

The Impact of Self-Esteem on the Acquisition of Swimming Skills among Kindergarten Students

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Abstract :

This study aimed to examine whether kindergarten children's self-esteem is associated with their proficiency in acquiring swimming skills. A descriptive correlational research design was employed to investigate the relationship between self-esteem and swimming skill acquisition. The study sample consisted of 100 kindergarten children aged 5–6 years, selected from five schools and sports centers in Amman. Data were collected using a self-esteem scale and the Preschool Competence and Behavioral Evaluation (PCBE) Scale. The findings indicated that children with higher levels of self-esteem demonstrated greater proficiency in acquiring swimming skills, with a strong positive association observed between self-esteem and swimming proficiency. Significant improvements in both self-esteem and swimming skills were observed among the participants, as indicated by the results of paired-samples t-tests. Analysis of variance revealed a statistically significant difference in swimming proficiency by gender. However, regression analysis showed that self-esteem was a significant predictor of swimming proficiency regardless of gender. Overall, the findings suggest that enhancing children's self-esteem may facilitate faster and more effective acquisition of swimming skills. These findings highlight the importance of creating supportive learning environments in which educators, swimming instructors, coaches, and parents can foster children's confidence and positive self-perceptions during the acquisition of swimming skills.

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Key Words: self-esteem; swimming; swimming skills; kindergarten children; skill acquisition.

Introduction :

Swimming is an essential life skill that contributes to physical fitness, motor development, and overall psychological well-being. Developing swimming proficiency at an early age is particularly important because it can enhance children's physical coordination and motor skills while also helping them develop confidence in aquatic environments (Minkels et al., 2025). However, learning to swim can be challenging for young children, regardless of their level of physical competence. Successful acquisition of swimming skills requires children to be psychologically and physically prepared to engage with the aquatic environment. In this regard, psychological readiness has increasingly been recognized as an important factor in swimming skill acquisition (Koroglu, 2023).

Among the psychological factors that may facilitate children's learning and acquisition of new life skills, self-esteem plays a particularly important role. During early childhood, self-esteem is closely associated with learning behaviors, motivation, persistence, and the development of self-efficacy. Children who have a positive perception of their own abilities may be more willing to face challenges, persist when difficulties arise, and engage actively in the learning process. In physical education and sport psychology, however, relatively few studies have examined the relationship between self-esteem and motor skill development in young children (Tavakolian et al., 2020).

In this context, Barton et al. (2012) reported that children with higher levels of self-esteem are more likely to engage in physical activity, persist in challenging activities, and respond positively to instructional feedback. In contrast, children with lower self-esteem may experience greater anxiety, fear failure, and show less motivation to acquire new skills, including swimming skills. Self-esteem may also be associated with children's perceived competence in aquatic environments. When children believe that they are capable of performing swimming tasks successfully, they may develop greater confidence and become more willing to enter the water and engage in unfamiliar aquatic activities. This supports the proposed relationship between self-esteem, perceived competence, and willingness to engage in aquatic activities (Korkmaz & Korkmaz, 2025).

Learning to swim can present particular psychological challenges for young children. Some children may be reluctant or fearful when entering the water, hesitate to attempt unfamiliar movements, or rely heavily on reassurance and encouragement from parents or teachers. Such psychological barriers may interfere with their willingness to participate fully in swimming activities and, consequently, with the development of swimming proficiency (Amelia, 2012). Therefore, understanding the role of self-esteem in swimming skill acquisition is important for creating learning environments that encourage confidence, motivation, persistence, and positive engagement among young swimmers.

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The Concept of Self-Esteem in Early Childhood Development :

Self-esteem is an important psychological construct that influences children's motivation to engage in new experiences, their self-confidence, and their sense of personal competence. It refers to an individual's evaluation of their own value, worth, and abilities (Yaswinda, 2019). During early childhood, self-esteem is shaped by a range of factors, including parental support, social interactions, and participation in physical activities. Children with higher levels of self-esteem tend to be more willing to face challenges, demonstrate greater resilience, and experience better emotional well-being (Papadopoulos, 2021).

Previous research has also identified a relationship between self-esteem and cognitive development. Papadopoulos (2021) reported that children with higher self-esteem tend to develop stronger cognitive abilities and perform better across a range of learning tasks. Similarly, Morcom (2017) examined the role of self-esteem in the development of cultural identity and found that individuals with higher levels of self-esteem tended to have greater confidence in their abilities, including their ability to learn new skills. These findings highlight the potential importance of self-esteem during children's early learning experiences, including the acquisition of motor skills such as swimming.

