

Presentation of a Mental Skills Model for General Science Students

Sarah. Jasim Mohammed AlAbdullah¹, Asghar. Sharifi^{2*}, Mushreq Mohammed. Mijwil Al-Isawi³, Zohreh. Saadatmand⁴

¹ Ph.D Student, Department of Educational Sciences, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

² Assistant Professor, Department of Educational Sciences, Roudehen Branch, Islamic Azad University, Roudehen, Iran

³ Professor, Department of Arabic Language, College of Basic Education, Babylon University, Babylon, Iraq

⁴ Associate Professor, Department of Curriculum planning, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

* Corresponding author email address: drasharifi@gmail.com

Article Info

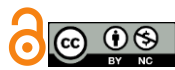
Article type:

Original Research

How to cite this article:

Jasim Mohammed AlAbdullah, S., Sharifi, A., Mijwil Al-Isawi, M. M., & Saadatmand, Z. (2025). Presentation of a Mental Skills Model for General Science Students. *International Journal of Innovation Management and Organizational Behavior*, 5(4), 1-8.

<https://doi.org/10.61838/kman.ijimob.5.4.14>



© 2025 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

ABSTRACT

Objective: This study aimed to identify and explain the dimensions and components of mental skills among general science students to provide a theoretical framework for enhancing these skills.

Methodology: This study employed a qualitative approach based on grounded theory. Data were collected through in-depth semi-structured interviews with 18 students and relevant experts and analyzed using qualitative data analysis methods, including open, axial, and selective coding. ATLAS.ti software, version 8, was used for data analysis.

Findings: Data analysis resulted in the extraction of 252 initial conceptual codes. These concepts were categorized into five main conceptual codes and 17 sub-conceptual codes, encompassing various dimensions of students' mental skills. The most significant identified dimensions include scientific thinking and analysis, creative and innovative thinking, management and organization, logical and systematic thinking, and research and scientific skills.

Conclusion: Mental skills among general science students, as a key factor in academic and research success, consist of a set of abilities that are directly related to academic performance. Enhancing these skills can improve learning quality, the ability to solve complex scientific problems, and students' academic progress. The findings of this study suggest that educational institutions should focus on training critical thinking skills, creativity, time management, and scientific research to create a conducive environment for student development. Additionally, conducting further research to examine the impact of environmental and social factors on mental skills can contribute to a more comprehensive understanding of this field.

Keywords: *Mental skills, critical thinking, scientific analysis, creativity and innovation, time management, systematic thinking, research skills, general science students, grounded theory, higher education.*

1 Introduction

Mental skills, as a fundamental component of human cognitive processes, play a crucial role in both daily life and academic success. These skills include abilities that enable individuals to process information, respond to complex problems, and generate appropriate solutions in the face of various challenges. Mental skills not only influence the quality of learning but also play an essential role in numerous aspects of individual and social life. Abilities such as concentration, working memory, critical thinking, data analysis, and decision-making all fall under the category of mental skills, each significantly contributing to an individual's performance across different domains. In academic contexts, these skills assist students in understanding complex concepts and applying them to solve novel problems. Therefore, enhancing students' mental skills can have a significant impact on their academic efficiency (Anton et al., 2020; Anton et al., 2021).

In this regard, universities and educational institutions, particularly in general science disciplines, play a crucial role in developing and strengthening these skills. Mental skills are of particular importance for general science students, as they are typically exposed to a broad range of information and topics. These students must be able to process diverse and sometimes contradictory information, analyze it, and use it to reach effective conclusions. Specifically, in general science disciplines, critical thinking and the ability to analyze issues from multiple perspectives are of utmost importance. These fields often integrate elements from humanities, social sciences, natural sciences, and technical disciplines, requiring general science students to continuously employ their mental skills for data analysis and problem-solving (Khodayari et al., 2011; Sanati Monfared, 2006).

Mental skills are also vital in various aspects of decision-making and problem-solving. Effective decision-making requires precise information analysis, prediction of outcomes, and selection of the best possible option. These skills help individuals navigate complex challenges in daily life and make the most efficient use of limited resources. In academic settings, general science students must be able to make informed decisions regarding study methods, resource selection, and research planning. This process requires concentration, information organization, and problem-solving abilities, all of which are key components of mental skills. Moreover, critical thinking is a fundamental pillar of problem-solving. Students must be able to analyze

information accurately and objectively to properly evaluate and resolve issues, ultimately advancing in scientific processes (Terzioğlu & Çakır, 2020; Zeydabadi & Ebrahim, 2014).

