JOURNAL OF CULTURAL ANALYSIS AND SOCIAL CHANGE

Journal of Cultural Analysis and Social Change,
2026, 11(1), 524-536
ISSN: 2589-1316

# Relative Mastery among Nurses

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**Citation:** Majeed, A. M. & Abd, S. I. (2026). Relative Mastery among Nurses, *Journal of Cultural Analysis and Social Change*, 11(1), 524-536. https://doi.org/10.64753/jcasc.v11i1.3899

**Published:** January 01, 2026

## ABSTRACT

Studies indicate that relative mastery reflects an individual's ability to control and manage their thoughts, emotions, and behaviors. It plays a fundamental role in various life domains, influencing academic achievement, social interactions, and overall well-being. Learning professional mastery is considered one of the essential competencies for the healthcare system and its workers to successfully face the current challenges. The study aimed to investigate: 1. The level of relative mastery among nurses. 2. The significance of differences in relative mastery according to the following variables: Gender (male - female)/ Age (20-35), (36 and above)/Years of service (1-15), (16 and above)/ Educational attainment (secondary - bachelor). 3. The interaction effect of gender, age, years of service, and educational attainment on relative mastery. To achieve these objectives, the researchers adopted the scale of Schkade and Schultz (2003), which defines relative mastery as the phenomenon through which behaviors indicating changes or improvements in occupational adaptation are identified, including individuals' perceptions of their effectiveness, competence, and satisfaction regarding their responses to professional challenges. The study sample consisted of 400 nurses selected using stratified random sampling from 8 hospitals in the Health Directorates of Rusafa, Karkh, and the Medical City. The sample was categorized by gender, age, years of service, and educational attainment. Data were analyzed using the SPSS software, and the researchers reached the following conclusions: 1. Nurses showed a low level of relative mastery with a mean score of 53.05, which is below the hypothetical mean of 81. 2. A statistically significant difference in relative mastery by gender was found in favor of males ($F = 5.83 > 3.83$, $p < 0.05$). 3. A statistically significant difference by age was observed in favor of the 36 and above group ($F = 27.64 > 3$, $p < 0.05$). 4. A statistically significant difference by years of service was found in favor of those with 16 years or more ($F = 23.6 > 3$, $p < 0.05$). 5. A statistically significant difference by educational attainment was found in favor of bachelor's degree holders ($F = 20.8 > 3.83$, $p < 0.05$). 6. No significant interaction was found between the variables (gender, age, years of service, educational attainment). 1. Strengthen collaboration between the Ministry of Health and civil society organizations to utilize assessment tools to diagnose low relative mastery among nurses in hospitals and health centers and to organize training programs by the relevant authorities to improve the quality of nursing services in Iraq. 2. Coordinate with the Ministries of Education and Higher Education to guide students in nursing schools and colleges toward professional values through conferences, seminars, and workshops, helping them overcome pressures and ethical distress to achieve mastery in the nursing profession. Conduct future studies on relative mastery and its relationship with other variables not addressed in this research, such as ethical dilemmas, moral climate, personal values and beliefs, and organizational support.

**Keywords:** Nurses, Iraq, relative mastery

## INTRODUCTION

### Research Problem

The current Iraqi situation, especially after 2003, has led to significant changes in society and its values, due to the openness that introduced new concepts such as focusing on outward appearances rather than intrinsic behavioral value, increased involvement in virtual rather than real-life interactions, and a rise in individualism expressed through behaviors alien to Iraqi culture. The researcher observed this phenomenon in various situations during visits to public hospitals.

Healthcare workers face psychological and social issues distinct from everyday challenges, such as increased workload, long hours, shifts, lack of resources, fear of infection, physical exhaustion, transmission of diseases, difficulty meeting medical and psychological needs, insomnia, changing regulations, unfamiliar work environments, witnessing patient suffering or death, prolonged separation from family, job stress, psychological fatigue, insufficient training, fear, anxiety, depression, and emotional demands all contributing to occupational strain.

Fiske and Taylor (1991) described this issue as a reflection of ethical concerns and accessibility, predicting substantial variation in nurses' attention to unethical behaviors in their work environment, potentially leading to unforeseen problems.

Resource limitations, nurse shortages, poor working environments, weak positive reinforcement, and lack of rewards can result in ethical distress, leading to dissatisfaction, burnout, a negative ethical climate, weak moral courage, and diminished job performance (i.e., reduced relative mastery) (Abdeen & Atia, 2020).

Under such conditions, nurses may be forced to make ethically compromising decisions due to time pressures or lack of support. This can hinder their ability to meet ethical responsibilities and may force them to prioritize tasks over ethical concerns (Varcoe et al., 2012).

The dynamic and increasing pressures in nurses' daily professional lives have caused psychological burnout due to work stress and ethical misjudgments. Iraqi nurses often operate under extreme pressure, which exacerbates ethical distress. Many are preoccupied with social media and its negative influence, embracing alien cultural norms that encourage constant objection and non-compliance, creating virtual relationships detached from reality. This erodes traditional values and lowers relative mastery, especially with the growing demand for healthcare services amid frequent health crises and infectious disease outbreaks.

Milliken and Grace (2017) highlighted the impact of ethical distress on job performance and relative mastery, defining it as the ability to control one's impulses, emotions, and behaviors in alignment with ethical standards and professional responsibilities. Both ethical distress and self-awareness are vital for enhancing ethical behavior in nursing.

Promoting ethical behavior is essential in nursing practice to uphold care standards and maintain the integrity of the profession. However, recent concerns about nurses' self-regulation have intensified. The ability to self-regulate is essential to uphold high patient care standards, ensure well-being, and protect the integrity of the nursing profession (Schiller, 2015).

This raises a key question for nurses: "Does inadequate patient care create a burden that leads to job underperformance?"

