

Women's Obstetric History and Urinary Incontinence

Samar shaban Abdelazim Mohamed ^{1*}, Elham Abozied Ramadan ²,
Hanan Elzeblawy Hassan ¹, Amel Ahmed Hassan Omran ²

¹ Maternal and Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt

² Obstetrics Gynecological Nursing, Faculty of Nursing Benha University

*Corresponding author: nona_nano_1712@yahoo.com.

Abstract:

Background: Stress urinary incontinence occurs when vesical pressure exceeds urethral pressure in the setting of sudden increases in intra-abdominal pressure. **Aim of the study:** The study was conducted to evaluate urinary incontinence characteristics according to ICIQ-SF scale and assess relationship between number of woman's gravida & parity and frequency of urinary incontinence among menopausal elderly women. **Design:** A descriptive study design was utilized in this study. **Sample:** A Purposive sample was used from the above mentioned setting. Total sample was 100 women who attended to gynecological and urological outpatient clinics at Beni-Suef University Hospital. **Tools:** (1) A structured interviewing questionnaire sheet. It was consist of obstetrics history such as (number of gravidity, parity, and abortion, mode of deliveries, any complications during pregnancy, labor and post-partum, mode of delivery, weight of baby at birth and duration between pregnancies), (2) The International Consultation on Incontinence Modular Questionnaire ICIQ-SF. **Results:** more than two-thirds (70%) of the studied sample got pregnant and delivered more than three times while 56% aborted from 1-3 times, 66% delivered spontaneous vaginally, 78% complained from untreated urinary tract, 34% experienced prolonged labor. It indicates that 45% of the studied women reported urine leakage several times a day. **Conclusion:** It illustrates that there were statistical differences in the frequency of urinary incontinence in relation to number of gravidity and parity among the studied women. **Recommendations:** Health education about the correction of misconceptions about urinary incontinence, which can be an effective means of bringing incontinent women into contact with health care center for early appropriate intervention.

How to cite:

Mohamed 2024. "Women's Obstetric History and Urinary Incontinence" *Current Research in Health Sciences* 2(1): 22 – 31.
<https://doi.org/10.58613/crhs214>

Received:

January 4, 2024

Accepted:

April 15, 2024

Published:

May 2, 2024



© 2024

by the authors. The terms and conditions of the Creative Commons Attribution (CC BY) licence apply to this open access article

Keywords: Obstetric history, Stress urinary incontinence.

Introduction

In Egypt UI prevalence is difficult to estimate because of most Egyptian women are refused to seek help regarding UI, they do not report incontinence when visiting their

health care providers, the belief that UI is a natural consequence of ageing & childbirth and embarrassment so more studies should be carry out to estimate the exact prevalence of UI in Egypt [1-6]. But there are a few studies which scrutinized the prevalence rate of UI in some Egyptian districts. A study conducted by Bahloul et al (2021) in Assiut reported that, the overall prevalence of UI was 22.2% and the prevalence of stress UI, urge UI and mixed UI was 5.7%, 5.1% and 11.4% respectively [7]s. Also Mohamed et al., (2021) reported the prevalence of urinary incontinence in Egypt was 54.8% for all cases, and 14.8% of them suffer from stress urinary incontinence (SUI) [8].

Continence mechanism in women is maintained by a coordinated effort between the bladder, urethra, pelvic muscles and the surrounding connective tissue. The function of the lower urinary tract is to either store (storage phase) or expel (voiding phase) urine. This is dependent upon a bladder that is able to expand while maintaining a relatively constant low pressure in the absence of involuntary contractions. The body of the bladder is innervated by parasympathetic nerves while the bladder neck receives sympathetic innervation. Normal urine storage is dependent on a closed outlet and a relaxed bladder [9-14].

Stress urinary incontinence occurs when vesical pressure exceeds urethral pressure in the setting of sudden increases in intra-abdominal pressure. This can be due to weakness of the pelvic floor or sphincter. Loss of bladder neck support is referred to as bladder neck hypermobility and treatments target the restoration of that support. Sphincter dysfunction is referred to as intrinsic sphincter deficiency. It is believed that most patients have elements of both disorders in varying degrees. Risk factors for SUI include childbirth, postmenopausal involution of the urethra, or as a complication of pelvic surgery or trauma [14-18].