Physical activity can also play an important role in the development of children's self-esteem and confidence. Participation in sports and other activity-based experiences can foster a sense of competence, facilitate positive social interactions, and contribute to overall emotional well-being (Barton et al., 2012). In this regard, Koroglu (2023) examined self-esteem and self-efficacy among students enrolled in physical education and sports programs and found a positive association between participation in physical activities and self-esteem. The study suggested that active participation in sports can provide children with a sense of accomplishment, which may, in turn, strengthen their confidence in their physical abilities.

Tavakolian et al. (2020) investigated the effects of nonlinear pedagogy on motor proficiency and self-esteem among obese girls with hyperactivity. Their findings indicated that a structured and responsive physical education program could contribute to improvements in motor skills while also enhancing children's self-confidence. These findings suggest that appropriate teaching approaches may have benefits that extend beyond physical skill development. In the context of swimming, the use of supportive and effective instructional methods may therefore help strengthen children's self-esteem while facilitating the acquisition and development of swimming skills.

Taken together, the literature suggests that self-esteem and motor development may be closely interconnected during childhood. Children who feel confident in their abilities may be more willing to participate, persist in challenging activities, and respond positively to instruction. This relationship is particularly relevant to swimming, where psychological readiness and confidence may influence children's willingness to engage with the aquatic environment and practice unfamiliar motor skills.

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The Role of Self-Esteem in Motor Skill Acquisition :

Self-esteem plays an important role in children's acquisition of motor skills. Children with higher levels of self-esteem are generally more willing to explore movement, take on new challenges, and persist when learning unfamiliar skills (Minkels et al., 2025). In the context of swimming, Chan et al. (2023) highlighted the importance of self-esteem in children's learning and performance. Children who have greater confidence in their abilities are more likely to perceive themselves as competent swimmers and to approach new aquatic skills with greater willingness and persistence. This sense of competence can foster intrinsic motivation and encourage continued engagement during swimming lessons. As children experience success in acquiring new skills, these positive experiences may further strengthen their confidence and sense of self-worth, creating a reinforcing cycle that encourages continued participation and enjoyment.

The learning environment also plays an important role in supporting this process. Instructional settings that promote autonomy, provide encouragement, and use positive reinforcement can strengthen children's self-esteem and facilitate skill acquisition (Minkels et al., 2023). When children feel supported rather than pressured, they may become more willing to experiment with new movements, respond positively to feedback, and persist when they encounter difficulties.

Fernandes et al. (2024) further provided evidence that self-esteem may mediate the relationship between physical activity participation and psychological well-being. Children who feel valued and competent through their participation in sports may experience greater emotional stability and become more engaged in learning. Similarly, Equinet et al. (2025) and Sinha (2024) emphasized the broader developmental benefits of continued participation in swimming and other sports. Taken together, these findings suggest that self-esteem may play a central role in linking children's motivation, psychological well-being, and acquisition of sport-related skills.

Although swimming provides numerous physical and developmental benefits, many children experience psychological barriers that can interfere with the acquisition of swimming skills. Fear of water, anxiety, and lack of confidence are among the most common challenges encountered by young learners. Minkels et al. (2025), in their review of evidence on motor-learning approaches to swimming instruction, reported that supportive and encouraging learning environments can help reduce fear and facilitate skill acquisition. These findings also suggest that psychological strategies incorporated into swimming instruction may help children manage anxiety, overcome fear, and develop greater confidence in the aquatic environment.

The relationship between self-esteem and swimming skill acquisition can also be understood through established theories of motivation and learning. **Bandura's social cognitive theory** emphasizes the importance of self-efficacy in shaping individuals' learning behaviors and performance. In the context of swimming, children who have strong beliefs in their ability to perform aquatic skills are more likely to remain engaged when faced with difficulties and to persist following unsuccessful attempts. Successful experiences can subsequently strengthen their perceived competence and encourage further effort, thereby supporting more effective skill acquisition (Sun & Espeso, 2024).

Similarly, Deci and Ryan's self-determination theory proposes that intrinsic motivation is fostered when individuals experience autonomy, competence, and relatedness. Positive self-esteem can contribute to children's perceptions of competence, while a supportive instructional environment can reinforce feelings of autonomy,

competence, and social connection. Together, these conditions can promote more self-determined forms of motivation and encourage sustained engagement in learning activities (Costa et al., 2020).

