani, 2022). Thus, it can be concluded that:

H3: Altruism mediates the relationship between Peer Ostracism and Academic Competition.

2.4 Knowledge Hiding, Altruism, and Academic Competition

When a knowledge provider misleads the knowledge seeker with wrong information or hides knowledge by pretending that they are unaware of the facts is referred to as knowledge hiding (Abdillah et al., 2022). It is a totally different approach to knowledge sharing. However, altruistic leadership generates positive attitudes and behaviors among students and employees. It promotes inventiveness, happiness, and interpersonal humor but it is not clear as not much evidence is available that how Altruistic leadership lessens the detrimental factor of knowledge hiding. Compassion, modesty, respect, empathy, and love are the prime traits of altruistic leaders (He & Wei, 2022). Such leaders tend to pay attention to their subordinate's needs and thoughts by supporting and training them. The emotive experiences of students in higher education institutions are triggered by the leadership approach of their peers and teachers which may elicit some positive emotions among students (He et al., 2021). However, it may assist by helping everyone. A cheerful and comfortable environment which affects

the attitudes of subordinates. Thus, it can be said that altruistic leadership acts as a motivator (Khelladi et al., 2022). Moreover, this fact can prevent knowledge from hiding among students for their own good. Knowledge Hiding is not considered a collection of undesirable attitudes and behaviors and it's an approach usually not designed to harm a company or institution to attain the core objectives (Zutshi et al., 2021). Usually, it is said to be a typical reaction. However, Altruistic leadership is considered a prominent factor that helps students and employees to be passionate by relying on their emotions as well as principles (X. Zhang et al., 2022). Having said that, Altruism is considered to be a very important factor as it instills positive and beneficial behavior among employees such as interpersonal humor, job satisfaction, and innovation. Adding more to it, it is a big question that how negative tendencies are ignored by Altruistic leaders, how academic competition increases because of Knowledge Hiding, and how evils like knowledge hiding occur in such a good environment (Fauzi, 2023). Thus, it can be concluded:

H4: Altruism mediates the relationship between Knowledge Hiding and Academic Competition.
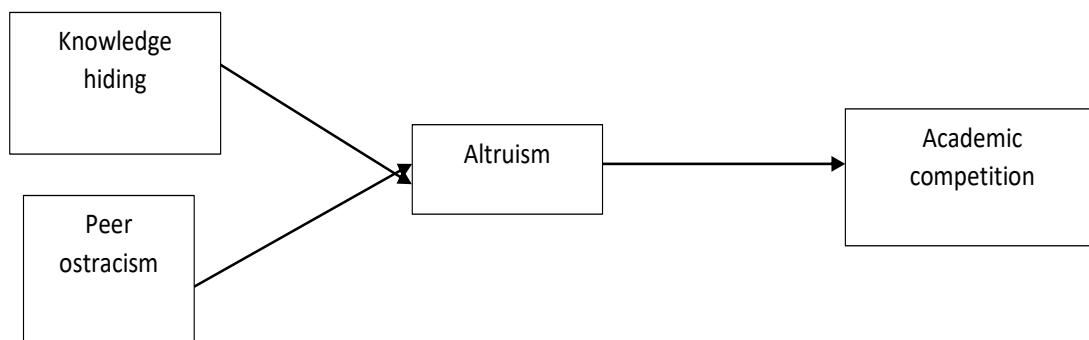
Figure 1

3. METHODS

This section provides detail of the research philosophy, which summarizes the utilized research approaches and techniques and the methods for conducting this study. Furthermore, this section details the procedures for the collection and analysis of data and the target audience. Moreover, this section also provides detail about the adopted measurement scales for each variable.

3.1 Research Philosophy

Past researchers and scholars widely use four research philosophies:

"Pragmatism, positivism, realism and interpretivism research philosophy" (HR & Aithal, 2022). After comparing and contrasting each research philosophy, the researcher has chosen the positivist philosophy for the current investigation because this philosophy aligns with the objectives of the study. According to positivist research philosophy, the nature of reality is objective; thus, it does not depend upon subjective ideas and experiences after individuals (Park et al., 2020).

In addition, the study also involves a cause-effect association which is primarily based on the objectivity of reality; therefore, this philosophy suits the best for the present study.

3.2   Research Method

There are three types of research methods that are widely accepted and used. These are "qualitative research method, quantitative research method and mixed method" (Strijker et al., 2020). In this study, the researcher has realized the quantitative research method. According to L. Haven and Van Grootel (2019), a quantitative research method allows the researcher to collect data in numerical format.

