Data Article

Selection and validation of emotional videos: Dataset of professional and amateur videos that elicit basic emotions

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A B S T R A C T

This article describes the process of selecting a collection of professional and amateur videos that elicit five basic emotions (i.e., happiness, fear, disgust, anger, and sadness) and validating these videos in three groups of participants (i.e., Chinese from China, Chinese from Malaysia, and Bumiputera from Malaysia). In the video selection phase, professional videos, which were Western movie trailers, were selected from IMDB (Internet Movie Database) and amateur videos were selected from YouTube. The researchers selected videos that display five basic emotions, identified the time frames with the strongest display of emotion, and rated the emotional intensity of each video on a 5-point Likert scale. After the initial stage of selection, two other researchers performed an emotion recognition task by watching the videos without audio to ensure that the emotions can be elicited without understanding the language. This data was used to refine the final selection of 20 professional videos and 20 amateur videos. In the video validation phase, 30 participants were asked to identify and rate the intensity of emotion felt. This article includes a description of the video selection method, a detailed list of the videos selected, and participants’ responses and ratings of emotional intensity for the 40 videos.

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Specifications Table

| Subject                      | Experimental and Cognitive Psychology |
|------------------------------|---------------------------------------|
| Specific subject area        | Selection and validation of emotional videos |
| Type of data                 | Table                                  |
| How data were acquired       | Professional videos were movie trailers from IMDb, an online database of information related to films, and amateur videos were from YouTube, an online video-sharing platform. Video validation data was collected online using Psychopy 3.0 and Pavlovia. |
| Data format                  | The videos were compressed in MP4 format. Video validation data was collected in Excel (.xlsx) format. |
| Parameters for data collection | To select professional videos, Western movie trailers were chosen from IMDb’s Best Picture-Winning or Top Box Office by identifying scenes that display the common emotional triggers defined by Paul Ekman Group [8–12]. For amateur videos, YouTube videos were selected by searching for keywords of common emotional triggers [8–12]. For video validation, UMS students who are Chinese from China, Chinese from Malaysia, or Bumiputera from Malaysia were recruited. |
| Description of data collection | Based on the above criteria, researchers selected professional and amateur videos that displayed the five basic emotions and rated the emotional intensity of each video on a 5-point Likert scale. All videos were cut to less than 60s and were presented on Psychopy 3.0 and uploaded to Pavlovia. To refine the video selection, two other researchers performed the emotion recognition task by watching the videos without audio. This data is used to select the final 40 videos. To validate the videos, 30 participants were asked to identify and rate the emotional intensity of the videos. |
| Data source location         | Institution: Universiti Malaysia Sabah |
|                             | City/Town/Region: Kota Kinabalu       |
|                             | Country: Malaysia                    |
| Data accessibility           | Repository name: Mendeley Data        |
|                             | Direct URL to data: https://data.mendeley.com/datasets/fshjfvg4bt/draft?aid=934d9407-548a-4e28-9331-26419429674c |

Value of the Data

- This dataset provides researchers with a collection of validated videos (i.e., professionally filmed movie trailers and amateur YouTube videos) and provides insight as to whether differences in cultural diversity (e.g., in China and Malaysia) affect emotion recognition.
- This dataset will benefit a range of researchers who investigate emotional or social skills, which includes cognitive psychologists, experimental psychologists, or social psychologists.
- The validated videos can be used in emotion-related experiments to understand various factors that affect emotion perception (e.g., facial expressions or body movement, methods of filming, audio or visual information, etc.).
- Based on the findings of future research, training programs or apps can be developed to teach and improve emotional and social skills in different settings and populations (e.g., in early education or with individuals with autism).

1. Data Description

The professional videos were selected from IMDb by identifying scenes that displayed the common emotional triggers defined by Paul Ekman Group [8–12]. The selection method, inclusion and exclusion criteria for professional videos are detailed in Table 1.
Table 1: Selection method, inclusion and exclusion criteria for professional videos.

| Emotion                | Selection Method                                                  | Inclusion Criteria                                      | Exclusion Criteria                                      |
|------------------------|-------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|
| Happiness              | IMDb – Best-picture winning (sorted by year descending)            | Western movie trailers                                   | Genre: Fantasy, historical fiction, animation            |
|                        | IMDb – Top box office (genre: comedy; title type: feature film;  |                                                          | Trailers filmed in black and white                       |
|                        | sorted by popularity)                                             |                                                          |                                                         |
| Fear and Disgust        | IMDb – Top box office (genre: horror; title type: feature film;   |                                                          | Genre: TV series, video games                           |
|                        | sorted by popularity)                                             |                                                          | Trailers filmed in black and white                       |
| Anger and Sadness       | IMDb – Best picture-winning (sorted by year descending)           |                                                          | Genre: Fantasy, historical fiction                      |
|                        |                                                                   |                                                          | Trailers filmed in black and white                       |

