

**Peezy™ Mid-Stream Urine (MSU) Usability
Study
Results Report**

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Background:

The Peezy™ Mid-Stream Urine (MSU) device tested in this study is designed to reliably collect a clean midstream urine sample. It is expected that users will use the device to collect samples without assistance. This study was undertaken to gather users' thoughts and feelings following use of the device.

The Peezy™ device used for this study comes sterile packaged. The instructions for use of the device are printed on the packaging surface along with instructions for opening. The package contains the Peezy™ collection device, sterilising wet wipe, sample container and lid.

Methods

Twenty Peezy™ devices were provided by the company for use in the usability study.

Participants were recruited from the staff of the Institute of Translational Medicine on an opportunistic basis with consideration of providing equal gender balance if possible. Potential participants were provided information on the study and its purpose. Consenting participants received no instruction on how to use the device except for the instructions on the packaging.

Participants were directed to a specially set up bathroom to use the device and asked to dispose of the device and packaging after use. Upon leaving the bathroom, participants were asked to complete a questionnaire.

The questionnaire was a combination of multiple choice and short-answer based responses. Participants asked to mark their level of agreement with ten statements on a 1-5 scale (1 – Strongly Disagree, 5 – Strongly Agree). These included:

1. The packaging was easy to remove
2. The instructions were easy to read
3. The instructions clearly explained how to use the device
4. I needed further instruction with using the device
5. I felt confident using the device
6. The device collected the sample easily
7. Removing the sample container from the collection device was easy
8. The sample was captured with little spillage
9. I would be comfortable using the device again
10. I would recommend this device is used in future

The short answer questions provided further information on participants' experience using the device and included:

1. Is there anything you particularly liked about the product?
2. Is there anything you particularly disliked about the product?
3. Do you have any other comments regarding the device or instructions for use?
4. Do you have any other comments regarding this study or questionnaire?

Results

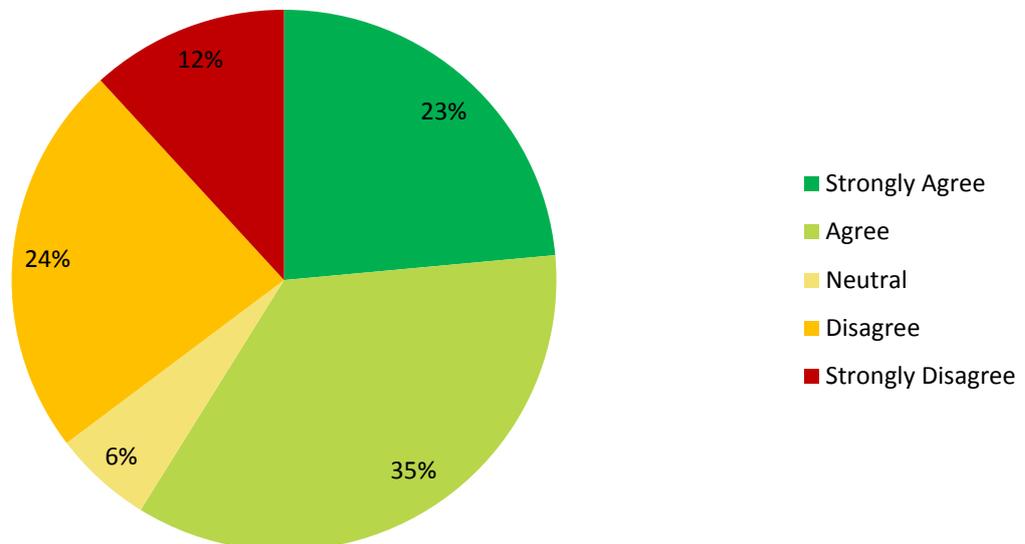
Demographic Data

17 responses were received from participants. 10 were Female, 5 were Male and 2 did not answer. The median age range was 36-45.