Urinary Incontinence is more common in women than in men. It can significantly impair quality of life, restricting social activity in women and usually accompanied by medical complications. Though urinary incontinence is not life-threatening, it is a very debilitating condition. “Incontinence is a condition that will not kill me, but it took my life away,” is an emotional quote that aptly describes the impact of urinary incontinence on the patient [19-22].

The burden of urinary incontinence is high, not only in terms of cost of incontinence products and nursing home costs but also in terms of loss of quality of life and decreased productivity. There appears to be a stigma attached to urinary incontinence that causes one to suffer in silence. Those women afflicted by urinary incontinence do not discuss this condition even with their partner or closest relative [14].

Aim of the study

1. Evaluate urinary incontinence characteristics according to ICIQ-SF scale.
2. Assess relationship between number of woman's gravida and frequency of urinary incontinence among menopausal elderly women.
3. Assess relationship between number of woman's parity and frequency of urinary incontinence among menopausal elderly women.

Research questions

1. Is there relationship between number of woman's gravida and frequency of urinary incontinence among menopausal elderly women?
2. Is there relationship between number of woman's parity and frequency of urinary incontinence among menopausal elderly women?

Subject and methods

Study Setting and Sampling

A Purposive sample was used from the above-mentioned setting. Total sample was 100 women who attended to gynecological and urological outpatient clinics at Beni-Suef University Hospital.

Tools of data collection

Tool I: A structured interviewing questionnaire sheet was developed by the researcher in the Arabic language based on a review of recent literatures, under guidance of supervisors. It was consist of obstetrics history such as (number of gravidity, parity, and abortion, mode of deliveries, any complications during pregnancy, labor and post-partum, mode of delivery, weight of baby at birth and duration between pregnancies).

Tool II: The International Consultation on Incontinence Modular Questionnaire ICIQ-SF: The ICIQ is a self-reported survey and screening tool for evaluating the frequency, severity of urinary incontinence. It consisted of 4 main items of 6 total ask for rating of symptoms in the past 4 weeks. Take sum score of items 3, 4, 5 (items 1 and 2 are demographic) for the actual score. The final item is a self-diagnostic item that is un-scored. The ICIQ-UI Short form provides a score ranging from 0-21; with a higher score indicating greater severity of symptoms; this assessment done before and after intervention.

Scoring system of the ICIQ-UI

- The total score is consider mild when <25% (<10points).
- Consider moderate when 25-50 % (10-15 points).
- Consider sever when >50% (>15 points).

Validity of the tools

Tools of data collection were investigated for their content validity by three experts in the field of Obstetric and Gynecological Nursing from Faculty of Nursing and Benha University.

Pilot study

A pilot study was conducted on 10 women to evaluate the applicability, efficiency, clarity of tool.

Statistical Design

The collected data was revised, coded, tabulated and introduced to a computer using statistical package for social sciences (IBM SPSS .25.0). Data was presented and suitable analysis was done according to the type of data obtained for each parameter.

Results

Table 1 Illustrates the distribution of studied sample according to their obstetrics history. It shows that more than two-thirds (70%) of the studied sample got pregnant and delivered more than three times while more than half (56%) of them aborted from 1-3 times. Regarding type of delivery, about two-thirds (66%) of them delivered spontaneous vaginally, while about 29% delivered by cesarean section. Regarding complications during pregnancy, the table reveals that more than three-quarter (78%) of the studied sample complained from untreated urinary tract, gestational diabetes, ante partum hemorrhage, anemia and pregnancy induced hypertension as the following mention (30%, 19%, 15%, 7%, 7%, respectively) during their previous pregnancies. While complications during labor revealed that about one half (46%) of the studied sample delivered without any complications while about one-third (34%) experienced prolonged labor. Also, complications during postpartum period showed (32%, 18%, and 14%) of them complained from chronic constipation and post-partum hemorrhage and Puerperal sepsis respectively.

Figure 1 Portrays the distribution of studied sample according to the International Consultation on Incontinence Modular Questionnaire (ICIQ-SF). It indicates that around half (45%) of the studied women reported urine leakage several times a day. Moreover, more than half (61%) of them reported that they leak small amount (under wear or pad is damp) of urine. In addition, all of them leak during cough or sneeze.