This method of research is an organized phenomenon to explore the collected numerical data by using statistical techniques and tools (Mohajan, 2020). The primary source of the quantitative method is a positivist research paradigm which consists of procedures such as structured protocols, survey questionnaires, and testing a theory (Watson, 2015).

By adopting the quantitative method, the study has yielded reliable and valid results that have the potential to apply to a larger population as well.

3.3   Target Population

As this study aims to analyse the epistemological approach to peer ostracism and knowledge hiding in higher education institutions in China and to explore the mitigating impact of altruism as the competitive spirit of peers toward international students.

Therefore, the most appropriate target audience for the study is the Chinese students of higher educational institutions within China.

3.4   Data Collection

The study collected data by conducting an online survey. The researcher contacted the students via their emails. An initial email was sent to them informing them about the purpose of the study and taking their consent. And the second email was sent to them to gather their responses. The

researcher sent a questionnaire to 400 students out of which 350 were considered for further death analysis.

3.5   Measurements

In this study, the researcher has adopted authentic and valid scales from previous researchers and scholars to measure the observed constructs. The details of the utilized and modified scales to measure the variables are presented in table 1 below.

All these measurement scales are adopted from the studies in which these scales are being utilized already and are also available in the peer articles of the adopted sources:

Table 1

Name of Variable	Nature of Variable	Number of items	Adopted from
Peer Ostracism	independent	7	(Fatima et al., 2021)
Knowledge Hiding	independent	8	(Fatima et al., 2021)
Academic Competition	dependent	5	(Li et al., 2022)
Altruism	moderator	8	(Friedland et al., 2020)

3.6   Data Analysis

To analyse the collected data Amos and SPSS were used. Initially, the researcher has Preliminary analyse the data using SPSS to check the specificity and authenticity of the dataset. After making sure that the data was authentic and accurate, Amos tested the model fitness and formulated the hypothesis of the study.

4.   RESULTS

4.1   Demographic Profile

Out of 350 respondents, 55.1% were male Chinese students whereas 44.9% were female. Respondents shared information regarding their age, and it was revealed that the majority of the students in the sample were between the ages of 24 to 29 (43.7%).

In terms of education, three categories were provided where 53.1% of the students were enrolled in an undergraduate degree followed by postgraduate Chinese students (25.1%).

21.7% of the students were enrolled in a short cycle as shown in Table 2.

Table 2: Demographic profile

	Frequency	Percent
Gender		
Male	193	55.1
Female	157	44.9
Total	350	100.0
Age		
18-23	115	32.9
24-29	153	43.7
30-36	82	23.4
Total	350	100.0
Education		
Enrolled in Short cycle	76	21.7
Enrolled in undergraduate	186	53.1
Enrolled in post-graduate	88	25.1
Total	350	100.0

4.2 Descriptive Statistics

Table 3 confirms that there are no missing values for each construct and mean values for all the variables are above 3. In terms of asymmetry of the data, skewness values were between the specified range of -2 and +2 as previously recommended by scholars (Hair et al., 2010)

Table 3: Descriptive Study

	N	Minimum	Maximum	Mean	SD	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
PO	350	1.00	5.00	3.2486	1.05775	-.381	.130
KH	350	1.00	5.00	3.3079	1.19599	-.298	.130
ALT	350	1.00	5.00	3.2700	.98682	-.144	.130
AC	350	1.00	5.00	3.3143	1.05228	-.062	.130
Valid N (listwise)	350						

PO= Peer ostracism, KH= Knowledge Hiding, ALT= Altruism, AC= Academic competition

For the detection of factors, the researcher checked the suitability and adequacy of the sample. As a rule of thumb, test statistics for KMO must be between the range of 0.6 and 1.0 (Tabachnick et al., 2013).

Table 4 confirms that the sample is adequate with a value of .955. Additionally, the researcher established that the sample has sufficient correlation for carrying out factor analysis as the significance level is below 0.05.

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.955
Bartlett's Test of Sphericity	Approx. Chi-Square	18388.327
	df	435
	Sig.	.000

Table 5 displays the rest after testing the data for common method bias. The standard threshold for Harman's single-factor test is 50%. A value of 53.61% shows that there might be a potential for common method bias.