General science students face unique learning challenges. For example, they frequently encounter vast amounts of information from different disciplines that must be organized and synthesized. To succeed in this process, students need skills such as organization, categorization, and data analysis. These skills help them simplify complex information and present it in logical and conceptual formats. Since general science fields are typically built upon interdisciplinary foundations, the ability to analyze information from multiple perspectives is considered a crucial component of mental skills in these disciplines (Anton et al., 2020).

One of the most important dimensions of mental skills that must be strengthened in general science students is the ability to engage in logical reasoning. Logical reasoning enables students to approach various data and information in a structured and systematic manner, leading to well-founded and accurate conclusions. This skill is essential for conducting scientific research, writing academic papers, and even addressing everyday challenges in personal and professional life. Recent studies have identified logical reasoning and analytical thinking as key factors contributing to general science students' academic performance and the enhancement of their scientific competencies (Bahmani et al., 2015).

Another essential mental skill for general science students is working memory and learning ability. Working memory allows students to retain information in their minds and use it during different stages of processing and analysis. This ability is particularly crucial in educational environments where managing information and retaining complex concepts are necessary. General science students must be able to store and recall various types of information when needed. This is especially important in scientific research and academic writing, where students must analyze data and incorporate it into scholarly documents (Anton et al., 2020; Anton et al., 2021).

In addition to working memory, attention and concentration are other critical components of mental skills that should be strengthened in general science students. Students must be able to focus on different issues during study sessions or research activities. High levels of concentration help them avoid errors and distractions, leading to more accurate results. Given that general science

students engage with a wide range of subjects, maintaining strong attention and focus is one of the key factors in their academic success (Anton et al., 2020; Zeydabadi & Ebrahim, 2014).

Therefore, considering the specific needs of general science students and the importance of mental skills in their academic success, these skills must be reinforced through educational processes. Proper training and structured academic programs can help students develop their mental skills, facilitating their academic and professional progress. In particular, due to the lack of a comprehensive examination of the dimensions, components, and indicators of mental skills among general science students, conducting further research in this field could significantly enhance their academic proficiency and improve their educational performance. Thus, this study seeks to answer the following research question:

What are the dimensions, components, and indicators of mental skills among general science students?

2 Methods and Materials

2.1 Study Design and Participants

This study is a qualitative research that employs a grounded theory approach due to the novelty of the subject. The research population included all general science students from the Faculty of Basic Education and key informants. The selection of study samples was conducted through theoretical sampling.

The inclusion criteria for this study were: having completed at least one academic term in the general science discipline, willingness to participate in semi-structured interviews, and the ability to articulate experiences and perspectives related to the research topic. Additionally, key informants with relevant experience in teaching, counseling, and educational management in general science faculties were selected to gather diverse and comprehensive data on the factors influencing the academic performance of this group. The exclusion criterion was the participant's unwillingness to continue the interview.

Sampling began with the first interview and continued until the categories reached saturation. Saturation is defined as the point at which new participants' responses to interview questions mirror those of previous participants. Theoretical saturation was achieved after conducting interviews with 18 students and experts in related fields.

2.2 Research Instrument

In this study, data were collected using in-depth semi-structured interviews. This method allows the researcher to gain a deep understanding of participants' experiences and perspectives through predefined questions while also providing sufficient space for participants to express their unique and individual viewpoints. This approach enables a more detailed examination of the various dimensions of students' mental skills and the identification of related components.

The interview questions were designed to enable participants to accurately describe their experiences regarding the mental skills they have employed in their academic journey. These questions were structured to address both cognitive and emotional-behavioral aspects of students' mental skills. Additionally, they provided an opportunity to explore components that may have received less attention.

