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ORIGINAL RESEARCH

The Roles of Moral Disengagement and Learned Helplessness Towards International Postgraduate Students' Academic Procrastination

Wenhao Wu[1,2], Qi He[3]

[1]Overseas Education College, Jiangsu University, Zhenjiang, 212013, People's Republic of China; [2]Faculty of Education, Chulalongkorn University, Bangkok, 10330, Thailand; [3]School of Finance and Economics, Jiangsu University, Zhenjiang, 212013, People's Republic of China

Correspondence: Qi He, Tel +86 15102233804, Email mocha_hq@163.com

Objective: Supervisors play an important role in international postgraduate students' academic performance, their insufficient guidance and supervision are the main antecedents for international postgraduate students' academic procrastination. Meanwhile, international postgraduate students' disengagement tendency and learned helplessness in dealing with supervisor's moral disengagement will significantly affect their academic choices and outcomes.

Methods: Based on self-determination theory, this research distributed 350 questionnaires through two-stage time-lagged method and 266 valid questionnaires were recovered. Hierarchical regression analysis examined the direct effect of supervisor' moral disengagement on international postgraduate students' academic procrastination, as well as the moderating effect of international postgraduate students' moral disengagement and learned helplessness.

Results: The results indicated that 1) supervisor's moral disengagement significantly predicts international postgraduate students' academic procrastination, 2) international postgraduate students' moral disengagement and learned helplessness positively moderate the above relation, and 3) international postgraduate students' learned helplessness positively moderates the moderating effect of international postgraduate students' moral disengagement.

Conclusion: This study revealed the antecedents and conditions of international postgraduate students' academic procrastination, which enriched the theoretical connotation and practical application of self-determination theory in the field of international postgraduate students' education.

Keywords: moral disengagement, academic procrastination, learned helplessness, supervisor, international postgraduate student

Introduction

International postgraduate students' academic progress (hereinafter referred as IPS) is usually considered as a direct reflection of their supervisors' academic capacity and efforts,[1] which will make a significant difference to the quality of their scientific research and study experience. Previous studies on IPS's education mostly emphasized the equipment of high-quality supervisors or the improvement of their ethics and internationalization,[2,3] but rarely considered IPS's academic procrastination and explored its antecedents from the perspective of IPS themselves. Global integration and economic globalization drive the flow and sharing of higher education resources, providing high-quality higher education opportunities, better scientific research conditions and exchange platforms for international students.[4] Although many governments in the world have provided policy and economic supports to IPS's academic development to different extent, a considerable number of them fail to deliver satisfactory academic performance,[5] and their academic procrastination has become very common.[6] In recent years, the amount of IPS has also shown a trend of rapid growth globally. Meanwhile, the quality issue of IPS education has become increasingly prominent and urgent, especially in the matter of their academic attitude and study efficiency.[7] In order to ensure the sustainable and healthy development of international

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education industry, it is impossible to peel off the attention to IPS's education quality. Therefore, it is of great significance to explore the antecedents and mitigation ways of IPS's academic procrastination.

The antecedents of IPS's academic performance has always been a hot topic in the field of international students education study.[8] Many researches attribute IPS's unsatisfactory academic quality to the inadequate education system. Frequent explanations include excessive emphasis on students' amount and improper scholarship policies failing to play an effective incentive role.[9] Another view, from the perspective of quality-control, holds that IPS's academic issue are the inevitable result of insufficient quality awareness, imperfect quality system, weak supervision, and insufficient punishment.[10] However, there are different conclusions about the impacts of supervisor on IPS's academic development all along. Some emphasized the key role of supervisor in the process of IPS's academic development, and believed that they can significantly affect IPS's academic qualities and devotion through academic guidance and demonstration by words and deeds,[11] so their disengagement of responsibilities will lead to harms to IPS, such as work burnout and academic anxiety. Others tended to believe that students' positive attitude, dedication, and ability are the decisive factors for academic achievement.[12] It is difficult to reach a consensus on the determinants of IPS's academic performance, which may be due to the existence of the multiple moderating effects between supervisor and IPS's academic performance. Thus, it is necessary to comprehensively consider the interaction between internal and external factors. However, in the research field of academic procrastination, a multiple moderation model based on internal and external interaction is very rare. For above reasons, this research aims to build a dual-moderating model of moral disengagement and learned helplessness, so as to systematically explore the mechanism of IPS's academic procrastination.

At present, most efforts to improve postgraduate education have been done through strengthening external control, but to a great extent, ignored the decisive role of students' own motivation on their academic willpower and persistence.[13] In fact, only when postgraduates establish responsible academic values and sense of responsibility, can their academic motivation be guaranteed.[14] Supervisors' moral disengagement results in a low degree of involvement to IPS' academic development, which may make it difficult for IPS to develop academic ability and spiritual motivation to pursue academic goals without external intervention.[15] As a result, the primary premise for IPS to avoid academic procrastination is to recognize and bear their academic responsibilities, take the initiative to control academic progress and attempt for self-realization. Previous researchers have found significant individual differences in students' attitudes towards their studies. Some students demonstrate weak academic will and an obvious tendency to disengage responsibility, while some others are willing to actively adapt to the environment and shoulder academic responsibilities.[16] IPS's moral disengagement can be reflected on their attempts to find excuses for being lack of academic efforts and subconsciously transfer their academic responsibilities to others. This process is highly consistent with the concept of internal motivation of self-determination theory.[17] When the external supply factors from supervisor fail to meet IPS' expectation, and IPS cannot fully mobilize their internal motivation to remedy the lack of external conditions, academic delay will be incubated.[18]

In the pursuit of academic achievement, IPS should be active decider rather than passive follower. With the continuous expansion of IPS education, their academic performance is also facing higher expectations,[19] and the realization of those expectations requires not only supervisors' professional support, spiritual encouragement, and supervision, but also students' efforts.[20] Previous studies have confirmed that when individuals recognize their own abilities and pay attention to the sustainable development of abilities, they tend to make positive attribution and believe in the possibility to improve abilities through accepting challenges regardless of the result. Thus, they will show an optimistic attitude and positive action in the face of difficult tasks.[21] Nevertheless, learned helplessness means fundamentally skeptical and negative attitudes about one's own academic choices and abilities, and causes a believe that efforts cannot make any difference. So he or she will feel difficult to maintain the mind and action of devotion into study and scientific research activities. Many researches on IPS's disengagement of academic responsibility believe that IPS generally have a poor sense of responsibility and show laziness,[22] but few of them attempt to look for the answers from the perspective of belief and ability. In IPS's moral disengagement situation, being influenced by the sense of helplessness and the lack of understanding of the impacts and significance of their own efforts, they can hardly avoid academic procrastination through self-adjustment and self-motivation. Therefore, when supervisors disengage their responsibility to supervise IPS's academic progress, IPS's moral disengagement tendency can be observed through

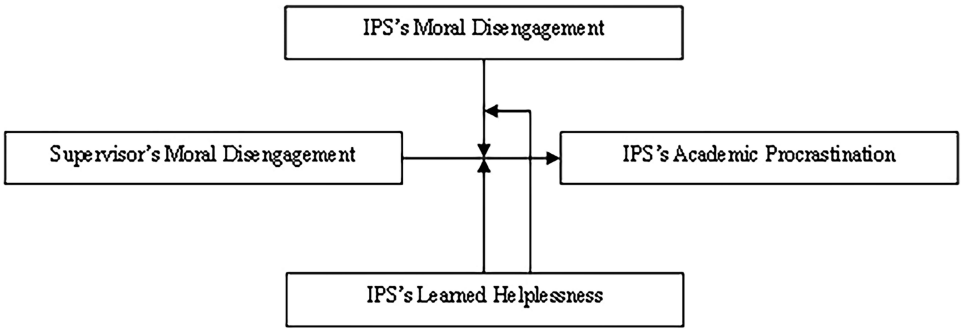

Figure 1 Theoretical model.

their personal efforts. Learned helplessness reflects students' consciousness and ability to master their own mentality and behavior. IPS with low learned helplessness can consciously pay attention to their academic goals. Even without sufficient external conditions, they can also appropriately control and adjust their behaviors, and make continuous efforts to achieve academic goals. In conclusion, this research infers that IPS' moral disengagement and learned helplessness jointly determine the effect intensity of supervisor's moral disengagement on IPS's academic procrastination.

