

Motivational factors influencing research completion: A literature review for occupational therapy and health professions

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ABSTRACT

Background: Graduate education, particularly at the master's and doctoral levels, is crucial in developing advanced professional skills and fostering a research-oriented mindset. However, many students struggle to complete their research due to various motivational and institutional challenges. This literature review examines the factors influencing research completion in graduate school to provide insights into occupational therapy and related health professions, emphasizing the importance of intrinsic and extrinsic motivational factors.

Objective: The primary goals of this review are to (1) identify the intrinsic and extrinsic motivational factors that influence research completion, (2) explore the barriers to research completion at the graduate level, and (3) propose motivational strategies that graduate programs can adopt to support research completion among occupational therapy and other health professions.

Materials and methods: A literature search was conducted across multiple databases, including the ASEAN Citation Index, EBSCO, Google Scholar, and Scopus. The review focused on studies published between 2010 and 2024 investigating motivational strategies, barriers, and research completion in graduate school. A total of 17 peer-reviewed articles met the inclusion criteria and were subjected to frequency and thematic analyses to identify key themes and patterns.

Results: The thematic analysis revealed four key themes: (1) intrinsic motivation and personal growth, (2) external support and institutional resources, (3) barriers to research completion, and (4) improving support systems. The findings highlight that intrinsic factors such as personal satisfaction and ambition are crucial for research completion, while external factors like mentorship, institutional resources, and cultural context play significant roles. Identified barriers include imposter syndrome, inadequate supervision, and time management challenges. Enhancing mentorship, strengthening institutional support, and developing student skills are recommended to improve research completion rates.

Conclusion: This review underscores the importance of addressing intrinsic and extrinsic motivational factors to support research completion among graduate students in occupational therapy and related health professions. By implementing targeted strategies that enhance mentorship, provide robust institutional support, and develop essential research skills, graduate programs can significantly improve research outcomes and advance evidence-based practice in health professions.

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Introduction

Graduate education, especially a Master's, requires advanced professional skills, self-directed research, and autonomy in professional practice, as independence is

important in academic programs worldwide. Likewise, the ASEAN Qualifications Reference Framework emphasizes research skills as a crucial aspect of graduate qualifications in the ASEAN region.¹ Moreover, the Philippines emphasizes promoting a research culture in graduate schools, aligning with global trends stressing research competency as a crucial outcome of higher education. A robust research culture in graduate education is essential for enhancing research productivity and achieving desired higher education outcomes.² Early research involvement is vital for enhancing graduate success skills, promoting critical thinking, problem-solving abilities, and deeper engagement with the academic process.³

Master's programs often include research-related courses, but students usually struggle to complete their projects due to motivational factors. Motivational factors such as autonomy, the development of a strong research culture, and early involvement in research are critical in influencing the ability of graduate students to complete their research.⁴ Research project characteristics, such as freedom, workload, and alignment with the supervisor's research, significantly influence graduate study success, with high workload and poor alignment leading to dissatisfaction and higher dropout rates.⁴ Moreover, research competence development can be challenging for students, as they struggle to acquire the necessary skills and navigate the complexities of research, mainly when real-world application is limited.⁵ Likewise, the lack of time, money, and institutional support that South African occupational therapists reported as barriers to participating in research is similar to what happens in the Philippines, emphasizing the necessity of a coordinated national research strategy to address these problems effectively.⁶ Moreover, the Philippines' CMO No. 15 Series 2019 has introduced publication requirements, complicating the academic landscape for students due to inadequate preparation and financial constraints.⁷ Understanding these factors is essential for improving research completion rates and enhancing professional practice, especially in fields like occupational therapy and health professions that rely on evidence-based practice.

This literature review aims to identify and analyze the motivational strategies that facilitate learning and research completion among occupational therapists and other health professions students enrolled in graduate programs. By synthesizing findings from diverse studies, this review seeks to:

1. Identify intrinsic and extrinsic motivational factors that influence research completion.
2. Explore barriers to research completion at the graduate level.
3. Propose motivational strategies graduate programs can adopt to support research completion among occupational therapy and other health professions.

Methodology

Research design

The authors conducted a literature review on motivational strategies in higher education, focusing on

occupational therapy and students from other health professions. This approach allowed a process of identifying, evaluating, and synthesizing data from various sources. In contrast to rigorous methodologies such as scoping or systematic reviews, this literature review provides just an overview of existing knowledge on the topic, ideas, and concepts.⁸

Literature search

The literature search used online databases, including the ASEAN Citation Index, EBSCO, Google Scholar, and Scopus. Initial search terms included combinations of keywords such as "motivational strategies," "graduate education," "occupational therapy," and "research." However, the results did not yield enough relevant studies. Expanded search terms used included combinations of keywords such as "motivational strategies," "graduate education," and "research." Boolean operators (AND, OR) were utilized to refine the search results. The search process was iterative, with refinements made to the search terms to ensure the inclusion of relevant literature. The following were the guiding questions for the literature review:

1. What are the intrinsic and extrinsic motivational factors that influence research completion?
2. What are the barriers to research completion at the graduate level?
3. What motivational strategies can graduate programs adopt to support research completion among occupational therapy and other health professions?