**Importance of the Study**

Nursing plays a vital role in healthcare delivery, ensuring individuals' well-being and quality of life. Nurses provide direct care, assist in diagnosis and treatment, advocate for patients, and offer emotional support. They also contribute to health education, prevention, safe medication management, and interdisciplinary cooperation. The profession supports community-specific care, evidence-based practice, disaster response, and emergency preparedness. It offers job security and emotional and financial stability (Habermann & Stagge, 2010).

During clinical practice, care providers often face limitations in making successful health decisions for patients, requiring careful evaluation. Several factors may hinder optimal outcomes, such as abrupt decision-making, patient involvement in rational and ethical decisions, and balancing patients' preferences with caregivers' conditions.

Ethical nursing practices enhance self-satisfaction, job fulfillment, and relative mastery (Farrell, 2016).

High-quality care extends beyond clinical skills, with ethical distress being a key factor influencing patients' overall well-being. Teaching ethical distress awareness supports patient-centered care, strengthens trust between providers and patients, and promotes better recovery outcomes (Buchanan, 2000).

According to Schkade and Schultz (1992), individuals interact with their environment to gain motivation and control over professional challenges. Occupational adaptation is evaluated based on the effectiveness of responses to challenges and the ability to generalize those responses to various situations. Relative mastery is defined as the individual's perception of their response as effective, competent, and satisfying to themselves and others.

Cairney and Krause (2008) suggested that major life events can diminish one's sense of mastery due to:

- Overwhelming problem-solving capacity.
- Excessive cognitive demands.
- Secondary stressors reducing feelings of control.

 

They also argued that cumulative life stress is particularly harmful in old age due to diminished personal and social resources, amplifying the impact of stress on perceived control.

In conclusion, studying relative mastery among nurses is vital in psychology to understand the factors that influence their ability to deliver high-quality care and improve patient outcomes. Identifying ways to enhance nurses' relative mastery supports skill development in healthcare practices and highlights the challenges nurses face in maintaining competence.

**Research Objectives**

1. To assess the level of relative mastery among nurses.
2. To identify significant differences in relative mastery based on:
    - Gender (male - female)
    - Age (20-35) vs. (36 and above)
    - Years of service (1-15) vs. (16 and above)
    - Educational level (secondary vs. bachelor)
3. To examine interaction effects between gender, age, years of service, and educational level on relative mastery.

**Research Limits**

This study is limited to nurses working in government hospitals in Baghdad in 2024.

**Definition of Terms**

***Relative Mastery:***

- **Pearlin (1990):** A sense of control over forces affecting one's life, representing internal personal mastery.
- **George et al. (2001):** The primary means of evaluating occupational adaptation how effectively profession and adaptation are integrated within the individual.
- **Schkade and Schultz (2003):** A phenomenon for identifying behaviors indicating change or improvement in occupational adaptation, including perceptions of effectiveness, competence, and satisfaction.
- **Cairney and Krause (2008):** A feeling of personal control; individuals with higher control show lower psychological stress.

***Theoretical Definition:*** Adopted from Schkade and Schultz (2003), relative mastery is the phenomenon by which behaviors indicating improvement in occupational adaptation are identified.

***Operational Definition:*** The total score a respondent obtains on the scale used in this study to measure relative mastery among nurses.

## THEORETICAL FRAMEWORK

**The Theory of Relative Mastery by Schkade & Schultz (2003)**

The concept of relative mastery was developed by Schkade and Schultz (2003) within the framework of the Occupational Adaptation Theory, a model primarily used in occupational therapy to understand how individuals adapt to their environments and achieve goals through effective and satisfactory performance. According to Schultz and Schkade, relative mastery is defined as:

"The ability to achieve personal goals in occupational performance in a way that is effective, satisfying, and competent, according to the individual's own standards and circumstances" (Schultz & Schkade, 2003, p.34).

In other words, mastery is not based on absolute standards or comparison with others, but on personal assessment of competence, satisfaction, and effectiveness in completing a specific task. Schkade and Schultz identified three primary dimensions to measure relative mastery:

- **Effectiveness**: the degree to which an individual achieves the desired outcome.
- **Efficiency**: achieving the goal with minimal time, effort, and resources.
- **Satisfaction (to Self and Others)**: the individual's and others' satisfaction with the performance.

These dimensions make relative mastery a more flexible and personalized concept compared to absolute mastery (Schultz & Schkade, 2003, p.52).

This theory helps in understanding how individuals adapt to everyday and professional challenges. Relative mastery is influenced by both internal and external factors, allowing individuals to readjust their goals based on

 

their circumstances. For example, a patient undergoing rehabilitation after an injury can achieve relative mastery by performing daily activities in a way that is effective, competent, and satisfying according to their new capabilities, even if they do not reach their pre-injury performance levels.

The term "occupational mastery" blends the concepts of adaptation and vocation, describing a psychological process where the individual integrates the deep desire to engage in meaningful occupation with the pursuit of excellence in that vocation. The theory assumes that every individual has an intrinsic desire to be competent in their work, which requires adapting to interactions between the person, the occupation, and the environment. If an individual becomes impaired, their adaptive capacity may weaken, leading to dysfunction. However, success is still possible if the individual can adapt adequately to satisfy themselves and others (Schultz & Schkade, 2003, p.23).

The interaction between the person and the environment generates internal motivation to overcome professional challenges. Once a challenge is identified, the individual generates a response, evaluates the outcome, and integrates the learning experience. The theory also proposes interventions when this natural process is disrupted by personal or environmental factors. The evaluation component is central in this process. According to the theory, individuals evaluate their responses based on internal feelings of effectiveness, competence, and satisfaction this self-assessment is referred to as "relative mastery" and serves as a core measure of occupational adaptation.