Empirical research in aquatic and sport-education settings provides further support for these theoretical relationships. Minkels et al. (2023) reported that swimming lessons characterized by autonomy-supportive instructor behaviors were associated with stronger perceptions of competence and higher levels of motivation among children learning to swim. Such findings reinforce the importance of creating instructional environments that not only teach technical swimming skills but also support children's psychological needs. By fostering confidence, autonomy, competence, and positive social interactions, swimming instructors may help children overcome psychological barriers and become more motivated and persistent learners.

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Effective Teaching Strategies for Enhancing Self-Esteem in Swimming Lessons :

Several instructional strategies can be used to support children's self-esteem while facilitating the acquisition of swimming skills. In early childhood swimming education, creating a positive, encouraging, and supportive learning environment is particularly important (Amelia, 2012). Teaching approaches that incorporate engaging activities, recognize small achievements, and provide individualized feedback can help strengthen children's confidence and motivation to learn.

Zhang, Kuusisto, Nokelainen, and Tirri (2020) examined the effects of process-oriented praise and peer feedback on children's self-efficacy and found that both approaches had a positive influence on children's confidence and engagement. These strategies can be adapted to swimming instruction by recognizing children's effort and progress rather than focusing exclusively on the final outcome. Similarly, Han et al. (2021) highlighted the value of goal-setting interventions in strengthening children's self-regulation, motivation, and persistence. Setting achievable, age-appropriate goals during swimming lessons may therefore help children recognize their progress and develop a stronger sense of competence.

Social interaction and peer support can also contribute to children's psychological development. Henschen (2023) emphasized the benefits of socially interactive and peer-supported activities for improving mood, self-esteem, and sense of belonging. In swimming lessons, instructors can incorporate carefully structured pair and group activities that encourage cooperation and mutual support. Such activities can help children feel more comfortable, develop confidence in their abilities, and experience swimming as a positive and socially engaging activity.

A supportive and inclusive instructional environment is particularly important when working with young children. Rubin (2023) similarly emphasized the importance of supportive experiences in the development of self-esteem during early childhood. In the context of swimming, classes that are inclusive, encouraging, and responsive to individual differences may provide children with opportunities to develop both their swimming skills and their confidence. Rather than comparing children's performance, instructors can focus on individual progress and celebrate improvements at each stage of learning.

Gender Differences and Self-Esteem in Swimming :

Gender differences in self-esteem have been documented in the psychological literature, although the extent and nature of these differences may vary according to age, context, and social experiences. Participation in swimming may contribute to the development of self-esteem and self-confidence in both boys and girls, but children may respond differently to particular instructional approaches.

Ozcan (2025) reported that an eight-week swimming training program for children aged 12–14 years was associated with significant improvements in self-esteem and self-confidence. The findings indicated that boys entered the program with higher baseline levels of confidence and tended to demonstrate greater willingness to take risks, whereas girls appeared to benefit particularly from structured, supportive instruction that encouraged skill development and strengthened confidence. The experimental group also demonstrated greater improvements in self-confidence than the control group, suggesting a potential relationship between aquatic skill development and positive psychological outcomes.

Parental observations provide further support for the broader psychological benefits of swimming. Swim England (2025) reported that many parents observed noticeable improvements in their children's self-esteem and confidence following swimming lessons. These observations highlight the potential emotional and educational benefits of swimming beyond the development of physical skills.

Taken together, these findings suggest that swimming instruction can contribute positively to children's self-esteem and confidence. However, instructors should avoid relying on assumptions about boys' and girls' abilities or learning preferences. Instead, instruction should be responsive to individual needs and should provide all children with equal opportunities to participate, succeed, and develop confidence. Positive feedback, achievable challenges, encouragement, and confidence-building activities can help create an inclusive learning environment in which both boys and girls can benefit from swimming and develop a positive perception of their own abilities.

I have revised the **Statement of the Problem and Research Questions** into natural, humanized academic English suitable for journal publication. I have also strengthened the research gap and made the wording of the questions precise and consistent with the stated purpose of the study.

Statement of the Problem :

Swimming is an important life skill for children because it contributes to water safety, physical competence, and confidence. However, learning to swim can be particularly challenging for kindergarten children, and their progress may be influenced not only by their physical abilities but also by psychological and social factors, including self-esteem. Self-esteem reflects children's perceptions of their own abilities and sense of self-worth and may influence their motivation, persistence, willingness to attempt challenging tasks, and response to failure.