Based on self-determination theory, this research established a moderated moderation model to explore: (1) the effect of supervisor's moral disengagement on IPS's academic procrastination, which is consistent with the conclusions of previous researches, and (2) the boundary conditions of supervisor's moral disengagement affecting IPS's academic procrastination. On the one hand, when IPS's moral disengagement is intensified, they tend to believe in supervisor's responsibility for their academic development and reduce their academic efforts, which may enhance the negative effect on academic procrastination. On the contrary, when IPS address the importance and necessity of personal efforts over external assist, they will take the initiative to shoulder academic responsibilities and try to overcome various difficulties, which may alleviate the impact of supervisor's moral disengagement on their academic procrastination. On the other hand, once IPS get trapped in learned helplessness and think it is difficult to overcome difficulties or realize academic expectations by relying on themselves, they may reduce academic involvement and fall into academic procrastination. Moreover, learned helplessness will also push IPS to place hope on their supervisors and disengage their own responsibilities, meaning that the moderating effect of IPS's moral disengagement will be enhanced. On above basis, this research further revealed how IPS's moral disengagement and learned helplessness moderate the relation between supervisor's moral disengagement and IPS's academic procrastination, as well as how IPS's learned helplessness moderates the moderating effect of IPS's moral disengagement. Hence, based on self-determination theory, this research clarified the relation between supervisor's moral disengagement and IPS's academic procrastination through a moderated moderation model, which has important theoretical and practical significance for exploring the mechanism of IPS's academic procrastination. Theoretical model is shown in Figure 1.

Theoretical Framework and Research Hypotheses

Self-Determination Theory

Self-determination theory applies empirical method to explore individual's self- determinative behaviors, holding that individuals are able to make choices based on experience and take actions according to their mastery and understanding of information on external environment, value goals, and needs.[23] Self-determination theory emphasizes the significance of internal resources for individuals' personality development and behavior adjustment.[24] Self-determination theory categorizes motivation into two types, namely internal motivation and external motivation.[23] Driven by external motivation, individuals' choices of action are dominated by surrounding events and other extrinsic factors, and their behaviors reflect their needs to acquire rewards or avoid punishment. Internal motivation contributes to a status of intensive self-control and self-determination, and individuals persevere with some certain behaviors out of emotional experience or mentality, such as loyalty, passion, and support. In terms of academic attitude and continuous engagement,

IPS, as the subject of self-determination, present corresponding academic behaviors and performance by comprehensively considering internal qualities and external conditions, for example, their own ability, academic difficulty, the supervisor's support, and so on,[25] which echoes self-determination theory. The supervisor encourages and supports IPS in expressing academic views, engaging in academic activities by instruction on knowledge and research methods, as well as spiritual encouragement. External support from the supervisor can prompt IPS to improve their academic ability and adjust academic strategies to overcome academic difficulties and achieve academic development.[26] But fundamentally, IPS's awareness of academic responsibility and academic competence are still decisive factors affecting their academic progress.[27] In order to overcome academic difficulties and achieve intrinsic academic pursuit, IPS tend to put active efforts on academic activities.

Supervisor's Moral Disengagement and IPS's Academic Procrastination

Moral disengagement refers to individuals' special cognitive tendency to reduce or even avoid the sense of guilt and self-condemnation by redefining or interpreting to rationalize their own immoral behaviors and underestimating the negative impacts on the behavior objects.[28] One of its important mechanisms is the transfer of responsibility, which is manifested in denial and disengagement of responsibility.[29] Among IPS's supervisors, it can be observed through the reduction of material, intellectual, and emotional devotion to IPS under the pretext of students' poor quality, language and cultural differences, and the lack of support from universities in terms of policies and funds,[30] resulting in students' inability to master material conditions, professional knowledge, and research skills necessary to complete their study and research tasks. Specifically, IPS complete academic tasks under supervisors' guidance, especially research activities are a long-term behavioral process with clear goals. Supervisors' tendency to disengage their responsibilities will lead to insufficient involvement in instructing postgraduate students,[31] and even refusal to provide them with support and encouragement, which will undermine their confidence in problem-solving and scientific research creativity, and further induce academic procrastination.[32] As can be seen from IPS education today, the knowledge level and academic quality of many IPS are difficult to meet the requirements of postgraduate education,[33] but the abilities of literature reading, experiment, and academic writing should be mastered by IPS themselves through independent learning and exploration from the perspective of supervisors, so they show unwillingness to instruct IPS in this respect.[31] Most IPS regard supervisors' above mind-set as a bias to disengage responsibilities, and breed dissatisfaction and disappointment with their supervisors.[34] Therefore, supervisors' disengagement of their obligations to IPS will deepen their difficulties in knowledge, ability, and willingness, which constitutes an important reason for their slow academic progress.

Academic procrastination refers to the behavior of failing to start or complete academic tasks on time with knowing that specific tasks must be completed before deadline,[35] which is mainly detected in examination review, literature reading, and thesis writing among IPS.[36] Its consequence not only include low work efficiency and unsatisfactory academic performance, but also induce negative emotions, such as regret, anxiety, and depression, and even involve suspension or withdrawal.[37] Previous studies have mostly interpreted the formation mechanism of academic procrastination from two paths, namely internal motivation and external conditions. In terms of internal motivation, academic procrastination can be interpreted as individuals' personality tendency in time allocation and utilization.[38] The lack of ability to organize knowledge and skills, and the failure of self-efficacy will lead to improper self-management. In the view of external conditions, there exists positive correlation between educational styles, such as autocracy and doting, and academic procrastination.[39] In the process of academic growth, IPS especially need supervisor's academic guidance and emotional care, which will play an important role in improving their academic attitude and academic performance.[40] Referring to the interactive perspective of internal motivation and external conditions in Ryan et al's[41] self-determination theory and emphasizing the stimulating effect of basic needs satisfaction on individuals' behavior, this research constructs IPS's academic procrastination as the result of the interaction between supervisor and IPS. IPS's academic achievement not only depends on their self-encouragement and efforts, but also cannot be separated from supervisor's support, encouragement, and supervision of their research tasks. Therefore, external conditions should be met to reduce the frequency and intensity of academic procrastination.