Table 2 includes a detailed list of the 40 professional and amateur videos that were presented in the video validation phase, including the movie names, video links and time frames, the common emotional triggers that are displayed in the videos [8–12], brief descriptions of the video content, the length of the videos, and the emotional intensity of the videos rated by the researchers.

In the video validation phase, three groups of participants watched the videos, identified the emotion felt, and rated the emotional intensity of each video. The data is reported in Table 3. The raw data are available in the Mendeley dataset.

2. Experimental Design, Materials and Methods

Emotion recognition is an important social skill that allows individuals to understand others’ mental state and to respond appropriately in different social situations [1–3]. Research utilized different types of stimuli to investigate emotion perception, including computer-generated emoticons, photos of posed facial expressions, and videos that more closely represent social interactions [4–7]. To create a dataset of professional and amateur videos that can be used in emotion perception research, video selection and video validation phases were conducted to identify emotional videos that elicit five basic emotions (i.e., happiness, fear, disgust, anger, and sadness). In the video selection phase, researchers selected emotional videos that displayed the common emotional triggers defined by Paul Ekman Group [8–12], identified the time frames with the strongest display of emotion, and rated the emotional intensity of each video on a 5-point Likert scale.

For professional videos, Western movie trailers were selected from IMDb, which is an online database of information related to films, by identifying scenes that displayed the common emotional triggers [8–12]. All videos were chosen from IMDb’s Best Picture-Winning or Top Box Office. Additionally, inclusion and exclusion criteria were set to ensure that the filming style and genre of all videos are similar (see details of selection method, inclusion and exclusion criteria in Table 1). For amateur videos, videos were selected from YouTube, which is an online video-sharing platform, by searching for keywords of common emotional triggers [8–14]. The selected videos were trimmed to less than 60 seconds using the Quick Editing software. Format Factory, which is a multimedia production software, was used to change the format of the videos to MP4. The resolution of the videos is 720 x 480 and the frame rate is 29.97fps.

After the initial stage of video selection, two researchers performed the emotion recognition task, which was presented on the Psychopy 3.0 software and uploaded to Pavlovia. The videos were played without audio to ensure that the emotions can be elicited without understanding the language. Upon completion, this data was used to refine the final selection of 20 professional videos and 20 amateur videos (see Table 2).

In the video validation phase, 30 undergraduate and postgraduate students (14 males and 16 females) enrolled in Universiti Malaysia Sabah were recruited. 10 participants were Chinese
## Table 2
A detailed list of professional and amateur videos.