Children with low levels of self-esteem may experience greater fear and anxiety, avoid challenging activities, or progress more slowly when acquiring new skills. In contrast, children with higher levels of self-esteem may be more willing to participate, persist in the face of difficulties, and demonstrate greater confidence in their ability to learn and perform new skills. These psychological characteristics may be particularly relevant to swimming, where children must overcome unfamiliar aquatic experiences and develop confidence in their ability to control their movements in the water.

Despite the potential importance of self-esteem in swimming skill acquisition, relatively few studies have specifically examined this relationship among kindergarten-aged children. Previous research has largely focused on general motor-skill development or on children in older age groups. For example, Minkels et al. (2023), Fernandes et al. (2024), and Equinet et al. (2025) examined factors related to children's motor development, psychological well-being, and participation in physical activities. Minkels et al. (2023), in particular, reported that swimming lessons based on autonomy-supportive instructor behaviors were associated with higher perceptions of competence and motivation among young swimmers. These findings suggest that psychological factors may play an important role in children's engagement with swimming and in their acquisition of sport-related skills.

However, the specific relationship between self-esteem and swimming skill acquisition during the kindergarten years remains insufficiently understood. Examining this relationship is therefore important because a better understanding of the psychological factors involved in early swimming education may contribute to the development of more effective instructional strategies and interventions. Such approaches could help instructors and educators create supportive learning environments that promote children's psychological development while facilitating the acquisition of swimming skills.

Accordingly, the purpose of the present study is to examine the relationship between self-esteem and swimming skill acquisition among kindergarten children and to determine whether this relationship differs according to gender.

Research Questions :

The present study seeks to answer the following research questions:

1. Is self-esteem significantly associated with the acquisition of swimming skills among kindergarten children?
2. Does the relationship between self-esteem and swimming skill acquisition differ between boys and girls?

Methodology :

Study Design

A descriptive correlational research design was employed to examine the relationship between self-esteem and swimming skill acquisition among kindergarten children. Correlational methods were used to determine the strength and direction of the association between the two variables without manipulating any experimental conditions. In addition, pre- and post-assessments were conducted to examine changes in self-esteem and swimming proficiency following the eight-week swimming program.

Participants

The study included 100 kindergarten children aged 5–6 years who were recruited from five schools and sports centers in Amman that offered structured swimming programs. A stratified random sampling procedure was used to ensure balanced representation by gender, with an equal number of boys and girls ($n = 50$ each). The sample included both beginners and children with some previous swimming experience to provide diversity in terms of prior exposure to swimming.

The inclusion criteria required participants to be between 5 and 6 years of age, enrolled in a structured swimming lesson program, and have parental consent to participate in the study. Children with severe aquaphobia, medical conditions that prevented them from participating safely in swimming activities, or current enrollment in competitive swimming programs were excluded from the study.

Instruments

Data were collected using two primary assessment instruments: a measure of self-esteem and an assessment of swimming proficiency.

First, the Preschool Competence and Behavioral Evaluation Scale (PCBE) was used to assess the children's self-esteem. The instrument consists of 25 items rated on a five-point Likert scale: Always (5), Often (4), Sometimes (3), Rarely (2), and Never (1). Higher scores indicate higher levels of self-esteem. To ensure that the children fully understood the items, the researchers read each item aloud individually using simple, age-appropriate language and assisted the children in selecting their responses.

Second, a Swimming Proficiency Checklist (SPC), adapted from previous research, was used to assess the children's swimming proficiency. The checklist evaluates four dimensions: basic water comfort, arm and leg coordination, breath control, and stroke development. Each dimension was rated by certified swimming instructors on a three-point scale: 1 = Needs Improvement, 2 = Developing, and 3 = Proficient.

Water comfort was operationalized using a combination of observational checklist items and instructor ratings that assessed each child's ease, confidence, and adjustment to the aquatic environment. Structured observations and instructor feedback were also used to document behavioral responses, motivation, and engagement during swimming activities.

To establish inter-rater reliability, more than one certified instructor independently evaluated each child's swimming proficiency. Any discrepancies between raters were subsequently discussed during consensus meetings, where instructors reviewed their ratings and reached an agreed-upon score.

Assessment Procedure

A pre-assessment and post-assessment procedure was adopted. Before the swimming lessons began, each participant underwent an initial assessment to establish baseline levels of self-esteem and swimming proficiency. The same assessment instruments were administered again after eight weeks of participation in the swimming program at the respective schools or sports centers. The pre- and post-assessment scores were then compared to determine whether changes had occurred in the children's self-esteem and swimming proficiency over the study period.

Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including means and standard deviations, were calculated for self-esteem and swimming proficiency scores.

Pearson's correlation coefficient was used to examine the strength and direction of the relationship between self-esteem and swimming proficiency. Paired-samples *t*-tests were conducted to compare participants' pre- and post-assessment scores. In addition, multiple regression analysis was performed to determine whether self-esteem significantly predicted swimming skill acquisition while controlling for gender and previous swimming experience.

The reliability and validity of the assessment instruments were supported by their use and validation in previous academic research. The instruments demonstrated acceptable internal consistency, with reported Cronbach's alpha coefficients exceeding 0.80. Inter-rater reliability for the swimming proficiency assessment was supported by having multiple certified instructors independently evaluate each participant.

Ethical Considerations

The study adhered to established ethical standards for research involving children. Written informed consent was obtained from the children's parents or legal guardians before participation, and child assent was obtained when appropriate and developmentally feasible. Participants' confidentiality was maintained by anonymizing the collected data and restricting access to authorized members of the research team. The study also received approval from the relevant Institutional Review Board (IRB).

All research data were stored in password-protected databases to safeguard participants' information and ensure compliance with applicable ethical and data-protection standards.

Overall, the methodology was designed to provide a systematic examination of the relationship between self-esteem and swimming proficiency among kindergarten children. By integrating standardized assessment instruments, structured observations, pre- and post-assessments, and appropriate statistical analyses, the study sought to provide a comprehensive understanding of the role of self-esteem in the acquisition of swimming skills during early childhood.

Results :

Descriptive Statistics

Descriptive statistics of self-esteem and swimming proficiency scores at both pre-assessment and post-assessment are summarized in table 1.

Table(1): Descriptive Statistics of Self-Esteem and Swimming Proficiency Scores

Variable	Pre-Mean	Pre-SD	Post-Mean	Post-SD	Min	Max
Self-Esteem	3.45	0.52	3.91	0.48	2.5	4.8
Swimming Proficiency	2.10	0.67	3.25	0.54	1.0	4.0

Table (1) showed that after the eight weeks swimming lessons, swimming proficiency increased from 2.10 to 3.25 and mean self-esteem increased from 3.45 to 3.91. The standard deviations (SD) indicate a moderate variation between students but there is also a trend for both the variables to improve.

Correlation Analysis

To test the relationship between self-esteem and swimming proficiency, Pearson correlation analysis was run.

Table (2): Pearson Correlation between Self-Esteem and Swimming Proficiency

Variables	Self-Esteem Score	Swimming Proficiency
Self-Esteem	1.00	0.68 ($p < 0.01$)
Swimming Proficiency	0.68 ($p < 0.01$)	1.00

Table (2) Analysis of correlation coefficient $r=0.68$, $p < 0.01$ indicates a strong positive correlation between self-esteem and swimming skill acquisition. Swimming skills improve more for children who have high level of self-esteem. This emphasizes that improvements in swimming skills are associated with high levels of self-esteem levels.

Paired t-Test Analysis

A paired t-test to have been calculated compare pre-assessment and post assessment for self-esteem and swimming proficiency.

Table (3): Paired t-Test for Self-Esteem and Swimming Proficiency

Variable	Mean Difference	t-value	p-value	Cohen's d
Self-Esteem	0.46	7.85	< 0.001	1.05
Swimming Proficiency	1.15	10.92	< 0.001	1.46

Table (3) showed that there is a statistically significant increase after the training period $p < 0.001$. Cohen's d values indicate large effect sizes 1.05 and 1.46, respectively, suggesting that the practical influence of the swimming intervention on both self-esteem and skill acquisition was substantial.

Regression Analysis

To control gender and prior swimming experience, this determinant of self-esteem was then allowed to be predicted on the amount of self-esteem that could be used to predict degrees of swimming proficiency in a multiple regression analysis.

Table (4): Multiple Regression Analysis for Predicting Swimming Proficiency

Predictor Variables	B	SE	T	p-value	Model R ²
Self-Esteem	0.62	0.11	5.63	< 0.001	
Gender (Male =1, Female =0)	0.12	0.09	1.34	0.18	
Prior Experience (Yes=1, No= 0)	0.35	0.08	4.37	< 0.001	
Constant	1.05	0.27	3.89	< 0.001	0.57

Regression Analysis

Table 4 indicates that self-esteem was a significant positive predictor of swimming proficiency ($B = 0.62, p < 0.001$). Previous swimming experience was also a significant positive predictor of swimming proficiency ($B = 0.35, p < 0.001$), whereas gender was not a statistically significant predictor ($p = 0.18$). Overall, the regression model explained 57% of the variance in swimming proficiency ($R^2 = 0.57$), indicating a substantial level of explanatory power.