Table 5: Common Method Bias

Extraction Sums of Squared Loadings		
Total	% of Variance	Cumulative %
16.082	53.606	53.606

4.3   Rotated Component Matrix

Table 6 shows the factor loadings of each construct. As per the requirements, factor loadings must be above 0.4 and there should be no cross-loadings (Li et al., 2020). Therefore, the researcher retained items with factor loadings above the specified benchmark. Secondly, it was ensured that there were no cross-loadings detected. Table 6 certifies that items of each construct are loaded onto their separate column.

Table 6(a): Rotated component matrix

	1	2	3	4
PO1		.811		
PO2		.753		
PO3		.740		
PO4		.765		
PO5		.728		
PO6		.811		
PO7		.805		
KH1	.862			
KH2	.868			
KH3	.873			
KH4	.867			
KH5	.872			
KH6	.869			
KH7	.870			
KH8	.874			
ALT1				.637
ALT2				.641
ALT3				.649
ALT4				.635
ALT5				.622

Table 6(b): Rotated component matrix

	1	2	3	4
ALT6				.867
ALT7				.886
ALT8				.842
AC3			.905	
AC4			.904	
AC5			.898	
AC6			.895	
AC7			.918	

PO= Peer ostracism, KH= Knowledge Hiding, ALT= Altruism, AC= Academic competition

4.4 Convergent & Discriminant Validity

The results in Table 7 allowed the researcher to evaluate convergent validity. Composite reliability (CR) values for all the variables were found to be above the assigned criteria of > 0.7. In addition, AVE values were greater than 0.5; therefore, the researcher concluded that there is no issue of convergent validity. For discriminant validity, it was found that AVE values exceeded MSV has been achieved, except for altruism. In terms of cross-correlation, altruism was also found to have lower cross-correlation compared to own-correlation.

Table 7: Convergent Validity

	CR	AVE	MSV	MaxR(H)	KNHD	PEOR	ACDC	ALTR
KNHD	0.996	0.970	0.621	0.998	0.985			
PEOR	0.946	0.715	0.627	0.963	0.773***	0.846		
ACDC	0.957	0.815	0.101	0.958	0.240***	0.318***	0.903	
ALTR	0.899	0.567	0.627	0.968	0.788***	0.792***	0.230***	0.753

PEOR= Peer ostracism, KNHD= Knowledge Hiding, ALTR= Altruism, ACDC= Academic competition

For further investigation of discriminant validity, the researcher adopted the heterotrait-monotrait (HTMT) technique (Henseler et al., 2015). The condition for this test states that the correlation between two constructs must be below 0.850 (Kline, 2011). Table 8 confirms that there is no issue of discriminant validity in the data.

Table 8: HTMT Analysis

	KNHD	PEOR	ACDC	ALTR
KNHD				
PEOR	0.762			
ACDC	0.235	0.323		
ALTR	0.822	0.773	0.291	

PEOR= Peer ostracism, KNHD= Knowledge Hiding, ALTR= Altruism, ACDC= Academic competition

4.5   Confirmatory Factor Analysis (CFA)

For establishing the fitness and acceptability of the model, CFA was employed. Table 9 validates that all indices have satisfied the criteria and model fitness and reliability was established.

Table 9: Confirmatory Factor Analysis

Indicator	Threshold	Observed
CMIN/df	≤ 3	1.403
IFI	≥ 0.90	.992
GFI	≥ 0.80	.915
CFI	≥ 0.90	.992
RMSEA	≤ 0.08	0.034