The Relative Mastery Scale was designed as an assessment tool for clinicians and therapists who needed a formal mechanism to guide clients through self-evaluation. The tool was developed to be valid and reliable for research into the effectiveness of this theoretical approach. Clinical studies using occupational adaptation interventions have shown significant improvements in clients' daily functioning, including those who experienced stroke or hip fractures (Dolecheck & Schkade, 1999, p.10).

Case studies in home healthcare settings with stroke patients discharged from occupational therapy after plateauing in motor skills showed notable improvement following occupational adaptation interventions (Johnson & Schkade, 2001, p.23). Additional studies by Bodenberg and Schkade (1998), and Gibson and Schkade (1997), confirmed changes in relative mastery as a dependent variable, correlating with improvements in daily activities (Gibson & Schkade, 1997, p.45).

However, the tools used for evaluating relative mastery (efficiency, effectiveness, and satisfaction) were ordinal scales created by researchers and had not been subjected to reliability and validity verification. A naturalistic study during a five-day ski trip with adolescents with limb impairments also showed changes in relative mastery through interviews and video recordings (Pasek & Schkade, 1996, p.12).

The theory of occupational adaptation describes the internal process of adaptation and aims to guide occupational therapists in helping clients adjust to participate in meaningful activities. The model emphasizes interaction between person and environment, and assumes the individual comprises three systems (sensorimotor, cognitive, and psychosocial) which interact with the occupational environment (physical, social, and cultural).

There are two types of adaptive energy:

1. **Primary Adaptive Energy**: Activated during high task focus.
2. **Secondary Adaptive Energy**: Activated in complex or creative tasks.

Adaptive response behaviors are classified into:

- **Primitive or Hyperstable**: All systems are static; no adaptive behavior.
- **Transitional or Hypermobile**: Random behavior across systems.
- **Mature**: Goal-oriented behaviors leading to adaptive responses.

When mastery is challenged, an occupational challenge arises. A response is generated through adaptive response generation, where occupational therapy plays a key role. Therapists enhance internal adaptation by using client-chosen roles and goals. Intervention focuses on assessing client performance, identifying facilitating or hindering factors, and designing plans to enhance capabilities.

The adaptive response evaluation assesses performance in terms of relative mastery efficiency, effectiveness, and satisfaction with self and others. This process results in learning and performance improvement, enabling meaningful engagement with the environment (Schkade & Schultz, 2003, p.67).

The theory is based on the Occupational Adaptation Model, emphasizing how individuals modify strategies or activities when typical responses are inadequate. Key components include:

- **Adaptive Response**: Changes made by the individual to meet task demands.
- **Occupational Challenge**: Occurs when task demands exceed current capabilities.
- **Relative Mastery**: The individual's evaluation of performance, including:
  - Efficiency: Resource usage (time, effort, energy)
  - Effectiveness: Task goal achievement
  - Satisfaction: Personal and social satisfaction with performance

Therapists work with clients to build adaptive capacity developing new responses and strategies for professional challenges to promote independence and satisfaction (Schkade & Schultz, 1992, p.23).

 

## RESEARCH METHODOLOGY AND PROCEDURES

### First: Methodology

The researchers adopted the descriptive method, as it is appropriate for the research nature and objectives.

### Second: Research Population

The research population included male and female nurses working in hospitals under the Health Directorates of Rusafa, Karkh, and the Medical City for the year 2024. Table (1) shows the distribution of nurses in Baghdad hospitals by gender.

**Table 1:** Nurse Distribution by Gender in Baghdad Hospitals

| No. | Hospital Name | Male | Female | Total |
|---|---|---|---|---|
| | **Al-Rusafa Health Dept.** | | | |
| 1 | Al-Nauman Hospital | 101 | 156 | 257 |
| | **Al-Karkh Health Dept.** | | | |
| 2 | Al-Kadhimiya Teaching Hosp. | 357 | 481 | 838 |
| 3 | Al-Karama Teaching Hosp. | 274 | 129 | 403 |
| | **Medical City Dept.** | | | |
| 4 | Ghazi Al-Hariri Hospital | 228 | 276 | 504 |
| 5 | Child Protection Hospital | 187 | 103 | 290 |
| 6 | Baghdad Teaching Hospital | 311 | 376 | 687 |
| 7 | Gastroenterology Hospital | 28 | 95 | 123 |
| 8 | Private Nursing Hospital | 111 | 132 | 243 |
| | **Total** | 1597 | 1748 | 3345 |

### Third: Research Sample

After defining the population, a stratified random sample of 400 nurses (200 males and 200 females) was selected from the eight hospitals to analyze scale items and derive psychometric properties. The selection was balanced by gender and hospital representation.

**Table 2:** Equal Sample Distribution by Gender

| No. | Hospital Name | Males | Females | Total |
|---|---|---|---|---|
| 1 | Al-Nauman Hospital | 25 | 25 | 50 |
| 2 | Al-Kadhimiya Teaching Hosp. | 25 | 25 | 50 |
| 3 | Al-Karama Teaching Hosp. | 25 | 25 | 50 |
| 4 | Ghazi Al-Hariri Hospital | 25 | 25 | 50 |
| 5 | Child Protection Hospital | 25 | 25 | 50 |
| 6 | Baghdad Teaching Hospital | 25 | 25 | 50 |
| 7 | Gastroenterology Hospital | 25 | 25 | 50 |
| 8 | Private Nursing Hospital | 25 | 25 | 50 |
| | **Total** | 200 | 200 | 400 |

By educational attainment, 100 males and 100 females held either secondary or bachelor degrees. Table 3 (not included here) illustrates the distribution by education.