According to self-determination theory, supervisor's moral disengagement will undermine the external conditions for IPS to complete academic tasks, resulting in slow academic progress. First, when supervisors fail to perform their duties

of imparting theoretical knowledge and sharing research experience to guide IPS to complete research tasks, it often means that students' ability to refine scientific problems, express academic views, and carry out research is difficult to be effectively consolidated and improved, and their original knowledge and ability are difficult to ensure their academic progress and output.[42] Consequently, they will take a wait-and-see attitude towards their academic tasks. Second, supervisors do not fully recognize IPS's academic ability and innovation, nor do they present spiritual care for students' academic progress. Their indifferent attitude makes it challenging for IPS to obtain internal momentum and stimulate confidence to overcome difficulties and setbacks,[34] which will lead to negative judgment on their own ability and give up looking for solutions to problems, as well as inability to strive to lucubrate their research direction within the specified time. Third, with moral disengagement, the supervisor pays less attention to urging students to promote their academic progress. If the supervisor fails to effectively supervise and control IPS's academic progress, and lacks evaluation and feedback on the completion of their tasks, they are vulnerable to their inertia and cannot timely plan phased academic goals and strategies, monitor their academic progress, and strengthen their expected academic performance.[27] In overall, the supervisor excludes IPS's academic development from their compulsory responsibilities in their subjective consciousness, disabling them from obtaining the external conditions provided by supervisor to ensure their internal passion in academic research field, which will aggravate their academic procrastination.

Hypothesis 1: Supervisor's moral disengagement has a positive effect on IPS's academic procrastination.

The Moderating Effect of IPS's Moral Disengagement

In IPS's view, providing resource guarantee to improve their academic ability and promote students' academic progress are supervisors' responsibilities and obligations. Supervisors' incompetence in scientific research, immature guidance experience, and imperfect supervision system are important reasons that hinder students' academic progress.[43] Therefore, IPS's moral disengagement is manifested in overgeneralization of the supervisor's responsibility for guidance and supervision. Facing with academic difficulties, they hope that the supervisor can provide unscheduled support or lower the requirements for research output,[44] and even expect the supervisor to assign other students to take their place to solve problems. With morally disengaging mentality, IPS rarely find reasons and make active efforts due to their lacking of self-discipline and laziness in independent thinking. Instead, they will classify their academic tasks and research activities as supervisor's responsibilities.[45] Meanwhile, the supervisor attributes IPS's academic difficulties to their lacking of ability or effort, and believes that they should master the academic progress independently, rather than being arranged and checked by the supervisor all the time.[46] In this sense, both the supervisor and IPS hold the mentality of disengaging responsibilities. The supervisor is unwilling to give additional academic support to IPS,[47] while IPS give up their efforts in reinforcing time and energy devotion to improve academic performance.[40] The joint action of the two sides will lead IPS to reduce their expectation of pursuing academic achievements.

According to self-determination theory, in the process of pursuing long-term academic goals, IPS need to exercise self-discipline control over their thinking, emotion, and behavior to avoid academic procrastination. To be specific, IPS adjust their academic devotion to the necessary level by activating internal motivation, and actively restrain the desire to procrastinate, so as to effectively use their learning time, eliminate the interference of leisure activities, and complete academic tasks in time,[48] in order to achieve academic goals. On the other hand, some IPS defend and excuse themselves through moral disengagement to reduce the negative feelings that may be caused by academic pressure and obtain psychological relief.[49] When IPS's moral disengagement intensity is high, they may attribute their academic development responsibility to supervisor, tend to regard academic progress as supervisor's guiding and supervising responsibilities, and believe that they only need to act according to supervisor's arrangement. Therefore, these IPS cannot independently choose effective study methods and strategies or ensure enough time and effort devotion in their academic progress, show inactive consciousness in research activities, only waiting for the supervisor to plan their research direction. In particular, when they encounter difficulties, they will give up the independent exploration and expect direct solutions given by supervisor.

However, in the situation of low IPS's moral disengagement, they will have a clear understanding of responsibilities and behavioral norms, avoid behaviors that do not conform to moral cognition, such as unclear goals, lazy behavior, and

excessive dependence on others,[50] independently plan academic goals and actively look for solutions when they encounter academic difficulties. In this case, even if the supervisor disengages responsibilities in academic support, encouragement, and supervision, IPS will rely on personal efforts to implement academic plan. Although the supervisor plays a dominant role in the interaction with IPS and their academic progress, they are essentially independent.[42] Therefore, IPS shall be aware of the significance of self-involvement for academic progress. Even when the supervisor's involvement is weak, they should actively plan the academic process, rather than passively wait for the supervisor to satisfy their academic needs and solve problems. In line with the above literature-based reasoning, this research proposes the following hypothesis:

Hypothesis 2: IPS's moral disengagement positively moderates the relation between supervisor's moral disengagement and IPS's academic procrastination.

The Moderating Effect of IPS's Learned Helplessness

Learned helplessness is a negative psychological feature of hopelessness to reality formed after individuals repeatedly experience uncontrollable and disgusting events.[51] Especially when confronted with difficult tasks, individuals will be depressed and unable to respond effectively to external requirements. Learned helplessness presents as a state of cognitive imbalance and fatigue. Individuals tend to make internal attribution to event failure, resulting in their cognitive dilemma of lacking of confidence and undermining their ability to complete tasks,[52] so as to avoid goal decision-making as much as possible and give up seeking ways to break through difficulties. IPS's learned helplessness is a complex learning psychological state, which is shown as a comprehensive performance of cognition, emotion, and behavior.[53] In terms of cognition, although IPS try with efforts, they still suffer repeated setbacks in academic tasks, and they take academic outcomes unchangeable even with maximum efforts, so they attribute academic failure to uncontrollable factors. In terms of emotion, the psychological state of depression and even despair will deprive their internal motivation to overcome difficulties and achieve academic achievements. As a result, they choose to take an evasive attitude towards challenging academic tasks. In the sense of behavior, they lack confidence in completing challenging academic tasks and regard failure as inevitable, so they will give up efforts and choose resistance and retreat. To sum up, the learned helplessness reflected by IPS in cognition, emotion, and behavior transmits their negative evaluation information about their own ability and situation. Learned helplessness also means that IPS lose their confidence in academic achievement and internal motivation to overcome difficulties, which will reduce their devotion in academic pursuit.

Influenced by learned helplessness, IPS will evaluate their academic prospects in a negative way through the stereotyped thinking that their academic choice and result are beyond control,[54] resulting in the underestimation of academic career's value and academic procrastination. Driven learned helplessness, IPS overestimate the difficulty of academic tasks, pay more attention to possible academic failures, and refuse to believe in the possibility of overcoming academic difficulties through their own efforts. This negative psychology of fear of failure and denial of success opportunities is easy to cause a vicious circle of negative emotions, constantly deplete their learning motivation and make them habitually choose to escape or give up, so that they cannot maintain continuous attention to academic tasks and make academic procrastination decisions.[55] On the contrary, IPS with low learned helplessness can effectively transform positive cognition and emotional expression into confidence in coping with academic difficulties, believe that they can complete academic tasks properly through their own efforts,[56] so they are willing to make positive adjustments to complete academic tasks. To be specific, they will master knowledge and improve ability, and seek solutions and strategies to overcome academic difficulties, which can be seen as important guarantees to avoid academic procrastination.

According to self-determination theory, learned helplessness will cause the development of IPS's negative emotions for their own abilities of learning, scientific research, and pressure resistance, as well as dependence on external support, while regular demand for external material and spiritual support will further weaken IPS's internal academic motivation. From the cognitive perspective, IPS with intensified learned helplessness tend to think that their ability cannot match the academic requirements and make a negative cognitive evaluation of themselves,[57] and place their hope on the external support and encouragement given by their supervisors. Thus, supervisor's disengagement of responsibilities will contribute to academic

procrastination. From the emotional perspective, being encountered with supervisor's moral disengagement, IPS have to rely on their own efforts to ensure academic progress and complete academic tasks. However, IPS with high learned helplessness have formed a stubborn negative stereotype in their subconscious and expect that they cannot fulfill academic requirements independently, thus increasing the possibility of academic procrastination.[55] From the behavior perspective, IPS are unable to seek external help to get out of the dilemma, and lack the ability and methods to overcome academic setbacks independently. Therefore, they will be in fear of academic tasks, show a negative condition of helplessness and difficulty to make progress, which forms an important reason for their lack of academic motivation. In conclusion, learned helplessness will induce negative judgment on one's behavior ability and its results, cause IPS's self-doubt, and disable them to overcome academic predicament caused by the lack or even the absence of supervisor's support. Therefore, under the combination of internal and external difficulties, IPS are more likely to lose direction of academic development and face difficulties to promote academic process. Hypothesis is proposed below:

Hypothesis 3: IPS's learned helplessness positively moderates the relation between supervisor's moral disengagement and IPS's academic procrastination.

