

# Prevalence of Urinary Incontinence in Young Obese Females

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**Abstract:** ***Aim:** To assess urinary incontinence in young obese women. **Procedure/Method:** Observational study done on 100 young obese women and QUID (Questionnaire for urinary incontinence diagnosis) was used and subjects were asked to answer the given questions. **Material:** QUID (Questionnaire for urinary incontinence diagnosis), pen, sheet. **Result:** It can be noted that on average, 34.6% individuals experienced stress incontinence rarely, 21% individuals experienced it once in a while, 10.6% individuals experienced it often, 5.6 % experienced it most of the time and 1% experienced it all of the time. As for urge incontinence, 42% individuals experienced it rarely, 15.3% individuals experienced it once in a while, 3% individuals experienced it often and 0.6% individuals experienced it most of the time. **Conclusion:** Hence there is no prevalence of urinary incontinence in young obese females.*

**Keywords:** Young obese females, Urinary incontinence, Quid

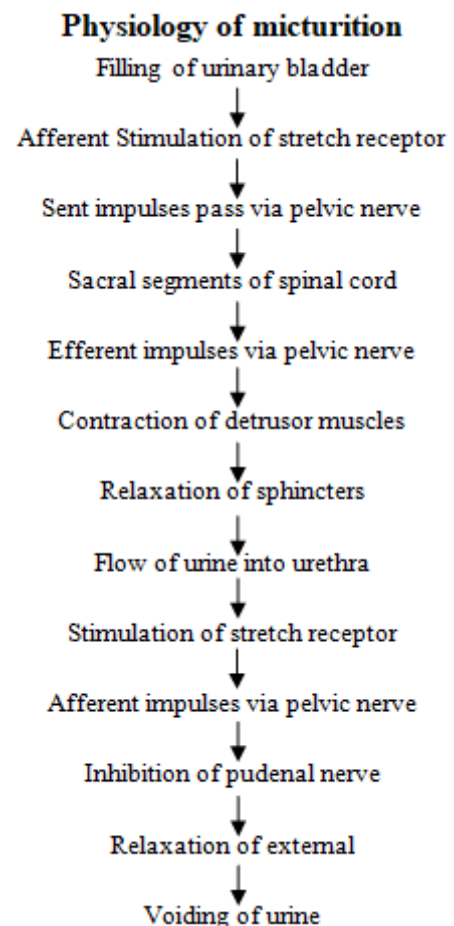
## 1. Introduction

- Micturition is the act of voiding urine.
- The first mild desire to void is commonly felt at a volume of 150 -200 ml. eventually as the pressure rises, the sensation of fullness become more consciously apparent and persistent and the necessary preparations to micturate.<sup>(1)</sup>
- Urinary Incontinence has been defined by the ICS as the involuntary loss of urine which is objectively demonstrable and is a social or hygienic problem.<sup>(1)</sup>
- Urinary incontinence is phrase that can be used to denote a symptom or sign of a condition in its own right.
- Urgency is a strong desire to void, accompanied by fear of leakage or fear of pain. Enuresis means any involuntary loss of urine. Because women have short urethra the detrusor is not required to contract very strongly to complement gravity to achieve emptying.<sup>(1)</sup>
- Obesity is defined as a condition of excessive amount of body fat and also it is an abnormal accumulation of fat, usually 20% or more over an individual's ideal body weight and is a heterogenous disorder in which energy intake chronically exceeds energy expenditure.

### BMI Classification

Classification	BMI (kg/m <sup>2</sup> )
Underweight	< 18.5
Normal range	18.5-24.9
Overweight	25.0 – 29.9
Obese	> 30.0
Class I	30.0 – 34.9
Class II	35.0 – 39.9
Class III	> 40.0

- Obesity results in increased intra-abdominal pressure. This leads to the weakening of the pelvic floor innervation and musculature.
- In addition, obesity may affect the neuromuscular function of the genitourinary tract, thereby also contributes to incontinence.