**Table 3**: Distribution of the Research Sample by Educational Attainment

| Gender | Secondary | Bachelor's | Total |
|---|---|---|---|
| Male | 100 | 100 | 200 |
| Female | 100 | 100 | 200 |
| **Total** | 200 | 200 | 400 |

**Table 4**: Distribution of the Research Sample by Years of Service

| Years of Service | (1–15 years) | (16+ years) | Total |
|---|---|---|---|
| Male | 100 | 100 | 200 |
| Female | 100 | 100 | 200 |
| **Total** | 200 | 200 | 400 |

The sample was selected using stratified random sampling with proportional allocation to ensure representativeness by gender and education. Nunnally (1978) suggested that the sample size should be 5 to 10 times the number of items, a guideline adopted by the researchers.

 

**Table 5**: Sample Types, Purposes, and Sources

| No. | Sample Type | No. of Participants | Purpose | Source |
|---|---|---|---|---|
| 1 | Random | 50 | To check clarity of instrument instructions and items | Research population |
| 2 | Random | 400 | To extract item discrimination power | Research population |
| 3 | Random | 80 | To calculate scale reliability | Research population |
| 4 | Random | 400 | For application and obtaining results | Research population |

**Fourth: Research Instrument – Relative Mastery**

The researchers adopted the Relative Mastery Scale developed by Schkade and Schultz (1992), aligned with the Occupational Adaptation Theory and tailored to the Iraqi context.

1. **Definition of Relative Mastery**: Based on Schkade and Schultz's definition, relative mastery refers to the phenomenon that identifies behaviors indicating changes or improvements in occupational adaptation, defined as the integration of vocation and adaptation within the person as they interact with their environment and overcome professional challenges.
2. **Review of Previous Studies**:
    - George et al. (2004)
    - George-Paschal & Grajo (2019)
    - Schkade & Schultz (1992)

    Based on these, the researchers adopted the original Schkade and Schultz instrument.
3. **Translation Validity**: The researchers translated the 27-item scale based on the Occupational Adaptation Theory. It comprises:
    - Effectiveness: 8 items
    - Efficiency: 9 items
    - Satisfaction (self and others): 10 items

    The scale was first translated from English to Arabic by two English experts, then unified, then back-translated to English. A psychology expert verified the accuracy of translation. The items were rated on a 5-point Likert scale:
    - Always applies to me
    - Often applies
    - Sometimes applies
    - Rarely applies
    - Never applies

    This design aligns with established psychometric guidelines for multiple-choice items (Liman, 2006, p.20).

**Item Validity**

The tool was presented to expert judges to verify the validity of the items, which involved a group of experts and specialists assessing the appropriateness of the items. After formulating the test instructions and its 27 items, they were presented in their initial form to a group of specialists and psychologists. This process included providing the theoretical definition adopted in the study and specifying the type of sample.

The researcher proposed five alternatives for response evaluation:

(1) Always applies to me
(2) Often applies
(3) Sometimes applies
(4) Rarely applies
(5) Never applies

The scale included both positive and negative items, which were not equally distributed. Scoring was done on a scale of (5 to 1) for items supporting the construct, and (1 to 5) for items against it. The scoring weights depended on the direction of the item. Items that indicate relative mastery were considered positively oriented, while those that did not were considered negatively oriented.

The researcher found that all the items of the Relative Mastery Scale were approved by the expert judges, with an approval rate of **100%**.

 

**Expert Judges:**

- Asst. Prof. Dr. Ammar Shamil – University of Baghdad / College of Arts / Department of English
- Dr. Ibtihal Mahdi Abdul Karim – University of Baghdad / College of Languages / Consulting Office
- Asst. Prof. Dr. Marwa Alaa – University of Baghdad / College of Arts / Department of English

**Statistical Analysis**

***Item Analysis***

After correcting the 400 questionnaires, the total score for each form was calculated using SPSS, and invalid ones (due to inaccuracies or missing responses) were excluded. The researcher used several methods of analysis as follows:

**1. Extreme Groups Method**

The researcher adopted the extreme groups method. Items that achieved a calculated t-value greater than the tabulated value of **1.96** were considered discriminative, as they were statistically significant at the **0.05** level and **214 degrees of freedom** (Allam, 2010, p. 615). According to this criterion, **all 27 items** of the Relative Mastery Scale were statistically significant. Table (6) illustrates this.