| Emotion | Alias | Movie Name                  | Video Link (Time Frame)                                                                 | Common Triggers [8–12]                                                                 | Content Description                                                                 | Length (sec) | Emotional Intensity |
|---------|-------|-----------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------|---------------------|
| Happiness | PH1   | Forrest Gump                | [https://www.imdb.com/title/tt0109830/?ref_al_tt_1](https://www.imdb.com/title/tt0109830/?ref_al_tt_1) (2:07-2:25 + 3:27-3:42) | Experiencing something beautiful, surprising or amazing; feeling connected         | A couple reuniting and envisioning a future together.                                | 32           | 3.5                 |
|          | PH2   | Playing with Fire           | [https://www.imdb.com/title/tt9134216/?ref_al_tt_1](https://www.imdb.com/title/tt9134216/?ref_al_tt_1) (1:40-2:01) | Witnessing or participating in acts of human goodness, kindness, and compassion; witnessing something humorous | Chaos while taking care of three children.                                             | 21           | 4                   |
|          | PH3   | Slumdog Millionaire         | [https://www.imdb.com/title/tt1010048/?ref_al_tt_1](https://www.imdb.com/title/tt1010048/?ref_al_tt_1) (0:50-1:06 + 1:48-1:57) | Experiencing something beautiful, surprising or amazing; feeling connected          | Recalling fond memories with loved ones.                                             | 25           | 4                   |
|          | PH4   | Home Alone 2: Lost in New York | [https://www.imdb.com/title/tt0104431/?ref_al_tt_1](https://www.imdb.com/title/tt0104431/?ref_al_tt_1) (0:05-0:47) | Witnessing something humorous or amusing                                          | Burglars falling into traps that a child set.                                      | 42           | 3.5                 |
|          | AH1   | -                           | [https://youtu.be/bF4xCJbJahu](https://youtu.be/bF4xCJbJahu)                  | Witnessing something humorous or amusing                                          | Two pandas were playing together, and a sudden sneeze made people laugh.           | 29           | 5                   |
|          | AH2   | -                           | [https://youtu.be/EuNYsDQg8](https://youtu.be/EuNYsDQg8)                      | Enjoyment derived through sound                                                   | A teacher pronounces “Google” in a different way and students laugh together.       | 13           | 3                   |
|          | AH3   | -                           | [https://youtu.be/ewsO1tXbr5Y](https://youtu.be/ewsO1tXbr5Y)                  | Experiencing something beautiful, surprising or amazing                            | A little girl’s father, who is in the military, surprises her at her birthday party. | 59           | 5                   |
|          | AH4   | -                           | [https://youtu.be/GbPSBmBpgT4](https://youtu.be/GbPSBmBpgT4)                  | Witnessing or participating in acts of human goodness, kindness, and compassion | A little girl pretends to be a veterinarian and bandages a dog.                      | 35           | 4                   |
| Fear     | PF1   | Countdown                   | [https://www.imdb.com/title/tt10039344/?ref_al_tt_1](https://www.imdb.com/title/tt10039344/?ref_al_tt_1) (1:45-2:14) | Darkness; death and dying                                                        | Running away from death and being captured by a ghostly hand.                       | 29           | 4                   |
|          | PF2   | Doctor Sleep                | [https://www.imdb.com/title/tt5606664/?ref_al_tt_1](https://www.imdb.com/title/tt5606664/?ref_al_tt_1) (0:37-0:44 + 2:08-2:16) | Darkness; death and dying                                                        | Being grabbed by a hand; being suffocated by hands.                                 | 15           | 4                   |

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| Emotion | Alias | Movie Name | Video Link | Common Triggers [8–12] | Content Description | Length (sec) | Emotional Intensity |
|---------|-------|------------|------------|------------------------|---------------------|-------------|-------------------|
| PF3     | It    | It         | https://www.imdb.com/title/tt1396484/?ref_=nv_sr_srsg_8 (1:56-2:17) | Darkness; death and dying | A hand reaches out to grab children; clown appears unexpectedly and reaches out to grab a child. | 21          | 4                 |
| PF4     | Scary Stories to Tell in the Dark | https://www.imdb.com/title/tt3387520/?ref_=nv_sr_srsg_0 (0:08-0:25) | Darkness; death and dying | Ghostly figure abruptly flies towards the screen. | 18          | 4                 |
| AF1     | -     | -          | https://youtu.be/87uttrluFLI | Snakes | A person tries to capture a large snake that is hiding under a bed. | 37          | 5                 |
| AF2     | -     | -          | https://youtu.be/kZzdGtoFYvk | Heights | A person hanging off a tall building with one hand; a person sliding off a tall, slanted building. | 27          | 4                 |
| AF3     | -     | -          | https://youtu.be/rRBfi7YdQTk | Loss of visibility of surroundings | A big truck driver turns around on a narrow road. | 36          | 3                 |
| AF4     | -     | -          | https://youtu.be/jfQ3F-6CydQ | Other animals | A performer teases a crocodile but got bitten by it. | 28          | 3                 |
| PD1     | Jennifer's Body | https://www.imdb.com/title/tt1131734/?ref_=fn_al_tt_1 (0:57-1:02) | Perceived perversions or actions of other people | A girl burns her tongue with a lighter. | 5           | 3                 |
| PD2     | Midsommar | https://www.imdb.com/title/tt8772262/?ref_=fn_al_tt_1 (2:10-2:15) | Expelled bodily products; something rotting, or dying; being exposed to bodily insides | Scenes of disfigured faces and bodies being dissected. | 5           | 4                 |
| PD3     | The Shining | https://www.imdb.com/video/vi1476002073?ref_=tt_pv_vi_aiv_2 (1:00-1:12) | Expelled bodily products | Blood gushing out from the elevators and overflowing the room. | 12          | 3                 |
| PD4     | The Babysitter | https://www.imdb.com/title/tt4225622/?ref_=adv_li_i (0:39-0:49) | Expelled bodily products; something rotting or dying | Someone was stabbed and blood is gushing out. Surgical extraction of tooth. | 10          | 3                 |
| AD1     | -     | -          | https://youtu.be/M5_FZGryvyM | Being exposed to bodily insides | A man eating an octopus and biting off its arms. | 34          | 4                 |
| AD2     | -     | -          | https://youtu.be/QxxNjtjy3RU | Certain foods (often from cultures other than our own) | A man eating an octopus and biting off its arms. | 34          | 4                 |

