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THE ACCEPTANCE AND USABILITY OF EDUCATIONAL VIDEOS ON FALLS IN OLDER PEOPLE FOR ONLINE CLINICAL EDUCATION: A USABILITY STUDY AMONG CLINICAL UNDERGRADUATES IN MALAYSIA

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Abstract

Educational videos and other multimedia materials are frequently employed to enhance clinical undergraduate learning. The acceptability and use of a fall prevention training videos by Malaysian clinical students are examined in this study. The use of multimedia in the classroom offers numerous advantages, but it is important to understand the needs, preferences, and feedback of the students regarding its usefulness and efficacy. Therefore, the objective of this study is to evaluate the acceptability and usability of the fall prevention instructional videos among clinical undergraduates in Malaysia through quantitative and qualitative study methods. This study looks at the acceptability and usage of fall prevention videos among clinical undergraduates in Malaysia. A quantitative and qualitative study of 53 clinical undergraduate students in Malaysia was conducted. The System Usability Scale (SUS) was adapted for our study to incorporate two open-ended questions regarding educational video continuity and practicality, feedback sections, and closed-ended questions addressing video flaws. The educational video on fall prevention has an excellent usability score of 73.26 ± 13.32. Most of the feedback suggested trimming the videos because 15 participants (28 %) felt it was too long. Many participants said that the educational videos were essential for practical sessions and future learning. The consensus was that educational videos should be kept up to date

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for future learning and usefulness, but more improvements are required to make the learning process better for the students.

Keywords: Clinical undergraduates; educational video; falls prevention; older people; online education

Abstrak

Penggunaan sumber multimedia seperti video pendidikan adalah lazim untuk meningkatkan pengalaman pembelajaran dalam kalangan pelajar klinikal. Walau bagaimanapun, mengetahui keperluan, pilihan, dan maklum balas pelajar tentang kebolehgunaan dan keberkesanannya adalah penting. Objektif kajian ini adalah untuk menilai penerimaan dan kegunaan video pengajaran pencegahan jatuh dalam kalangan pelajar klinikal di Malaysia melalui kaedah kajian kuantitatif dan kualitatif. Seramai 53 orang pelajar klinikal Malaysia telah menyertai projek ini. Kajian ini telah mengubah suai Skala Kebolehgunaan Sistem (SUS) untuk memasukkan soalan tertutup tentang kekurangan video, bahagian maklum balas, dan dua soalan terbuka mengenai kesinambungan video pendidikan dan kegunaan dalam sesi praktikal. Video pendidikan pencegahan jatuh mempunyai skor kebolehgunaan yang baik iaitu 73.26 ± 13.32. Seramai 15 orang peserta (28 %) berpendapat video terlalu panjang dan mencadangkan agar ianya dapat diringkaskan. Kebanyakan peserta menyatakan video pendidikan itu penting untuk pembelajaran masa depan dan ketika sesi praktikal. Kebanyakan peserta bersetuju bahawa video pendidikan perlu diteruskan untuk pembelajaran masa depan dan ketika sesi praktikal walaupun sebenarnya penambahbaikan diperlukan terhadap video tersebut.

Kata Kunci: Prasiswazah klinikal; video pendidikan; pencegahan jatuh; orang tua; pendidikan dalam talian

1.0 INTRODUCTION

Falling can be fatal, particularly for senior citizens. Every year, 50 % of those over 80 and 30 % of those over 65 falls (Ageing & Unit, 2008). In Malaysia, approximately 15% of senior citizens over 60 will fall at least once a year (Abdul Rahman et al., 2021). It is noteworthy that older adults who have fallen once are two to three times more likely to fall again within a year, and that falling once doubles the likelihood of falling again (Abdul Rahman et al., 2021; Ambrose, Paul, & Hausdorff, 2013; Deandrea et al. 2010). A previous study reported that in 2019, falls occurred most frequently outside, with 20% of participants reporting serious injuries (Abdul Rahman et al., 2021; Bhasin et al., 2020). With well-established procedures, falls can be avoided by older adults (Montero-Odasso et al., 2021; Montero-Odasso et al., 2019). But how can we teach the public about preventing falls, particularly when it is best to avoid physical contact?