## 2. Data Analysis and Results

### Components of QUID

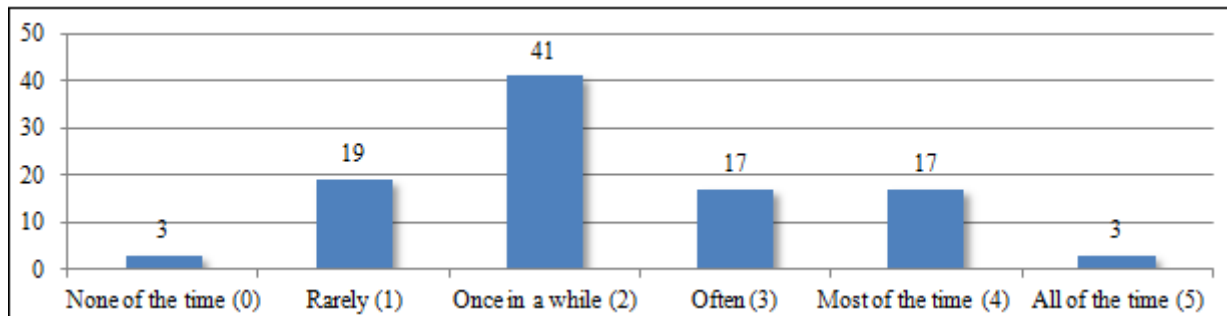
- 1) When you cough or sneeze?
- 2) When you bend down or lift something up?
- 3) When you walk quickly, jog or exercise?
- 4) While you are undressing in order to use the toilet?
- 5) Do you get such a strong and uncomfortable need to urinate?
- 6) Do you have to rush to the bathroom?

**Table 1:** Mean values and SD of each component/question of the QUID questionnaire

Components	1	2	3	4	5	6
Mean ± SD	2.35 ± 1.15	1.03 ± 0.92	0.71 ± 0.83	0.68 ± 0.76	0.8 ± 0.84	1.05 ± 0.87

- According to the bar graph below, it can be noted that for Question 1, i.e., “When you sneeze or cough?”, the score 2 was repeated the most (by 41% of the population) that means that they experience this component ‘Once in a while’, followed by score 1 which was chosen by 19% of

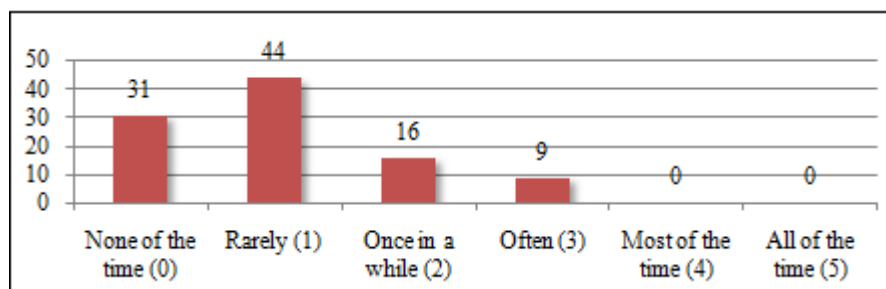
the population, score 3 and 4 which were chosen by 17% of the population each, score 5 which was chosen by 3% of the population and score 0 which was chosen by 3% of the population.



**Figure 1:** Q1- When you sneeze or cough

- As seen in Figure 2, for the component, “When you bend down or lift something”, the most repeated score was 1 (Rarely) which was chosen by 44% of the population, followed by score 0 which was chosen by 31% of the population, score 2 which was chosen by 16% of the

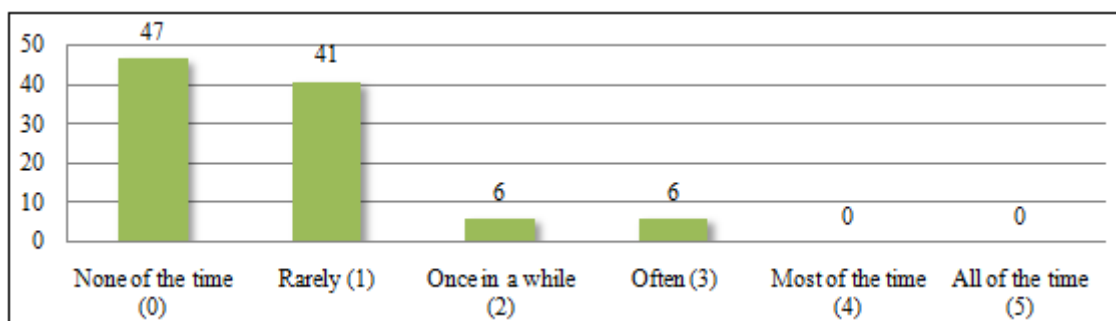
population and score 3 which was chosen by 9% of the population.



**Figure 2:** Q2- When you bend down or lift something?

- In figure 3 we see that the score 0 was chosen by 47% individuals, followed by score 1 which was chosen by 41% individuals, scores 2 and 3 which were chosen by 6% individuals when asked if they experienced

incontinence while walking quickly, jogging or exercising.



