

University of Nottingham

Dynamic Visual Analogue Mood Scales (D-VAMS)

User Guide

1. Introduction

The D-VAMS is a brief, nonverbal mood assessment instrument suitable for use with stroke patients with communication difficulties due to aphasia. It consists of a set of scales which allows mood to be reported by modifying facial expression images using a slider. For each of the scales, the user adjusts the facial expression to one that best reflects their own mood. The D-VAMS mean score is a valid and reliable measure of pleasantness or unpleasantness of mood. Two versions of the scale exist, one with a female face, and one with a male face.

2. Using the D-VAMS

2.1 The D-VAMS Main Menu

The main menu is divided into two parts, the Scale Browser and the Assessment Run options:

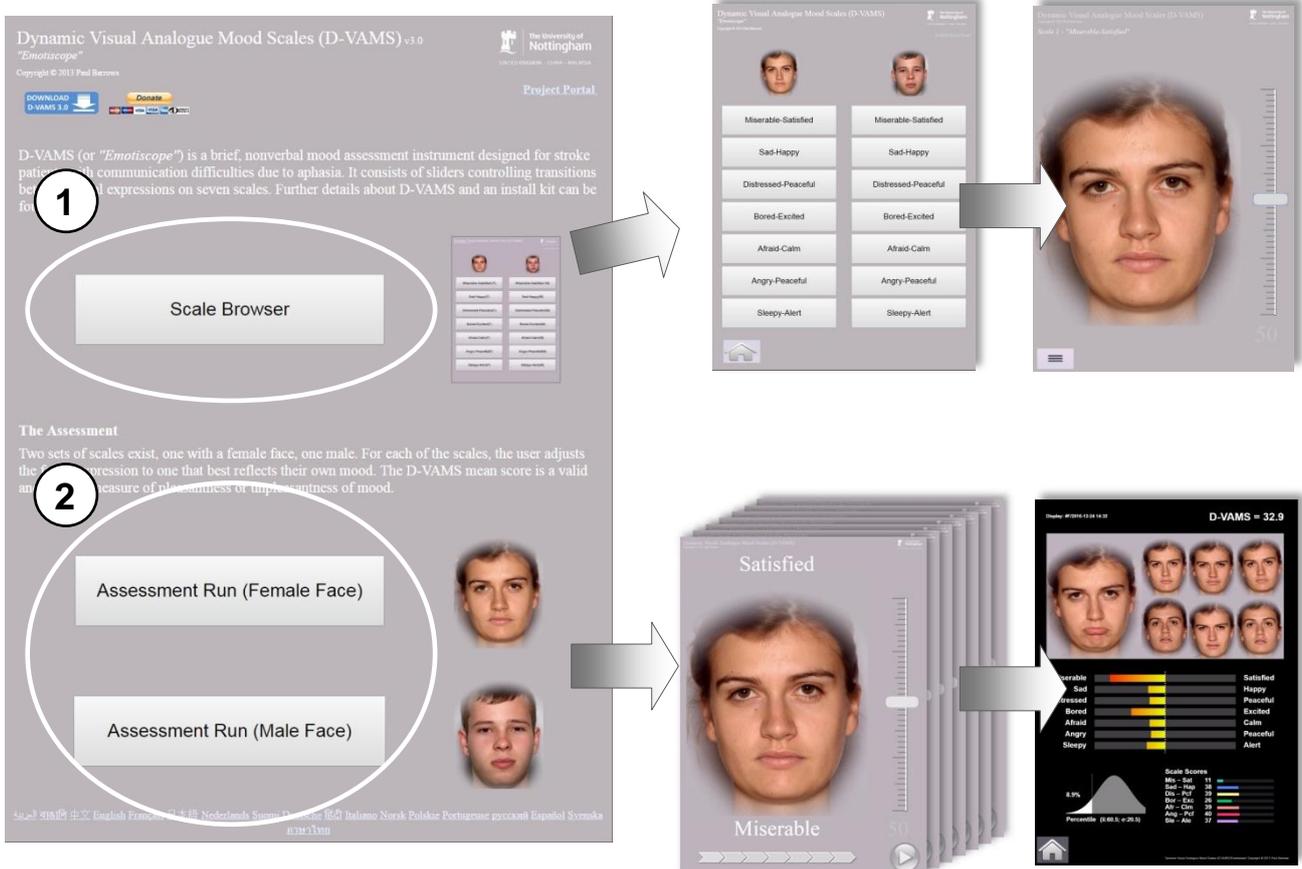


Figure 1. The Main Menu

- 1 **The Scale Browser.** This is a general browser that allows the scales to be selected and examined one at a time. It can be used to create custom administrations of particular items.
- 2 **The Assessment Run.** This allows a standard assessment to be run. The seven scales for the selected gender are administered consecutively, after which a results page is displayed. The D-VAMS mean score represents pleasantness of mood on a scale of 0 to 100.