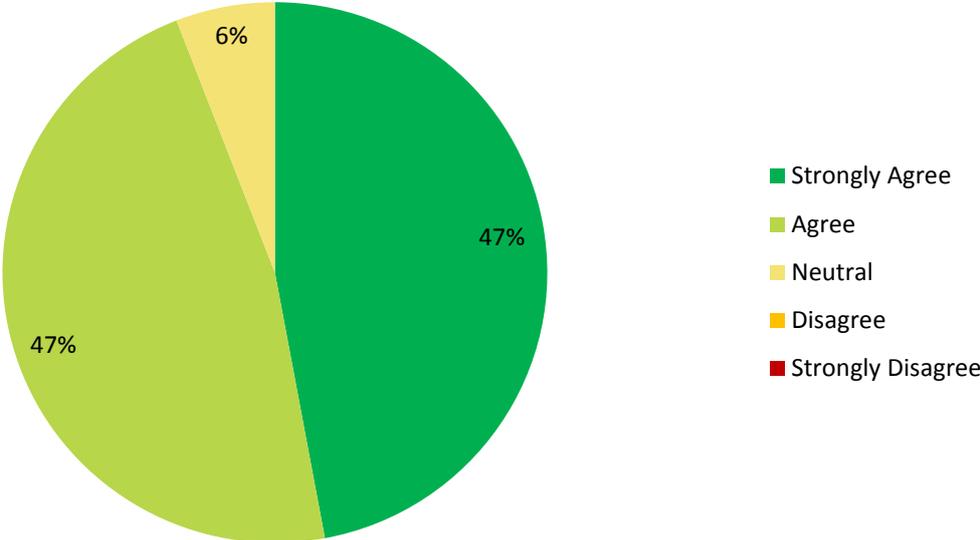
Multiple Choice Data

Statement 1 'the packaging was easy to remove', was the most varied in score; 58% of respondents felt that the packaging was easy to remove, while 36% disagreed with this statement. Instructions were easy to read for 94% of respondents and all respondents felt they explained how to use the device effectively. 70% of respondents did not feel they required further instruction with the device and 94% of respondents felt confident using the device as instructed. 64% of respondents felt that removing the sample from the collector was easy, with 36% being unsure or disagreeing with this statement. 82% of respondents felt that the sample was collected with little spillage. 88% of respondents would be comfortable using the device again and 70% would recommend this for further use. These results are provided in more detail in pie charts below.

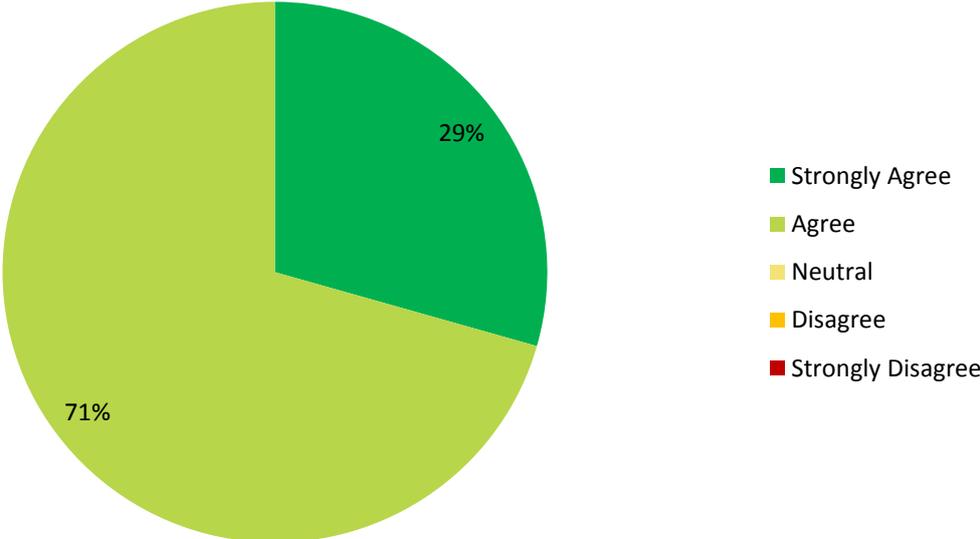
1: 'The packaging was easy to remove'