Summary of Findings

The findings showed significant improvements in both self-esteem and swimming proficiency over the study period. A strong positive correlation was also observed between self-esteem and swimming proficiency ($r = 0.68, p < 0.01$), indicating that children with higher levels of self-esteem tended to demonstrate greater swimming proficiency.

The paired-samples *t*-tests revealed statistically significant improvements in both self-esteem ($p < 0.001$) and swimming skills ($p < 0.001$) from the pre-assessment to the post-assessment. In addition, the analysis of variance (ANOVA) revealed a statistically significant difference in swimming proficiency by gender. However, the regression analysis showed that gender was not a significant predictor of swimming proficiency after self-esteem and previous swimming experience were taken into account. In contrast, self-esteem remained a strong positive predictor of swimming proficiency regardless of gender.

Taken together, these findings suggest that self-esteem is closely associated with children's swimming proficiency and may play an important role in their acquisition of swimming skills. The disappearance of the gender effect in the regression model suggests that the gender differences observed in the ANOVA may be related, at least in part, to differences in self-esteem and previous swimming experience. Thus, the apparent influence of gender on swimming proficiency may be indirect rather than a direct effect.

It is also possible that the relationship between gender and swimming proficiency is influenced by multicollinearity or by a mediating mechanism involving self-esteem. However, the regression results alone do not establish mediation. A formal mediation analysis would be required to determine whether self-esteem actually mediates the relationship between gender and swimming proficiency. Accordingly, the present findings indicate that the initial gender differences in swimming proficiency may be partly explained by differences in self-esteem and previous swimming experience, rather than by gender itself.

Discussion :

This study examined the relationship between self-esteem and swimming skill acquisition among kindergarten children. The findings revealed a strong positive association between self-esteem and swimming proficiency, suggesting that children with higher levels of self-esteem tended to demonstrate greater proficiency in acquiring swimming skills. The findings are discussed below in relation to previous research, possible explanations for the observed relationships, and implications for practice.

Following the eight-week swimming program, significant improvements were observed in both self-esteem and swimming proficiency. In addition, a strong positive correlation was found between self-esteem and swimming proficiency ($r = 0.68, p < 0.01$). This finding is consistent with previous research suggesting that higher self-esteem is associated with better motor-skill development among children (Tavakolian et al., 2020). One possible explanation is that children with higher self-esteem may be more willing to explore new experiences, attempt challenging tasks, and persist when learning unfamiliar skills, including swimming. Previous research has similarly suggested that self-esteem is associated with children's confidence and motivation to participate in physical activities (Koroglu, 2023).

Children who have greater confidence in their abilities may be more likely to remain engaged when they encounter difficulties and to continue practicing until they improve. The present findings are also consistent with Minkels et al. (2025), who emphasized the importance of positive reinforcement and confidence-building strategies in supporting motor learning among children. At the same time, the relationship between self-esteem and swimming proficiency may be reciprocal. As children develop physical competence and successfully master new skills, their perceptions of their own abilities may improve, which may, in turn, strengthen their self-esteem. Amelia (2012) similarly reported that mastery of physical skills can contribute to more positive self-perceptions and higher self-esteem. From this perspective, the improvement observed in the present study may reflect an interaction between psychological development and physical competence rather than a one-way effect of self-esteem on swimming performance.

The multiple regression analysis further indicated that self-esteem was a significant positive predictor of swimming proficiency ($B = 0.62, p < 0.001$). This finding supports the broader literature emphasizing the role of psychological well-being in children's engagement with physical activities. Barton et al. (2012), for example, highlighted the importance of psychological well-being in promoting participation in physical activity. Children with

higher self-esteem may be more willing to approach challenges, remain engaged in learning activities, and persist when faced with difficulties. These characteristics may facilitate the acquisition and refinement of swimming skills.