(continued on next page)
Table 2 (continued)

| Emotion | Alias | Movie Name     | Video Link (Time Frame) | Common Triggers [8–12] | Content Description                                                                 | Length (sec) | Emotional Intensity |
|---------|-------|----------------|-------------------------|------------------------|-------------------------------------------------------------------------------------|--------------|---------------------|
| AD3     | -     | Expelled bodily products (vomit) | https://youtu.be/dw3svc_-Pss | A person vomiting in bed. | 26 5                                                                                 |              |                     |
| AD4     | -     | Something rotting | https://youtu.be/oOkRkF_Zk0k | An exposed wound was infected with maggots. | 11 5                                                                               |              |                     |
| Anger   | PA1   | Interference; injustice; betrayal, abandonment, rejection | https://www.imdb.com/title/tt1024648/?ref_=wp_vi_tt (0:09-0:28) | Riot; hostages taken and held in gunshot. | 19 3                                                                               |              |                     |
|         | PA2   | Someone trying to hurt us; another person's anger | https://www.imdb.com/title/tt0299658/?ref_=adv_li_i (0:56-1:01) | Argument between two people, resulting in one person pushing another against the wall. | 5 3.5                                                                              |              |                     |
|         | PA3   | Interference; injustice; someone trying to hurt us or a loved one; betrayal, abandonment, rejection | https://www.imdb.com/title/tt2024544/?ref_=fn_al_tt_1 (0:35-1:15) | A man captured into slavery and being mistreated. | 41 4                                                                               |              |                     |
|         | PA4   | Interference; another person's anger | https://www.imdb.com/title/tt1504320/?ref_=fn_al_tt_2 (0:35-0:44 + 1:18-1:30) | King frustrated during preparation of speech. | 21 3.5                                                                              |              |                     |
|         | AA1   | Injustice | https://youtu.be/qAbp1Vn6s4M | Father abuses a child. | 37 4                                                                               |              |                     |
|         | AA2   | Interference | https://youtu.be/jwa4mkjdm7w | A passenger demands the bus driver to apologize by yelling at him. | 21 4                                                                               |              |                     |
|         | AA3   | Hurt loved one physically | https://youtu.be/476G_F6K_MM | Husband abuses and hits his wife. | 37 5                                                                               |              |                     |
|         | AA4   | Betrayal | https://youtu.be/ngnsglzS58M | A woman repeatedly slaps an elderly man. | 45 4                                                                               |              |                     |
| Sadness | PS1   | Endings and goodbyes | https://www.imdb.com/title/tt0120338/?ref_=fn_al_tt_1 (1:27-1:57) | Titanic is sinking and people are struggling to survive. | 30 3.5                                                                              |              |                     |
|         | PS2   | Rejection by a friend or lover; the loss of some aspect of identity | https://www.imdb.com/title/tt4975722/?ref_=fn_al_tt_1 (0:36-1:17) | The struggles of 42 being bullied by others, being yelled at, and being beaten. | 4 4                                                                                |              |                     |

(continued on next page)
Table 2 (continued)

| Emotion | Alias | Movie Name | Video Link (Time Frame) | Common Triggers [8–12] | Content Description | Length (sec) | Emotional Intensity |
|---------|-------|------------|--------------------------|-------------------------|---------------------|--------------|---------------------|
| PS3     | Crash |            | https://www.imdb.com/title/tt0375679/?ref_=fn_al_tt_1 (47-1:04 + 1:38-2:12) | Rejection by a friend or lover; the loss of some aspect of identity; sickness or death of a loved one Endings and goodbyes; death of a loved one | Brother being locked away for stealing car; car crashes. | 41           | 4                   |
| PS4     | Unforgiven |            | https://www.imdb.com/title/tt0105695/?ref_=fn_al_tt_1 (1:03-1:40) | | A man is shaving while overlooking a grave. He brings flowers to the grave and sits there in silence. An elder brother crying while looking at the photo of his younger brother who passed away. | 37           | 3                   |
| AS1     |        |            | https://youtu.be/GNr8mekkzzA | Death of a loved one | | 52           | 3                   |
| AS2     |        |            | https://youtu.be/aICjChe6-U | Being disappointed by an unexpected outcome | A boy sharing about his friend who passed away unexpectedly. | 22           | 4                   |
| AS3     |        |            | https://youtu.be/n6MoHWQvqlo | Endings and goodbyes | A woman has to part with her dog and cries while hugging her dog. | 20           | 4                   |
| AS4     |        |            | https://youtu.be/7cajWZdS0UA | Sickness of a loved one | A dog hears continuous barking but couldn't move. The dog cries helplessly. | 33           | 5                   |