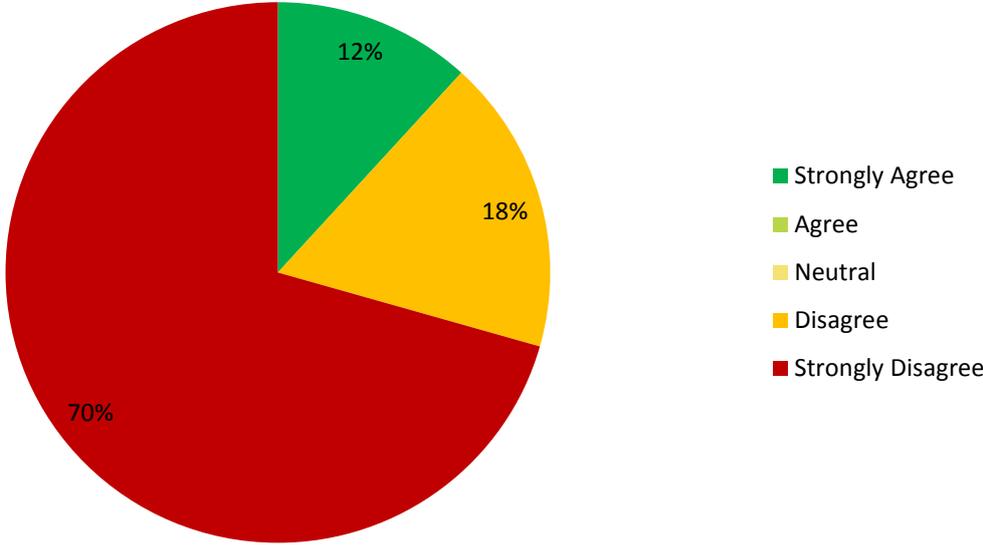
2: 'The instructions were easy to read'



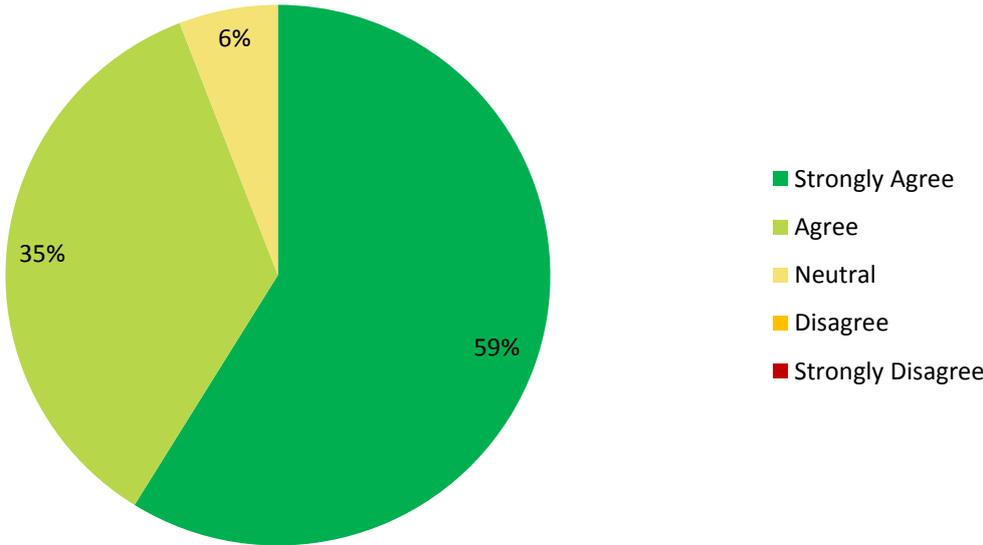
3: 'The instructions clearly explained how to use the device'