**Figure 3:** Q3- When you walk quickly, jog or exercise?

- In figure 4 we see that the score 0 was chosen by 48% individuals, followed by score 1 which was chosen by 38% individuals, scores 2 and 3 which were chosen by

12% and 2% of individuals respectively when asked if they experienced incontinence while undressing in order to use the toilet.

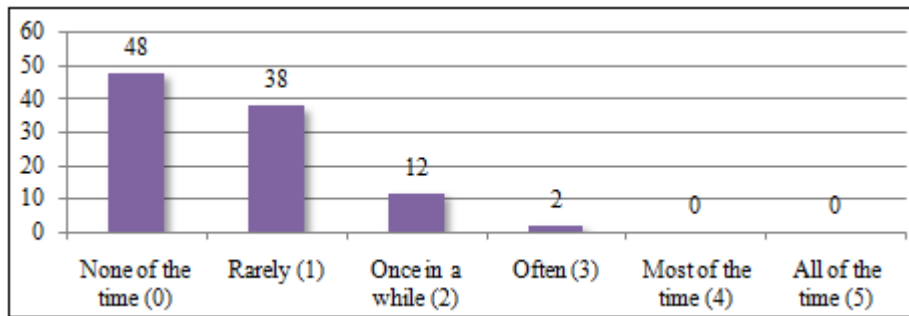


Figure 4: Q4- While you are undressing in order to use the toilet?

- In figure 5 we see that the score 0 was chosen by 43% individuals, followed by score 1 which was chosen by 38% individuals, scores 2 and 3 which were chosen by 15% and 4% individuals, respectively, when asked if

they get such a strong and uncomfortable need to urinate that they leak urine before reaching the toilet.

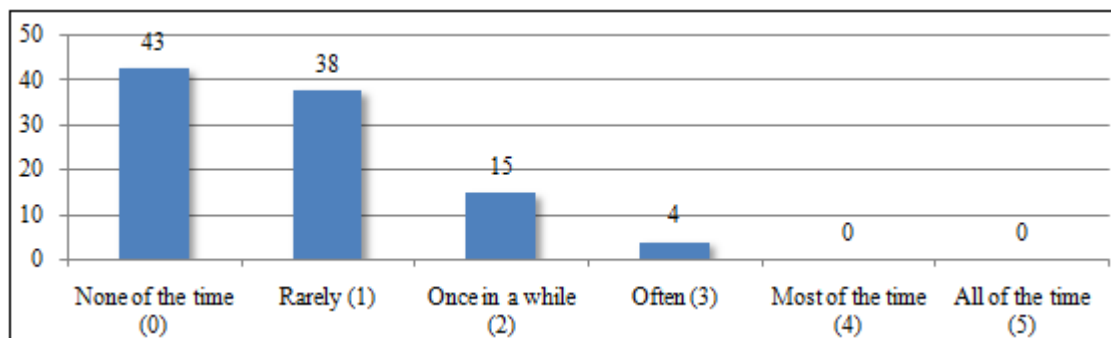


Figure 5: Q5- Do you get such a strong and uncomfortable need to urinate that you leak urine before reaching the toilet?

- In figure 6 we see that the score 1 was chosen by 50% individuals, followed by score 0 which was chosen by 26% individuals, scores 2,3 and 4 which were chosen by 19%, 3% and 2% individuals, respectively, when asked if

they have to rush to the bathroom because they get a sudden, strong need to urinate.

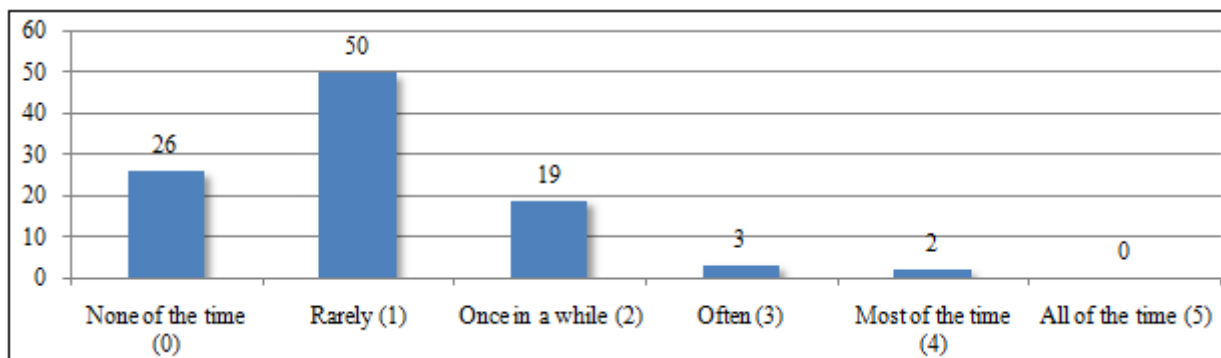


Figure 6: Q6- Do you have to rush to the bathroom because you get a sudden, strong need to urinate?