2.2 Running an Assessment

Either face can be used, but for people with impaired language comprehension ability it is better to provide a same-gender face to help communicate the purpose of the instrument. Select the face on the “Assessment Run” section to begin an assessment.

2.21 Instructing the user

Before running an assessment, the user’s ability to understand your instructions must first be assessed. If the user can understand written or spoken English then use the instruction sheet on page 9. Read the instructions out loud to them, or show the user the instruction sheet and indicate to them to read it.

For severely aphasic users, gestures, visual demonstration and other nonverbal cues should be used to communicate the purpose of the device, ideally by somebody with experience in communicating with the language impaired. The illustrations at the bottom of the instruction sheet provide a starting point for this. After the user has been shown the illustrations, the first of the scales should be demonstrated (use the face of the user’s gender), moving the slider up and down and allowing the user to see the face change from a happy one to an unhappy one and then back again. Putting a similar expression on your own face as you demonstrate the scale and then pointing to the user should help to communicate that the scale is intended to reflect their mood. Patting one’s chest with one or both hands is a universal sign for ‘heart’ or feelings, this gesture combined with pointing to the user and other gestures (palms open and mild shrug to indicate a question, for example) may also help to communicate the question as to how the user is feeling.

The D-VAMS was designed to make its purpose as clear as possible from its appearance and function without any supporting language. A demonstration with accompanying gestures as described here should be adequate for communicating the purpose of D-VAMS. to most cognitively intact users. However there will be those who simply will not be able to understand what the scales are for. If a user seems unsure of what to do then it is best not to continue, and to rely on observer-rated measures only, such as the SAD-Q or feedback from a caregiver.

2.22 Demonstrating and running a D-VAMS assessment

Once the user understands the purpose of the assessment, they should be introduced to the D-VAMS interface. Depending on the device you are using, each way of operating the slider should be demonstrated one by one (see Figures 2 and 3).

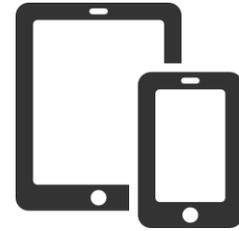
For each page of the assessment run, move the slider slowly towards one end and then back to the other, so that the user can see how the position affects the facial expression image, and the dimension of emotion that the scale represents. When this demonstration is complete, return the slider handle to the ‘neutral’ (midpoint) position, then ask the user to use the scale to report their own mood during the previous week. When they have finished setting the slider, they may then press the green, *Next Page* button (marked “>”) on the bottom right of the page. Repeat until all the pages have been completed and the Results page appears at the end of the run.

If this is the first time that the user has completed the D-VAMS, then you should repeat the run and use the score from the second run, as evidence suggests that practise affects the validity of the scores.

N.B: The *Next Page* button will remain disabled and greyed until the slider has been moved. It will not become active until the slider has been moved, so the slider must be adjusted first even if the neutral point is the desired response.

Tablet Instructions

Any of these three methods can be used to adjust the slider:



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Satisfied

1. Use short strokes up or down the image to adjust the slider and image. Holding fingertip down after a stroke causes the slider to continue moving at a rate corresponding to the stroke length

2. Tap and hold the slider handle until it changes shade and becomes 'anchored' to your fingertip. It can then be dragged upwards or downwards

3. You can also set the slider by touching anywhere along its length. The slider handle will automatically move to any position that you touch