Everyone can learn about fall prevention through online clinical education. For students pursuing higher education, online clinical education resources like instructional videos are crucial

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during the pandemic (Brame, 2016). Videos are the most common type of content on the Internet these days, therefore it makes sense to use them in teaching (Haleem et al., 2022; Nartiningrum & Nugroho, 2020). Every student, especially those pursuing an undergraduate degree, is familiar with online learning since the pandemic (Radha et al., 2020). They should therefore support fall prevention education videos with their online learning activities. Their endorsement, suggestions, and changes are crucial in letting us know if the fall prevention film ought to be seen by everyone (Pettersson et al., 2021).

Singh et al. (2020) revealed that 92 % of medical students thought that using online clinical education resources was beneficial for their study. In a related study, Alsoufi et al. (2020) studied medical undergraduate students in Libya and found that while 56 % of the participants thought that downloadable online learning materials, like articles or videos, were superior to live content, only 21 % thought that online learning materials could be applied to clinical settings. In a similar vein, research found that even though the course was overly drawn out and less pleasurable, every participant praised the online module for providing understandable graphics and videos (Heiser, Stickler, & Furnborough, 2013; Lee et al., 2022).

2.0 MATERIAL AND METHODS

2.1 Study design

This study consists of a cross-sectional quantitative and qualitative online survey study conducted among Malaysian undergraduate clinical students aged 19 and above from public or private universities. The targeted courses were for undergraduates pursuing health sciences, medicine, nursing, and pharmacy.

2.2 Participants

When conducting a mixed-methods investigation, the sample sizes for the qualitative and quantitative components may be established independently, to triangulate or integrate results from both approaches to ensure a comprehensive analysis. The sample size for quantitative assessment might be determined using power analysis based on the anticipated effect size, desired level of confidence (e.g., 95%), and statistical power (e.g., 80%).

For qualitative data from open-ended questions, the sample size might be determined by reaching data saturation, where new responses no longer reveal new themes or information. This process continues until a point where additional participants do not significantly alter or contribute to new insights. The participants were recruited via a database of a previous study they participated in titled “Knowledge, Awareness, and Attitude Towards Falls in Older Adults: A Survey Among Healthcare

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and Medical Undergraduates in Malaysia". In the previous study, the willingness and permission to participate in the study were asked at the end of the online survey, hence only those who agreed to participate were reached out by the research team.

Those participants who agreed were added to a WhatsApp group. Then, informed consent was given to participants in the WhatsApp group before participation. Next, participants were provided with a link to access Google Forms inclusive of information sheets, the fall prevention educational video, and questionnaires. Undergraduate clinical students who neither pursued the targeted courses nor filled up the questionnaire completely were excluded from the study.

2.3 The video description

The fall prevention educational video is designed as a learning tool for future physiotherapists. It has a duration of 9 minutes and 30 seconds and includes subtitles to aid understanding. The video is presented in Bahasa Melayu, the local language, for better comprehension and effective learning. The video provides scientifically supported explanations regarding factors contributing to falls, such as specific health conditions, unsafe environments, and other risk factors. The video also showed the physical exercises, and prevention strategies that individuals or patients can perform to reduce the risk of falls.

In addition, the video highlighted the role and contribution of physiotherapists in fall prevention, encompassing assessment strategies, therapeutic interventions, and health advice for at-risk individuals. Besides that, the video also emphasizes the importance of awareness regarding fall risks within the community and the need to understand preventive measures as part of physiotherapy clinical practice. For better understanding, the subtitles were provided to enhance comprehension, particularly for those who require visual or auditory assistance in learning. Overall, this video is specifically made to deliver information regarding fall prevention to aspiring physiotherapists in a detailed, easily understandable, and clinically relevant manner within the context of Malaysian healthcare practices.

2.4 Outcome measurement

Data were collected using the validated questionnaire called System Usability Scale (SUS) (Grier et al., 2013) accompanied by socio-demographics, factors leading to video defects, and open-ended questions about participants' opinions on the continuity of learning through educational videos about fall prevention and the helpfulness of video content for practicality aspects. SUS was a standardized scale, while socio-demographics and other parts of the questionnaire and open-ended questions were self-created. The SUS consists of 10 items, where the raw score of each item is evaluated by a Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree).