Figure 2 Shows the Correlation between number of gravid and frequency of urinary incontinence. It illustrates that there were statistical differences in the frequency of urinary incontinence in relation to number of gravidity among the studied sample ($p < 0.05$).

Figure 3 Shows Correlation between number of woman's parity and frequency of urinary incontinence. It reveals that there were highly statistical differences in the frequency of urinary incontinence in relation to number of parity among the studied sample ($p \leq 0.01$).

Table 2 Reveals the relationship between obstetrics history and frequency of urinary incontinence among studied sample. It demonstrates positive correlation between number of gravidity and parity and frequency of urinary incontinence with statistical significant association ($p \leq 0.01$).

Table 1. Distribution of studied sample according to obstetrics history (n=100).

Obstetrics history	No	%
Number of gravidity		
1-3 pregnancies	30	30.0
More than 3 pregnancies	70	70.0
Number of parity		
1-3 deliveries	30	30.0
More than 3 deliveries	70	70.0
Number of abortion		
No abortion	44	44.0
1-3 times of abortion	56	56.0
*Type of delivery		
Spontaneous vaginal deliveries	66	66.0
Vaginal deliveries with episiotomy	25	25.0
Caesarean section	29	29.0
Instrumental deliveries	1	1.0
Baby weight at birth		
Less than 2.5 kg	13	13.0
2.5-4 kg	82	82.0
More than 4kg	5	5.0
Duration between pregnancy		
Usually between 1 - 2 year	4	4.0
Usually between 2- 3 years	51	51.0
More than 3 years	16	16.0
Not regular intervals	29	29.0
*Complication during pregnancy		
No complications	40	40.0
Antepartum hemorrhage	15	15.0
Gestational Diabetes	19	19.0
Pregnancy Induced Hypertension	7	7.0
Untreated urinary tract infection	30	30.0
Anemia	7	7.0
*Complication during labor		
No complications	46	46.0
Antenatal hemorrhage	9	9.0
Prolonged Labor	36	36.0
Obstructed labor	14	14.0
*Complication during postpartum		
No complications	51	51.0
Postpartum hemorrhage	18	18.0
Chronic constipation	32	32.0
Puerperal sepsis	14	14.0