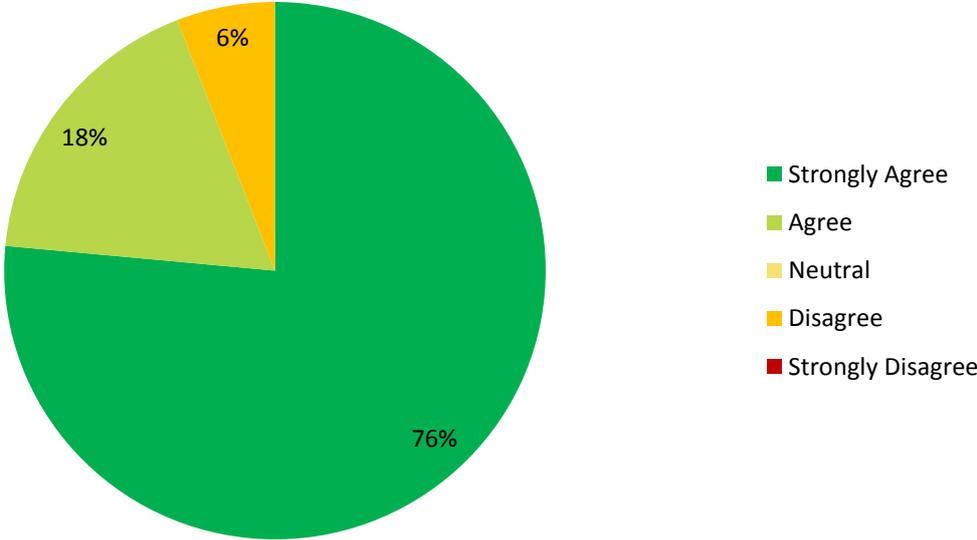
4: 'I needed further instruction with using the device'



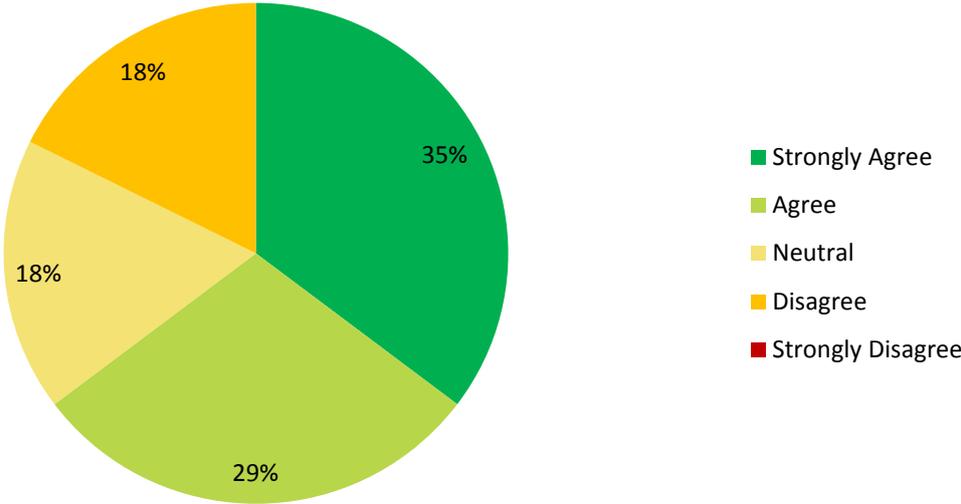
5: 'I felt confident using the device'