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Then, raw score of each item will be converted into an item score; for odd-numbered items, raw score will be deducted by 1, and for even-numbered items, raw score will be subtracted by 5. Next, item scores of all items will be totaled up and multiplied by 2.5 to get a standard SUS score. This unique scoring method aims to standardize and normalize the responses obtained from the Likert scale items, making it easier to compare and interpret usability scores across different assessments or studies, ultimately providing a more consistent usability evaluation. The standard SUS score ranges from 0 (very poor perceived usability) to 100 (excellent perceived usability).

Specifically, a standard SUS score of 50.9 indicates average user experience with the product; a SUS score of 71.4 indicates good user experience with the product, while a standard SUS score of 85.5 indicates excellent user experience with the product (Grier et al., 2013). The SUS questionnaire is quick and easy to utilize by researchers and participants (Grier et al., 2013). It has a higher accuracy of analysis when compared with four other different usability questionnaires such as the Questionnaire for User Interface Satisfaction (QUIS) and Computer System Usability Questionnaire (CSUQ) (Lewis, 2018a).

In terms of reliability, Cronbach's alpha for all 10 items of SUS showed a test result of alpha = 0.911 (Grier et al., 2013), which indicates SUS had an acceptable level of reliability between 0.70 to 0.95 (Cheah et al. 2022). Although SUS analysis can estimate the overall usability of a product (Grier et al., 2013), the specific strengths and weaknesses of the product are yet to be identified (Kortum & Peres, 2014).

Finally, SUS is not sensitive to minor changes in its item (Lewis, 2018b), such as changing the word ‘system’ to ‘video’, or ‘cumbersome’ to ‘awkward’. Hence, SUS is customizable according to the researcher’s needs. Hence, SUS is a reliable tool to measure the usability of the fall prevention educational video. Likert scales, close-ended questions, and open-ended questions were part of the questionnaire. On average, the questionnaire will take around 20-30 minutes to complete. The questionnaire includes:

1. Socio-demographics such as name, age, gender, public or private university, enrolled course, and year of study.
2. The SUS items were modified according to the research objective to determine the usability of the fall prevention educational video. Each item is evaluated using the Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree).
3. Questions about factors leading to video defects are close-ended where participants have to select “Agree” or “Disagree”. Factors such as lengthy video, poor structure of contents, language barrier,

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use of jargon, lack of information, poor audio, poor animation and visual, and no interest whatsoever.

4. Two open-ended questions about the participants' opinions on the continuity of learning through educational videos about fall prevention and the helpfulness of video content for practical aspects.

2.5 Data Analysis

All the results from the survey questionnaire excluding the open-ended questions were analyzed using Statistical Products and Service Solution (SPSS) version 25.0. Descriptive analysis (frequency and percentages) was used to describe the participants' socio-demographics, results of raw SUS score for each item, and factors leading to video defects. The measure of central tendency (mean, standard deviation, mode, median) will be used to report the results of the average standard SUS score to determine the usability of the video. However, normality tests specifically the Shapiro-Wilk value and histogram will also be carried out first to determine the normality of the standard SUS score among 53 participants, followed by choosing the appropriate measure of central tendency.

Qualitative methods, such as content analysis or thematic analysis, were employed to examine the open-ended questions. This process entailed the identification of themes, patterns, or noteworthy aspects within the responses provided by the participants to the questions. The findings from open-ended questions were summarized in the discussion section. This process could have entailed explaining common themes or major findings that emerged from the points of view or comments of the participants about the video.

3.0 RESULTS AND DISCUSSION

Following are the results and discussion of the main findings derived from the analysis and interpretation of the data.

3.1 The Demographic Characteristics

A total of 53 participants which consist of 72 % female (n = 38) and 28 % male (n = 15) completed the questionnaire. The age range was 20–30 years old, with a mean of 22.55 ± 1.48 years. There were 46 people (86.8%) registered with Universiti Kebangsaan Malaysia (UKM), followed by two each from the University of Cyberjaya and MAHSA University, one each from UniSZA, UniKL, and IMU. There were 38 students (72 %) in physiotherapy, compared to one each in audiology, nursing, dietetics, nutrition, biomedical, and pharmacy. There were more third-year students, a total of 33 (62 %) than fourth-year students, 15 of them with 28 %, with the fewest being first-year, with total of 2 (4 %) and second year, with total of 3 (6 %). Table 1 displays the participant's demographic information.