The essence of IPS's learned helplessness is inferiority complex and anxiety caused by the gap between their perceived ability, willpower and the requirements of academic tasks. Therefore, it is necessary to realize that the disengagement of their academic responsibility is essentially IPS's helpless act as they feel unable to cope with and control the academic tasks and circumstance,[58] so they have to rely on supervisor's involvement and interference. This character defect will further deepen the disengagement intensity of responsibility to solve academic problems, and thus affect the moderating effect of IPS's moral disengagement on the relation between supervisor's moral disengagement and IPS's academic procrastination. The negative attribution of IPS's academic failure will cause confusion and disappointment about academic prospects, and IPS will show low internal motivation, unconsciously reduce their spiritual and emotional devotion, become reluctant exert full efforts for their studies. Instead, they choose to rely on supervisors' support. The expectation of uncontrollable results and inevitable failure will damage their cognition and emotion, so they tend to find excuses and blame failure on the maladjustment of language and cultural environment, difficulty of research task, and even their original choice of major or research direction, showing an obvious tendency of disengaging responsibility and ebbing their academic motivation, which is embodied in actions of disengagement and procrastination.[59] In contrast, IPS with low learned helplessness can optimistically evaluate their conditions and make positive attribution to their academic results, hold a clear understanding of their main responsibilities in academic development, timely eliminate the negative emotions caused by academic pressure, frustration, and failure, overcome difficulties and continue to focus and pay efforts, which will alleviate the intensity of moral disengagement.

Hypothesis 4: IPS's learned helplessness positively moderates the moderating effect of IPS's moral disengagement, which positively moderates the relation between supervisor's moral disengagement and IPS's academic procrastination.

Methodology

Procedure

This research uses questionnaires to collect empirical data. Through the staffs engaged in IPS's education and management in some universities in China and other overseas friendly universities, a certain number of IPS are selected as the sample. This research ensures the privacy and anonymity of the participants by fully following the guidelines of Declaration of Helsinki throughout the survey process, informed consent was requested from the participants. In order to ensure the authenticity and accuracy of the data evaluation results, certain reverse questions were set to avoid response bias. The survey is divided into two stages, with a time interval of 3 months. In the first stage, IPS participating in the survey were asked to answer questions about their gender, nationality, religious belief, major, educational background, feelings about their supervisor's moral disengagement, and their own moral disengagement and learned helplessness. In the second stage, IPS participating in the survey were asked to answer questions about their academic procrastination.

Participant

In the first stage, 350 questionnaires were distributed and 312 were recovered. In the second stage, 350 questionnaires were distributed and 286 were recovered. After eliminating the invalid questionnaires, such as unable to satisfy two-stage matching, incomplete response to the questionnaire, and obvious response bias, 266 valid questionnaires were obtained, and the effective recovery rate was 76%. Among the 266 valid samples, 151 are males, occupying 56.77%. From nationality view, Africans, Asians, and Europeans take up about 80% in total, respectively 28.57%, 27.82%, and 22.93%, while other 12.03% and 8.65% come from American and Oceanian countries. 181 participants are religious, accounting for 68.05%. The participants' major show relatively equal distribution, with 23.31% for science, 21.43% for social science, 21.05% for engineering, 18.42% for medicine and 15.79% for art. In addition, 58.65% of the participants are master students, while others are pursuing their doctoral degree. It can be seen that the coverage of effective samples is wide and evenly distributed, which proves that the data collection is scientific and effective.

Measure

Based on literature review, this study reviewed the previous researches on the methods for measuring moral disengagement, academic procrastination, and learned helplessness, and applied the widely accepted scale for the research process. Since the main instruction language for the participants in this research is English, English items are used to ensure that the participants can generally understand the items. In addition, due to the special research context and survey objects of this research, the original item expression was also adjusted to meet the needs of this research, so as to ensure the content validity and face validity of the questionnaire items. Likert-5 was used for quantitative evaluation. IPS need to choose between 1–5 and express different intensities.

Supervisor's Moral Disengagement. This research referred to Chen et al′s[60] 3-item scale of moral disengagement, and adjusted the item expression to "My supervisor prioritizes his personal development and interests above my academic progress", "I find that my supervisor always uses my lacking of ability or laziness as an excuse to reduce time and energy spent in supporting me", and "No matter what the facts are, my supervisor has been used to attributing the delay of academic progress to me". In this research, Cronbach's α coefficient of this scale is 0.756 with saturated results of confirmatory factor analysis.

IPS's Academic Procrastination. Chu et al[61] revised the academic procrastination scale according to Lay[62]′s, with 7 items. Based on the method for measuring academic procrastination by Chu et al[61] this research requested IPS to evaluate their academic procrastination through items, such as "I often procrastinate and can't start academic tasks in time", and "If it's not an academic task to be completed now, I'll choose to finish it later". Its Cronbach's α coefficient is 0.718, and the results of confirmatory factor analysis show satisfactory level of all indexes (χ^2=11.506, df=14, χ^2/df=0.822, RMSEA=0.010, CFI=0.944, IFI=0.988, TLI=0.976).

IPS's Moral Disengagement. This research referred to the 3-item scale of moral disengagement by Chen et al[60] and adjusted the item expression to "If my supervisor does not arrange and supervise my academic tasks, I can do nothing", "I can blame the academic failure on my supervisor", and "If the academic task's demand exceeds my ability, I should expect the supervisor to give support and comfort". Its Cronbach's α coefficient is 0.791, and the results of confirmatory factor analysis show saturation.

IPS's Learned Helplessness. Zhang et al[63] simplified the learned helplessness scale developed by Quinless et al[64] and selected 10 items related to employees' creativity under the principle of practicality. This research took the learned helplessness scale by Zhang et al[63] as a reference, adjusted its items according to the special research context and objects, and obtains example items, such as "No matter how hard I try to achieve some academic results, I can't achieve satisfactory ones in the end". In the reliability test, Cronbach's α coefficient is 0.741. According to validity test results, KMO equals to 0.841 and p-value is below 0.001, suitable for subsequent factor analysis. First, this study applies principal component analysis for exploratory factors, with a single factor being extracted, and the factor loading is between 0.521–0.646. Second, the results of confirmatory factor analysis show that all indexes reach satisfactory level (χ^2=82.723, df=35, χ^2/df=2.364, RMSEA=0.023, CFI=0.958, IFI=0.940, TLI=0.906).

Control Variables. The effects of demographic features, such as gender, nationality, religion, major, and educational background are different on the intensity of IPS's academic procrastination, which has been verified in related researches. For example, Turhan[65] found that females' research ability and academic ambition are relatively lower than males. Beneke et al[66] pointed out that IPS's academic foundation, the degree of emphasis and adaptability to academic tasks from different nationality have distinct disparity. Also, religious beliefs will also affect their academic moral development and endurance in the face of academic difficulties.[67] IPS's major direction determines their academic difficulty and procrastination levels.[68] In addition, master and doctoral students have significant differences in their ways of thinking, communicating, and interacting with supervisors.[69] Therefore, this research controlled gender, nationality, religion, major, and educational background in the process of statistical analysis.