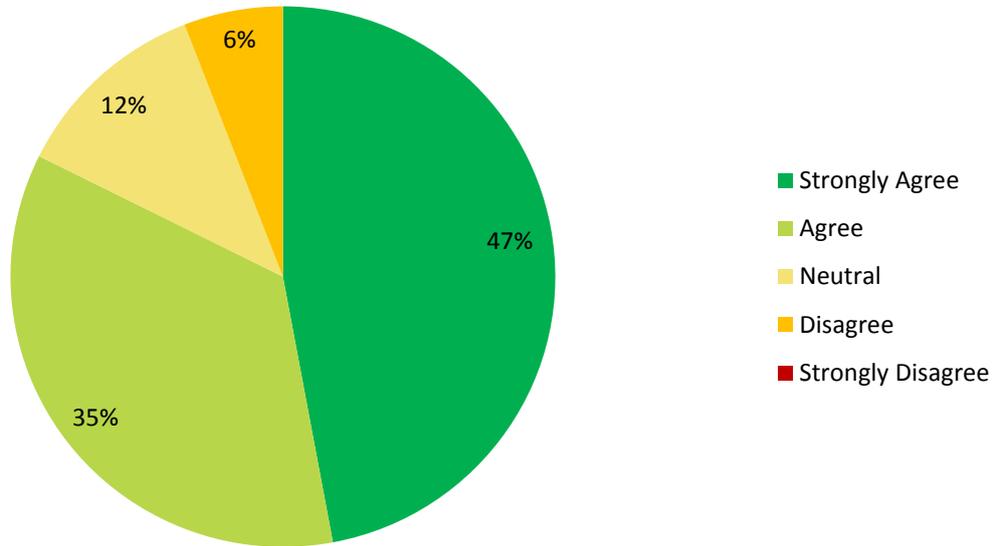
6: 'The device collected the sample easily'



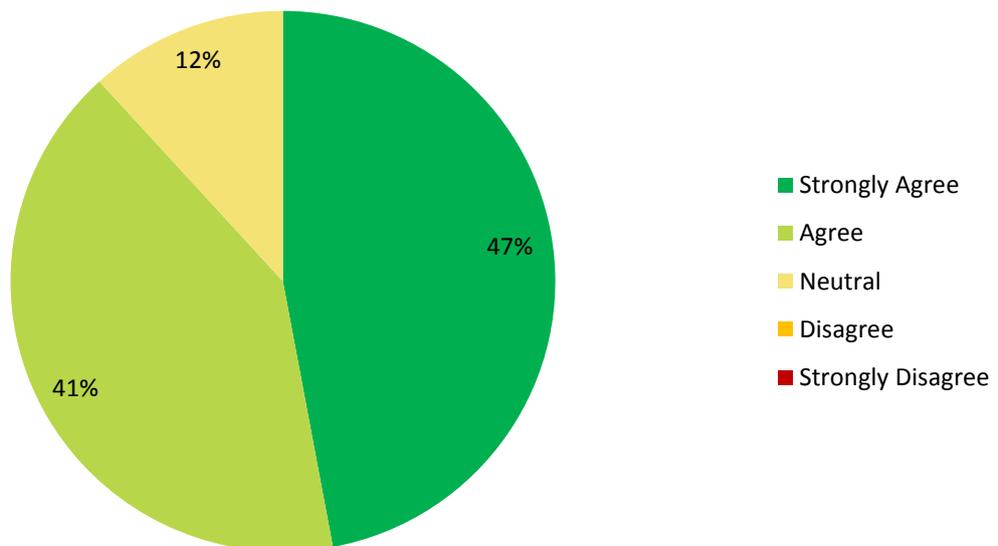
7: 'Removing the sample container from the collection device was easy'