To ensure the relevance and quality of the included studies, the following criteria were applied: (1) Studies published in peer-reviewed journals between 2010 and 2024, (2) Research focused on motivational strategies in graduate education, (3) Studies involving occupational therapy students, health professions students or professionals, and (4) Articles available in English. The following criteria were used to exclude studies: (1) Studies not related to graduate education, (2) non-peer-reviewed articles, such as opinion pieces and editorials, and (3) Publications in languages other than English without available translations. The criteria were applied to literature titles initially searched, followed by further screening through abstracts and full texts. After using these criteria, 17 articles met the inclusion criteria and were selected for review.

Data Analysis

A frequency analysis was used to summarize the articles according to year of publication, geographical location, methodology, data collection method, and population. The authors used thematic analysis⁹ to identify common themes and patterns regarding motivational strategies for research completion in graduate school. Both intrinsic and extrinsic motivational factors were examined. Moreover, the authors did not assess for methodological rigor for the included studies as it is beyond the scope of this review.¹⁰

The following were the steps in analyzing the data. First, the authors began familiarizing themselves with the data by reading and re-reading the full texts of the included studies. Second, the authors independently assigned codes for significant words, phrases, or sentences. During this step, the authors regularly held discussions to settle any conflicts in the coding process. Third, the authors searched for themes by organizing the codes. Patterns, connections, and recurring concepts were the basis for establishing the themes. Fourth, the authors reviewed the themes to ensure they represented the coded data. Fifth, the authors defined and named the final set of themes. Lastly, the authors prepared and reviewed a written report of the findings.

Results

Frequency Analysis

Table 1 shows the results of the frequency analysis of the analyzed articles. Most articles were published between 2020 and 2024, indicating a recent interest in the topic. Asia was the most represented continent, with a significant proportion of studies originating from countries like Hong Kong, China, the Philippines, Vietnam, and India. Most studies utilized quantitative methodologies, while a smaller percentage employed qualitative and mixed methods designs. Data collection methods were predominantly surveys, with other studies incorporating mixed methods, focus groups, and interviews. The research primarily focused on graduate students, including those at the master's, doctoral, and post-doctorate levels, with some studies examining mixed populations of faculty and students.

Table 1. Frequency analysis of articles reviewed.

Category		N / 17 (%)
Year of publication	2020-2024	12 (70.6)
	2010-2014	3 (17.6)
	2015-2019	2 (11.8)
Continent (countries)	Asia (Hong Kong, China, Philippines, Vietnam, India)	7 (41.2)
	Europe (Netherlands, Germany, Sweden)	3 (17.6)
	Oceania (New Zealand)	2 (11.8)
	Africa (Tanzania, South Africa)	2 (11.8)
	Not applicable (Evidence synthesis)	2 (11.8)
	North America (USA)	1 (5.9)
Methodology	Quantitative	7 (41.2)
	Qualitative	5 (29.4)
	Mixed methods	3 (17.6)
	Evidence synthesis (scoping, systematic review)	2 (11.8)
Data collection method	Surveys	7 (41.2)
	Mixed	5 (29.4)
	Focus groups	2 (11.8)
	Interviews	2 (11.8)
	Content analysis	1 (5.9)
Population	Mixed graduate students (Master's, Doctorate, Post-doctorate)	10 (58.8)
	Doctoral students	4 (23.5)
	Mixed (faculty and students)	3 (11.8)

Thematic Analysis

The thematic analysis of the data yielded four key themes that provide insight into the factors influencing research completion among graduate students. These themes cover intrinsic and extrinsic motivational factors, barriers

to research completion, and strategies for enhancing support systems within graduate programs that may apply to occupational therapy and other health professions (Table 2).

Table 2. Summary of themes and sub-themes.