Data Analysis and Results

Common Method Derivation

The research process was strictly controlled and the data used are obtained anonymously in an attempt to control the common method bias. However, all variables are reported by the interviewed IPS, which may cause artificial covariation due to subjective bias. Therefore, this study applied Harman's single-factor analysis method by SPSS to conduct exploratory factor analysis on all items. The results showed that KMO equals to 0.816, the chi square value of Bartlett's sphericity test result is 1886.640, and the p-value is below 0.001. The extracted four common factors are consistent with the number of variables set in this research, and the variability of the first variance is 19.230%, lower than the critical value of 50%, indicating that there is no serious common method deviation in the data obtained.

Confirmatory Factor Analysis

AMOS was used to conduct confirmatory factor analysis on the data collected from the survey to test the matching degree between data and model, as well as the discriminant validity between variables. As shown in Table 1, the four-factor model structure including supervisor's moral disengagement, IPS's academic procrastination, IPS's moral disengagement, and IPS's learned helplessness has a good fitting effect (χ^2/DF=2.652<5, RMSEA=0.079<0.08, CFI=0.982>0.9, IFI=0.986>0.9, TLI=0.954>0.9). The results are better than three-factor, two-factor, and single-factor structural models after factor combination. It can be seen that the four-factor structure involved in this research have good discriminant validity.

Descriptive Statistics and Correlation Analysis

Table 2 mainly shows the mean value, standard deviation, and partial correlation coefficient among variables by SPSS. It can be seen that there is a significant positive correlation between supervisor's moral disengagement and IPS's academic procrastination (r=0.163, p<0.01). There is also a significant positive correlation between IPS's moral disengagement and IPS's academic procrastination (r=0.199, p<0.01), and there is a significant positive correlation between IPS's learned helplessness and IPS's academic procrastination (r=0.282, p<0.001). There is a significant positive correlation between

Table 1 Confirmatory Factor Analysis

Model	Factor	χ^2	df	χ^2/df	RMSEA	CFI	IFI	TLI
Four-Factor	Supervisor's Moral Disengagement, IPS's Academic Procrastination, IPS's Moral Disengagement, IPS's Learned Helplessness	594.009	224	2.652	0.079	0.982	0.986	0.954
Three-Factor	Supervisor's Moral Disengagement, IPS's Academic Procrastination, IPS's Moral Disengagement + IPS's Learned Helplessness	746.549	227	3.289	0.093	0.794	0.798	0.759
Double-Factor	Supervisor's Moral Disengagement + IPS's Moral Disengagement + IPS's Learned Helplessness, IPS's Academic Procrastination	974.980	229	4.258	0.111	0.560	0.566	0.514
Single-Factor	Supervisor's Moral Disengagement + IPS's Moral Disengagement + IPS's Learned Helplessness + IPS's Academic Procrastination	1274.021	230	5.539	0.131	0.384	0.393	0.323

Table 2 Descriptive Statistics and Correlation Analysis

Control Variables	Variables	Mean	SD	1	2	3	4
Gender, Nationality, Religion, Major, Education Background	**1 Supervisor's Moral Disengagement**	3.257	0.658	1			
	2 IPS's Academic Procrastination	3.863	0.396	0.163**	1		
	3 IPS's Moral Disengagement	3.752	0.506	−0.012	0.199**	1	
	4 IPS's Learned Helplessness	3.652	0.324	0.036	0.282***	0.209**	1

Note: **means p<0.01, ***means p<0.001.

IPS's learned helplessness and IPS's moral disengagement (r=0.209, p<0.001). Above results provide a basis for the hypothesis test process of this research.

Hypothesis Test

In order to test the direct impact of supervisor's moral disengagement on IPS's academic procrastination, and the moderating effect of IPS's moral disengagement and IPS's learned helplessness on the relation between supervisor's moral disengagement and IPS's academic procrastination, this research used the hierarchical regression test method by SPSS to test the hypothesis after standardizing the variables.[70] See following test results.

Supervisor's Moral Disengagement and IPS's Academic Procrastination. The hypothesis test results of supervisor's moral disengagement affecting IPS's academic procrastination are shown in Table 3. In model 2, the regression coefficient of supervisor's moral disengagement on IPS's academic procrastination is positive and significant (β=0.098, p<0.01), indicating that supervisor's moral disengagement has a positive impact on IPS's academic procrastination. Hypothesis 1 is proved.

The Moderating Effect of IPS's Moral Disengagement. The hypothesis test results of the moderating effect of IPS's moral disengagement on the relation between supervisor's moral disengagement and IPS's academic procrastination are shown in Table 4. This research conducted the regressions of control variables, independent variable, moderating variable, and interaction between independent variable and moderating variable respectively in Model 1–4. In Model 4, regression coefficient of the interaction between supervisor's moral disengagement and IPS's moral disengagement on

Table 3 Supervisor's Moral Disengagement and IPS's Academic Procrastination

Variables	IPS's Academic Procrastination					
	Model 1			Model 2		
	β	95% CI		β	95% CI	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
Gender	−0.033	−0.132	0.066	−0.038	−0.135	0.060
Nationality	0.010	−0.043	0.063	0.016	−0.037	0.069
Religion	−0.066	−0.186	0.054	−0.068	−0.187	0.051
Major	−0.030	−0.083	0.022	−0.029	−0.081	0.022
Education Background	−0.050	−0.150	0.050	−0.049	−0.149	0.050
Supervisor's Moral Disengagement				0.098**	−0.171	−0.026
R^2	0.013			0.040		
Adjusted R^2	−0.005			0.018		
ΔR^2	0.013			0.026		
F	0.712			1.789*		

Note: * means p<0.05, **means p<0.01.

Table 4 The Moderating Effect of IPS's Moral Disengagement

Variables	IPS's Academic Procrastination					
	β	95% CI		β	95% CI	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
	Model 1			Model 2		
Gender	−0.033	−0.132	0.066	−0.038	−0.135	0.060
Nationality	0.010	−0.043	0.063	0.016	−0.037	0.069
Religion	−0.066	−0.186	0.054	−0.068	−0.187	0.051
Major	−0.030	−0.083	0.022	−0.029	−0.081	0.022
Education Background	−0.050	−0.150	0.050	−0.049	−0.149	0.050
Supervisor's Moral Disengagement				0.098**	−0.171	−0.026
IPS's Learned Helplessness						
Supervisor's Moral Disengagement * IPS's Learned Helplessness						
R^2	0.013			0.040		
Adjusted R^2	−0.005			0.018		
ΔR^2	0.013			0.026		
F	0.712			1.789*		
	Model 3			Model 4		
Gender	−0.041	−0.134	0.053	−0.029	−0.122	0.064
Nationality	0.028	−0.023	0.079	0.035	−0.015	0.086
Religion	−0.061	−0.175	0.053	−0.050	−0.163	0.064
Major	−0.042	−0.091	0.008	−0.041	−0.090	0.009
Education Background	−0.032	−0.128	0.063	−0.020	−0.115	0.075
Supervisor's Moral Disengagement	0.104**	−0.174	−0.035	0.107**	−0.176	−0.038
IPS's Learned Helplessness	0.353***	0.211	0.494	0.310***	0.166	0.455
Supervisor's Moral Disengagement * IPS's Learned Helplessness				0.066*	0.012	0.119
R^2	0.078			0.112		
Adjusted R^2	0.053			0.084		
ΔR^2	0.038			0.034		
F	3.116**			4.043***		

Note: *means p<0.05, **means p<0.01, ***means p<0.001.