**results not mutually exclusive*

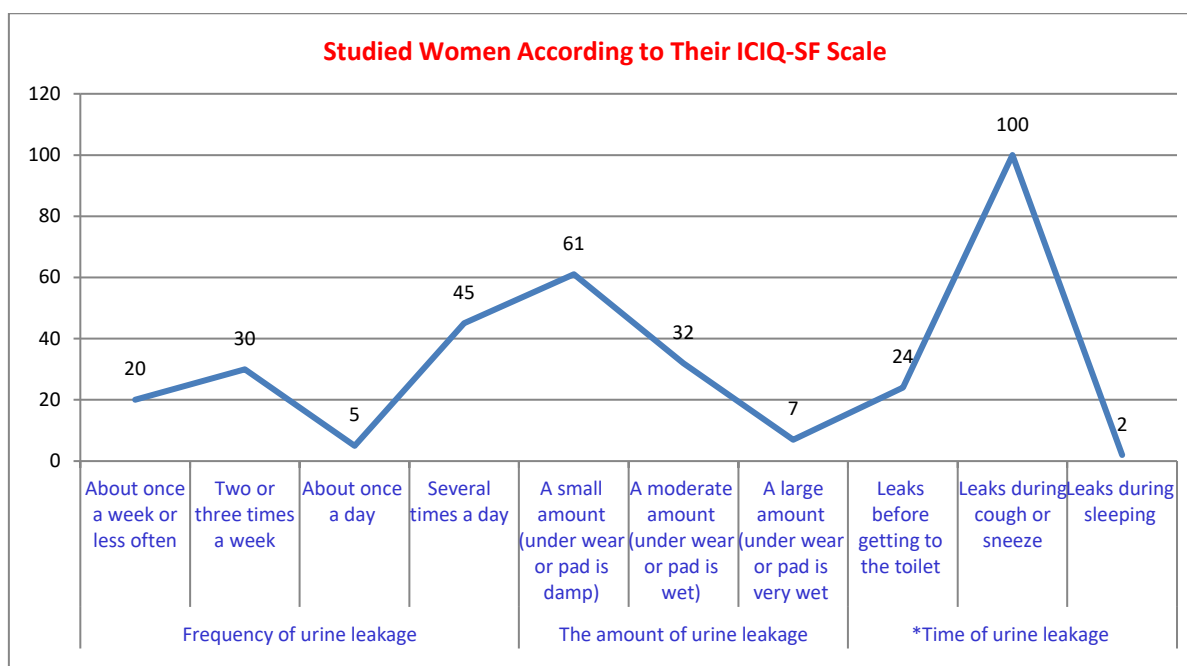


Figure 1. Distribution of studied sample according to their ICIQ-SF scale (n=100)

**results not mutually exclusive*

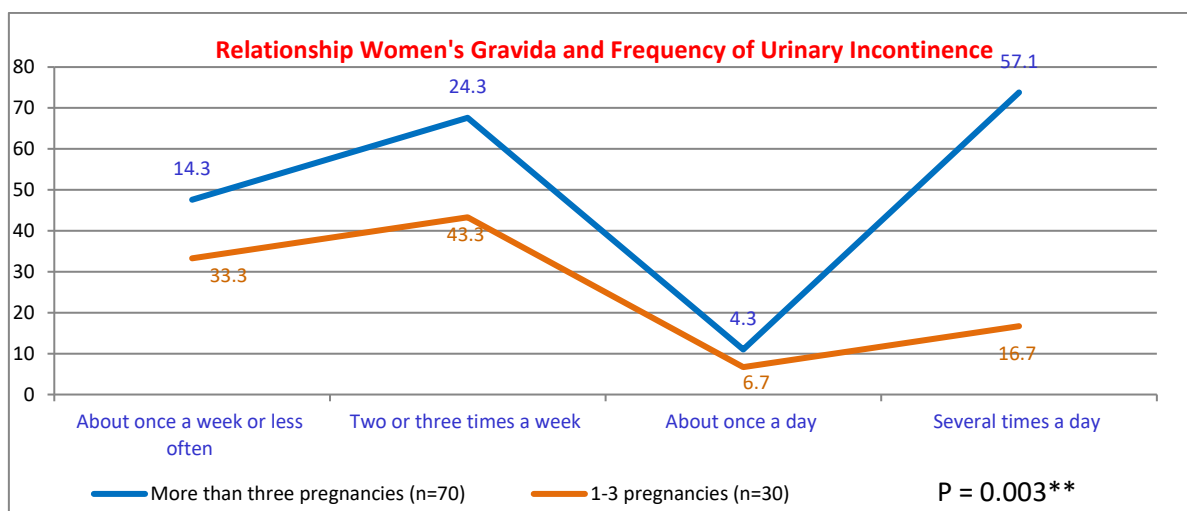


Figure 2. Relationship between number of woman's gravida and frequency of urinary incontinence

