

19 October 2015

To whom it may concern,

Re: Summary of the HDTI Usability Study of the handSteady[®] Cup

In 2014, The Health Design & Technology Institute (HDTI) at Coventry University completed a qualitative usability study of the handSteady[®] cup, supported by the European Regional Development Fund. This letter summarises the key findings from this study.

The purpose of the study was to evaluate the usability and acceptability of the handSteady[®] cup with a group of potential end users. Whilst the sample size wasn't large enough to extrapolate to the general population with statistical confidence, it provided interesting qualitative insights.

Ten people aged over 60 who found drinking from a traditional mug challenging were recruited. A range of conditions caused these drinking challenges, including arthritis, Multiple Sclerosis, stroke and tremor. Participants were asked to use the handSteady[®] in their daily lives for three weeks. They were then interviewed individually and a thematic analysis was conducted.

It was found that handSteady[®] helped some participants with the activity of drinking, but not everybody. This may have been dependent on both the condition affecting drinking, and the attitude toward drinking aids. The Rotatable Handle[™] took some participants practice to find the most comfortable drinking method and it appeared that in some cases people's openness to learning how to use it related to their willingness to use daily living aids. In addition, the severity of their drinking difficulty appeared to influence a participant's likelihood to persevere and learn how to use the mug.

Around half of the participants found handSteady[®] helpful and expressed that they would continue to use it, finding that it helped them to drink hot and cold drinks more easily than a regular mug. The remaining participants either did not use the mug at all or gave up after trialling it a few times, for various reasons ranging from not finding a comfortable drinking technique, to finding the handle too small. A scale was administered to gauge participants' level of drinking difficulty before and after using handSteady[®] (10 being impossible and 1 being not at all difficult). The total median score for before handSteady[®] was 7.5 out of 10 for difficulty with the activity of drinking

(this part of the question was completed by all participants). This reduced to 2.5 by using handSteady® for those who chose to give a rating (2 participants did not answer this question).

The participants of the study were very disparate in both their medical need for a drinking aid, and their views on assistive technology and the handSteady® cup. Personal preferences and characteristics seemed to be very influential on participants' overall evaluation of the product.

For those participants who had been able to use the mug successfully, practice and a trial and error approach was required in order to find the most comfortable drinking method. People's level of perseverance with using handSteady® was proportional to their desire and willingness to use aids to daily living. For those who gave up, the reasons cited tended to be safety-based, and in particular the feeling of unsteadiness due to the movement caused by the Rotatable Handle™. This compared with those who persisted and found the cup helpful, who said they felt that cup was more steady than normal cups due to the Rotatable Handle.

All of the participants who had used handSteady® regularly felt that it offered a beneficial alternative to a static traditional mug handle. They reported that they would continue using the handSteady® after the study. They appreciated being able to move the handle independently of the mug and cited the following advantages of the Rotatable Handle™:

- Gripping the cup at a more comfortable angle than other cups
- Tipping the cup to drink easily without exerting or lifting their arm
- Stabilising movement resulting from tremors or shakes from muscle weakness
- A feeling of safety by drinking with a reduced risk of spills
- A feeling of independence brought about by an increased ability to carry and drink hot beverages without help
- Reduced pain from drinking by being able to lift and move the mug more easily than a traditional mug
- An increase in the ease of drinking
- Ability to drink more easily in bed at night, reducing the risk of spills and increasing the ability to drink water during the night without needing to sit up in bed.

Feedback from family members reinforced the finding that there was an increase in independence by virtue of the participants being able to carry their own drink, and drink with less assistance, which positively affected the lives of the family members as well as the participant.

The material was cited as beneficial from the point of view of reducing the risk of breaking if dropped, but the heat transfer through the walls of the cup were seen as a concern to some participants, particularly if two hands were used to hold the cup.

The Hidden Lid™ was used by some of the participants. Its benefits were confirmed by those who liked to use it, including keeping the liquid hotter for longer, not being visible when fitted and being

helpful for transporting drinks (something some of the participants previously needed help with). The curved rim was acknowledged as helpful for reducing drip stains and being comfortable.

People were generally happy about the size of the cup and felt that the handle was a good size and offered space for the user's hand, although some participants would like the handle to be larger, particularly those experiencing swollen fingers due to stroke or arthritis.

Generally people found the handSteady® easy to clean in the dishwasher and sink.

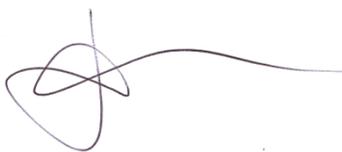
None of the participants felt that the look of the handSteady® would put them off using it in public or with company. Furthermore, those who found it helpful felt that the benefits of using it outweighed any stigma of using assistive technology and highlighted that those with whom they would have a drink would know about their difficulties anyway

Users suggested multiple colours of the cup, adjusting the lid to make it easier to remove and making the cup microwaveable. We understand that all of these factors are being addressed by the manufacturer, handSteady Ltd, in the new handSteady® cup being launched in 2015. A number of further recommendations have been made which are being taken into consideration for future development.

There was a strong level of consensus from those who used it regularly that the handSteady® mug was lightweight and manageable, even when full with liquid.

For those who did not find the handSteady® appropriate for their needs, constructive suggestions were offered which may improve the usability of the mug for other similar users, and it was acknowledged that the handSteady® may be of use to others even if not suitable for everybody. Overall, from those who used it regularly, the handSteady® was viewed very positively and as something which would continue to be useful. Finally, some of the users who found handSteady® helpful also suggested that the cup enabled them to be taken on holiday, used in bed at night and used as a passenger when taken on car trips.

Yours faithfully



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