

## Peer Review File

Article information: <https://dx.doi.org/10.21037/aoi-23-7>

### Reviewer A:

It doesn't explain any of the participants' characteristics, such as age or whether they are first-time ICU patients or more accustomed to sample collection. A description would be helpful.

The questions are very basic. With these two questions, do they manage to conduct interviews lasting 30-45 minutes? Or is it within broader interviews that they discuss this?

Perhaps it would be better if they explained this more thoroughly. A more comprehensive exploration of the results is essential. Based on this qualitative study, what recommendations can you offer to the scientific community regarding the selection of urine samples in women experiencing UTI symptoms?

Several significant publications related to the collection of various urine samples have been released, and it appears that you have not cited them. Please verify this.

### Reply 1:

*Thank you for your comments. With regards to your comment: "The questions are very basic. With these two questions, do they manage to conduct interviews lasting 30-45 minutes? Or is it within broader interviews that they discuss this?" On lines 102 to 104 of the original manuscript, it was explained that Semi-structured interviews were conducted as part of a wider study. However, we focused the data collection specifically on the perspectives relating to the challenges of collecting a midstream urine specimen when diagnosing a urinary tract infection. We further clarify this on lines 105 to 112.*

### Reply 2:

*In response to your comment: Based on this qualitative study, what recommendations can you offer to the scientific community regarding the selection of urine samples in women experiencing UTI symptoms? We further clarify this on lines 222 to 237.*

### Reply 3:

*In response to your comment: Several significant publications related to the collection of various urine samples have been released, and it appears that you have not cited them. Please verify this. As this manuscript focuses on the perspectives relating to the challenges of collecting a midstream urine specimen when diagnosing a urinary tract infection. We included publications that related to midstream urine specimen collection only.*

### Changes in the text:

*On lines 105 to 112 it reads: Semi-structured interviews were conducted as part of a wider study. Semi-structured open ended interviews allowed participants to answer questions in detail as their responses were discursive dialogues which facilitated an expanded interview process. We focused the data collection specifically on the perspectives relating to the challenges of collecting a midstream urine specimen when diagnosing a urinary tract infection. Two important questions from the wider study were explored in more detail for the purpose of understanding the trials of urine*

specimen collection when diagnosing a urinary tract infection in the adult female population.

On lines 222 to 237 it now reads:

#### **Clinical recommendations**

Urine specimen collection is an important diagnostic procedure that requires an optimal urine specimen, especially for women experiencing symptoms of a urinary tract infection. Healthcare providers play an important role when disseminating information regarding urine specimen collection techniques and the importance of urine specimen collection (20). Despite the varying perceptions of what constitutes a quality midstream urine specimen (23), it is essential that patients obtain a urine specimen that captures the true diagnostic properties of their urinary tract infection for urinalysis (24), accompanied by the assessment of symptoms displayed during the time of the urine specimen collection (25). Published evidence has revealed that the midstream urine specimen is a method that effectively facilitates urinary diagnostics and antimicrobial treatment in the adult female population diagnosed with a urinary tract infection (26). However, the effective stewardship of nursing interventions are paramount, to ensure an optimal, midstream urine specimen technique is followed by patients, through evidence-based patient education, when a urine specimen for culture has been ordered (27).

#### **Reviewer B:**

This work aimed to determine how patients thought when they had to collect their mid-stream urine. Therefore, the Introduction should emphasize the problem of collecting unqualified urine, not urinary tract infection as you wrote. You should give detail how patients in your hospital got instruction before performing midstream urine collection. Your presenting results are not remarkable. I think you should give some more demographic data relating to the perspective of your participants such as their age, race if they were a foreigner who had language barrier to understand the instruction for collecting urine, education, and frequency of getting midstream urine during the past few years. Indeed, your results did not cover all of your participants' results. How were the rest? You may give results how many of them had no problem in collecting midstream urine, how many of them concerned the contamination from incorrectly collect their urine, etc.

#### **Reply 1:**

*Thank you for your comments. With regards to your comment: This work aimed to determine how patients thought when they had to collect their mid-stream urine. Therefore, the Introduction should emphasize the problem of collecting unqualified urine, not urinary tract infection as you wrote. On lines 52 to 54 it was stated that "The objective of this study was to explore the trials of urine specimen collection when diagnosing a urinary tract infection. This study explored the perspectives relating to the challenges of collecting a midstream urine specimen when diagnosing a urinary tract infection".*

#### **Reply 2:**

*In response to your comment: You should give detail how patients in your hospital got instruction before performing midstream urine collection. On lines 103 to 105 of the original manuscript, we explained that "Semi-structured interviews were conducted as part of a wider study. We further clarify this on lines 112 to 116 along with Appendix 1.*

**Reply 3:**

**In response to your comment:** *I think you should give some more demographic data relating to the perspective of your participants such as their age, race if they were a foreigner who had language barrier to understand the instruction for collecting urine, education, and frequency of getting midstream urine during the past few years. We further clarify this on lines 80 to 91.*

**Reply 4:**

**In response to your comment:** *You may give results how many of them had no problem in collecting midstream urine. This study explored the perspectives relating to the challenges of collecting a midstream urine specimen when diagnosing a urinary tract infection only, therefore we did not explore how many of them had no problem in collecting midstream urine.*

**Changes in the text:**

On lines 80 to 91 it reads: We used convenience sampling for participant recruitment (19), as the patients were known to the medical team and regularly attended the specialist center for urinary diagnosis and antimicrobial treatment. The inclusion criteria were female patients, presenting to the specialist center with lower urinary tract symptoms. The presenting symptoms were urinary hesitancy, overactive bladder (OAB), painful bladder syndrome (PBS), urinary incontinence and reduced quality of life as a result of their symptoms. Each participant was aged eighteen and over, of different ethnicities and all were fluent in English language for reading and writing. And each patient had longstanding experience of providing a midstream urine specimen. The exclusion criteria were patients under the age of eighteen, unable to provide informed consent, male patients and patients who were not registered for treatment at the specialist center.

On lines 112 to 116 it reads: As part of the wider study, participants were given information on how to obtain a midstream urine specimen with sequential steps for completing the task (Appendix 1). The midstream urine specimen instructions were adapted from Dougherty and Lister's standard technique for non-invasive urine specimen collection (11).