IPS's academic procrastination is positive and significant (β=0.061, p<0.01), and regression coefficient of supervisor's moral disengagement on IPS's academic procrastination is also positive and significant (β=0.079, p<0.05), indicating that IPS's moral disengagement positively moderates the effect of supervisor's moral disengagement on IPS's academic procrastination. Hypothesis 2 is proved.

Also, this research draws a schematic diagram of the interaction effects to show the direction and trend of the moderating effect of IPS's moral disengagement. As can be seen from Figure 2, when IPS's moral disengagement is weak, the regression level of supervisor's moral disengagement to IPS's academic procrastination is lower and more gentle; Under the condition of high IPS's moral disengagement, the regression level of supervisor's moral disengagement to IPS's academic procrastination is higher and more inclined. Therefore, Hypothesis 2 is further verified.

The Moderating Effect of IPS's Learned Helplessness. The hypothesis test results of the moderating effect of IPS's learned helplessness on the relation between supervisor's moral disengagement and IPS's academic procrastination are shown in Table 5. This research conducted the regressions of control variables, independent variable, moderating

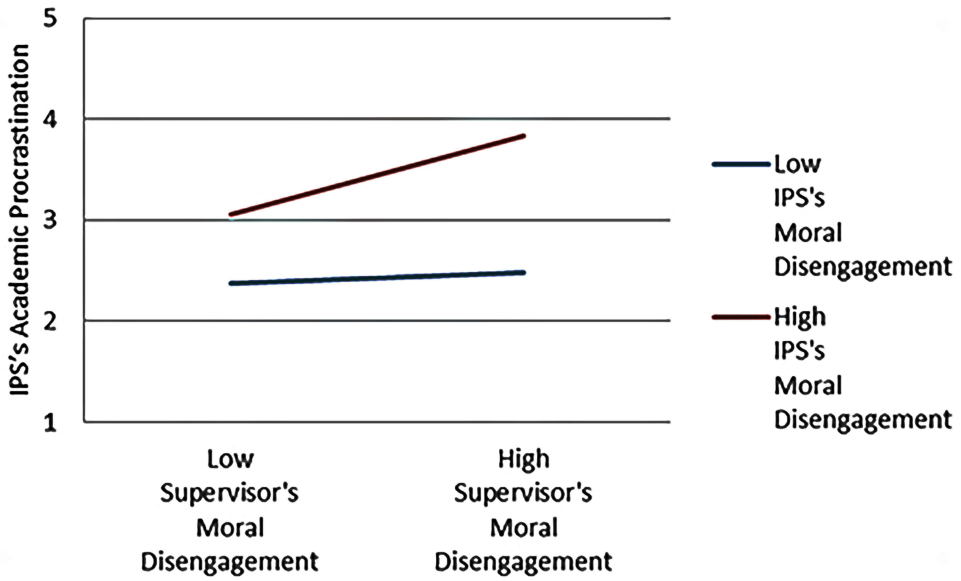

Figure 2 Schematic diagram of interaction effect (IPS's Moral Disengagement).

variable, and interaction between independent variable and moderating variable respectively in Model 1–4. In Model 4, regression coefficient of the interaction between supervisor's moral disengagement and IPS's learned helplessness on IPS's academic procrastination is positive and significant (β=0.066, $p<0.05$), and regression coefficient of supervisor's moral disengagement on IPS's academic procrastination is also positive and significant (β=0.107, $p<0.01$), indicating that IPS's learned helplessness positively moderates the impact of supervisor's moral disengagement on IPS's academic procrastination. Hypothesis 3 is proved.

Then, a schematic diagram of the interaction is drawn to present the direction and trend of the moderating effect of IPS's learned helplessness. As can be seen from Figure 3, under the condition of low IPS's learned helplessness, the regression level of supervisor's moral disengagement on IPS's academic procrastination is lower and subtler; Under the condition of intensified IPS's learned helplessness, the regression level of supervisor's moral disengagement to IPS's academic procrastination is higher and more inclined. Therefore, Hypothesis 3 is further verified.

Hypothesis test result of the moderating effect of IPS's learned helplessness on the moderating effect of IPS's moral disengagement are shown in Table 6. Regressions of control variables, independent variable, moderating variable, and their interaction, as well as second-order moderating variable and their interaction were conducted respectively in Model 1–4. In Model 4, regression coefficient of the interaction among supervisor's moral disengagement, IPS's moral disengagement, and IPS's learned helplessness on IPS's academic procrastination is positive and significant (β=0.029, $p<0.05$). Regression coefficient of the interaction between supervisor's moral disengagement and IPS's moral disengagement on IPS's academic procrastination is positive and significant (β=0.054, $p<0.01$), and the two directions are consistent, indicating that IPS's learned helplessness positively moderates the moderating effect of IPS's moral disengagement on the relation between supervisor's moral disengagement and IPS's academic procrastination. Hypothesis 4 is proved.

Subsequently, this research drew a schematic diagram of the interaction effect to show the moderating direction and trend of IPS's learned helplessness on the moderation of IPS's moral disengagement. As can be seen from Figure 4, when IPS's moral disengagement is weak, regression level of supervisor's moral disengagement to IPS's academic procrastination under the moderation of weak IPS's learned helplessness is lower and more subtle, and regression level of supervisor's moral disengagement to IPS's academic procrastination under the moderation of strong IPS's learned helplessness is higher and more inclined; Under the condition of strong IPS's moral disengagement, regression level of supervisor's moral disengagement to IPS's academic procrastination under the moderation of weak IPS's learned

Table 5 The Moderating Effect of IPS's Learned Helplessness

	IPS's Academic Procrastination					
Variables	β	95% CI		β	95% CI	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
	Model 1			Model 2		
Gender	−0.033	−0.132	0.066	−0.038	−0.135	0.060
Nationality	0.010	−0.043	0.063	0.016	−0.037	0.069
Religion	−0.066	−0.186	0.054	−0.068	−0.187	0.051
Major	−0.030	−0.083	0.022	−0.029	−0.081	0.022
Education Background	−0.050	−0.150	0.050	−0.049	−0.149	0.050
Supervisor's Moral Disengagement				0.098**	−0.171	−0.026
IPS's Learned Helplessness						
Supervisor's Moral Disengagement * IPS's Learned Helplessness						
R^2	0.013			0.040		
Adjusted R^2	−0.005			0.018		
ΔR^2	0.013			0.026		
F	0.712			1.789*		
	Model 3			Model 4		
Gender	−0.041	−0.134	0.053	−0.029	−0.122	0.064
Nationality	0.028	−0.023	0.079	0.035	−0.015	0.086
Religion	−0.061	−0.175	0.053	−0.050	−0.163	0.064
Major	−0.042	−0.091	0.008	−0.041	−0.090	0.009
Education Background	−0.032	−0.128	0.063	−0.020	−0.115	0.075
Supervisor's Moral Disengagement	0.104**	−0.174	−0.035	0.107**	−0.176	−0.038
IPS's Learned Helplessness	0.353***	0.211	0.494	0.310***	0.166	0.455
Supervisor's Moral Disengagement * IPS's Learned Helplessness				0.066*	0.012	0.119
R^2	0.121			0.141		
Adjusted R^2	0.098			0.114		
ΔR^2	0.082			0.019		
F	5.097***			5.272***		

Note: *means $p<0.05$, **means $p<0.01$, ***means $p<0.001$.

helplessness is lower and more subtle, and regression level of supervisor's moral disengagement to IPS's academic procrastination under the moderation of strong IPS's learned helplessness is higher and more inclined. This shows that IPS's learned helplessness can positively moderate the moderating effect of IPS's moral disengagement. Therefore, Hypothesis 4 is further verified.