### 3. Discussion

- This study was conducted to investigate the prevalence of urinary incontinence in obese females. 100 obese patients between the ages of 15 to 25 years (Mean age-21.44 ± 2.50 years) were included in the study. A Questionnaire for Urinary Incontinence Diagnosis (QUID) was used to assess the severity of the incontinence.
- The QUID questionnaire includes following 6 components like while coughing and sneezing, bending down or lifting something, walking quickly or exercise, while undressing in order to use the toilet, having strong and uncomfortable need to urinate,

- rushing to the bathroom.
- Catherine S.Bradley MD, Eric S.Rovner MD et al who conducted a study to check the reliability of QUID questionnaire for urinary incontinence in women .It was concluded that QUID questionnaire is reliable to diagnose stress and urge urinary incontinence in a referral urogynecology patient population with accuracy
- Through the questionnaire it was concluded that a large amount of the population experienced stress incontinence rarely or once in a while.
- 41% individuals experienced incontinence during activities such as coughing and/or sneezing once in a while and 44% individuals experienced the same while

- bending down or lifting something rarely.
- 6) 41% of women experienced incontinence rarely while walking quickly, jogging or exercising.
  - 7) 38% women experienced incontinence rarely while undressing in order to use the toilet and 12% of women experienced the same once in a while.
  - 8) 38% women rarely experienced strong and uncomfortable need to urinate that they leak urine before reaching the toilet, whereas 15% of women experienced it once in a while.
  - 9) 50% of the recruited population noted that they rarely have to rush to the bathroom because they get a sudden, strong need to urinate, 19% of them experienced the same once in a while and 3 and 2% of the women experienced the same often and most of the time respectively.
  - 10) These could be as a result of the increase in intra-abdominal pressure which adversely stresses the pelvic-floor and may contribute to the development of urinary incontinence.
  - 11) In addition, the neuromuscular functions of the genitourinary tract are also found to be affected among obese individuals according to a study done by J.M. Cummings and C.B. Rodning in 2000. This study also proved the occurrence of stress incontinence in obese population and that weight loss may help relieve it.
  - 12) Within our chosen age group, it was found on calculating the mean of mean values of questions 1, 2 and 3 that majority of the females experienced stress incontinence rarely or once in a while. Whereas, most of the females experienced urge incontinence none of the time or rarely on calculation of mean of mean values of questions 4, 5 and 6.
- 4) Study can be used as a preventive measure to reduce the severity of incontinence by giving a strengthening protocol.
  - 5) Study can also be used to check the amount of incontinence that occurred by checking the amount of urine flowed by using pad test.

## References

- [1] Margret Polden and Jill Mantle.
- [2] Obesity and Female Stress Urinary Incontinence: <https://www.sciencedirect.com/science/article/pii/S0090429513007565>
- [3] Urinary Stress Incontinence Among Obese Women: Review of Path physiology Therapy: <https://link.springer.com/article/10.1007/s001920050>

## 4. Conclusion

- In conclusion, it can be noted that on average, 34.6% individuals experienced stress incontinence rarely, 21% individuals experienced it once in a while, 10.6% individuals experienced it often, 5.6 % experienced it most of the time and 1% experienced it all of the time.
- As for urge incontinence, 42% individuals experienced it rarely, 15.3% individuals experienced it once in a while, 3% individuals experienced it often and 0.6% individuals experienced it most of the time.
- Hence there is no prevalence of urinary incontinence in young obese females.

## 5. Limitation of Study

- Only over weighted and obese females were included.
- Age group was limited, i.e. 15-25.
- Location of study was limited

## 6. Recommendation and Scope of Study

- 1) Comparative study between urge and stress incontinence can be done in the same population.
- 2) Study can be conducted in females with different body compositions, i.e. BMI.
- 3) Study can be used to design an exercise program for the same population.