χ^2= Chi Square; Df= Degree of freedom; CFI= Comparative Fit Index; RMSEA= Root Mean Square Error of Approximation
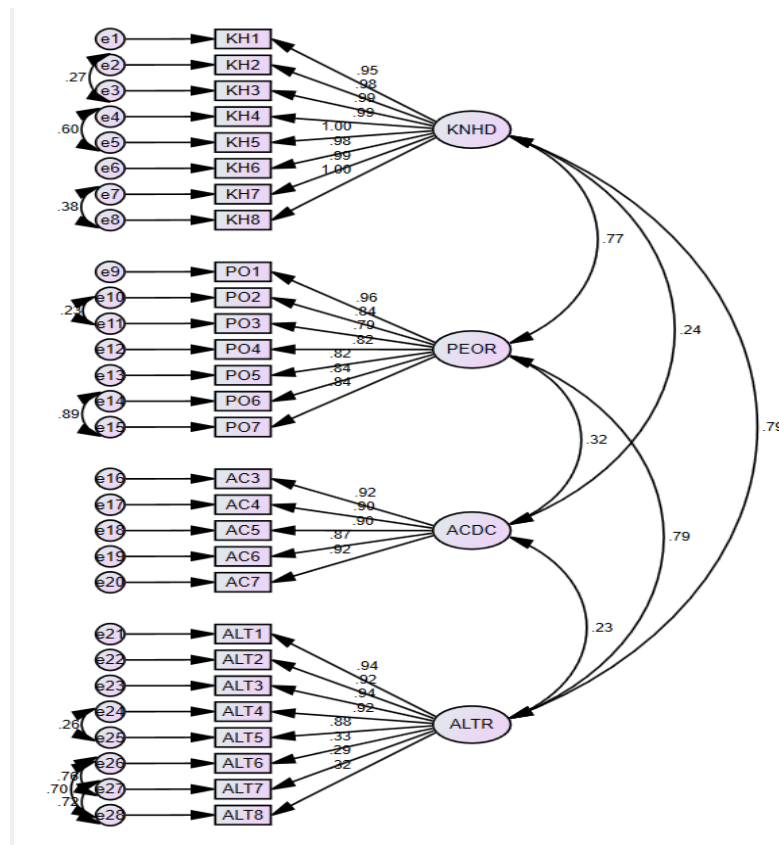
Figure 2: Confirmatory Factor Analysis

4.6   Structural Equation Modeling (SEM)

In the present study, SEM was employed for testing the hypothesis. Table 10 shows that PO positively affects academic competition, and the relationship was revealed to be significant with a p-value of 0.09. In contrast, while KH positively influences AC, a p-value greater than 0.05

resulted in the rejection of the hypothesis.

Table 10: Structural Equation Model

Parameter	Estimate	Lower	Upper	P value
PO → AC	.328	.212	.465	.009
KH → AC	.108	-.025	.244	.151

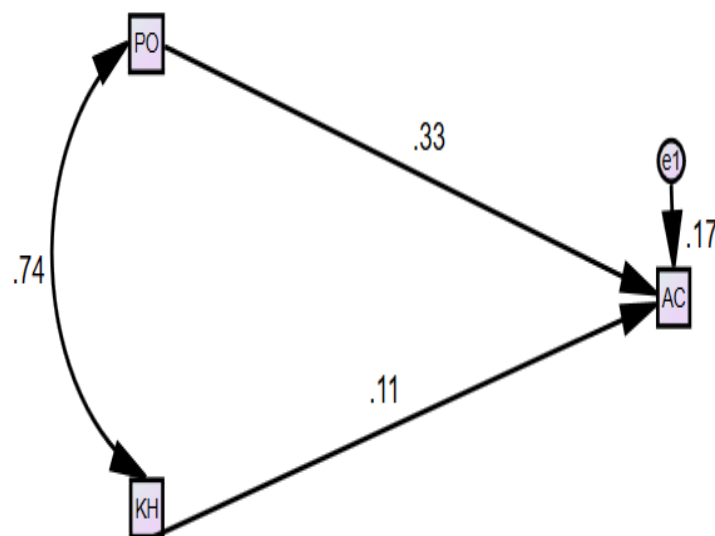*PO= Peer ostracism, KH= Knowledge Hiding, ALT= Altruism, AC= Academic competition*


Figure 3: Structural Equation Modeling

The results for the indirect effects are displayed in Table 11. The moderating impact of altruism between the linkage of AC and PO was found to be insignificant with a p-value of 0.074. Additionally, ALT played no moderating role in the association between KH and AC as the p-value exceeded 0.05.

Table 11: Indirect Effect

| Indirect Path	Standardized Estimate	Lower	Upper	P-Value
ZPO → ZAC	.743	.216	1.141	.038
XPOXALT → ZAC	-.822	-1.589	-.061	.074
ZALT → ZAC	.504	.185	.801	.008
ZKHXALT → ZAC	.325	-.383	1.153	.445
ZKH → ZAC	-.252	-.744	.262	.419

PO= Peer ostracism, KH= Knowledge Hiding, ALT= Altruism, AC= Academic competition