Miserable

50

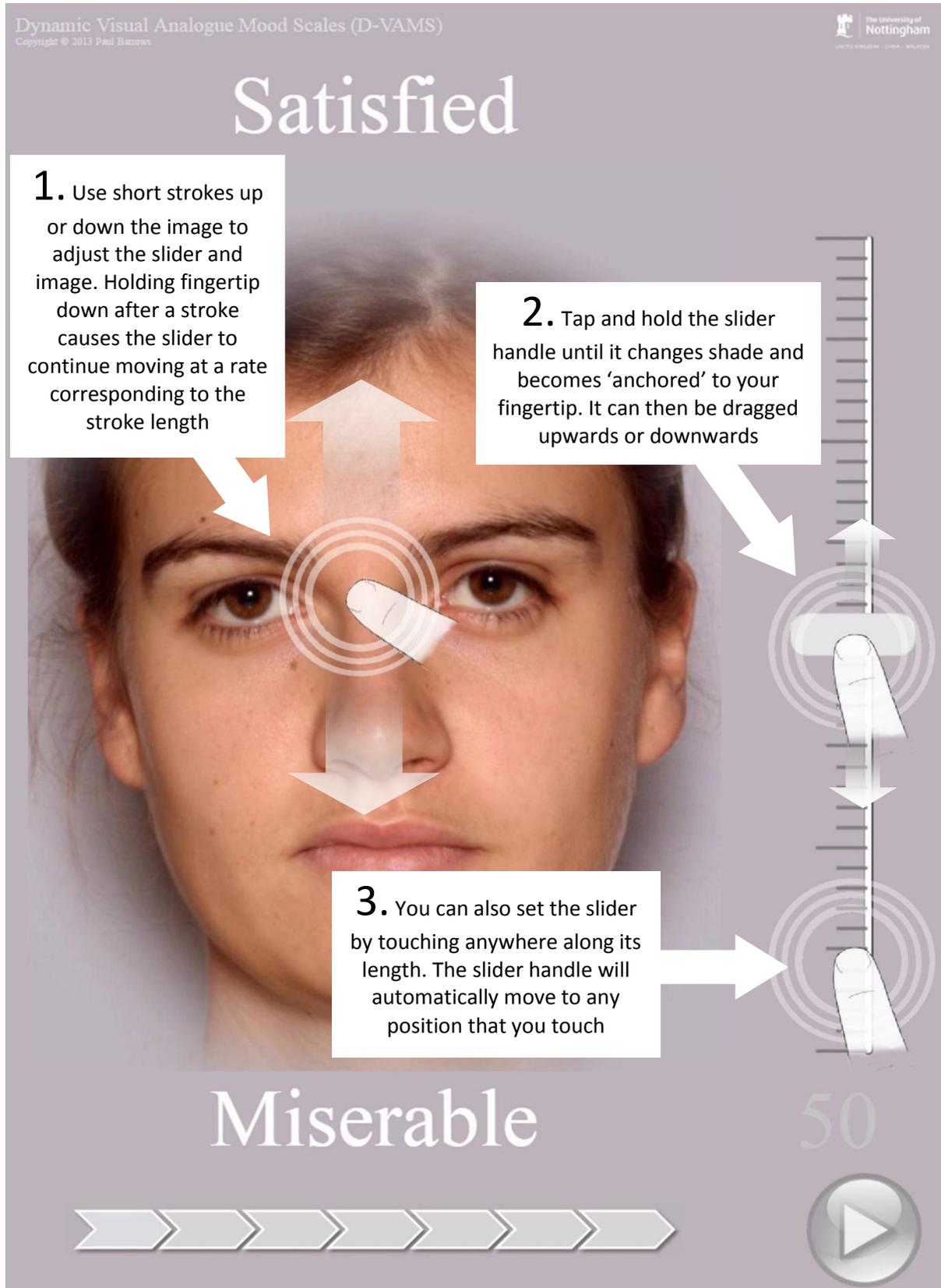
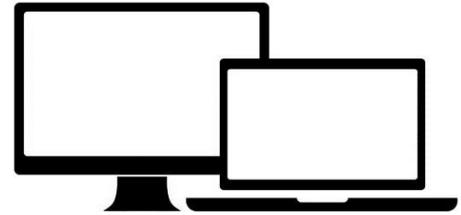


Figure 2. Tablet Instructions for D-VAMS interface: 'Miserable-Satisfied' scale, female face.

Desktop/Laptop PC Instructions

Any of these three methods can be used to adjust the slider:



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Satisfied

1. If your mouse has a mouse wheel, the slider can be operated by rolling it forwards or backwards while the mouse pointer is over the image. This is especially practical if your mouse has a 'freewheel' mode where scrolling can continue under the wheel's own momentum

2. Click on the slider handle using the mouse pointer and the left button of the mouse, then drag it upwards or downwards to select an expression

3. Click anywhere along the length of the slider using the mouse pointer and the left button of the mouse. The slider handle will automatically move to the position that you select