**significant at $p \leq 0.05$*

***highly significant at $p \leq 0.01$*

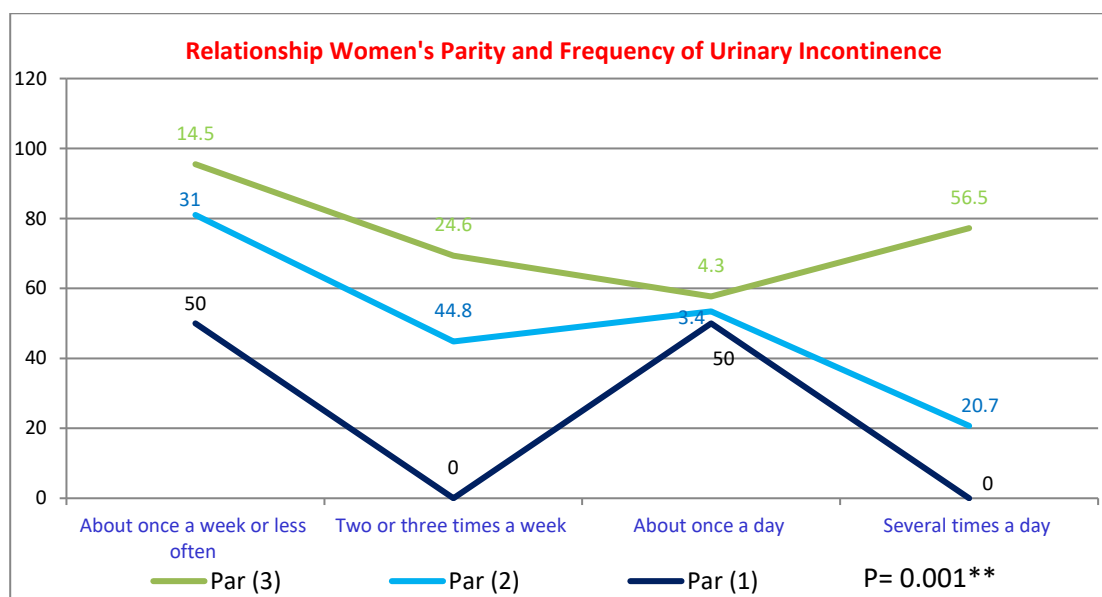


Figure 3. Relationship between number of woman's parity and frequency of urinary incontinence (N=100)

*significant at $p \leq 0.05$

**highly significant at $p \leq 0.01$

Table 2. Relationship between obstetrics history and frequency of urinary incontinence (N=100)

Obstetrics history	Frequency of urinary incontinence	
	R	p-value
Number of gravidity	0.294	0.003*
Number of parity	0.303	0.002*

Person correlation coefficient test *significant at $p \leq 0.05$ **highly significant at $p \leq 0.01$

Discussion

Stress Urinary incontinence (SUI) considers the most common and distressing health problem among the aging population especially menopausal women, associated with a profound negative impact on their life. Its prevalence estimates 30% to 50% and increases with age and represents 50% to 60% among nursing home residents. Women are at more risk for SUI three times more than men, because of anatomic, social, and cultural status and also because of the effects of pregnancy, delivery, and menopause [23].

The findings of the current study will be discussed under three parts include Part I: obstetric and urinary incontinence history for the studied women. Part II: The International Consultation on Incontinence Modular Questionnaire ICIQ-SF (physical, psychological and sexual condition of the studied women). Part III: Correlation between (No of gravidity and parity) and frequency of urinary incontinence.

Concerning correlation between number of parity and frequency of urinary incontinence, the current study revealed that there was positive correlation between number of parity and frequency of urinary incontinence pre and post intervention with

highly statistical significant difference (p value=0.000), this was similar to Ahmed, D et al (2019) who studied the Urinary Incontinence in Healthy Saudi Women and revealed that multi-parity was related to the urinary incontinence prevalence [24]. Also Rizk DE et al (2019) and Melville, J.L et al, (2019) who studied the Urinary Incontinence in The United States Women and reported that urinary incontinence prevalence was more common in females who had three or more births [25-26].

Regarding correlation between number of gravidity and frequency of urinary incontinence, the present study reported that there was positive correlation with statistical significant (p value = 0.003), this result was in accordance with Contillo,C (2019) who studied Hospital extra: urinary incontinence and depression [27]. Palkhivala, A (2019) studied Pelvic muscle training may relieve SUI long term: study reports some patients experience extended relief after 8 weeks' training both of them documented that women suffer from urinary incontinence four times more than men due to multiple trauma from child birth that affects urethral sphincter function [28]. on the other hand Wyman et al (2018) & Sharaf A-Y et al (2020) who studied The Impact of Nursing Interventions on the Control of Urinary Incontinence among Women and mentioned that there was no significant relationship between gravidity and frequency of urinary incontinence [29-30].

These results may attribute to that the effect of age on pelvic floor structure and function is difficult to separate from the effects of hormonal status and parity. Evidence of denervation and changes in striated muscle fiber number, type, and diameter have been found in asymptomatic and nulliparous women .Constipation may contribute to pelvic floor dysfunction in older women. Total collagen content in pelvic muscle and fascia declines with age, with increased cross linking and decreased elasticity, but this association does not imply a direct causative effect of “ageing [31].