Discussion

Topics related to IPS's education have become hot issues, especially their academic performance has attracted increasing attention.[71,72] However, previous researches mostly investigated the causes for the defects in IPS's education quality from the external perspectives,[13] but few researchers have paid attention to the decisive role of students' internal motivation on their academic performance, so research conclusions are slightly insufficient. It have been confirmed that IPS have difficulties in completing their studies with the lack of supervisor's external intervention,[34] but the fact that IPS's insufficient spirit and ability will also contribute to academic procrastination has been ignored. This research

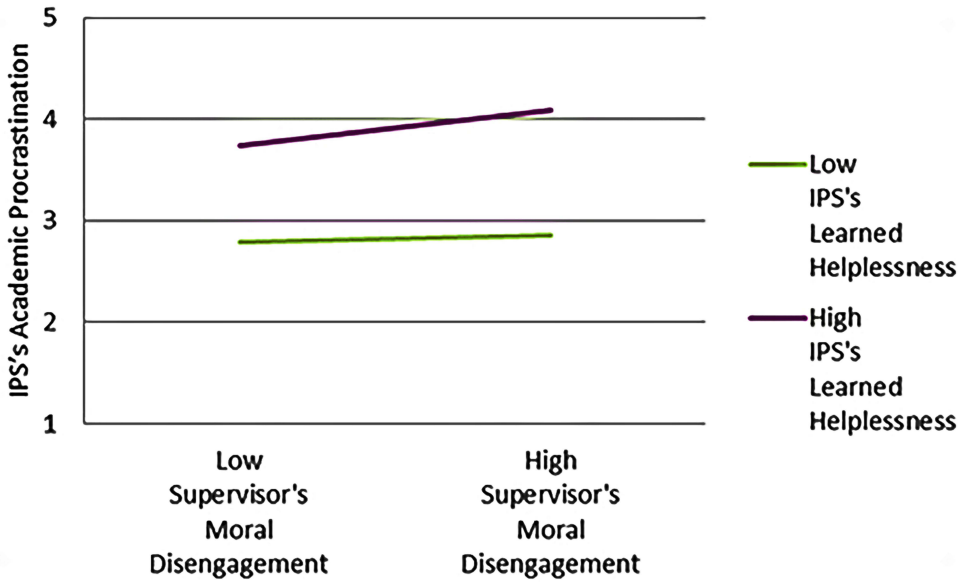

Figure 3 Schematic diagram of interaction effect (IPS's Learned Helplessness).

explored individuals' behavior tendency and its consequences by means of self-determination theory, and holds that external conditions and internal motivation jointly determine their potential abilities and attitudes towards their responsibilities or difficulties.[73]

Theoretical Significance

Firstly, this research verified the trigger conditions of IPS's academic procrastination by reconstructing the complex moderation model, and further reconfirmed the previous researches' view that supervisor plays an important role in students' academic development. IPS are very vulnerable to the cultural impact caused by differences in teaching methods and study environment, resulting in negative feelings, such as confusion and anxiety (Cho et al, 2020), and their academic tasks are essentially highly challenging activities (Mostafa et al, 2020), which needs more instructions from supervisors. However, supervisor's moral disengagement means that they are unwilling to take extra responsibility for IPS's academic development and try to minimize their obligations. Therefore, they will blame IPS's academic problems on the lack of their own academic ability or enthusiasm by the transfer of responsibility. In the absence of supervisor's external guidance and support, it is difficult for IPS to focus on academic tasks, propose innovative ideas, and put them into practice, then they will regard their studies as a burden rather than an opportunity to improve ability. Without external support, their internal motivation for pursuing academic progress will be gradually eroded (Charleson, 2019), which is more likely to cause academic procrastination.

Secondly, scholars have focused on the direct link between supervisor's guidance and postgraduates' academic performance (Khuram et al, 2021), but ignored the internal conditions, such as students' academic attitude in this process. Taking IPS's moral disengagement as an important consideration, this study explains the boundary conditions of supervisor's moral disengagement affecting IPS's academic procrastination, and more comprehensively presents the internal and external interaction of the generation mechanism for IPS's academic procrastination. It has been previously proven that IPS's subject consciousness and sense of responsibility for their own academic development will be directly reflected in their willingness and real actions to pursue academic achievement and long-term development. The awareness of academic responsibility and the pursuit of scientific research achievements pushes IPS to actively improve their research ability, actively cultivate their interest in scientific research, and make more efforts in learning and research. More importantly, when IPS have a strong awareness of academic responsibility, they will actively strengthen communication to acquire suggestions and other useful information, so as to conduct self-assessment and reflection,

Table 6 The Moderating Effect of IPS's Learned Helplessness (Moderated Moderation)

Variables	IPS's Academic Procrastination					
	β	95% CI		β	95% CI	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
	Model 1			Model 2		
Gender	−0.033	−0.132	0.066	−0.038	−0.135	0.060
Nationality	0.010	−0.043	0.063	0.016	−0.037	0.069
Religion	−0.066	−0.186	0.054	−0.068	−0.187	0.051
Major	−0.030	−0.083	0.022	−0.029	−0.081	0.022
Education Background	−0.050	−0.150	0.050	−0.049	−0.149	0.050
Supervisor's Moral Disengagement				0.098**	−0.171	−0.026
IPS's Moral Disengagement						
IPS's Learned Helplessness						
Supervisor's Moral Disengagement * IPS's Moral Disengagement						
Supervisor's Moral Disengagement * IPS's Moral Disengagement * IPS's Learned Helplessness						
R^2	0.013			0.040		
Adjusted R^2	−0.005			0.018		
ΔR^2	0.013			0.026		
F	0.712			1.789*		
	Model 3			Model 4		
Gender	−0.035	−0.129	0.060	−0.037	−0.129	0.054
Nationality	0.020	−0.031	0.071	0.027	−0.023	0.077
Religion	−0.079	−0.194	0.035	−0.072	−0.184	0.039
Major	−0.020	−0.070	0.030	−0.033	−0.082	0.016
Education Background	0.000	−0.098	0.099	0.003	−0.093	0.098
Supervisor's Moral Disengagement	0.079*	−0.150	−0.008	0.091*	−0.160	−0.022
IPS's Moral Disengagement	0.153**	0.060	0.246	0.107*	0.014	0.199
IPS's Learned Helplessness				0.307***	0.164	0.450
Supervisor's Moral Disengagement * IPS's Moral Disengagement	0.061**	0.023	0.099	0.054**	0.017	0.092
Supervisor's Moral Disengagement * IPS's Moral Disengagement * IPS's Learned Helplessness				0.029*	0.016	0.074
R^2	0.112			0.172		
Adjusted R^2	0.084			0.140		
ΔR^2	0.034			0.060		
F	4.043***			5.299***		

Note: *means $p<0.05$, **means $p<0.01$, ***means $p<0.001$.

make timely adjustments in academic direction or other technical aspects, and consciously moderate their perception of academic pressure to ensure a good psychological state. Even if the supervisor shows a strong tendency to disengage, IPS can overcome external interference and temptation, conquer difficulties with their own efforts and make better research progress.