Miserable

50

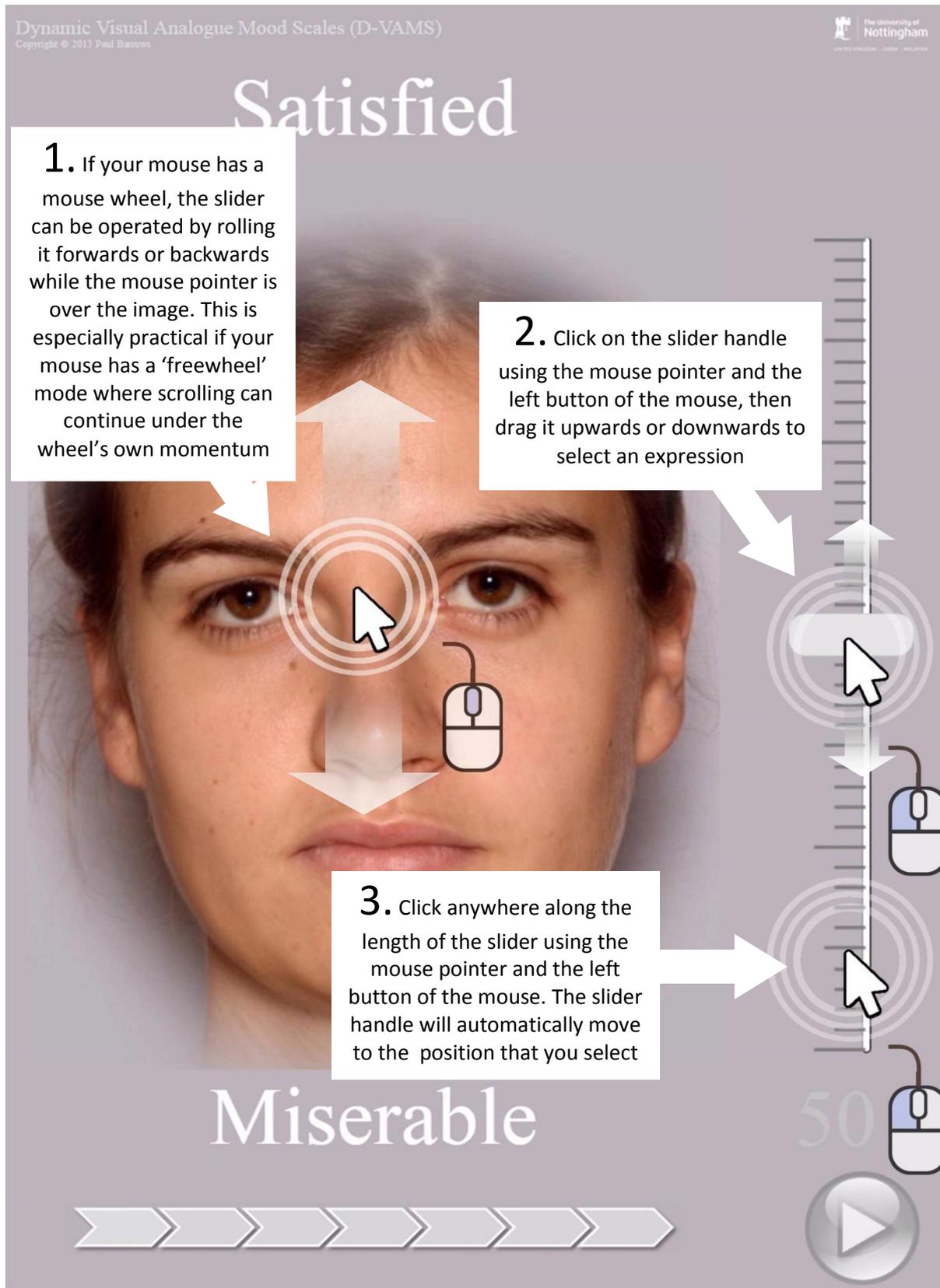


Figure 3. Desktop/laptop PC Instructions for D-VAMS interface: 'Miserable-Satisfied' scale, female face.

3. Interpreting the Results

The results page in Figure 4 appears at the end of each run. All the data are held in the browser's URL string, so the page can be bookmarked and edited like an ordinary web address.