from China (6 males and 4 females, mean age 21.1 years, ranging from 19 to 23, SD = 1.197), 10 participants were Chinese from Malaysia (5 males and 5 females, mean age 20.5 years, ranging from 19 to 26, SD = 2.461), and 10 participants were Bumiputera from Malaysia (3 males and 7 females, mean age 20.9 years, ranging from 18 to 23, SD = 1.792). All participants, who had normal or corrected vision, were recruited through convenience sampling and snowball sampling. All participants gave informed consent prior to their participation.

The video validation phase was carried out using the Psychopy 3.0 software, which was uploaded to Pavlovia. All participants accessed the videos via a link that was provided by the researcher and performed the emotion recognition task on their respective laptops. The 40 videos were presented randomly, and each video was followed by three questions (i.e., What emotion did you feel after watching the video? How strongly did you feel the emotion? Have you ever watched this video before?). Participants who have watched more than 60% of the videos prior to the video validation phase were excluded from the data as they may have anticipated the content of the videos [14].

Upon completion, the data on the count and percentage of emotion detected and the rating of emotional intensity for each video were recorded on Pavlovia and then transferred to XLSX worksheet (.xlsx) to calculate the total count and total percentage of detected emotions and the
### Table 3

The count and percentage of emotion detected and the mean of emotional intensity.