The interview questions used in this study included:

1. In your opinion, what are mental skills, and how do they influence your learning process?
2. How do you apply your mental skills in educational settings, during study sessions, and in research activities?
3. What are the most important components of mental skills that have contributed to your academic success?
4. When faced with learning challenges, what mental skills do you use to overcome these difficulties?
5. What abilities do you feel contribute to your academic progress during learning and research?
6. How do mental skills assist you in group interactions and team-based projects?
7. What differences have you observed in the application of your mental skills across different courses?
8. Are your mental skills influenced by environmental or social factors (e.g., support from professors or classmates)? If so, how?
9. How do you use your mental skills for time management and maintaining focus in your studies?
10. In your opinion, which of your personality traits or abilities, related to mental skills, have been most effective in your academic performance?

These questions were designed to gain a deeper understanding of students' and key informants' perspectives

and experiences, aiming to identify the factors influencing students' mental skills and their various dimensions.

2.3 Implementation Process

The interviews commenced in early 2023 and continued until early 2024, alongside the coding of data. In the first phase of theoretical sampling, interviews were conducted with ten participants. Gradually, after extracting events, concepts, and categories, core categories began to emerge. The second phase of sampling was then conducted based on these core categories. Coding in the second stage was carried out based on the impact of core codes on the process.

The analysis of interview transcripts was conducted concurrently with data collection using ATLAS.ti software (version 8) and an emergent coding method, including open, axial, and selective coding. At all stages, field notes were documented. Upon reaching saturation, theoretical note organization was performed. This organization provided an overarching theoretical framework for constructing the grounded theory. Once the notes were organized, the most appropriate theoretical codes were identified. The processes of organizing and coding theoretical concepts occurred simultaneously.

To ensure the accuracy and validity of the research data, the study employed four criteria outlined by Glaser (1998): fit, workability, relevance, and modifiability.

- **Fit:** Categories should emerge from the data rather than being predetermined by theoretical perspectives. To ensure this criterion, the categories in this study were solely derived from the collected data, and researchers adopted a non-judgmental approach. Additionally, both axial and selective codes were directly drawn from participant interviews.
- **Workability:** This criterion assesses whether the concepts effectively address participants' main concerns. In this study, the selective code was identified directly and indirectly by participants, and the researcher's field notes aided in interpreting the decisions and actions taken by individuals in this domain.
- **Relevance:** A theory achieves relevance when it is significant and meaningful to the individuals

involved in the study. This criterion was ensured through semi-structured interviews with participants, allowing them to present their personal viewpoints.

- **Modifiability:** This principle states that the theory should be flexible and adaptable to new data or changing contexts, allowing for revision and refinement (Lomborg & Kirkevold, 2003). Therefore, the grounded theory produced in this study is neither absolute nor final but rather an ongoing process, as all grounded theories have the potential for further development (Glaser, 1998).

To enhance the credibility of the research data, the researchers allocated sufficient time for data collection and maintained theoretical notes throughout the study. The analysis process of categories was reviewed with three participants (as observers), and their feedback was incorporated into axial coding. Additionally, efforts were made to ensure a wide range of perspectives from various related disciplines and to include a diverse group of experts to enhance the validity of the interview process.

3 Findings and Results

Following the analysis of interviews conducted with 18 students and experts in relevant fields, a total of 252 initial conceptual codes, 5 main conceptual codes, and 17 sub-conceptual codes were identified to define the core concepts, which are elaborated below.

A) Open Coding

At this stage, the first interview was analyzed, and statements were categorized into conceptual and summarized expressions following the open coding method to facilitate further analysis.

B) Axial Coding

In this stage, after extensive reflection and contemplation on the research topic, the researcher logically organized concepts around the research questions. Specifically, the categories and concepts derived from open coding were compared, integrated, and condensed. The researcher, utilizing abstract and creative thinking, linked all the extracted meanings based on their interrelations, arranging them into several key points, core axes, or theoretical connections (Table 1).

