Volume
Falls experienced by older adult residents in long-term care homes

▼ DESCRIPTION OF DATASET

This dataset includes videos of real-life falls experienced by older adult residents of long-term care homes.

DATA DESCRIPTION:

The dataset contains 300 videos of falls experienced by 118 adults (57 women who accounted for 175 falls, and 61 men who accounted for 125 falls). The dataset also contains individual and master spreadsheets containing information on the video frame rate and resolution, the status of the person who experienced the fall, and reported injuries related to the fall. At the time of falling, the individuals ranged in age from 58 years to 98 years (mean age = 82.8 years, SD = 7.6 years). All individuals captured falling were residing in two partnering long-term care facilities in British Columbia, where the falls occurred. All falls occurred in common areas of the long-term care homes (lounges, dining rooms and hallways). No cameras were installed in bedrooms or bathrooms.

Each individual recorded falling, or their decision maker, has provided informed consent for sharing their fall video footage for the purposes of research and education. 98 participants provided permission to share both their videos and their medical records with researchers. 20 participants only consented for sharing of their videos, and did not consent for sharing of medical records. 14 participants (7 women who accounted for 15 falls, 7 men who accounted for 13 falls) consented to have their videos shared publicly; therefore, 28 videos (mean age = 84.2 years, SD = 7.8 years) in the dataset are available to the public. Faces on the videos have been blurred.

In cases where a given fall was captured by more than one camera, the views from the individual cameras have been combined into a single video file. Most falls (n=158) were captured from only one camera view. For 99 falls, videos are included from two camera views, and for 43 falls, videos are included from three or more camera views.

The falls were recorded on video at a frame rate between 3 and 33 frames per second (fps). The camera resolution ranged from 352 x 240 pixels to 1920 x 1080 pixels.

All videos labelled as "Uploaded August 2018" in the "Groups" column have been converted to 640 x 480 pixels and a frame rate of 24 fps or 30 fps. In cases where the original frame rate was less than 30 fps (or 24 fps), this will have resulted in duplication of successive images in the video. All videos labelled as "Uploaded November 2020" and "Uploaded June 2021" in the "Groups" column have been exported to match the frame size and the frame rate of their original videos. The original frame rate and resolution are noted in Excel spreadsheets accompanying each video.

All videos are in mp4 format.

STRUCTURE OF THE DATASET:

Each folder contains a video (.mp4) file, depicting a single fall event. For falls captured by more than one camera, the views from the individual cameras have been combined into a single video file. Each video is named as [analyzed video number]_[date of fall (mmddyyyy)].mp4.
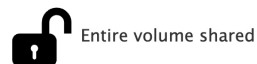
Each folder also contains an Excel file (.xlsx) with information about the fall event shown in the video. The information includes the number of camera views, the original frame rate and resolution of the video, and information on the individual who experienced the fall, collected from the fall incident report and minimum data set (MDS) assessment taken within 6 months of the fall. For the videos where the participant did not consent to share their medical information, information is not provided on ADL score, CPS score, Vision score, disease diagnoses, and medications (marked as "–" in each of these categories). The Excel files are named as [analyzed video number].xlsx.

A master spreadsheet contains data from fall incident report and MDS for all 300 falls ("Master spreadsheet – Falls experienced by older adult residents in long-term care homes.xlsx"). For the videos where the participant did not consent to share their medical information, information is not provided on ADL score, CPS score, Vision score, disease diagnoses, and medications (marked as "–" in each of these categories).

The cause of fall, activity at time of fall, and mobility aid at time of fall descriptors (columns M, N, O in the Master Spreadsheet) were assessed by a team of three trained raters using a validated questionnaire. Details of the Fall Video Analysis Questionnaire development and validation can be found in the following publication:

Yang, Y., Schonnop R., Feldman F., & Robinovitch S.N. (2013) Development and validation of a questionnaire for analyzing real-life falls in long-term care captured on video. BMC Geriatrics 13(40).

The spreadsheet also includes information on habitual use of mobility aid (column R in the Master

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Spreadsheet). "Habitual Use of Mobility Aid" refers to the recommended use of a mobility aid retrieved from the MDS of the participant, while "Mobility Aid at Time of Fall" refers to the use of a mobility aid in the specific video. The mobility aid of habitual use may not match with the video.

A master spreadsheet also contains injury data information for the recorded falls. A 7-day follow up is done for all falls to assess injuries in more detail. "Serious" injuries are injuries that required hospitalization, a diagnostic procedure (such as x-ray), or sutures; all other injuries are considered "moderate." Furthermore, the order of injuries does not reflect severity.

A reduced spreadsheet contains information on the above categories for the 28 publicly shared videos ("Reduced Spreadsheet for Publicly Shared Videos – Falls experienced by older adult residents in long-term care homes").

DATA COLUMNS (in first tab "Videos" of master spreadsheet):

– Video Identifier
– Participant Identifier (of the individual captured falling)
– Views (number of camera views of the fall)
– Original Video Resolution (pixels)
– Original Video Frame Rate (frames per second (fps))
– Edited Video Resolution and Frame Rate
– Age (years)
– Sex
– Height (cm)
– Weight (kg)
– Date of Fall
– Cause of Fall
– Activity at Time of Fall
– Mobility Aid at Time of Fall
– Falls within Last 6 Months
– Fractures within Last 6 Months
– Habitual Use of Mobility Aid (habitual; may not match video)
– ADL Self-Performance Hierarchy Scale (0–6, with 6 being the most impaired)*
– Cognitive Performance Scale (0–6, with 6 being the most impaired)*
– Vision Patterns Score (0–4, with 4 being the most impaired)*
– Disease Diagnoses*
– # of Medications per Week*
– Type of Medications*

*Not provided in the reduced public spreadsheet

Note: The spreadsheet contains a key tab ("Videos Key") that explains the nature of the data (classifications and labels) in the "Videos" tab.

DATA COLUMNS: (in second tab "Injury Data" of master spreadsheet):

– Injury resulted
– Serious injury
– Injury location 1–8
– Injury type 1–8

Note: The spreadsheet contains a key tab ("Injury Data Key") that explains the nature of the data (alphanumeric coding) in the "Injury Data" tab.

REFERENCES:
Publications that use this dataset must reference the following publication:
Robinovitch SN, Feldman F, Yang Y, Schonnop R, Leung PM, Sarraf T, Sims-Gould J, and Loughin M: Video capture of the circumstances of falls in elderly people residing in long-term care: an observational study. The Lancet. 381(9873): 47-54, 2013.

Also, we request that you please inform us of any publications that use this dataset, via email to stever@sfu.ca.

added on	August 2018
sessions	300 (300 shared)
ages	58.4 yrs–90+ yrs (M = 83.3 yrs)
participants	121 (61 Male, 58 Female)

▾ LINKS

- Robinovitch SN, Feldman F, Yang Y, Schonnop R, Leung PM, Sarraf T, Sims-Gould J, and Loughin M: Video capture of the circumstances of falls in elderly people residing in long-term care: an observational study. The Lancet. 381(9873): 47-54, 2013. (external link)

▾ HOW TO CITE

Robinovitch, S. (2018). Falls experienced by older adult residents in long-term care homes. *Databrary*. Retrieved February 21, 2023 from http://doi.org/10.17910/b7.739. ⬇ RIS ⬇ BibTeX