The graphical representation of the moderating impact of altruism is shown in Figures 4 and 5.
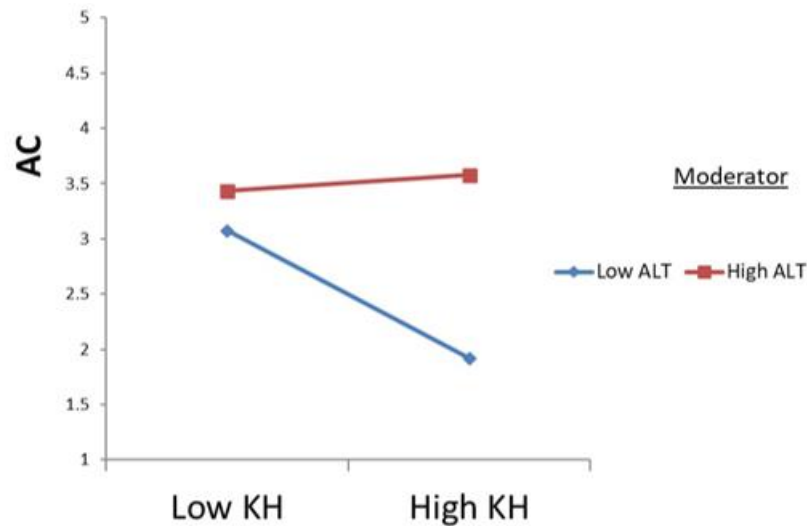
ALT dampens the negative relationship between KH and AC.

Figure 4: Moderating effect of ALT between the association of KH and AC
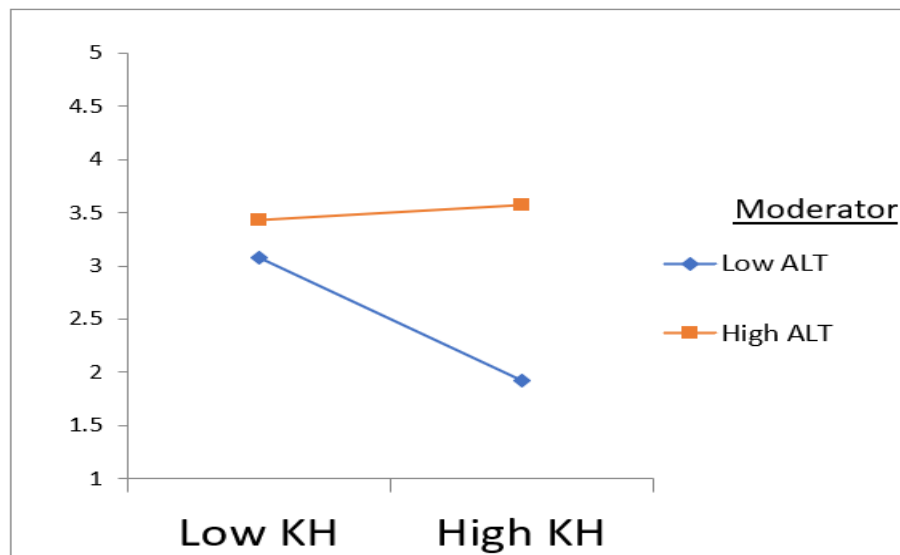
ALT dampens the positive relationship between PO and AC.

Figure 5: Moderating effect of ALT between the association of PO and AC

5. DISCUSSION

The present research has been conducted to analyze peer ostracism and knowledge-hiding practices in HEIs in China. For this purpose, the mitigation capacity of altruism towards the competitive spirit of peers has also been assessed. The review of the literature and the research objectives

lead to the formulation of three hypotheses. After the application of statistical techniques, results were drawn which indicated that peer ostracism significantly impacts academic competition. According to him, peer ostracism directly impacts other persons and makes him feel isolated, avoided, neglected or not being spoken to. Although it is a negative practice and must be discouraged by the authorities of any academic or industrial sector. Peer ostracism results in affecting academic competition. People who have experienced ostracism are more aggressive toward others in general. By affecting peer's need for self-esteem, sense of association, control, and meaningful existence, peer ostracism impacts academic competition (Fatima et al., 2021; Zhao et al., 2016). The second hypothesis is related to the impact of knowledge hiding on academic competition has resulted to be insignificant. Knowledge hiding is a negative behavior and must be discouraged.

When a student hides knowledge from his peers, not only is involved in negative behavior but also become deprived of ideas exchanging and brainstorming. A person keeping knowledge to himself makes no use of his information as long as he shares it with others. At the individual level, knowledge hiding exerts three types of strong impacts including creativity, learning, and individual performance, and contains psychological effects (Ghasemaghaei & Turel, 2021; He et al., 2021). The third and fourth hypothesis has also been resulted as insignificant. Therefore Altruism is an insignificant moderator between peer ostracism, knowledge hiding, and academic competition. According to Shah and Hashmi (2019), organizational culture is a very important element while measuring the negative behavior prevalence in any institute or organization. Therefore, it can be estimated that if the culture of any institute does not allow individuals to hide information from each other and promote knowledge hiding or negative behavior practices such as peer ostracism is not likely to be progressive (Fatima et al., 2023).