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Table 1. Demographic data of participants

Demographic	Frequency (N)	Percentage (%)
Age (22.55 ± 1.48)	53	100
Gender		
Male	15	28
Female	38	72
University		
University Kebangsaan Malaysia (UKM)	46	86.8
University of Cyberjaya	2	3.8
Mahsa University	2	3.8
University Sultan Zainal Abidin (UniSZA)	1	1.9
University Kuala Lumpur, RMCP (UniKL)	1	1.9
International Medical University Malaysia (IMU)	1	1.9
Course		
Physiotherapy	38	71.7
Occupational Therapy	2	3.8
Speech Science	5	9.4
Audiology	1	1.9
Medicine	2	3.8
Nursing	1	1.9
Diet	1	1.9
Nutrition	1	1.9
Pharmacy	1	1.9
Biomed	1	1.9
Year of Study		
First Year	2	3.8
Second Year	3	5.7
Third Year	33	62.3
Fourth Year	15	28.2

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3.2 The raw SUS score

A total of 33 of 53 participants (62 %) strongly agreed that they can readily use the knowledge they learned from the movie in real life and found certain parts of the video well described. A total of 15 participants (28 %) expressed no opinion regarding the fall-related knowledge-enhancing material in the film, whereas 24 participants (45 %) strongly disagreed that the video was difficult to grasp. The raw SUS score results are displayed in Table 2.

Table 2. Results of raw SUS score

Items	Frequency, N (%)				
	0 Strongly Disagree	1 Slightly Disagree	2 Neutral	3 Slightly Agree	4 Strongly Agree
1. I think I would watch this video again to gain better knowledge about falls.	0 (0)	3 (5.7)	9 (17)	18 (34)	**23 (43.4)**
2. I find the content in this video unnecessarily complicated.	**19 (35.8)**	13 (24.5)	9 (17)	7 (13.2)	5 (9.4)
3. I think the knowledge I gained from watching this video is easy to apply in real life.	0 (0)	0 (0)	2 (3.8)	18 (34)	**33 (62.3)**
4. I think I would need a healthcare individual along with me to better understand this video.	12 (22.6)	10 (18.9)	**14 (26.4)**	9 (17)	8 (15.1)
5. I find some parts of this video are well explained.	0 (0)	0 (0)	3 (5.7)	17 (32.1)	**33 (62.3)**
6. I think the content in this video is not enough to gain better knowledge about falls.	11 (20.8)	**16 (30.2)**	15 (28.3)	8 (15.1)	3 (5.7)
7. I think most people would understand and learn very quickly from watching this video.	0 (0)	2 (3.8)	7 (13.2)	17 (32.1)	**27 (50.9)**
8. I find the contents of this video difficult to understand.	**24 (45.3)**	21 (39.6)	5 (9.4)	0 (0)	3 (5.7)
9. I feel very confident to apply the knowledge about falls in my daily life after watching this video.	0 (0)	1 (1.9)	9 (17.0)	20 (37.7)	**23 (43.4)**
10. I need to learn a lot of things about falls before I can understand the contents of this video.	6 (11.3)	**20 (37.7)**	6 (11.3)	11 (20.8)	10 (18.9)

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3.3 Standard SUS Score Interpretation

The mean standard SUS score among all 53 participants is 73.26 ± 13.32. A conventional SUS score of 71.4 to 85.4, according to Grier et al. (2013) denotes a positive user experience. Hence, a score of 73.26 ±13.32 indicates good usability of the fall prevention educational video. With a range of 52.50, the maximum and minimum standard SUS scores are 100 and 47.5, respectively. In the meantime, the 72.50 mode and medium standard SUS scores are the same. The Shapiro-Wilk test can be used to assess whether the standard SUS score is normal due to the short sample size. If the *p*-value is more than 0.05, the data is considered normal.