| Emotion   | Alias | Emotion Detected | Response Count (Percentage) | Mean of Emotional Intensity |
|-----------|-------|------------------|----------------------------|-----------------------------|
|           |       |                  | Chinese from China | Chinese from Malaysia | Bumiputera from Malaysia | Total Count (Total Percentage) |                               |
| Happiness | PH1   | Happiness        | 10 (100%)          | 9 (90%)               | 7 (70%)               | 26 (86.67%)                  | 3.50                           |
|           |       | Sadness          | 0 (0%)             | 1 (10%)               | 3 (30%)               | 4 (13.33%)                  | 2.50                           |
| Happiness | PH2*  | Happiness        | 10 (100%)          | 10 (100%)             | 10 (100%)             | 30 (100%)                   | 3.40                           |
| Fear      | PH3   | 8 (80%)          | 9 (90%)            | 8 (80%)               | 25 (83.33%)           | 3.00                         |
|           |       | Disgust          | 0 (0%)             | 0 (0%)                | 1 (10%)               | 1 (3.33%)                   | 3.00                           |
|           |       | Sadness          | 2 (20%)            | 1 (10%)               | 0 (0%)                | 3 (10%)                     | 2.67                           |
| Happiness | PH4*  | Happiness        | 10 (100%)          | 8 (80%)               | 8 (80%)               | 26 (86.67%)                  | 3.38                           |
| Fear      |       | 0 (0%)           | 1 (10%)            | 1 (10%)               | 2 (6.67%)             | 1.50                         |
|           |       | Disgust          | 0 (0%)             | 0 (0%)                | 0 (0%)                | 1 (3.33%)                   | 3.00                           |
|           |       | Sadness          | 0 (0%)             | 0 (0%)                | 1 (10%)               | 1 (3.33%)                   | 1.00                           |
| Happiness | AH1   | Happiness        | 10 (100%)          | 10 (100%)             | 8 (80%)               | 28 (93.33%)                  | 3.71                           |
| Sadness   |       | 0 (0%)           | 0 (0%)             | 2 (20%)               | 2 (6.67%)             | 3.00                         |
| Fear      | AH2*  | Happiness        | 10 (100%)          | 9 (90%)               | 10 (100%)             | 29 (96.67%)                  | 3.59                           |
|           |       | 0 (0%)           | 1 (10%)            | 0 (0%)                | 1 (3.33%)             | 3.00                         |
| Happiness | AH3   | Happiness        | 10 (100%)          | 8 (80%)               | 10 (100%)             | 28 (93.33%)                  | 4.11                           |
| Sadness   |       | 0 (0%)           | 2 (20%)            | 0 (0%)                | 2 (6.67%)             | 4.00                         |
| Happiness | AH4*  | Happiness        | 10 (100%)          | 10 (100%)             | 9 (90%)               | 29 (96.67%)                  | 3.52                           |
| Sadness   |       | 0 (0%)           | 0 (0%)             | 1 (10%)               | 1 (3.33%)             | 2.00                         |
| Fear      | PF1*  | Happiness        | 10 (100%)          | 9 (90%)               | 10 (100%)             | 29 (96.67%)                  | 3.97                           |
|           |       | Disgust          | 0 (0%)             | 1 (10%)               | 0 (0%)                | 1 (3.33%)                   | 5.00                           |
| Fear      | PF2*  | Happiness        | 10 (100%)          | 10 (100%)             | 10 (100%)             | 30 (100%)                   | 3.33                           |
| Fear      | PF3   | 10 (100%)        | 9 (90%)            | 10 (100%)             | 29 (96.67%)           | 3.93                         |
|           |       | Disgust          | 0 (0%)             | 1 (10%)               | 0 (0%)                | 1 (3.33%)                   | 3.00                           |
| Fear      | PF4   | 10 (100%)        | 10 (100%)          | 9 (90%)               | 29 (96.67%)           | 3.34                         |
|           |       | Disgust          | 0 (0%)             | 0 (0%)                | 1 (10%)               | 1 (3.33%)                   | 3.00                           |
| Happiness | AF1   | Happiness        | 0 (0%)             | 0 (0%)                | 1 (10%)               | 1 (3.33%)                   | 2.00                           |
|             |       | Sadness          | 9 (90%)            | 9 (90%)               | 5 (50%)               | 23 (76.67%)                  | 3.30                           |
|             |       | Disgust          | 1 (10%)            | 0 (0%)                | 4 (40%)               | 5 (16.67%)                  | 3.60                           |
|           |       | Sadness          | 0 (0%)             | 1 (10%)               | 5 (50%)               | 1 (3.33%)                   | 3.00                           |
|             |       | Happiness        | 0 (0%)             | 3 (30%)               | 2 (20%)               | 5 (16.67%)                  | 3.00                           |
|             |       | Sadness          | 10 (100%)          | 7 (70%)               | 8 (80%)               | 25 (83.33%)                  | 3.64                           |
|             |       | Happiness        | 10 (100%)          | 10 (100%)             | 10 (100%)             | 30 (100%)                   | 3.43                           |
|             |       | Sadness          | 0 (0%)             | 0 (0%)                | 0 (0%)                | 0 (0%)                      | 0.00                           |
|             |       | Happiness        | 0 (0%)             | 0 (0%)                | 0 (0%)                | 1 (3.33%)                   | 1.00                           |
|             |       | Sadness          | 2 (20%)            | 3 (30%)               | 2 (20%)               | 7 (23.33%)                  | 2.71                           |
|             |       | Disgust          | 8 (80%)            | 6 (60%)               | 7 (70%)               | 21 (70%)                    | 3.10                           |
|             |       | Sadness          | 0 (0%)             | 1 (10%)               | 0 (0%)                | 1 (3.33%)                   | 2.00                           |
|             |       | Happiness        | 3 (30%)            | 1 (10%)               | 3 (30%)               | 7 (23.33%)                  | 4.14                           |