Conclusion

It illustrates that there were statistical differences in the frequency of urinary incontinence in relation to number of gravidity and parity among the studied women.

Recommendations

Health education about the correction of misconceptions about urinary incontinence, which can be an effective means of bringing incontinent women into contact with health care center for early appropriate intervention.

References

- [1] Kamel DM, Thabet AA and Tantawy SA., 2018. Effect of abdominal versus pelvic floor muscle exercises in obese women with mild stress urinary incontinence. *Hong Kong Physiotherapy Journal*, 31(1), 12-18.
- [2] Hassan H., Mohamed S., Ramadan E., Omran A., 2023. Urinary Incontinence among Menopausal Northern Upper Egyptian Women Impact of Deep Kegel and Breathing Exercises. *New Medical Innovations and Research*, 4(9): 1-12. DOI: <https://doi.org/10.31579/2767-7370/070>
- [3] Ghanim S., Mohamed S., Mohamed A., Hassan H., 2024. Nurses' Knowledge and Practice for Reducing Falls among Older Adult Women. *Nile journal for geriatric and gerontology*, 7(1): 104-126. Doi: 10.21608/NILES.2024.318085.
- [4] Hassan H., Ghanem S., Mohammed S., Mohammed A., 2024. Study Nurses' Practices Regarding Fall Prevention among Elderly Women. *Clinics in Nursing*, 3(1): 1-11. DOI: <https://doi.org/10.31579/2835-8147/048>
- [5] Mohamed S., Hassan H., Omran A., Ramadan E., 2024. Effect of Urinary Incontinence on Women's Physical Condition. *Journal of Community Medicine and Public Health Reports*, 5(2): 1-5.
- [6] Hassan H., Mohammed S., Mohammed A., Ghanem S., 2024. Study Nurses' Knowledge about Fall Prevention among Elderly Women. *Journal of Orthopaedic Science and Research*, 5(1): 1-13. <https://doi.org/10.46889/JOSR.2023>
- [7] Bahloul M, Abbas A, Abo-Elhagag M, Elsnosy E and Youssef A., 2019. Prevalence of overactive bladder symptoms and urinary incontinence in a tertiary care hospital in Egypt. *International Journal Contraceptive Obstetrics and Gynecological*; 6(6): 2132-36.
- [8] Mohamed, AE, Mohamed,M., Taha, S, Mohammed R., 2021. Effect of Educational Interventions on Reducing Stress Urinary Incontinence Episodes among elderly Women. *Minia Scientific Nursing Journal*, 9(1).
- [9] Jayachandran, Chaandini ., 2017. Prevalence of Stress, Urge, and Mixed Urinary Incontinence in Women. *Eastern Michigan University DigitalCommons@EM*.
- [10] Ghanem S., Mohammed A., Mohammed S., Hassan H., 2024. Relationship between Nurses' Practices Regarding Fall Prevention among Elderly Women and their personal Characteristics. *Journal of Orthopaedic Science and Research*, 5(1):1-7. <https://doi.org/10.46889/JOSR.2024.5103>
- [11] Hassan H., 2020. Evidence-Based Practice in Midwifery and Maternity Nursing for Excellent Quality of Care Outcomes. *American Journal of Nursing Research*, 8(6): 606-607. doi: 10.12691/ajnr-8-6-3.
- [12] Omran A., Hassan H., Ramadan E., Mohamed S., 2024. Effect of Practicing Deep Breathing and Kegel Exercises on Menopausal Urinary Incontinence at Beni-Suef. *Public Health Open Access*, 8(1): 1-10. DOI: 10.23880/phoa-16000272
- [13] Hassan H., Zedan H., Farag D., 2024. Successful Vaginal Birth Subsequent to Cesarean Section. *Mansoura Nursing Journal*, 11(1): 343-355. DOI: 10.21608/mnj.2024.216259.1325
- [14] El Badawy, R. E. S., Ali, S. A., Abo El-Seoud, A. R., & Abd Allah, E. S., 2019. Health Education Intervention for Controlling of Stress Urinary Incontinence among Elderly Women at Zagazig City. *Zagazig Nursing Journal*, 9(2): 49-65.