Table 1

Sample Process of Axial Coding

Axial Codes	Open Codes
Critical and Analytical Thinking	Critical thinking, problem-solving, data analysis, logical decision-making, deductive reasoning, inductive reasoning, evaluation skills, critical analysis, system analysis, pattern recognition
Creative and Innovative Thinking	Creative thinking, scientific imagination, predictive ability, innovative thinking, innovation capacity, creative problem-solving, ability to solve complex problems, creative thinking in research, divergent thinking
Management and Planning	Time management, resource management, project management, research proposal development, ambiguity tolerance, failure management, self-regulation skills, risk management, long-term planning
Teamwork and Interactions	Collaboration skills, teamwork, peer interaction, conflict management skills, intellectual conflict resolution, team leadership skills, interdisciplinary communication, collaboration with diverse groups
Logical and Systematic Thinking	Systems thinking, holistic thinking, analysis of interrelationships, ability to analyze multiple dimensions of a problem, application of inductive reasoning, comparative analysis skills
Research and Scientific Skills	Question formulation, information search skills, hypothesis development, ethical decision-making, research question design, hypothesis evaluation, use of scientific evidence, qualitative analysis
Communication and Presentation	Interpersonal communication skills, academic writing skills, scientific presentation skills, written communication, listening skills, idea integration skills, technology utilization, comprehension of complex concepts
Strategic and Future-Oriented Thinking	Strategic thinking, trend forecasting, future-oriented thinking, consequence evaluation, logical analysis, trend prediction, theoretical development
Self-Management and Personal Discipline	Self-regulation skills, self-learning ability, intrinsic motivation, data collection accuracy, self-assessment, ethical problem-solving ability
Data and Information Management	Understanding the scientific significance of data, data analysis and synthesis ability, information categorization skills, use of scientific evidence, data collection ability, use of statistical software
Network and Systems Analysis	Analysis of scientific networks, system analysis ability, understanding complex relationships, complex network analysis, multi-dimensional problem analysis
Understanding and Applying Concepts	Understanding complex concepts, comprehension of scientific ethical principles, grasping scientific theories, abstraction skills, cause-and-effect relationship analysis, philosophical reasoning
Quantitative and Qualitative Data Analysis	Quantitative analysis, qualitative analysis, comparative analysis, statistical analysis skills, use of scientific evidence
Creativity in Design and Implementation	Creativity in experiment design, development of innovative research methods, theoretical advancements, creative problem-solving, innovation in research methodologies
Resource and Environmental Management	Financial and human resource management, working with incomplete data, conflict management skills, resource evaluation ability, managing uncertain conditions
Interdisciplinary Interactions	Establishing cross-disciplinary communication, working in multidisciplinary settings, engaging with researchers from other fields, integrating diverse knowledge sources
Multi-Dimensional Data Analysis	Analyzing different dimensions of a problem, analyzing interrelationships, identifying similarities and differences, integrating and synthesizing results

C) Selective Coding

Selective coding represents the final stage of analysis, where the concepts are integrated around a central category, and necessary categories for further development and refinement are identified. At this point, analytical notes and diagrams reflect the depth and complexity of the emerging theory (Strauss & Corbin, 2013, p. 255). However, this coherence and integration do not emerge instantly; rather, it

is a process that begins with the initial data analysis and continues through the final reporting stage.

In this phase, the central category of the study is identified, and the theory is extracted. The core topic is narrated as a story or report based on the collected data, leading to the final stage of coding. Table 2 illustrates the process of selective coding.

Table 2

Selective Coding Process

Dimensions (Selective Codes)	Components (Axial Codes)	Indicators (Open Codes)
Scientific Thinking and Analysis	Critical and analytical thinking, creative and innovative thinking, logical and systematic thinking, quantitative and qualitative data analysis	Critical thinking, problem-solving, data analysis, logical decision-making, deductive and inductive reasoning, critical analysis, pattern recognition, creative thinking, scientific imagination, outcome prediction, innovation in research methods, system and interrelationship analysis, hypothesis evaluation
Management and Organization	Time management, resource and project management, ambiguity and failure tolerance, self-regulation	Long-term planning, time management, project management, data and information management, self-regulation, risk management, failure management, ambiguity tolerance, project planning, self-evaluation, information categorization, and scientific evidence analysis, use of statistical software
Communication and Interactions	Collaboration skills, interdisciplinary interactions	Teamwork, conflict management, team leadership, interdisciplinary communication, collaboration with researchers from other fields, idea integration, effective transfer of complex concepts, listening and writing skills, use of technology in academic presentations