|             |       | Disgust          | 7 (70%)            | 6 (60%)               | 7 (70%)               | 20 (66.67%)                  | 3.35                           |
|             |       | Anger            | 0 (0%)             | 1 (10%)               | 0 (0%)                | 1 (3.33%)                   | 3.00                           |
|             |       | Sadness          | 0 (0%)             | 2 (20%)               | 0 (0%)                | 2 (6.67%)                   | 2.50                           |
|             |       | Happiness        | 3 (30%)            | 4 (40%)               | 4 (40%)               | 11 (36.67%)                  | 3.73                           |
|             |       | Disgust          | 7 (70%)            | 5 (50%)               | 6 (60%)               | 18 (60%)                    | 3.06                           |
|             |       | Sadness          | 0 (0%)             | 1 (10%)               | 0 (0%)                | 1 (3.33%)                   | 2.00                           |
|             |       | Happiness        | 0 (0%)             | 0 (0%)                | 3 (30%)               | 3 (10%)                     | 2.67                           |
|             |       | Disgust          | 6 (60%)            | 8 (80%)               | 4 (40%)               | 18 (60%)                    | 2.89                           |
|             |       | Anger            | 0 (0%)             | 1 (10%)               | 0 (0%)                | 1 (3.33%)                   | 4.00                           |
|             |       | Sadness          | 1 (10%)            | 1 (10%)               | 0 (0%)                | 2 (6.67%)                   | 3.50                           |
|             |       | Happiness        | 1 (10%)            | 9 (90%)               | 9 (90%)               | 27 (90%)                    | 4.00                           |
|             |       | Disgust          | 0 (0%)             | 1 (10%)               | 0 (0%)                | 1 (3.33%)                   | 2.00                           |
|             |       | Sadness          | 0 (0%)             | 1 (10%)               | 1 (10%)               | 2 (6.67%)                   | 3.00                           |
| (continued on next page)
| Emotion | Alias | Emotion Detected | Chinese from China | Chinese from Malaysia | Bumiputera from Malaysia | Total Count (Total Percentage) | Mean of Emotional Intensity |
|---------|-------|------------------|-------------------|----------------------|-------------------------|-------------------------------|----------------------------|
| Happiness | AD3° | Fear 10 (100%) 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) | 3.00 |
|           |       | Disgust 9 (90%) 0 (0%) 8 (80%) 27 (90%) 3.89 |
|           |       | Happiness 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) 4.00 |
|           |       | Disgust 10 (100%) 10 (100%) 8 (80%) 28 (93.33%) 4.04 |
|           |       | Sadness 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) 1.00 |
|           | AD4° | Fear 2 (20%) 0 (0%) 0 (0%) 2 (6.67%) 4.50 |
|           |       | Disgust 7 (70%) 10 (100%) 10 (100%) 27 (90%) 4.37 |
|           |       | Sadness 0 (0%) 1 (10%) 0 (0%) 1 (3.33%) 2.00 |
| Anger | PA1 | Happiness 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) 1.00 |
|         |       | Fear 3 (30%) 4 (40%) 4 (40%) 11 (36.67%) 2.82 |
|         |       | Disgust 0 (0%) 1 (10%) 2 (20%) 3 (10%) 3.00 |
|         |       | Anger 6 (60%) 4 (40%) 2 (20%) 12 (40%) 3.58 |
|         |       | Sadness 1 (10%) 1 (10%) 1 (10%) 3 (10%) 4.00 |
|         | PA2 | Happiness 0 (0%) 0 (0%) 3 (30%) 3 (10%) 4.00 |
|         |       | Fear 2 (20%) 4 (40%) 0 (0%) 6 (20%) 3.67 |
|         |       | Disgust 0 (0%) 0 (0%) 2 (20%) 2 (6.67%) 3.00 |
|         |       | Anger 7 (70%) 5 (50%) 5 (50%) 17 (56.67%) 3.71 |
|         |       | Sadness 1 (10%) 1 (10%) 0 (0%) 2 (6.67%) 2.00 |
|         | PA3° | Fear 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) 1.00 |
|         |       | Disgust 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) 1.00 |
|         |       | Anger 8 (80%) 7 (70%) 8 (80%) 23 (76.67%) 2.52 |
|         |       | Sadness 2 (20%) 3 (30%) 0 (0%) 5 (16.67%) 3.00 |
|         | PA4° | Happiness 0 (0%) 1 (10%) 3 (30%) 4 (13.33%) 3.50 |
|         |       | Fear 0 (0%) 1 (10%) 1 (10%) 2 (6.67%) 3.50 |
|         |       | Disgust 1 (10%) 0 (0%) 0 (0%) 1 (3.33%) 2.00 |
|         |       | Anger 7 (70%) 6 (60%) 5 (50%) 18 (60%) 3.33 |
|         |       | Sadness 2 (20%) 2 (20%) 1 (10%) 5 (16.67%) 2.60 |
|         | AA1 | Fear 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) 4.00 |
|         |       | Disgust 1 (10%) 1 (10%) 1 (10%) 3 (10%) 4.67 |
|         |       | Anger 9 (90%) 7 (70%) 8 (80%) 24 (80%) 4.63 |
|         |       | Sadness 0 (0%) 2 (20%) 0 (0%) 2 (6.67%) 3.00 |
|         | AA2° | Happiness 0 (0%) 1 (10%) 0 (0%) 1 (3.33%) 3.00 |
|         |       | Disgust 0 (0%) 1 (10%) 0 (0%) 1 (3.33%) 3.00 |
|         |       | Anger 10 (100%) 8 (80%) 8 (80%) 26 (86.67%) 3.73 |
|         |       | Sadness 0 (0%) 0 (0%) 2 (20%) 2 (6.67%) 2.50 |
|         | AA3° | Disgust 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) 5.00 |
|         |       | Anger 10 (100%) 8 (80%) 9 (90%) 27 (90%) 4.44 |
|         |       | Sadness 0 (0%) 2 (20%) 0 (0%) 2 (6.67%) 3.00 |
|         | AA4 | Fear 1 (10%) 0 (0%) 1 (10%) 2 (6.67%) 3.00 |
|         |       | Disgust 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) 4.00 |
|         |       | Anger 9 (90%) 7 (70%) 7 (70%) 23 (76.67%) 4.52 |
|         |       | Sadness 0 (0%) 3 (30%) 1 (10%) 4 (13.33%) 3.25 |
| Sadness | PS1 | Happiness 1 (10%) 1 (10%) 1 (10%) 3 (10%) 2.33 |
|         |       | Fear 1 (10%) 2 (20%) 1 (10%) 4 (13.33%) 3.00 |
|         |       | Sadness 8 (80%) 7 (70%) 8 (80%) 23 (76.67%) 3.26 |
|         | PS2 | Fear 1 (10%) 1 (10%) 1 (10%) 3 (10%) 3.67 |
|         |       | Anger 3 (30%) 0 (0%) 3 (30%) 6 (20%) 3.67 |
|         |       | Sadness 6 (60%) 9 (90%) 6 (60%) 21 (70%) 3.00 |
|         | PS3° | Happiness 0 (0%) 1 (10%) 1 (10%) 2 (6.67%) 3.50 |
|         |       | Sadness 10 (100%) 9 (90%) 9 (90%) 28 (93.33%) 3.61 |
|         | PS4° | Happiness 1 (10%) 0 (0%) 0 (0%) 1 (3.33%) 1.00 |
|         |       | Fear 0 (0%) 1 (10%) 1 (10%) 2 (6.67%) 1.50 |
|         |       | Sadness 9 (90%) 9 (90%) 9 (90%) 27 (90%) 3.19 |
|         | AS1° | Sadness 10 (100%) 10 (100%) 10 (100%) 30 (100%) 3.87 |
|         |       | Happiness 0 (0%) 1 (10%) 0 (0%) 1 (3.33%) 3.00 |
|         |       | Anger 0 (0%) 0 (0%) 1 (10%) 1 (3.33%) 4.00 |
|         | AS2 | Sadness 10 (100%) 9 (90%) 9 (90%) 28 (93.33%) 3.54 |