Authoritative bodies of schools must be focused on such behaviors as they can exert a potentially adverse impact on the mental and psychological well-being of students. Altruism can be helpful to mitigate the competitive spirit of peers toward international students but only to a certain extent. As results of this research also indicated altruism as an insignificant moderator. This is might be due to the fact that when a person promote some else's welfare even at the risk of himself had to encounter negative consequences and selfish behaviors of others (Mallén et al., 2019). Studies by Ficapal-Cusí et al. (2020) have also indicated that altruistic behavior results in the performance of adolescents in schools, decrease dropouts in schools,

bullying, physical violence, and mental health issues.

6. CONCLUSION

To survive and compete with the rivals in academic competition is the ultimate goal of every student in educational institutes. There are different unpleasant behaviors observed in educational institutes to beat the competition and to stay ahead of peers. Among these behaviors knowledge-hiding practices and peer ostracism is studied in the present research. A quantitative research design was applied to evaluate the relationship between variables. Data were collected from the Chinese students to assess the extent of harmful feelings among them toward the international students. 400 Questionnaires were disbursed among the students, out of which 350 were finalized for data analysis after data cleaning and screening. Results indicated that PO significantly impacts AC whereas KH insignificantly impacts AC. The moderation of ALT is also resulted to be insignificant between PO, KH and AC.

7. RESEARCH IMPLICATIONS

7.1 Theoretical Implications

The present study holds numerous theoretical and practical significance. Firstly the study enhances the growing body of literature regarding the negative educational behaviors of students toward their peers. As currently, research is scarce regarding the assessment of ostracism and knowledge hiding in academic institutes. Theoretical insights into academic competition are also a valuable addition to the literature. As Chinese students are observed to be involved in knowledge-hiding practices towards their peers, so through this study a beneficial addition to the literature can be observed as the study is related to the contemporary and emerging topic of educational institutes in China.

7.2 Practical Implications

The practical significance of the study can also not be denied. The study is a valuable insight for academic institutes of China and HEIs in particular to examine the knowledge hiding or ostracism behaviors among their students. As this is a negative practice to stay ahead in an academic competition, so Chinese regulatory bodies of educational sectors or the policymakers can take benefits from this study by formulating policies to

exert control on the prevalence of such behaviors. Contrary to knowledge hiding, HEIs must promote knowledge-sharing practices in their institutes to brainstorm unique ideas among students and increase their critical thinking and problem-solving skills which is a productive way of staying ahead or beating academic completion.

8. RESEARCH LIMITATIONS AND FUTURE RESEARCH INDICATIONS

The present study holds multiple shortcomings. The current study has selected a quantitative research design which can be altered through a qualitative or mixed research method in the future. The study's targeted context was China which can also be changed by future researchers. Most importantly, the present study has tested academic competition through knowledge hiding and ostracism behaviors. This research also can be conducted in the corporate sector of China or any other country to assess the extent of these harmful behaviors and their influence. The culture of academic institutes can be included in the future research as a moderator because negative or positive culture prevalence is directly associated with such behaviors.

References
Abdillah, M. R., Wu, W., & Anita, R. (2022). Can altruistic leadership prevent knowledge-hiding behaviour? Testing dual mediation mechanisms. *Knowledge Management Research & Practice*, *20*(3), 352-366.
Abubakar, A. M., Behravesh, E., Rezapouraghdam, H., & Yildiz, S. B. (2019). Applying artificial intelligence technique to predict knowledge hiding behavior. *International Journal of Information Management*, *49*, 45-57.
Albana, M. J., & Yeşiltaş, M. (2022). Impact of linguistic ostracism on knowledge sharing, hiding and hoarding and the moderating role of cultural intelligence. *Kybernetes*, *51*(3), 1180-1198.
Anand, A., Offergelt, F., & Anand, P. (2022). Knowledge hiding–a systematic review and research agenda. *Journal of Knowledge Management*, *26*(6), 1438-1457.
Bailey, C. (2006). Supporting international students in UK Higher Education: key issues, and recommendations for further research.
Beck, R., Pahlke, I., & Seebach, C. (2014). Knowledge exchange and symbolic action in social media-enabled electronic networks of practice. *MIS quarterly*, *38*(4), 1245-1270.
Bilal, A. R., Fatima, T., Imran, M. K., & Iqbal, K. (2021). Is it my fault and how will I react? A phenomenology of perceived causes and consequences of workplace ostracism. *European Journal of Management and Business Economics*, *30*(1), 36-54.
Boz Semerci, A. (2019). Examination of knowledge hiding with conflict, competition

and personal values. *International Journal of Conflict Management*, *30*(1), 111-131.