Finally, this study introduced the concept of learned helplessness, which has broadened the horizon for analyzing the causes of IPS's academic procrastination. Previous researches believe that learned helplessness will lead to negative attribution of failure experience, especially the negation of individuals' internal stable conditions, which will corrode students' academic motivation, as well as undermine learning efficiency and performance. It also proved that IPS with strong learned helplessness tend to shift their responsibility to the supervisor as they are unable to overcome academic

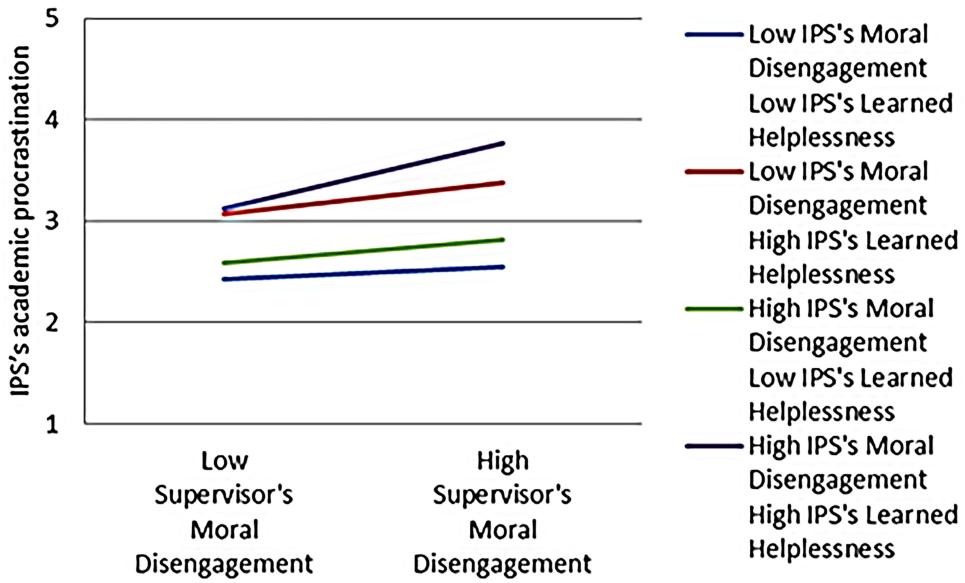

Figure 4 Schematic diagram of interaction effect (Moderated Moderation).

difficulties and avert academic procrastination through their efforts when the supervisor refuse to fully fulfill responsibilities. Meanwhile, when IPS's learned helplessness is weak, they can take the initiative to undertake academic responsibility. Even if the supervisor rarely provides guidance and support, they can make up for the lack of external conditions and find solutions to complete academic tasks.

Practical Significance

First of all, supervisor system is still the mainstream mode of postgraduate education in the world. Supervisor's disengagement of responsibility to guide IPS is not only disadvantageous to IPS's development of academic ability and innovation consciousness, but will also spoil their emotional resources for continuous academic devotion. Therefore, giving full play to the role of supervisor is a necessary step to improve IPS's education quality. The selection of supervisors for IPS should not only adhere to the traditional requirements for their professional ability and academic competence, but also pay attention to their cross-cultural communication ability. It is also important to select supervisors who have a real enthusiasm and strong sense of responsibility for IPS's education. In addition, universities should strengthen supervisors' specialized training and experience exchange in IPS's guidance and instruction, clarify the importance and particularity of IPS education, make new supervisors fully understand relevant policies, rules, and regulations, and help them master general rules and basic methods of educating IPS. Also, it is necessary to establish and improve the evaluation and monitoring system for IPS's education quality, improve the administration and evaluation to supervisors by fully considering IPS's opinions and concerns, enhance supervisor's awareness of responsibility in the process of performance evaluation, and adjust the allocation of scientific research resources accordingly and timely.

Secondly, it is necessary to re-emphasize the decisive role of self-determination in IPS's academic career, pay attention to the development and enhancement of their academic ability and thinking, and improve their academic competence by adding preparatory education and curriculum adjustment. Besides, IPS shall be encouraged to pay attention to academic quality development, establish independent awareness in their studies, independently formulate research directions and academic objectives under supervisor's guidance, constantly reflect and adjust scientific research directions and learning strategies. Moreover, IPS shall gradually capture their main roles in the process of researches and practice, and reduce the tendency of rationalizing their procrastination behaviors. Also, universities shall pay attention to the quality motoring and process management of IPS education, standardize IPS's academic affairs management by properly creating an atmosphere that values rules and punctuality, and normalizing processes for IPS to follow, especially give clear instructions and deadlines at

critical time points and important procedure, and establish punishment measures for delaying behaviors, so as to enable students to plan in advance rather than disengage their responsibilities till the last moment before deadline.

Finally, it has been unveiled that IPS's competence and psychological state have an impact on their academic progress Strengthening psychological counseling is the essential for them to consolidate their academic ability and volitional quality. While fully fulfilling their instructing and guiding responsibilities, the supervisor is also required to take into account IPS's differences in knowledge, language, and thinking. Since IPS's entrance into university, inclusive attitude towards their cultural differences should be embraced throughout the whole education process. It will be helpful to give them more respect, understanding, and trust, and cultivate the empathy between supervisors and IPS by increasing interaction and communication. In addition, it is compulsory to pay continuous attention to IPS's cognitive and emotional state, build a valid intervention mechanism and resolve psychological problems caused by academic problems as earliest. In particular, the evaluation of IPS's academic progress should mainly focus on encouragement, give appropriate pressure and criticism, and timely provide feedback to strengthen guidance, so as to improve their academic competence and creative thinking to face the challenges of academic tasks.

Research Limitations and Future Prospects

Although this research discussed theoretical and practical significance based on the results of empirical analysis, its limitations are also inevitable. First, the data used are obtained from interviewed IPS's subjective reports. Even though the survey process is strictly controlled, the possibility of response deviation of the obtained data results cannot be completely excluded. To be more specific, IPS's answer may deviate from the fact due to their awareness to protect personal privacy and conduct impression management. In future research, we can consider collecting data through experimental methods or collecting paired samples, so as to avoid subjective errors as much as possible. Second, two-stage time-lagged method was used to collect data, but it still cannot effectively infer the direct causal relation among variables. Therefore, tracking survey method can be used to collect longitudinal data to effectively verify the affecting direction and intensity among variables in future researches. Third, this research directly explored the impact of supervisor's moral disengagement on IPS's academic procrastination, but did not explore the effect on IPS's internal psychology. Thus, it did not pay enough attention to its intermediary mechanism. Subsequent research can explore the potential intermediary mechanism to enrich the process analysis of supervisor's moral disengagement on IPS's academic procrastination. Fourth, this research takes IPS as the research object to explore the impact of supervisor's moral disengagement on postgraduates' academic procrastination and its boundary conditions, but it still remains unknown whether its conclusions are applicable to other populations of students. Future researches can further broaden the scope of research objects and expand the applicability of the theoretical model.

Conclusion

Previous researches paid little attention to the formation mechanism of academic attitude or its impact on IPS's academic performance under the joint effects of internal and external factors. Based on self-determination theory, this research not only stressed the key role of supervisor's disengagement of responsibility in exploring the antecedents of IPS's academic procrastination, but also fully considered their moral disengagement tendency, as well as defects of cognition and ability, which opens a new perspective and direction for the analysis of the relation between supervisor and IPS.

Ethical Approval

This research was approved by the ethical review committees of Jiangsu University and Tianjin University of Technology in China, and Chulalongkorn University in Thailand.

Informed Consent

Respondents agreed to participate in this research and gave informed consent.

Acknowledgment

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors report no conflicts of interest regarding the publication of this paper.

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