Guiding/research questions	Themes	Sub-themes
1. What are the intrinsic and extrinsic motivational factors that influence research completion?	Intrinsic motivation and personal growth External support and institutional resources	• Personal satisfaction and self-perception • Commitment and ambition • Mentorship and supervision • Institutional resources and infrastructure • Cultural and environmental context
2. What are the barriers to research completion at the graduate level?	Barriers to research completion	• Personal barriers • Institutional barriers • External barriers
3. What motivational strategies can graduate programs adopt to support research completion among occupational therapy and other health professions?	Improving support systems	• Enhancing mentorship and supervision • Strengthening institutional support • Developing student skills

Theme 1: Intrinsic motivation and personal growth

Intrinsic motivation, including personal satisfaction, self-perception, commitment, and ambition, significantly influences graduate students' research completion, emphasizing the importance of these factors in the research journey. Graduate students' satisfaction stems from their roles as educators, researchers, and scholars, bolstered by their self-perception and ambition to achieve academic and professional goals. Intrinsic factors play a crucial role in comprehending how personal factors influence the persistence and success of graduate students in occupational therapy and related health professions.

Sub-theme 1.1: Personal satisfaction and self-perception

Graduate students often find personal satisfaction in their roles as educators, researchers, and scholars, which is closely linked to their perception of themselves within these academic fields. Research is often seen as a way for students to affirm their identity and purpose within the educational community, fostering intrinsic motivation to overcome challenges.¹¹ Self-perception is essential in students' motivation to research despite challenges.^{12,13}

Sub-theme 1.2: Commitment and ambition

Graduate students with ambition and commitment to long-term career aspirations will likely remain focused and driven during the research process.¹⁴ The ambition is frequently the result of a desire to reach significant personal and professional milestones, such as publishing research, contributing to the field, or moving up the academic ladder. Likewise, students with solid professional ambitions are more resilient in research challenges, as their commitment to academic goals motivates them to complete their studies.¹⁵ This sub-theme directly addresses the guiding research question by illustrating how personal ambition and commitment are central to research completion.¹⁶

Theme 2: External support and institutional resources

This theme explores how mentorship, institutional support, and educational and cultural influences critically

motivate graduate students to complete their research. Mentorship, institutional resources, and a supportive artistic environment are crucial for students' motivation and success, providing necessary resources, guidance, and context for sustained research efforts.¹⁷⁻¹⁹

Sub-theme 2.1: Mentorship and supervision

Mentorship and supervision are essential in guiding graduate students through research, providing technical advice, emotional and psychological support, and accountability. Strong mentor-mentee relationships are critical in sustaining student motivation and ensuring the successful completion of research projects. For example, mentoring relationships in occupational therapy significantly impact graduate students' research productivity and completion rates, focusing on extrinsic motivational factors.^{17,20}

Sub-theme 2.2: Institutional resources and infrastructure

The availability and quality of institutional resources, such as funding, research facilities, and access to academic networks, are vital to the research process. Institutions that provide robust support systems enable students to focus on their research without being hindered by logistical or financial concerns. Adequate resources and infrastructure facilitate the research process and reinforce the student's commitment to their work. For example, students with access to well-resourced institutions, such as libraries, research grants, and collaboration opportunities, are more likely to complete their research successfully.¹⁸

Sub-theme 2.3: Cultural and environmental context

The cultural and educational environment in which students conduct research significantly influences their motivation and work completion, with cultural norms, institutional culture, and academic environment potentially supporting or hindering research progress. Understanding these influences is essential for creating supportive conditions that align with students' needs and expectations. Likewise, educational culture and environmental context impact graduate students' research

experiences, emphasizing the significance of a positive environment for research completion.¹⁹

Theme 3: Barriers to research completion

Barriers like imposter syndrome, inadequate supervision, time management, and family obligations can significantly affect students' motivation and research completion. Research completion rates for graduate students are significantly improved by addressing challenges.^{14,21,22}

Sub-theme 3.1: Personal barriers

Personal barriers like imposter syndrome, self-regulation issues, and psychological stress can hinder a student's research progress, leading to procrastination, disengagement, and attrition. For example, imposter syndrome is a prevalent graduate student issue where they feel inadequate, leading to doubts about their research abilities, delays, or withdrawal from their programs.²¹ Likewise, students may also feel that they lack adequate skills in completing research-related tasks, which may lead to discontinuation.²³

Sub-theme 3.2: Institutional barriers

Institutional barriers, such as supervision issues, misalignment between student and institutional goals, and inadequate support services, can create a disconnect between students and their academic environment.

Likewise, inadequate supervision and miscommunication between students and advisors significantly hinder research completion, creating feelings of isolation and uncertainty.²²

Sub-theme 3.3: External barriers

External barriers, such as time management, family obligations, and financial constraints, can hinder students' ability to complete their research, potentially leading to delays or discontinuation. Likewise, time management challenges and external responsibilities, such as part-time work or family duties, significantly impact students' ability to focus on their research.¹⁴ Moreover, external pressures often compete with academic demands, causing difficulties in balancing for graduate students that hinder research completion.