**Table (6):** Discriminative Power of Items in the Relative Mastery Scale Using the Extreme Groups Method

| Item No. | Group | Mean | Std. Dev. | t-value | Significance | Item No. | Group | Mean | Std. Dev. | t-value | Significance |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | High | 4.54 | 0.59 | 2.38 | Significant | 15 | High | 4.85 | 0.43 | 10.14 | Significant |
| | Low | 4.37 | 0.67 | | | | Low | 4.24 | 0.63 | | |
| 2 | High | 4.52 | 0.57 | 8.10 | Significant | 16 | High | 3.98 | 0.78 | 5.45 | Significant |
| | Low | 3.94 | 0.70 | | | | Low | 3.52 | 0.71 | | |
| 3 | High | 4.02 | 0.73 | 4.33 | Significant | 17 | High | 4.10 | 0.79 | 6.73 | Significant |
| | Low | 3.67 | 0.71 | | | | Low | 3.54 | 0.73 | | |
| 4 | High | 4.54 | 0.58 | 6.41 | Significant | 18 | High | 4.85 | 0.41 | 9.38 | Significant |
| | Low | 4.09 | 0.68 | | | | Low | 4.28 | 0.65 | | |
| 5 | High | 4.59 | 0.65 | 7.95 | Significant | 19 | High | 4.79 | 0.42 | 10.99 | Significant |
| | Low | 3.99 | 0.72 | | | | Low | 4.10 | 0.68 | | |
| 6 | High | 3.77 | 0.73 | 3.28 | Significant | 20 | High | 3.39 | 0.69 | 2.37 | Significant |
| | Low | 3.52 | 0.65 | | | | Low | 3.21 | 0.67 | | |
| 7 | High | 4.77 | 0.48 | 9.85 | Significant | 21 | High | 4.02 | 0.73 | 4.33 | Significant |
| | Low | 4.20 | 0.56 | | | | Low | 3.67 | 0.71 | | |
| 8 | High | 4.19 | 0.80 | 7.14 | Significant | 22 | High | 4.38 | 0.66 | 4.32 | Significant |
| | Low | 3.60 | 0.67 | | | | Low | 4.05 | 0.70 | | |
| 9 | High | 4.35 | 0.83 | 8.12 | Significant | 23 | High | 4.65 | 0.53 | 10.42 | Significant |
| | Low | 4.00 | 0.53 | | | | Low | 4.00 | 0.59 | | |
| 10 | High | 4.78 | 0.50 | 11.27 | Significant | 24 | High | 4.73 | 0.44 | 8.46 | Significant |
| | Low | 3.93 | 0.82 | | | | Low | 4.10 | 0.68 | | |
| 11 | High | 4.86 | 0.37 | 12.66 | Significant | 25 | High | 4.48 | 0.66 | 8.48 | Significant |
| | Low | 4.06 | 0.71 | | | | Low | 3.87 | 0.62 | | |
| 12 | High | 4.10 | 0.79 | 8.15 | Significant | 26 | High | 4.48 | 0.70 | 7.60 | Significant |
| | Low | 3.46 | 0.60 | | | | Low | 4.35 | 0.72 | | |
| 13 | High | 4.48 | 0.70 | 7.60 | Significant | 27 | High | 3.39 | 0.69 | 2.37 | Significant |
| | Low | 4.00 | 0.59 | | | | Low | 4.10 | 0.68 | | |

**A. Item–Total Correlation: Item Validity**

This method shows the homogeneity of the scale items in measuring the studied construct. All correlations were statistically significant.

**Table (7):** Correlation of Each Item with the Total Score of the Relative Mastery Scale

| Item | r | Sig | Item | r | Sig | Item | r | Sig | Item | r | Sig |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.10 | Sig | 9 | 0.38 | Sig | 17 | 0.43 | Sig | 23 | 0.32 | Sig |
| 2 | 0.35 | Sig | 10 | 0.31 | Sig | 18 | 0.22 | Sig | 24 | 0.22 | Sig |
| 3 | 0.18 | Sig | 11 | 0.42 | Sig | 19 | 0.43 | Sig | 25 | 0.42 | Sig |
| 4 | 0.27 | Sig | 12 | 0.44 | Sig | 20 | 0.17 | Sig | 26 | 0.34 | Sig |
| 5 | 0.38 | Sig | 13 | 0.49 | Sig | 21 | 0.32 | Sig | 27 | 0.34 | Sig |
| 6 | 0.13 | Sig | 14 | 0.34 | Sig | 22 | 0.42 | Sig | | | |
| 7 | 0.42 | Sig | 15 | 0.44 | Sig | | | | | | |
| 8 | 0.44 | Sig | 16 | 0.49 | Sig | | | | | | |

**B. Subscale–Total and Inter-Subscale Correlation: Construct Validity**

These correlations assess the internal consistency of the scale. All correlations were statistically significant when compared to Pearson's critical value of **0.08** at **$\alpha = 0.05$, df = 399**.

 

**Table (8):** Validity of the Relative Mastery Scale via Subscale–Total and Subscale–Subscale Correlations

| Subscale | Effectiveness | Efficiency | Satisfaction | Relative Mastery |
|---|---|---|---|---|
| Effectiveness | 1.00 | 0.29 | 0.19 | 0.67 |
| Efficiency | | 1.00 | 0.37 | 0.80 |
| Satisfaction (Self/Other) | | | 1.00 | 0.69 |

**Confirmatory Factor Analysis**

After conducting the confirmatory factor analysis (CFA) for the Relative Mastery Scale, as shown in **Figure (1)** and **Table (9)**, it was found that all items demonstrated statistically significant loadings on the scale. This is due to the fact that all standardized regression weight values were statistically significant based on **t-test values**, all of which exceeded the critical value of **1.96** at the **0.05** significance level. **Figure (1)** presents the CFA diagram for the Relative Mastery Scale.

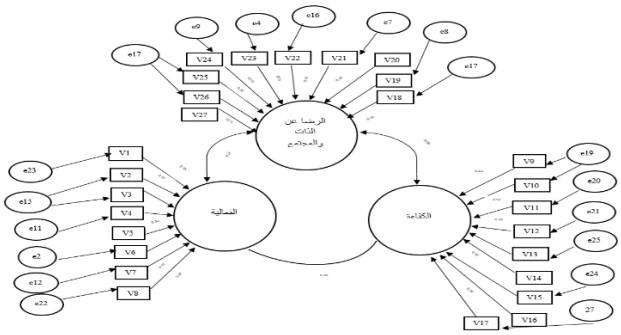

**Figure (1):** Confirmatory Factor Analysis Model for the Relative Mastery Scale

**Table (9)** shows the item loadings on their respective factors and the critical ratios for the significance of these loadings.