Following the execution of the Shapiro-Wilk test, participants' standard SUS scores were found to be normal (W (53) = 0.974, $p = 0.29$). We also conclude that the data for standard SUS scores are normal because the histogram displays an equally distributed bell curve. Among the participants, Nursing, Physiotherapy, Nutrition, and Pharmacy undergraduates rated ‘Good’ usability to the educational film with the mean standard SUS score of 85, 76.25, 75, and 75, respectively. Meanwhile, participants registered in Medicine, Occupational Therapy, Diet, Audiology, Speech, and Biomed courses rated ‘Average’ usability to the educational film with average standard SUS scores of 70, 68.75, 60, 60, 59.6, and 55, respectively. The average comparison of standard SUS scores amongst courses is displayed in Table 3.

Table 3. Means comparison of Standard SUS score between courses

Course	Mean	N	SD	Usability
Nursing	85	1	-	Good
Physiotherapy	76.25	38	12.85	Good
Nutrition	75	1	-	Good
Pharmacy	75	1	-	Good
Medicine	70	2	0	Average
Occupational Therapy	68.75	2	8.84	Average
Diet	60	1	-	Average
Audiology	60	1	-	Average
Speech	59.5	5	14.62	Average
Biomed	55	1	-	Average

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3.4 Factors Leading to Video Defects

Out of all the elements contributing to the fall prevention instructional video's faults, the greatest percentage of participants, 28 % or 15, felt that the video was too long. Next, 13.2% (n=7) of participants agreed that the animation and images were poor, and 11.3% (n=6) discovered that the questionnaire contained jargon. On the other hand, just two people thought the content was poorly organized, and two more expressed disinterest. Four individuals each agreed that the audio quality, lack of information, and language barrier were the remaining reasons. Table 4 lists the causes of errors in instructional videos about falls.

Table 4. Factors leading to defects of educational video on falls.

Item	Agree		Disagree	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
The video was too long	15	28.3	38	71.7
Poor animation and visual	7	13.2	46	86.8
Use of jargon (complicated sentences /words)	6	11.3	47	88.7
Language barrier	4	7.5	49	92.5
Lack of information	4	7.5	49	92.5
Poor audio	4	7.5	49	92.5
Poor structure of contents	2	3.8	51	96.2
Not interested	2	3.8	51	96.2

3.5 Feedback on Video (Qualitative)

Firstly, two participants complained that the film was too long, saying,

- *"The video should briefly focus on main points".*
- *"The video duration should be shortened and make it simple but concise".*

Four participants also thought the movie had inadequate animation and aesthetics, suggesting,

- *“More animation should be inserted, not just static presentation with audio”.*
- *“Subtitles should be more obvious to see”.*
- *“Educational video, especially for public awareness, should be more infographic and fewer words”.*

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- *"Use more animations or short clips instead of text to bring out the content".*

A participant suggested improving the audio quality,

- *"The video provided can be synchronized with the audio for better understanding".*

Two participants complained that the video lacked information, suggesting,

- *"More information about the medication and postural hypertension should be given".*
- *"Maybe can add pictures of items that have been mentioned in the video, such as bath chair, or how to increase the height of the toilet bowl".*

Finally, two participants provided feedback and suggested to make the questionnaire easier by,

- *"Liaise and synchronize the video's content with the questions' content".*
- *"Provide more information related to the questionnaire".*

Following is the table that summarizes the findings from the interview (Table 5).

Table 5. The feedback on the video

No.	The comments and feedback
1.	*"The video should briefly focus on main points".*
2.	*"The video duration should be shortened and make it simple but concise".*
3.	*"More animation should be inserted, not just static presentation with audio" and "subtitles should be more obvious to see".*
4.	*"Subtitles should be more obvious to see".*
5.	*"Educational videos especially for public awareness should be more infographic and fewer words".*
6.	*"Use more animations or short clips instead of text to bring out the content".*
7.	*"The video provided can be synchronized with the audio for better understanding".*
8.	*"More information about the medication and postural hypertension should be given".*

3.6 Helpfulness of Educational Video on Practical Aspects

The instructive video's practicality was well-received by eight participants,

- *"Maybe can add pictures of items that have been mentioned in the video, such as bath chair, or how to increase the height of the toilet bowl".*
- *"Liaise and synchronize the video's content with the questions' content" and "Provide more information related to the questionnaire".*
- *"It is delivered using easy terms with clear visual aids relating to the local environment".*
- *"The knowledge delivered is easy to understand and easy to remember".*
- *"It is easy to understand, and the contents are evidence-based".*

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- *"Speech clinicians can apply the information to those that are likely to fall to make the session comfortable and effective".*
- *"It will help those who work in the clinical setting to be more aware of their workplace's condition and ensure patient safety".*
- *"Yes, it is extremely helpful".*

One participant said, the data is current and simple to understand. Professionals, students, and healthcare staff will find this easier to understand. A positive remark was made about the educational film, but three participants made unfavorable comments.