Theme 4: Improving support systems

This theme emphasizes enhancing graduate programs' support systems, including mentorship, institutional support, and student skill development, to boost research completion rates. Strategies enhancing mentorship, strengthening institutional support, and developing research skills effectively address barriers and motivational factors influencing research completion.^{6,14,18}

Sub-theme 4.1: Enhancing mentorship and supervision

Mentorship is critical for research success, and effective strategies include training mentors, clear communication, and structured programs to ensure consistent support throughout the research process. Improving the quality of mentorship can significantly

increase students' confidence, provide clearer guidance, and reduce feelings of isolation. For example, structured mentorship programs are important in assisting students with research challenges, fostering stronger relationships, and ensuring timely completion.^{6,17,24-26}

Sub-theme 4.2: Strengthening institutional support

Graduate programs can enhance research completion by aligning institutional resources and policies with student needs. Institutions that boost research funding, offer flexible timelines, and provide students with the necessary tools and infrastructure are likelier to achieve higher completion rates. Likewise, well-developed support systems in institutions, such as research funding and infrastructure, are critical in empowering students to pursue their research goals.^{18,26}

Sub-theme 4.3: Developing student skills

Aside from providing external support, graduate programs should focus on developing students' skills in critical areas such as time management, self-regulation, and research methodologies. Workshops, seminars, and coaching sessions can enhance students' time and resource management skills, helping them overcome barriers to research completion. Moreover, skill development initiatives focusing on research methodologies and time management effectively enhance research outcomes and project completion.¹⁴

Discussion

This literature review highlights the significant role intrinsic and extrinsic motivational factors play in research completion among graduate students. Intrinsic motivation, driven by personal satisfaction and ambition, is crucial for students' commitment to research, complemented by external support systems like mentorship and institutional resources.

The review identifies barriers to research completion, including imposter syndrome, inadequate supervision, and time management issues, which are prevalent across various educational contexts.^{27,28} This review and external studies emphasize the importance of addressing barriers and implementing contextually relevant support systems for improved research completion rates. Safdari *et al.* and Memarpour *et al.* highlight the need for tailored institutional support,^{27,28} while Bulan stresses the importance of adapting educational practices to local contexts.²⁹ Graduate programs should implement tailored strategies to meet their student's unique needs, thereby enhancing the effectiveness of their support systems in facilitating successful research completion.

Implications for occupational therapy and other health professions

The findings from this literature review have practical implications for improving research completion in occupational therapy and other health professions. Educational programs should enhance mentorship quality and provide robust institutional resources to

tackle common barriers like imposter syndrome and time management issues. Graduate programs should establish structured mentorship programs and ensure students can access the necessary research tools and support services. Adopting these strategies can enhance students' research skills, leading to a more evidence-based and competent workforce in health professions. However, it is essential to recognize the challenges in resource allocation and the need for tailored approaches to meet diverse student needs.

Implications for future research

This review suggests areas for future research to understand better factors influencing research completion among graduate students in occupational therapy and related health professions. Future research should investigate the long-term efficacy of strategies like improved mentorship and tailored institutional support in various educational settings. Likewise, qualitative research could offer a deeper understanding of graduate students' experiences with imposter syndrome and time management issues, thereby enhancing research completion. Future research could also focus on the specific needs of underrepresented student populations and how targeted interventions can support them. Moreover, investigating the role of emerging technologies, such as virtual mentorship programs and online skill development tools, in supporting research completion would also be valuable. Addressing these areas can provide deeper insights and more robust solutions for improving research outcomes across health professions education.

Limitations

While this literature review provides valuable insights into the factors influencing research completion among graduate students, several limitations should be acknowledged. The review was limited to English-published studies in selected databases, potentially excluding relevant research from other languages or less accessible sources. The review's broad focus on graduate students may have overlooked the nuances of occupational therapy and health professions graduate education, potentially limiting the generalizability of the results as more studies were needed for analysis. Finally, the review's reliance on existing literature reflects the scope and quality of the available studies, which may vary.

Conclusion

This literature review examines the factors influencing graduate students' research completion and provides insights into occupational therapy and related health professions. Our findings highlight the critical role of personal motivation, effective mentorship, and institutional support in sustaining research efforts. Barriers such as imposter syndrome, inadequate supervision, and time management challenges were identified as significant obstacles, emphasizing the need for targeted interventions. The review also outlined strategies that graduate programs can implement to enhance research

completion, including improved mentorship, tailored institutional resources, and skill development initiatives. Graduate programs can improve research completion by addressing barriers and providing guidance for educators and researchers, contributing to advancing knowledge and practice in occupational therapy and health professions.

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