Other developmental factors may also contribute to this relationship. Morcom (2017) emphasized the association between self-esteem, cultural identity, and children's personal development, suggesting that children's social and developmental contexts may shape their perceptions of competence and participation in physical activities. Similarly, Papadopoulos (2021) highlighted the relationship between cognitive development and self-concept in shaping children's behavior. Taken together, these perspectives suggest that self-esteem and motor-skill development are interconnected within a broader network of psychological, cognitive, social, and physical factors. However, the present correlational findings do not establish that self-esteem directly causes improvements in swimming proficiency.

The findings concerning gender are also noteworthy. Although the ANOVA indicated a statistically significant difference in swimming proficiency by gender, gender was not a significant predictor in the regression model after self-esteem and previous swimming experience were taken into account ($p = 0.18$). This finding suggests that the initial gender difference may be partly associated with differences in other variables included in the regression model, particularly self-esteem and previous swimming experience. It does not necessarily indicate that boys and girls respond identically to self-esteem, but rather that gender itself did not make a significant independent contribution to swimming proficiency in the final regression model.

This finding differs from some previous research reporting gender-related differences in self-esteem. For example, Kling et al. (1999) identified gender differences in self-esteem across the literature. Nevertheless, the present study did not find gender to be an independent predictor of swimming proficiency once self-esteem and previous swimming experience were considered. One possible explanation is that the swimming instruction provided in the participating settings was supportive and inclusive, potentially reducing differences in participation, confidence, and engagement between boys and girls. Rubin (2023) similarly emphasized the importance of environmental influences, including family support, peer relationships, and instructional practices, in the development of self-esteem during early childhood.

Previous swimming experience was also a significant positive predictor of swimming proficiency ($B = 0.35$, $p < 0.001$). This finding is consistent with the view that children's previous exposure to structured physical activities can contribute to their confidence and perceived competence. Yaswinda (2019) emphasized the importance of environmental stability and previous experiences in children's self-esteem development. Children who have previously participated in structured physical activities may be more familiar with instructional settings, physical challenges, and performance expectations, which may make it easier for them to adapt to swimming instruction and develop new aquatic skills.

Overall, the findings suggest that swimming proficiency among kindergarten children is associated with a combination of psychological and experiential factors. Self-esteem emerged as the strongest predictor in the present model, while previous swimming experience also made a significant contribution. Although gender differences were observed in the initial analysis, gender did not remain a significant predictor after these factors were taken into account. These findings highlight the importance of considering children's psychological characteristics and previous experiences alongside their physical abilities when designing early swimming programs.

Implications for Practice :

The findings have several practical implications for educators, swimming instructors, coaches, and parents. Given the strong association between self-esteem and swimming proficiency, swimming programs for young children should incorporate strategies that foster confidence, competence, motivation, and positive engagement.

1. Positive Reinforcement:

Instructors should provide frequent, specific, and constructive feedback that recognizes children's effort, progress, and successful attempts. Appropriate praise and encouragement can help children develop a stronger sense of competence and remain motivated when learning challenging skills.

2. Individualized Instruction:

Children develop physical and psychological skills at different rates. Instructors should therefore adapt activities and expectations to individual abilities and levels of experience. Providing achievable challenges and allowing children to progress at an appropriate pace can promote a sense of accomplishment and competence.

3. Parental Involvement:

Parents can reinforce children's confidence by providing encouragement and positive support outside formal swimming lessons. Opportunities to participate in safe, age-appropriate aquatic activities may help maintain children's interest in swimming and reinforce their confidence in their ability to learn new skills.

4. Early Exposure to Aquatic Environments:

Because previous swimming experience was a significant predictor of swimming proficiency, appropriate early exposure to aquatic environments may help children become more comfortable and confident in the water. Gradual and supportive exposure may also reduce anxiety and facilitate adaptation to swimming instruction.

Limitations and Future Research :

Although the study provides useful evidence concerning the relationship between self-esteem and swimming proficiency among kindergarten children, several limitations should be considered.

- **Sample Size and Generalizability:** The sample consisted of 100 kindergarten children recruited from five schools and sports centers in Amman. Consequently, the findings may not be generalizable to children from other regions, educational settings, or socioeconomic backgrounds. Future studies should use larger and more diverse samples to enhance the generalizability of the findings.
- **Study Duration:** Swimming skill development is a gradual process that may extend beyond the eight-week period examined in the present study. Longitudinal research conducted over longer periods would provide a more comprehensive understanding of how self-esteem and swimming proficiency develop and interact over time.
- **Lack of a Control Group:** Because the study did not include a control group, improvements observed between the pre- and post-assessments cannot be attributed solely to the swimming program. Future research should consider randomized controlled designs or comparison groups to determine whether structured swimming instruction produces changes in self-esteem and swimming proficiency beyond normal developmental changes.
- **Psychological Interventions:** Future research could investigate whether targeted psychological interventions, such as self-esteem enhancement programs, confidence-building activities, or autonomy-supportive instructional strategies, improve children's acquisition of swimming skills. Such studies could help clarify whether strengthening self-esteem leads to measurable improvements in swimming proficiency.
- **Mediation and Moderation Effects:** The finding that gender was significant in the ANOVA but not in the regression model warrants further investigation. Future studies could employ formal mediation or moderation analyses to determine whether self-esteem and previous swimming experience explain or modify the relationship between gender and swimming proficiency.