- [15] Hassan H., 2020. Kegels Exercises: A crucial issue during woman's lifespan. *American Research Journal of Public Health*, 3(1):1-5. DOI: 10.21694/2639-3042.20001
- [16] Mohamed S., Omran A., Hassan H., Abo zied E., 2023. Effect of Deep Breathing and Kegel Exercises on Stress Urinary Incontinence among Elderly Women. *Benha Journal of Applied Sciences*, 8 (4): 81-89. Doi: 10.21608/bjas.2023.194796.1078
- [17] Hassan H., Gouda W., Farag D., 2024. Active versus Expectant Management of Third Stage of Labor: A Plane of Nursing Action. *Egyptian Journal of Health Care*, 15 (2): 1-17. DOI: 10.21608/EJHC.2024.348751.
- [18] Nadir I. Osman A , Vincenzo Li Marzi b, Jean N. Cornu c, Marcus J. Drake., 2018. Evaluation and Classification of Stress Urinary Incontinence: Current Concepts and Future Directions. *European Urology focus* 2 : 2 3 8 – 2 4 4.
- [19] National Association for Continence., 2017. Women stress urinary incontinence [Internet] 1-800-252-3337. Available from: <https://www.nafc.org/womens-stress-urinaryincontinence> .
- [20] Mohamed S., Omran A., Ramadan E., Hassan H., 2024. Effect of Kegal and Breathing Exercise adherence on Obstetrical History of Elderly Women with Urinary Incontinence. *Journal of Women Health Care and Issues*, 7(2): 1-8. DOI:10.31579/2642-9756/187
- [21] Mohamed S., Hassan H., Omran A., Ramadan E., 2024. Elderly Women Urinary Incontinence: Impact of Nurse-Based Kegel and Deep Breathing Exercise Intervention. *ESP International Journal of Advancements in Science & Technology*, 2(1):45-51. DOI: 10.56472/25839233/IJAST-V2I1P107.
- [22] Hassan H., 2019. The Impact of Evidence-Based Nursing as The Foundation for Professional Maternity Nursing Practices. *Open Access Journal of Reproductive System and Sexual Disorder*, 2(2): 195-197. OAJRSD.MS.ID.000135. DOI: 10.32474/OAJRSD.2019.02.000135.
- [23] Abdelazim S., 2023. Effect of Deep Breathing and Kegel Exercises on Urinary Incontinence among Elderly Women. A Thesis Submitted to Faculty of Nursing, Benha University.
- [24] Khalifa M, Farag M, Abd El Aziz A, Ali S. Ahmed N., 2019. Assessment of Psychological Symptoms and Quality of Life among Women with Urinary Incontinence. *J Gynecol Res Obstet*; 3(2): 064-069.
- [25] Rizk DE, Shaheen H, Thomas L, Dunn E and Hassan MY., 2019. The prevalence and determinants of health care-seeking behavior for urinary incontinence in United Arab Emirates women. *Int. Urogynecol. J. Pelvic Floor Dysfunct.*, 10(3):160–165.
- [26] Melville JL, Katon W, Delaney K and Newton K., 2019. Urinary Incontinence in US Women: a population-based study. *Arch Intern. Med.*, 165(5):537–542.
- [27] Contillo C., 2019. Hospital extra: urinary incontinence and depression. *American Journal of Nursing*,; 107 (1): 72C – 72 H
- [28] Palkhivala A., 2019. Pelvic muscle training may relieve SUI long term: study reports some patients experience extended relief after 8 weeks' training. *Urology Times* 2005 Dec 1.
- [29] Wyman J, Fanti A, McClish D, Bump R., 2018. Comparative efficacy of behavioral interventions in the management of female urinary incontinence. *Journal of obstetrics and Gynecology*,179(4):999-1004.
- [30] Sharaf, A-Y, El Sebai N-A, Ewieda S-M ,Shokry, M & Salem M-A., 2020. The Impact of Nursing Interventions on the Control of Urinary Incontinence among Women. *Journal of American Science*. 6(10): 1256:1274.
- [31] Klimaszewska K. The social aspects of urinary incontinence of women. *Pielęę XXI*