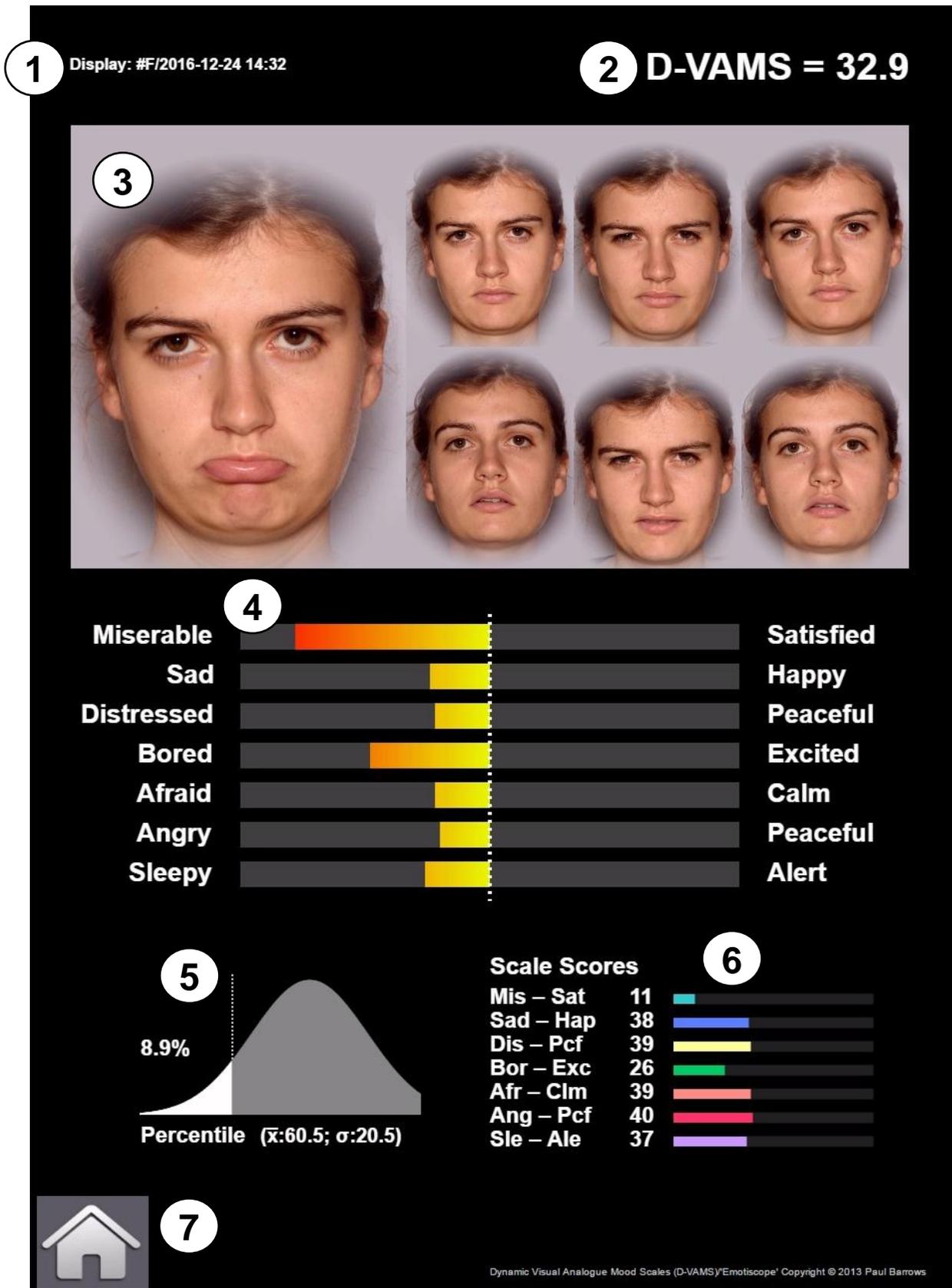


Figure 4. The Results Display

- 1 **The Page ID.** Each results page is timestamped to help manage the bookmarking of multiple results pages. Each timestamp is preceded with the gender code ("F"/"M").
- 2 **The D-VAMS Score.** This is the mean score from all seven scales. It represents pleasantness of mood on a scale of 0 to 100.
- 3 **The Faces Display.** The faces chosen are displayed together at the top of the page and give an at-a-glance view of the type and intensity of emotions communicated.
- 4 **The Main Bar Display.** Scores for the scales are displayed as a series of bipolar bar charts. Traffic-light colour bands give visual support, with lower scores passing through orange and red, and higher scores passing through yellow and green.
- 5 **The Bell Curve.** To guide interpretation, the D-VAMS score is presented as a percentile on the bell curve based on the mean and S.D. of scores from a validation study sample. Note that study sample characteristics will vary, but these values can be modified if required by editing the relevant section of the chart.htm file.
- 6 **The Unipolar Score Display.** The numeric values are given here for each of the scale scores, along with a unipolar bar display.
- 7 **The Home Button.** This returns the user to the main D-VAMS menu.

N.B: The D-VAMS is not intended to be used as a sole diagnostic instrument. Its purpose is to provide information to help guide and inform medical staff, carers, and researchers in evaluating the mood of people with communication difficulties following stroke.

Appendix – Instructions

This is a brief test to examine your mood. You are about to be shown seven pages. On each page there is an image of a face, whose expression you can modify using the slider control on the right. Move the slider up and down until the face has an expression that best reflects **how you have been feeling during the last week.**

Once you are satisfied with your selection, go to the next page by pressing the “>” button at the bottom right.