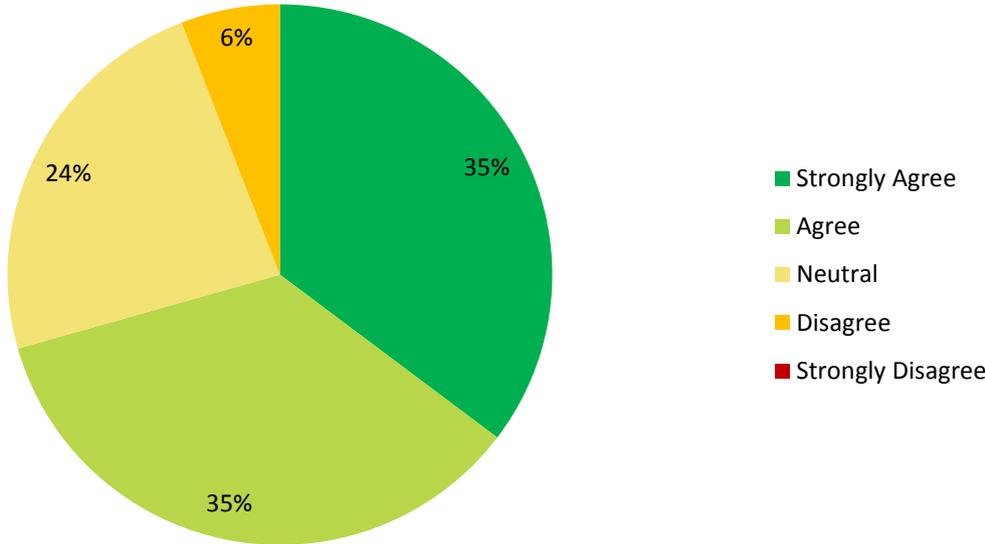
8: 'The sample was captured with little spillage'



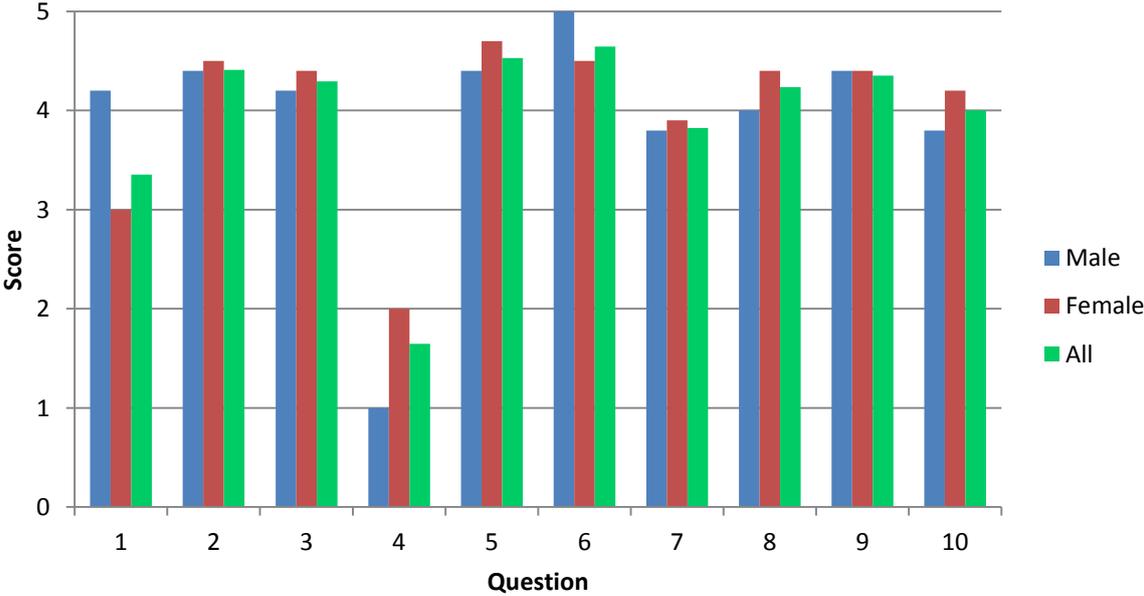
9: 'I would be comfortable using the device again'



10: 'I would recommend this device is used in future'



Average Score



Short Answer Questions:

Positives:

When participants were asked what they particularly liked about the product, eleven of the respondents mentioned its ease of use.