- *"The video was informative for the general view but needs to improve more info for local practice".*
- *"This video is more theoretically driven and that a professional healthcare provider is needed for practical sessions".*
- *"Not very helpful in acquiring practical skill due to lack of visual aids such as video/image showing correct ways to use walking aid but relevant to local practice based on the language used (Malay and English)".*

Thus, with constructive input from participants, content delivery by delivering specific practical skills videos may be improved that may help them in their clinical practices. Following is the table that summarizes the feedback obtained from the interview (Table 6).

Table 6. The feedback on the helpfulness of video on practical aspects

No.	The comments and feedback
1.	*"Maybe can add pictures of items that have been mentioned in the video, such as bath chair, or how to increase the height of the toilet bowl".*
2.	*"Liaise and synchronize the video's content with the questions' content"* and *"Provide more information related to the questionnaire".*
3.	*"It is delivered using easy terms with clear visual aid relating to the local environment".*
4.	*"The knowledge delivered is easy to understand and easy to remember".*
5.	*"It is easy to understand, and the contents are evidence-based".*
6.	*"Speech clinicians can apply the information to those that are likely to fall to make the session comfortable and effective".*
7.	*"It will help those who work in the clinical setting to be more aware of their workplace's condition and ensure patient safety".*
8.	*"Yes, it is extremely helpful".*

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9. *“The video was informative for the general view but needs to improve more info for local practice”.*
10. *“This video is more theoretical driven and that a professional healthcare provider is needed for practical sessions”.*
11. *"Not very helpful in acquiring practical skill due to lack of visual aids such as video/image showing correct ways to use walking aid but relevant to local practice based on the language used (Malay and English)".*

3.7 Continuity of Learning through Falls Prevention Educational Video

Fall prevention education for elderly individuals is crucial as Malaysia ages (Ong et al., 2021). In this part of the questionnaire, most participants agreed that educational videos should be made for future use to raise public knowledge about falls and prevention. Eight participants said,

- *"Yes, education about falls is important so that the public is aware of this issue and can better prevent the accident from occurring”*.
- *“There are still misconceptions about falls among older adults. These videos will raise awareness and dispel myths”.*
- *"Accessible and can be replayed many times for revision purposes".*
- *"Yes, it is a good effort as the media can reach all ages".*
- *"Yes, the knowledge about falls should be promoted and shared on social media".*
- *“Easier for the public to digest, and reach more people in the long run, very informative and can be used for all levels of education”.*
- *“People who are not in the healthcare field can understand the importance and how to prevent falls in older adults”.*
- *"I believe future research studies conducted on knowledge of fall and fall prevention interventions will be updated and advance further with efficient and radical strategies".*

3.8 Usability of Falls Prevention Educational Video

Every participant expressed dissatisfaction with the lack of patient interaction and hands-on therapy in the online program. While some of this research found online clinical teaching tools deficient, others found them to be useful. According to a survey, 58 % of medical students complained about the poorly structured online clinical materials they are given, which makes it difficult for them to understand, and 58 % of them discovered that materials were not integrated during online lectures (Back et al., 2016). According to a survey by Agung (2019), It has been observed that 46 % of the participants, or nearly half of them, struggle to understand the online learning materials provided. Online resources for clinical teaching are unrealistic and have received mixed responses.

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Since no information about the kind of online clinical material examined or the medical subjects covered is provided by the research, these results do not accurately reflect the usefulness of fall prevention instructional films. Future studies on this subject should therefore look at the benefits and drawbacks to demonstrate the usefulness of fall prevention instructional videos. The fall prevention educational film had a level of usability that exceeded the average, as indicated by the mean standard System Usability Scale (SUS) score of 73.26 among all participants.