Breidenthal, A. P., Liu, D., Bai, Y., & Mao, Y. (2020). The dark side of creativity: Coworker envy and ostracism as a response to employee creativity. *Organizational Behavior and Human Decision Processes*, *161*, 242-254.

Cipriani, R. (2022). The other, altruism and empathy. Variety of prosocial behavior. *The American Sociologist*, *53*(1), 11-21.

Connelly, C. E., Černe, M., Dysvik, A., & Škerlavaj, M. (2019). Understanding knowledge hiding in organizations. *Journal of Organizational Behavior*, *40*(7), 779-782.

Connelly, C. E., & Zweig, D. (2015). How perpetrators and targets construe knowledge hiding in organizations. *European Journal of Work and Organizational Psychology*, *24*(3), 479-489.

Donnelly, R. (2019). Aligning knowledge sharing interventions with the promotion of firm success: The need for SHRM to balance tensions and challenges. *Journal of Business Research*, *94*, 344-352.

Fatima, T., Bilal, A. R., Imran, M. K., Ayub, A., & Arshad, H. (2021). Who is likely to hide knowledge after peer ostracism? An exchange-based perspective of contact quality and need to belong. *VINE Journal of Information and Knowledge Management Systems*(ahead-of-print).

Fatima, T., Bilal, A. R., Imran, M. K., & Waqas, M. (2023). Relations outside the workplace matter! A nexus of coworker ostracism, relational capital, alternate belongingness and knowledge hiding. Evidence-Based HRM: a Global Forum for Empirical Scholarship,

Fauzi, M. A. (2023). Knowledge hiding behavior in higher education institutions: a scientometric analysis and systematic literature review approach. *Journal of Knowledge Management*, *27*(2), 302-327.

Ficapal-Cusí, P., Enache-Zegheru, M., & Torrent-Sellens, J. (2020). Linking perceived organizational support, affective commitment, and knowledge sharing with prosocial organizational behavior of altruism and civic virtue. *Sustainability*, *12*(24), 10289.

Friedland, J., Emich, K., & Cole, B. M. (2020). Uncovering the moral heuristics of altruism: A philosophical scale. *PloS one*, *15*(3), e0229124.

Friedrich, J., Becker, M., Kramer, F., Wirth, M., & Schneider, M. (2020). Incentive design and gamification for knowledge management. *Journal of Business Research*, *106*, 341-352.

Ghani, U., Zhai, X., Spector, J. M., Chen, N.-S., Lin, L., Ding, D., & Usman, M. (2020). Knowledge hiding in higher education: Role of interactional justice and professional commitment. *Higher Education*, *79*, 325-344.

Ghasemaghaei, M., & Turel, O. (2021). Possible negative effects of big data on decision quality in firms: The role of knowledge hiding behaviours. *Information Systems Journal*, *31*(2), 268-293.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. (2010). *Multivariate data analysis* (7th Edition ed.). Pearson.

He, P., Jiang, C., Xu, Z., & Shen, C. (2021). Knowledge hiding: current research status and future research directions. *Frontiers in Psychology*, *12*, 748237.

He, Y., & Wei, X. (2022). Preventing knowledge hiding behaviors through workplace

friendship and altruistic leadership, and mediating role of positive emotions. *Frontiers in Psychology*, *13*.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, *43*, 115-135.

Hernaus, T., Cerne, M., Connelly, C., Poloski Vokic, N., & Škerlavaj, M. (2019). Evasive knowledge hiding in academia: when competitive individuals are asked to collaborate. *Journal of Knowledge Management*, *23*(4), 597-618.

Horvat, E. M., & Lewis, K. S. (2003). Reassessing the" burden of'acting White'": The importance of peer groups in managing academic success. *Sociology of education*, 265-280.

HR, G., & Aithal, P. (2022). Why is it Called Doctor of Philosophy and Why Choosing Appropriate Research Philosophical Paradigm is Indispensable During Ph. D. Program in India? *International Journal of Philosophy and Languages (IJPL)*, *1*(1), 42-58.