“Easy to use and handle unlike normal MSU... would be ideal for elderly or young to use and for clinical staff if having to assist patient with MSU.” – Female, 46-55.

“Much easier than just a tube.” – Female, 26-35

Seven respondents mentioned the improved hygiene, or lack of mess in using the device.

“It was definitely less messy than the usual method of just a tube or a tube with funnel.” – Female, 36-45

“It was very clean to use. I have to give a lot of urine samples and it is not very hygienic but this is a lot better.” – Female, 26-35

“Very hygienic, especially the fact that it does not overspill as this is a problem I have encountered before.” – Male, 18-25

Three respondents mentioned the clarity of instructions positively, but there were some concerns about its combination with the packaging.

“The instructions were easy to follow (if I hadn’t torn them in half on the packaging!)” – Female – Female, 36-45

Other positive points included the lip used to hold the device, the design of the device and packaging and the size of the collection tube.

Negatives:

When asked about what they particularly disliked about the product, many respondents (7) mentioned the packaging.

“The packaging is not very discreet and when opening ripped the instruction sheet on the outside” – Female, 36-45

“Packaging didn’t open well, ripped and made reading instructions troublesome. The pull-apart opening took only the outer film off so I had to break open packaging.” – Female, 45-55

“The packaging did not cleanly separate and instead shred unevenly. It could have resulted in the contents spilling on to the floor if I didn’t have a surface to place it on in the room.” – Female, 26-35

“The packaging ripped too easily, and the contents ended up on the floor.” – Unspecified

Three respondents mentioned some mess from the device.

"I'd like it if the filter was made from a different sort of material so there is no back splash." – Male, 18-25

"When removing the bottle from the device there was still a tendency for it to drip even after the set 10 second period." – Male, 36-45

"Difficult to tell when the device had stopped draining without lifting out of the toilet but then it dripped! – Female, 36-45

Two respondents mentioned the collection tube's position when fitted as a problem.

"It was not very easy to get the device in position when sitting down as the tube sticks out at a right angle." – Female, 36-45

"Sample tube sticks out at a sharp angle which might make it difficult for women sitting on the toilet." – Female, 26-35

Some male respondents felt that the device was overcomplicated.

"Coordinating holding the device and keeping the outlet over the toilet was tricky at first. Also it was not filling the tube at first until I tilted it slightly forwards at which point the tube began to fill." – Male, 35-45

"Traditional MSU specimen container is easier for a male patient. With the Peezy™ I felt I needed a third hand!" – Male, 55+

"I didn't see the point, it made giving a urine sample a drama." – Male, 36-45

Other comments and suggestions from respondents included:

"I think it is brilliant. I hope it becomes available soon. The only issue is you need some kind of workspace close by to put the lid on etc. But I think a bin lid or sink is OK." – Female, 26-35

"Potentially look to add gloves or sample tube wipes to pack." – Female, 26-35

"The top writing on the packaging could be larger – 'pull to open' was too small." – Unspecified

"In the instructions for use is it worth saying 'push the tube into the plastic funnel until it clicks into place'? (I wonder how many might become detached)" – Male, 55+

"I suggest a separate instruction sheet not part of the packaging" – Female, 36-45

"Instructions needed a holder for lid and tube, need instructions to say do not discard lid." – Female, 46-55

Conclusions

Overall, the Peezy™ device was viewed very favourably in the multiple-choice questions, there was little difference in scores between genders.

The results from this usability study demonstrate the ease-of-use of the device compared to current methods of MSU collection. The majority of respondents felt the device was more hygienic than current standards too, though a minority noted that it caused a mess and it was suggested that a glove or extra wipes could be included in the package.

The most significantly disliked aspect of the device, both in scores and comments, was the packaging and their integrated instructions. The bag would tear open unpredictably, causing the instructions to become unreadable or for contents to spill on the floor. This could be improved with a separate instructions sheet in the packaging or a different method of opening the package, possibly by tearing open.