(continued on next page)
mean of emotional intensity (see Table 3). In Table 3, 20 videos (indicated with asterisks) can be used for future emotion-related research. Videos with the two highest recognition accuracy in each category were selected. The recognition accuracy of all videos was higher than 60%. If the recognition accuracy was the same for multiple videos, the video with the least confusion with another emotion and/or the video with the highest mean of emotional intensity was selected.

Ethics Statement

Ethics was approved by the ethical committee of the Faculty of Medicine and Health Sciences, Universiti Malaysia Sabah [approval code: JKEtika 1/19 (20)]. Informed consent was obtained from all participants.

Declaration of Competing Interest

The authors declare that there is no conflict of interest.

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Table 3 (continued)

| Emotion | Alias | Response Count (Percentage) | Total Count (Total Percentage) | Mean of Emotional Intensity |
|---------|-------|-------------------------------|--------------------------------|-----------------------------|
|         |       | Chinese from China | Chinese from Malaysia | Bumiputra from Malaysia |                          |
| AS3∗    | Disgust | 1 (10%) | 0 (0%) | 0 (0%) | 1 (3.33%) | 4.00 |
|         | Sadness | 9 (90%) | 10 (100%) | 10 (100%) | 29 (96.67%) | 3.66 |
| AS4     | Fear   | 2 (20%) | 0 (0%) | 0 (0%) | 2 (6.67%) | 2.50 |
|         | Sadness | 8 (80%) | 10 (100%) | 10 (100%) | 28 (93.33%) | 3.71 |

* Videos with the two highest recognition accuracy in each category were selected. If the recognition accuracy was the same for multiple videos, the video with the least confusion with another emotion and/or the video with the highest mean of emotional intensity was selected.
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