In general, all participants expressed satisfaction after viewing the educational movie on fall prevention. Hence, it can be inferred that the fall prevention educational film exhibits favorable qualities and demonstrates a moderate level of efficacy in facilitating knowledge acquisition among undergraduate students in clinical settings. Nevertheless, there is a dearth of published literature and empirical research that investigates the usability of educational videos about fall prevention. Therefore, the ability to compare the findings of our research with other pertinent studies is limited.

3.9 Feedback on Video

To maintain viewer engagement, educational videos should incorporate solely the most essential information. The inclusion of animation, infographics, and concise segments can enhance the overall quality of the video and contribute to viewer satisfaction. By adopting these strategies, the video can avoid becoming verbose, uninteresting, and stagnant (Tandi, 2023). Additionally, it is crucial to ensure that the audio is clear and devoid of any background noise, as this can impede viewer comprehension (Robb et al., 2017).

The use of jargon should be minimized, as it has the potential to confuse viewers and increase the likelihood of misinterpretation (Chun, Kern, & Smith, 2016). Furthermore, producers should pay attention to the size of the text (Chujo & Utiyama, 2005; Darroch et al., 2005), ensure sufficient contrast between the text and background, and refrain from overcrowding the screen with excessive amounts of text (Darroch et al., 2005).

3.10 Helpfulness of Video on Practicality Aspects

Based on the responses to the open-ended questions, it was found that participants agreed with the ease of comprehension of the educational video, as well as the informative nature of its material, which was presented using accessible language. By engaging with educational videos, they have gained a deeper understanding of the concept of falls and their avoidance (Humrickhouse, 2021; Yardley et al., 2006). However, it might be argued that the video provided offers a broad perspective and falls short

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in terms of imparting practical skills and essential knowledge about fall prevention, a crucial aspect of future professional practices.

3.11 Continuity of Learning via Educational Videos

The consensus among participants was that the utilization of educational movies has the potential to enhance awareness of falls among the elderly population. The movie is readily accessible, enabling individuals to watch it multiple times at their convenience and from any location. Given that a minority of individuals expressed agreement with the presence of a few problems in the movie and considering that our video received a favorable rating in terms of usability, this outcome provides us with a promising foundation upon which to further develop educational videos for future learning purposes.

3.12 Strength of the Study

Our research focuses on the examination of fall prevention educational videos for online clinical education among Malaysian clinical students, making us the pioneers in this area of inquiry. Therefore, the findings can serve as a valuable point of reference for future researchers to compare and further investigate the cause, as well as explore unresolved inquiries that were beyond the scope of our study. The feedback results obtained from the study can provide valuable insights for educators in the development and implementation of enhanced fall prevention training videos, hence facilitating improved learning outcomes.

3.13 Limitations of the Study

The limitations of the research exhibit variability. Regarding participation, a total of 89 individuals out of the initial cohort of 145 participants from the preceding study expressed their willingness to take part in the current investigation. Consequently, the research team contacted these 89 individuals, ensuring their informed consent was obtained. However, just 53 individuals responded. Fortunately, a sample size of 20 ± 4 individuals is considered sufficient for assessing the usability of a product (Alroobaea & Mayhew, 2014).

Furthermore, given the nature of an online survey, it cannot be ensured that all participants have viewed the video in its entirety. This raises the possibility that participants may have skipped certain sections or not fully comprehended the content and quality of the video before proceeding to the questionnaire. There is a possibility of inaccuracies in the raw, item, and standard System Usability Scale (SUS) scores. The formation of the assumption was based on the perception of a minority of participants who held the belief that factors such as language barriers, technical jargon, or poor audio quality could have potentially led to their discontinuation of movie viewing.

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4.0 CONCLUSION

In summary, the usability of the fall prevention educational film designed for online practical education among clinical undergraduates in Malaysia is excellent, particularly when targeting older persons. Most participants expressed consensus regarding the utility of the film in enhancing their practical skills and advocated for its continuation as a valuable resource for future educational endeavours. Nevertheless, the movie had certain deficiencies, indicating the need for further efforts to enhance its quality and substance to enhance the educational value it provides to undergraduate students and the public. Despite all, more studies with large sample sizes should be conducted to further confirm the findings and support the current study.

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