**Table (9):** Item Loadings and Critical Ratios on the Relative Mastery Scale Factors

| No. | Item Code | Domain | Estimate | C.R. | Sig. | No. | Item Code | Domain | Estimate | C.R. | Sig. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | v8 | Effectiveness | 0.17 | 2.98 | Sig. | 16 | v16 | Efficiency | 0.18 | 3.61 | Sig. |
| 2 | v7 | Effectiveness | 0.40 | 3.36 | Sig. | 17 | v17 | Efficiency | 0.55 | 8.47 | Sig. |
| 3 | v6 | Effectiveness | 0.14 | 2.90 | Sig. | 18 | v18 | Efficiency | 0.13 | 2.59 | Sig. |
| 4 | v5 | Effectiveness | 0.25 | 2.83 | Sig. | 19 | v19 | Efficiency | 0.12 | 1.97 | Sig. |
| 5 | v4 | Effectiveness | 0.20 | 2.69 | Sig. | 20 | v20 | Efficiency | 0.49 | 7.69 | Sig. |
| 6 | v3 | Effectiveness | 0.12 | 1.99 | Sig. | 21 | v21 | Satisfaction (Self & Society) | 0.15 | 2.03 | Sig. |
| 7 | v2 | Effectiveness | 0.23 | 2.81 | Sig. | 22 | v22 | Satisfaction (Self & Society) | 0.35 | 2.39 | Sig. |
| 8 | v1 | Effectiveness | 0.14 | 2.74 | Sig. | 23 | v23 | Satisfaction (Self & Society) | 0.35 | 2.59 | Sig. |
| 9 | v9 | Efficiency | 0.50 | 4.22 | Sig. | 24 | v24 | Satisfaction (Self & Society) | 0.50 | 2.55 | Sig. |
| 10 | v10 | Efficiency | 0.46 | 7.94 | Sig. | 25 | v25 | Satisfaction (Self & Society) | 0.14 | 1.99 | Sig. |
| 11 | v11 | Efficiency | 0.62 | 8.89 | Sig. | 26 | v26 | Satisfaction (Self & Society) | 0.47 | 2.62 | Sig. |
| 12 | v12 | Efficiency | 0.32 | 2.34 | Sig. | 27 | v27 | Satisfaction (Self & Society) | 0.15 | 2.53 | Sig. |
| 13 | v13 | Efficiency | 0.31 | 2.25 | Sig. | | | | | | |
| 14 | v14 | Efficiency | 0.23 | 2.61 | Sig. | | | | | | |
| 15 | v15 | Efficiency | 0.14 | 2.25 | Sig. | | | | | | |

To determine whether the Relative Mastery Scale could be treated as a unidimensional scale (i.e., a single total score) or whether its subdomains (Effectiveness, Efficiency, and Satisfaction) should be considered as separate subscales, the researcher examined the inter-factor loadings. The findings showed that the relationships between domains were statistically significant. Table (10) presents these values.

**Table (10)**: Inter-Factor Loadings Among the Domains of the Relative Mastery Scale

| No. | Domain Pair | Estimate | Std. Error (S.E.) | Critical Ratio (C.R.) | Sig. (0.05) |
|---|---|---|---|---|---|
| 1 | Effectiveness × Efficiency | 0.04 | 0.012 | 3.36 | Significant |
| 2 | Effectiveness × Satisfaction | 0.01 | 0.006 | 2.03 | Significant |
| 3 | Efficiency × Satisfaction | 0.02 | 0.009 | 2.48 | Significant |

**Scale Validity Indicators**

The validity of the current scale was verified using two methods:

1. **Face Validity**

Face validity for the scale was established through the procedures conducted by the researcher, as detailed in previous pages namely, the expert judgment processes previously outlined.

2. **Construct Validity**

Construct validity was confirmed through two methods: the extreme groups method and internal consistency, both of which are indicators of construct validity and factor structure.

**Reliability Indicators**

Two methods were used to assess the reliability of the current scale:

1. **Test–Retest Method**

To calculate the reliability coefficient using the test–retest method, the researcher administered the Relative Mastery Scale to a sample of 40 nurses randomly selected from hospitals in Al-Karkh and Al-Rusafa. After a two-week interval, the same scale was re-administered to the same group. Using Pearson's Correlation Coefficient, the reliability score was found to be 0.77, which is considered a good level of stability. This aligns with the criterion stated by Foran (1961, p. 384), who recommended reliability values above 0.70.

**Cronbach's Alpha Coefficient:**

The researcher verified the reliability of the Relative Mastery Scale using Cronbach's Alpha method, based on data from the total sample. Cronbach's Alpha was used to measure the internal consistency of the current scale. After applying the scale to the analytical sample of 400 nurses, the Cronbach's Alpha coefficient for the Relative Mastery Scale was found to be 0.81, which is considered a high and acceptable reliability level according to the criterion set by Nunnally (1967, p. 196). This is shown in Table (11).

**Table (11):** Reliability Coefficients Using Test–Retest and Cronbach's Alpha for the Relative Mastery Scale

| No. | Method | Reliability Value |
|---|---|---|
| 1 | Test–Retest | 0.77 |
| 2 | Cronbach's Alpha | 0.81 |

**Statistical Indicators for the Relative Mastery Scale**

The statistical indicators of the Relative Mastery Scale were derived using the Statistical Package for the Social Sciences (**SPSS**). After applying the scale to the research sample of **400 nurses**, several statistical indicators were obtained, as shown in **Table (12)**:

**Table (12):** Statistical Indicators of the Relative Mastery Scale

| Indicator | Value |
|---|---|
| Mean | 81 |
| Median | 79 |
| Mode | 80 |
| Standard Deviation | 7.2 |
| Skewness | -0.01 |
| Kurtosis | -0.32 |
| Minimum Score | 27 |
| Maximum Score | 135 |

**Normal Distribution of the Relative Mastery Scale**

Upon examining the statistical indicators of the Relative Mastery Scale, it is evident that they align with indicators typical of scientific measurement tools and approximate a normal distribution. This provides evidence of the sample's representativeness of the studied population and the generalizability of the results. The highest score on the Relative Mastery Scale was 135, and the lowest was 27, as illustrated in Figure (2), which corresponds to these statistical indicators.