Creativity and Implementation	Creativity in design and execution, concept comprehension, and network analysis	Experiment design, creativity in solving complex problems, multi-dimensional data analysis, application of abstract concepts, systems analysis, complex network analysis, integration of information from multiple sources, results analysis, innovation in research methods, theoretical advancements
Self-Management and Strategy	Strategic and future-oriented thinking, self-management, and personal discipline	Trend forecasting, research strategy development, research proposal writing, consequence evaluation, long-term planning, self-regulation, personal resource management, continuous self-assessment, intrinsic motivation, intellectual conflict management, strategic approaches in research

4 Discussion and Conclusion

This qualitative study aimed to model the mental skills of general science students. According to the participants, mental skills are one of the most critical factors contributing to students' academic success. These skills encompass a set of cognitive, analytical, creative, and managerial abilities that help students effectively confront complex scientific problems and research challenges. Mental skills are structured into various dimensions and components, and since they are directly related to academic performance, they play a crucial role in enhancing learning quality and academic progress.

The first major dimension of mental skills is scientific thinking and analysis. This dimension includes abilities such as critical thinking, problem-solving, and data analysis. Students who possess strong analytical skills can systematically examine scientific issues and find logical solutions. The components of this dimension include deductive and inductive reasoning, logical decision-making, and both quantitative and qualitative data analysis. Indicators such as practicing complex problem-solving, systematic data analysis, and continuous evaluation of scientific theories are key factors in strengthening this skill.

The second dimension, creative and innovative thinking, enables students to seek new ideas and solutions rather than relying on conventional approaches. Creative and innovative thinking allows general science students to develop novel methods for solving scientific problems and propose inventive solutions when faced with challenges. Components such as imagination, divergent thinking, and predictive abilities are fundamental to this dimension. Indicators such as the ability to design creative experiments and solve problems through innovative methods contribute to the development of these skills.

Management and organization is another essential dimension of mental skills, focusing on students' ability to manage time, resources, and scientific projects. Students must be able to plan effectively and utilize their time efficiently to achieve their academic goals. Project management and research proposal development are crucial

components of this dimension. Indicators such as long-term planning, data management, and optimal use of scientific resources help students manage their academic projects more effectively.

The fourth dimension of mental skills is logical and systematic thinking, which emphasizes students' ability to systematically analyze phenomena and understand complex relationships among scientific variables. Students with strong systems thinking can comprehend the interconnections among different aspects of a scientific problem and analyze their interactions. Components such as holistic thinking, network and system analysis, and the ability to examine interrelated factors are part of this dimension. Indicators like systematic analysis and comparative evaluation enhance these skills.

Research and scientific skills are among the most crucial mental skills, as they enable students to collect, analyze, and present scientific data. These skills include formulating research questions, evaluating hypotheses, and using scientific evidence to validate results. Indicators such as hypothesis development, qualitative data analysis, and continuous evaluation of scientific findings help students conduct their research with greater accuracy.

Creativity in design and implementation is another dimension of mental skills, referring to students' ability to develop new research methodologies and experimental designs. This dimension includes components such as creativity in designing experiments, the ability to develop new theories, and innovation in research methods. Indicators such as designing creative experiments and solving complex problems using novel approaches help strengthen this skill.

Another critical dimension is communication skills and group interactions, which pertain to students' ability to collaborate with others and engage in effective scientific communication. Components such as teamwork, leadership abilities, and interdisciplinary collaboration are part of this dimension. Indicators such as working with peers, managing conflicts, and using technology for scientific presentations contribute to improving these skills.

Strategic and future-oriented thinking is another key dimension of students' mental skills. This dimension

includes the ability to forecast future scientific trends, analyze potential outcomes, and plan for long-term goals. Components such as evaluating consequences, future-oriented thinking, and logical analysis fall within this dimension. Indicators such as strategic data analysis and the use of forward-thinking approaches in research contribute to strengthening these abilities.

Finally, self-management and personal discipline is a fundamental dimension of mental skills, emphasizing students' ability to regulate emotions, maintain intrinsic motivation, and control personal behaviors. Students who excel in this area can navigate academic and research pressures with flexibility and resilience. Indicators such as continuous self-assessment, developing intrinsic motivation, and stress management enhance these skills.