Khelladi, I., Castellano, S., Hobeika, J., Perano, M., & Rutambuka, D. (2022). Customer knowledge hiding behavior in service multi-sided platforms. *Journal of Business Research*, *140*, 482-490.

Kline, R. (2011). Principles and Practice of Structural Equation Modeling (Third Edit, Vol. 20). In: New York: The Guilford Press. DOI: https://doi. org/10.5840/thought194520147.

L. Haven, T., & Van Grootel, D. L. (2019). Preregistering qualitative research. *Accountability in research*, *26*(3), 229-244.

Li, G., Li, Z., Wu, X., & Zhen, R. (2022). Relations between class competition and primary school students' academic achievement: Learning anxiety and learning engagement as mediators. *Frontiers in psychology*, *13*.

Li, Y., Wen, Z., Hau, K.-T., Yuan, K.-H., & Peng, Y. (2020). Effects of cross-loadings on determining the number of factors to retain. *Structural Equation Modeling: A Multidisciplinary Journal*, *27*(6), 841-863.

Mallén, F., Domínguez-Escrig, E., Lapiedra, R., & Chiva, R. (2019). Does leader humility matter? Effects on altruism and innovation. *Management Decision*.

Mohajan, H. K. (2020). Quantitative research: A successful investigation in natural and social sciences. *Journal of Economic Development, Environment and People*, *9*(4), 50-79.

Park, Y. S., Konge, L., & Artino, A. R. (2020). The positivism paradigm of research. *Academic Medicine*, *95*(5), 690-694.

Peng, H., Bell, C., & Li, Y. (2021). How and when intragroup relationship conflict leads to knowledge hiding: the roles of envy and trait competitiveness. *International Journal of Conflict Management*, *32*(3), 383-406.

Ruparel, N., & Choubisa, R. (2020). Knowledge hiding in organizations: A retrospective narrative review and the way forward. *Dynamic Relationships Management Journal*, *9*(1), 5-22.

Shah, M., & Hashmi, M. S. (2019). Relationship between organizational culture and knowledge hiding in software industry: Mediating role of workplace ostracism and workplace incivility. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, *13*(4), 934-952.

Song, G. R., & Kim, K. S. (2021). More similar, better belonging: effect of organizational citizenship behavior profile similarity on ostracism. *The Journal of Applied Behavioral Science*, *57*(4), 511-529.

Strijker, D., Bosworth, G., & Bouter, G. (2020). Research methods in rural studies: Qualitative, quantitative and mixed methods. *Journal of Rural Studies*, *78*, 262-270.

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). *Using multivariate statistics* (Vol. 6). pearson Boston, MA.

Watson, R. (2015). Quantitative research. *Nursing standard*, *29*(31).

Wu, C. H., Kwan, H. K., Liu, J., & Lee, C. (2021). When and how favour rendering ameliorates workplace ostracism over time: Moderating effect of self-monitoring and mediating effect of popularity enhancement. *Journal of Occupational and Organizational Psychology*, *94*(1), 107-131.

Wu, H.-p., Garza, E., & Guzman, N. (2015). International student's challenge and adjustment to college. *Education Research International*, *2015*.

Zhang, H., Yang, Z., Kwan, H. K., & Wu, F. (2022). Workplace ostracism and family social support: a moderated mediation model of personal reputation. *Asia Pacific Journal of Management*, 1-40.

Zhang, X., Yao, Z., Qunchao, W., & Tsai, F.-S. (2022). Every coin has two sides: the impact of time pressure on employees' knowledge hiding. *Journal of Knowledge Management*, *26*(8), 2084-2106.

Zhang, Y., Bolino, M. C., & Yin, K. (2022). The interactive effect of perceived overqualification and peer overqualification on peer ostracism and work meaningfulness. *Journal of Business Ethics*, 1-18.

Zhao, H., Xia, Q., He, P., Sheard, G., & Wan, P. (2016). Workplace ostracism and knowledge hiding in service organizations. *International Journal of Hospitality Management*, *59*, 84-94.

Zou, Y., Wang, Y., Yang, X., & Jiang, R. (2022). Observed ostracism and compensatory behavior: A moderated mediation model of empathy and observer justice sensitivity. *Personality and Individual Differences*, *198*, 111829.

Zutshi, A., Creed, A., Bhattacharya, A., Bavik, A., Sohal, A., & Bavik, Y. L. (2021). Demystifying knowledge hiding in academic roles in higher education. *Journal of Business Research*, *137*, 206-221.