The final version of the scale consisted of 27 items, and based on statistical procedures, all items were statistically significant.

 

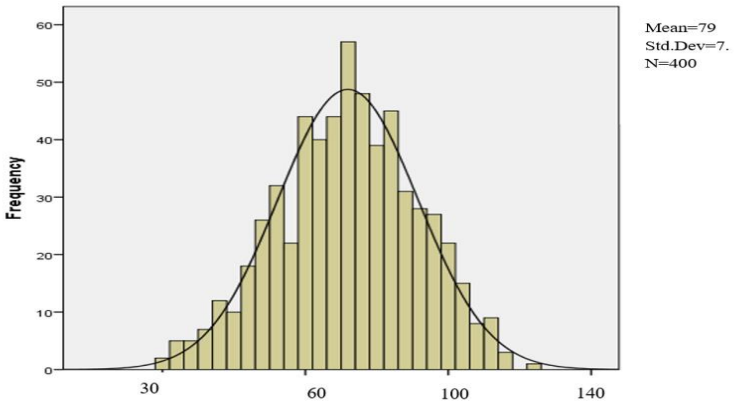


**Figure (2):** Approximate Normal Distribution of the Relative Mastery Scale

## PRESENTATION AND DISCUSSION OF RESULTS

### Measuring Relative Mastery Among Nurses

To achieve this objective, the researcher applied the Relative Mastery Scale to the study sample consisting of 400 nurses. The results showed that the mean score was 79, with a standard deviation of 7.2. When this mean was compared to the hypothetical mean of the scale (81), and using the t-test for one sample, the difference was found to be statistically significant and in favor of the hypothetical mean. The calculated t-value exceeded the critical t-value of 1.96, with 399 degrees of freedom at the 0.05 significance level. Table (13) illustrates this.

**Table (13):** T-Test for the Difference Between the Sample Mean and the Hypothetical Mean of the Relative Mastery Scale

| Sample Size | Mean | Std. Deviation | Hypothetical Mean | Calculated T-Value | Tabulated T-Value | Degrees of Freedom | Significance Level |
|---|---|---|---|---|---|---|---|
| 400 | 79 | 7.2 | 81 | -12.04 | 1.96 | 399 | Significant |

The result in Table (13) indicates that the research sample possesses a low level of relative mastery.

This result can be interpreted in light of the adopted theory by Schkade and Schultz, which defines mastery as *"the ability to achieve personal goals in occupational performance in a manner that is effective, satisfactory, and competent, according to the individual's own standards and personal circumstances"* (Schultz & Schkade, 2003, p.34).

In other words, mastery does not rely on absolute standards or comparisons with others. Instead, it is based on the individual's own assessment of efficiency, satisfaction, and effectiveness in performing a specific task. Schkade and Schultz (2003) identified three key dimensions for measuring relative mastery:

1. **Effectiveness**: The degree to which an individual achieves the intended outcome of the performance.
2. **Efficiency**: Achieving the goal with minimal effort, time, and resources.
3. **Satisfaction (to self and others)**: The degree to which the individual and those around them feel satisfied with the performance.

These dimensions make **relative mastery** a more flexible and personalized concept compared to **absolute mastery** (Schultz & Schkade, 2003, p.52).

### Differences in Relative Mastery According to the Variables of Gender, Age, Years of Service, and Educational Attainment

In order to identify the significance of differences between the mean scores of the respondents on the Relative Mastery Scale according to the variables of gender (male–female), age (20–35 and 36 and above), years of service (1–15 and 16 and above), and educational attainment (secondary–bachelor's degree), the researcher used Two-Way ANOVA at a significance level of (0.05). Table (14) shows the results:

**Table (14)** Two-Way ANOVA Results to Identify Differences in Relative Mastery According to Gender, Age, Years of Service, and Educational Attainment

| Source of Variation (S.O.V) | Sum of Squares (S.S) | Degrees of Freedom (D.F) | Mean Square (M.S) | F-Value | Significance |
|---|---|---|---|---|---|
| Gender (male–female) | 26.53 | 1 | 25.627 | 5.83 | Significant |
| Age (20–35 / 36 and above) | 1708.863 | 2 | 854.432 | 27.64 | Significant |
| Years of Service (1–15 / 16 and above) | 156.23 | 3 | 161.57 | 5.34 | Significant |
| Educational Attainment | 92.34 | 4 | 96.90 | 4.56 | Significant |
| Gender * Age | 118.463 | 2 | 59.232 | 1.92 | Not Significant |
| Gender * Years of Service | 110.2 | 3 | 110.43 | 1.23 | Not Significant |

 

| | | | | | |
|---|---|---|---|---|---|
| Gender * Educational Attainment | 121.67 | 4 | 122.51 | 0.84 | Not Significant |
| Age * Years of Service | 130.69 | 6 | 130.7 | 1.01 | Not Significant |
| Age * Educational Attainment | 44.23 | 8 | 45.44 | 1.21 | Not Significant |
| Years of Service * Educational Attainment | 63.23 | 12 | 64.14 | 0.91 | Not Significant |
| Error | 18363.340 | 355 | 30.915 | | |
| Total | 1709010 | 400 | | | |

**1. Differences in Relative Mastery by Gender (Male – Female)**

To achieve this objective, the Relative Mastery Scale was applied to a sample of 400 nurses, consisting of 200 males and 200 females. Using Two-Way ANOVA, the calculated F-value was (5.83), which exceeds the critical F-value of (3.84) at the 0.05 significance level and degrees of freedom (1–355), indicating a statistically significant difference in relative mastery by gender in favor of males. See Table (15):

**Table (15)** Mean and Standard Deviation by Gender on the Relative Mastery Scale

| Variable | Gender | Sample Size | Mean | Std. Dev | Calculated F | Critical F | Significance |
|---|---|---|---|---|---|---|---|
| Relative Mastery | Male | 200 | 79.9 | 7.61 | 5.83 | 3.83 | Significant |
| | Female | 200 | 78.66 | 7.20 | | | |

This result aligns with Kielhofner's 1980 study, which indicated that females face greater social pressures that may negatively impact their ability to achieve mastery at work. It also corresponds with Cairney and Krause's 2008 study that explored the relationship between physical activity, mastery, and psychological distress. Their findings revealed that higher levels of mastery and physical activity were associated with lower levels of distress suggesting that men, being more able to engage in physical activities, enjoy enhanced psychological health and increased mastery (Cairney & Krause, 2008, p.45).