These dimensions and components of mental skills interact with one another, helping general science students effectively handle academic and scientific challenges and maximize their intellectual potential. Strengthening these skills not only improves students' academic performance but also prepares them to tackle complex scientific and research problems.

Despite the valuable findings of this study, there were some limitations. One of the primary limitations was the diversity of participants. Although efforts were made to include students and experts from various disciplines, practical constraints in accessing certain groups may have reduced the generalizability of the findings. Additionally, participants' preconceived notions could have influenced their responses, meaning that some perspectives may have been shaped more by prior beliefs or interview expectations rather than their actual experiences. Furthermore, the qualitative nature of this study inherently limits its applicability to specific contexts and communities, making direct generalization to other fields challenging.

Given these limitations, future studies should consider integrating both qualitative and quantitative methods to obtain more comprehensive results. Additionally, conducting similar research across more diverse populations with larger sample sizes could enrich the data and improve the generalizability of the findings.

From a practical perspective, universities and educational institutions should focus on developing students' mental skills through structured programs. Offering workshops and training courses on critical thinking, time management, and creativity can help students enhance these skills. Moreover, establishing educational support and advisory systems,

particularly for students facing academic and research challenges, can significantly contribute to skill development.

From a research standpoint, examining the relationship between mental skills and other factors influencing academic success—such as personality traits, social and environmental support, and educational technologies—could open new avenues for future studies. Despite its limitations, this study represents a meaningful step toward a better understanding of the mental skills of general science students and improving their educational quality.

In practical applications, educational institutions should implement targeted programs to enhance students' mental skills. For example, organizing workshops on critical thinking, stress management, creative problem-solving, and improving concentration and self-management can help students strengthen these skills in academic and research environments. Additionally, creating opportunities for project-based learning and teamwork can enhance students' communication skills and interdisciplinary collaboration.

Providing educational support systems, such as individual and group counseling services, to help students with time management and academic efficiency can also be beneficial. Furthermore, the development of digital infrastructures—such as online learning platforms that offer interactive tools and diverse learning resources—can positively impact students' mental skill development.

Implementing these measures not only enhances students' academic performance but also better prepares them for future scientific and research challenges.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

References

- Anton, N. E., Bean, E. A., Myers, E., & Stefanidis, D. (2020). Optimizing learner engagement during mental skills training: A pilot study of small group vs. individualized training. *The American Journal of Surgery*, 219(2), 335-339. <https://doi.org/10.1016/j.amjsurg.2019.12.022>
- Anton, N. E., Lebares, C. C., Karipidis, T., & Stefanidis, D. (2021). Mastering Stress: Mental Skills and Emotional Regulation for Surgical Performance and Life. *Journal of Surgical Research*, 263, A1-A12. <https://doi.org/10.1016/j.jss.2021.01.009>
- Bahmani, B., Soukhtezari, S., Mazaherinezhad, A., & Sayyah, M. (2015). Assessing mental skills of student athletes in a colligate sport olympiad. *Biosciences Biotechnology Research Asia*, 12, 527-531. <https://doi.org/10.13005/bbra/2229>
- Khodayari, B., Saiiari, A., & Dehghani, Y. (2011). Comparison relation between mental skills with sport anxiety in sprint and endurance runners. *Procedia-Social and Behavioral Sciences*, 30, 2280-2284. <https://doi.org/10.1016/j.sbspro.2011.10.445>
- Sanati Monfared, S. (2006). *Validation of the OMSAT-3 questionnaire and confirmation of the psychological preparation program on the level of mental skills of selected athletes participating in the 2006 Doha Asian Games* <https://www.sid.ir/paper/512015/fa>
- Terzioğlu, Z. A., & Çakır, S. (2020). Effectiveness of a Mindfulness-Based Skill Development Program on Elite Archers' Mental Skills and Mindfulness Levels. *Akdeniz Spor Bilimleri Dergisi*, 3(2), 303-316. <https://doi.org/10.38021/asbid.832808>
- Zeydabadi, R. M., & Ebrahim. (2014). Psychometric properties and normalization of the Persian version of the Ottawa Mental Skills Assessment Tool-3 (OMSAT-3). *Journal of Sport Psychology Studies*, 3(7), 63-82. <https://civilica.com/doc/793512/>