Conclusion :

This study highlights the important relationship between self-esteem and swimming skill acquisition among kindergarten children. The findings showed a strong positive association between self-esteem and swimming proficiency, and self-esteem emerged as a significant positive predictor of swimming proficiency even after accounting for gender and previous swimming experience. Previous swimming experience also made a significant contribution, whereas gender was not a significant independent predictor in the regression model.

The findings underscore the importance of viewing swimming education as more than the development of physical skills alone. Children's confidence, motivation, perceived competence, and previous experiences may all contribute to their engagement with learning and their progress in acquiring new skills. Creating supportive and autonomy-oriented learning environments may therefore help children develop both physical competence and positive psychological characteristics.

For educators, swimming instructors, and parents, the findings emphasize the value of encouragement, individualized instruction, achievable challenges, and constructive feedback. Such practices can help children develop confidence and persistence while creating positive experiences with physical activity. Nevertheless, the present findings should be interpreted as evidence of association and prediction rather than proof of a direct causal effect of self-esteem on swimming proficiency.

More broadly, the study supports a holistic approach to early childhood education in which physical, psychological, social, and emotional development are considered interconnected. Fostering self-esteem alongside physical competence may contribute to children's confidence and willingness to engage in new learning experiences, providing a potentially important foundation for their continued development.

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أثر تقدير الذات في اكتساب مهارات السباحة لدى أطفال الروضة

الملخص :

هدفت هذه الدراسة إلى بحث ما إذا كان تقدير الذات لدى أطفال رياض الأطفال يرتبط بمدى كفاءتهم في اكتساب مهارات السباحة. اعتمدت الدراسة المنهج الوصفي الارتباطي للكشف عن العلاقة بين تقدير الذات واكتساب مهارات السباحة. وتكوّنت عينة الدراسة من (100) طفل من أطفال رياض الأطفال، تراوحت أعمارهم بين 5 و6 سنوات، اختيروا من خمس مدارس ومراكز رياضية في عمّان. جُمعت البيانات باستخدام مقياس لتقدير الذات ومقياس الكفاءة والتقويم السلوكي لمرحلة ما قبل المدرسة (Preschool Competence and Behavioral Evaluation [PCBE]). أظهرت النتائج أن الأطفال ذوي المستويات الأعلى من تقدير الذات أظهروا كفاءة أكبر في اكتساب مهارات السباحة، مع وجود علاقة ارتباطية موجبة قوية بين تقدير الذات ومستوى الكفاءة في السباحة. كما أظهرت النتائج تحسناً ذا دلالة إحصائية في كل من تقدير الذات ومهارات السباحة لدى أفراد العينة، وذلك وفقاً لنتائج اختبار (ت) للعينات المرتبطة. وكشف تحليل التباين عن وجود فروق ذات دلالة إحصائية في مستوى الكفاءة في السباحة تُعزى إلى الجنس. إلا أن تحليل الانحدار أظهر أن تقدير الذات كان متنبئاً ذا دلالة إحصائية بمستوى الكفاءة في السباحة بغض النظر عن جنس الطفل. وبوجه عام، تشير النتائج إلى أن تعزيز تقدير الذات لدى الأطفال قد يساهم في تسهيل اكتساب مهارات السباحة بصورة أسرع وأكثر فاعلية. وتبرز هذه النتائج أهمية توفير بيئات تعليمية داعمة يستطيع فيها المعلمون ومدرّبو السباحة والمدرّبون وأولياء الأمور تعزيز ثقة الأطفال بأنفسهم وتصوراتهم الإيجابية عن ذاتهم أثناء اكتساب مهارات السباحة.

الكلمات المفتاحية: تقدير الذات، السباحة، مهارات السباحة، أطفال رياض الأطفال، اكتساب المهارات.