**2. Differences in Relative Mastery by Age (20–35 / 36 and above)**

**Table (16)** Means and Standard Deviations of Relative Mastery by Age

| Group | Age Group | Sample Size | Mean | Std. Dev | F (Calculated) | F (Critical) | Sig |
|---|---|---|---|---|---|---|---|
| Males | 20–35 | 100 | 79.0 | 7.4 | | | |
| | 36 and above | 100 | 77.0 | 7.1 | | | |
| Males Total | | 200 | 78.0 | 7.25 | | | |
| Females | 20–35 | 100 | 78.5 | 7.0 | | | |
| | 36 and above | 100 | 77.6 | 7.1 | 27.64 | 3.00 | Sig |
| Females Total | | 200 | 78.05 | 7.05 | | | |
| Total Sample | | 400 | 78.05 | 7.15 | | | |

This finding aligns with Frank (1996), who indicated that relative mastery is a dynamic process evolving over time, influenced by personal resources, environmental contexts, and challenges. Mastery promotes resilience by enabling people to find individualized solutions, reduce stress from unrealistic expectations, and foster learning and adaptability (Frank, 1996, p.34).

**3. Differences in Relative Mastery by Years of Service (1–15 / 16 and above)**

**Table (17)** Means and Standard Deviations by Years of Service

| Group | Years of Service | Sample Size | Mean | Std. Dev | F (Calculated) | F (Critical) | Sig |
|---|---|---|---|---|---|---|---|
| Males | 1–15 | 100 | 79.0 | 7.4 | | | |
| | 16 and above | 100 | 77.0 | 7.1 | | | |
| Males Total | | 200 | 78.0 | 7.25 | | | |
| Females | 1–15 | 100 | 78.5 | 7.0 | | | |
| | 16 and above | 100 | 77.6 | 7.1 | 23.6 | 3.00 | Sig |
| Females Total | | 200 | 78.05 | 7.05 | | | |
| Total Sample | | 400 | 78.05 | 7.15 | | | |

**4. Differences in Relative Mastery by Educational Attainment (Secondary – Bachelor's)**

**Table (18)** Means and Standard Deviations by Educational Attainment

| Group | Educational Level | Sample Size | Mean | Std. Dev | F (Calculated) | F (Critical) | Sig |
|---|---|---|---|---|---|---|---|
| Males | Secondary | 100 | 79.0 | 7.4 | | | |
| | Bachelor's | 100 | 77.0 | 7.1 | | | |
| Males Total | | 200 | 78.0 | 7.25 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Females | Secondary | 100 | 78.5 | 7.0 | | | |
| | Bachelor's | 100 | 77.6 | 7.1 | 20.8 | 3.83 | Sig |
| Females Total | | 200 | 78.05 | 7.05 | | | |
| Total Sample | | 400 | 78.05 | 7.15 | | | |

### Post-Hoc Comparisons Using Tukey Test

**Table (19)** Tukey Test Results for Differences in Relative Mastery by Age, Years of Service, and Educational Attainment

| Comparison | N | Mean | Mean Difference | Tukey Critical | Significance (0.05) |
|---|---|---|---|---|---|
| Males (20–35 vs. 36+) | 25 | 79.66/83.24 | 3.58 | 1.30 | Significant (36+) |
| Males (1–15 vs. 16+) | 25 | 79.26/83.83 | 3.57 | 1.30 | Significant (16+) |
| Males (Secondary vs. Bachelor) | 25 | 79.34/84.44 | 4.10 | 1.30 | Significant (Bachelor) |
| Females (20–35 vs. 36+) | 25 | 77.45/80.65 | 3.20 | 1.30 | Significant (36+) |
| Females (1–15 vs. 16+) | 25 | 77.12/80.89 | 3.77 | 1.30 | Significant (16+) |
| Females (Secondary vs. Bachelor) | 25 | 77.65/81.32 | 3.67 | 1.30 | Significant (Bachelor) |

## CONCLUSIONS

Based on the results of this study, the researcher arrived at the following conclusions:

1. Nurses demonstrate a low level of relative mastery.
2. There are statistically significant differences in relative mastery:
   - By gender, in favor of males.
   - By age, in favor of the (36 and above) group.
   - By years of service, in favor of the (16 and above) group.
   - By educational attainment, in favor of bachelor's degree holders.

## RECOMMENDATIONS

In light of the study results, the researcher recommends the following:

1. Media, in collaboration with the Red Crescent and Red Cross, should highlight the burden of care in nursing through awareness programs to promote and enhance relative mastery.
2. The Ministry of Health should coordinate with civil society organizations to use diagnostic tools for identifying weaknesses in mastery and conduct training courses to improve the quality of nursing services in Iraq.
3. Coordination with the Ministry of Education and Higher Education to guide nursing students and recent appointees on professionalism and ethical resilience to enhance mastery in nursing, through conferences and workshops.

## SUGGESTIONS

The researcher suggests conducting further studies to investigate relative mastery in different professional groups such as physicians, engineers, pilots, officers, and teachers.

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