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Review Article

Web-based digital applications for training of senior citizens and their caregivers before and after pandemics: A Swot analysis

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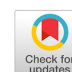

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ABSTRACT

This would be the first instance where we would be using the online web-based training session for senior citizens and the caregivers to address the commonest health issues like depression, as a result of loneliness arising among the senior citizens during the lockdown period of CoVID-19 pandemic in India and the other issue is caregiver burden, stress and strain due to burnout because of continued caretaking.

The article focusses on addressing the mental health issues arising in situations like the global pandemic, of CoVID-19 outbreak, among the senior residents and their caregivers. The lockdown period in India came along with mental health issues, which included depression in elderly with caregiver burnout and strain among the caregiver's, due to excess caregiving. The above-mentioned health issues could have been addressed during the online training session. The tools involved here, would be web-based applications, conveyed through cell phones using this as a mode of delivery of the online training content, to the participants.

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1. Introduction

The COVID-19 Pandemic has impacted every citizen around the globe in one way or the other, leading to social, economic, psychological and emotional disturbances, thus affecting wellbeing. The mental health issues are bound to rise because of nil access to gardens for evening walks, socialization with friends, closed newspaper reading rooms as they are bound to stay indoors. With limited mobility and lack of socialization the senior citizens and if this issue is left unaddressed. They are bound to get depressed and can proceed towards developing mental illnesses. Thus, pandemics that of the CoVID-19 have brought about a huge impact on the health of the senior citizens and caregivers due to the lockdown installed by the Government of India. Henceforth, in the upcoming days, if such a situation arises, training of caregivers and senior citizens would be a boon to combat emergence of such above mentioned mental health issues.

2. Aims

The aim of the training program should include highlighting the importance of web-based training, using smart phone based android applications. The senior citizens, will be immensely supported by the online training sessions, in managing mental health issues arising due the lack of social interaction and loneliness due at the time of lockdown. The training sessions aim to highlight the effectiveness of Peer education from an experienced caregiver to other caregivers on issues related to caregiver burnout and stress management.

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3. Objective

The main objective will be to alleviate the physical, mental, emotional and psychological stress and strain in the caregivers of morbid elderly.

The second objective was to study the health benefits on elderly by the web-based interaction, especially the emotional component developed in the seniors due to lockdown and social isolation.

4. Ethical Considerations

Verbal Informed consent has to be taken, and the acceptance of their participation was be confirmed telephonically. The ethical considerations that are incorporated, should include principles like:

4.1. Right based approach

Where, every senior citizen and caregiver, enrolled in the training should receive the complete and same details, throughout the training and reinforcement sessions.

4.2. Freedom of expression, freedom of privacy, freedom of health, and freedom against discrimination

Every participant had the freedom of expressing his/her views based on the issues that they were facing, their understanding and ability for choosing the type of health care facility, if diagnosed/found out to be ill during the training, then they should not have biases in receiving the training content, which may be arise due to age, gender, race or pre-existing illnesses. Thus, complete training to all and should be provided throughout the tenure of the intervention planned.

4.3. Person centred care: Person centred care in case early stages of dementia sets in; Honouring individuals and their choices: whitlatch (2013)[1]

This includes prioritising the decisions, if the elderly would develop dementia symptoms during the training, and honouring their choices, when they are able to give consent regarding many personal issues that would arise in dementia care. This concept is widely considered as best practice by many experts (Kelly 2010;[2] Brooker 2016,[3] Spector et al., 2013),[4]

4.4. Person centred care to relation centred care (MoreHardt and Spira 2013)[5]

The understanding of the early onset dementia experience would focus on the dynamics and multi-dimensional aspects of relationships, over the course of illness; i.e. the interactions between the caregiver and the senior citizen, would have a positive outcome on caregiving. This includes replacing the authoritative role of the health care provider by a caregiver, empowering both the senior citizen and the caregiver regarding caregiving. Empowering the senior citizen, by trust, that the caregiver will be doing the caregiving, according to the will and wish if the senior citizen would to develop dementia, which the latter had wished, to a particular type of care, when the early signs of dementia were evident, empowering the caregiver to confidently deliver his caregiving. The caregiver will also be carefree, about the consent issues regarding the type of caregiving, as the he/she is prior informed, about the type of care he/she should be giving the elderly person now living with dementia.

4.5. Inclusion criteria needed for the training sessions

1. Caregivers, caregiving for majority of the time and residing with the senior citizens.
2. Senior citizens who will be attending the hospital out-patient department (OPD) of Geriatric Units of tertiary care hospitals for the past six months and Senior citizens who may have mild cognitive impairment could be included, for the training sessions.

4.6. Exclusion criteria

Senior citizens with moderate and severe cognitive impairment**,** part time caregivers who don't spend more time with the senior citizens.

4.7. Methodology to be followed for the training sessions

The plan is to conduct regular training, once a fortnight, under the National Program for the Health Care of the Elderly Persons, a Government of India initiative, with special considerations to the elderly and their caregivers to prevent issues related to the depression and caregiver strain and thus reduce caregiver burnout.

We would incorporate the following statements mentioned by Maslow (2013)[6] for the delivering a training program for caregivers, of the elderly population residing at their home, with their caregivers.

4.8. Domains addressed in the training programme

4.8.1. Caregiver training

The training was to address the three domains of learning (cognitive, affective and psychomotor). The training would be held online for a duration of 45 minutes every fortnight for formal and informal discussions, regarding caretaking and managing issues arising during caregiving. The method included here would be a peer education session by the caregiver to the other caregivers moderated by health care professional (doctor). To address the cognitive domain the pre-training knowledge would to evaluated by a pretested, predesigned questionnaire and a post-test evaluation would

also be done to check the gain in knowledge. For the affective domain, the caregivers would be given situations regarding how to perform caregiving if a particular type of caregiving situation would arise. To check the psychomotor domain, the skill description about how the situation was addressed would be discussed in the peer education session.

4.9. Details of the training and training methodology adopted for the senior citizens:

A pre-test questionnaire evaluation, containing knowledge, attitude and practice questions would be used to assess caregiver strain and stress management and this would be done by a trained caregiver identified prior by the health professional and another part of the training would be on geriatric depression symptoms among senior citizens.

1. The training should be first for the caregivers, to identify the symptoms of depression in elderly by using the geriatric depression scale, which would be delivered by an expert caregiver (peer education).
2. The expert caregiver would be training the other caregivers through smart phone web based online training sessions on usage of the tools.
3. Applications like DEMKONNECT, an android web based mobile application which includes memory screening, sharing on a phone call by an expert, activities to be done during the day, dementia friendly communities learning lessons etc.
4. Reinforcement sessions to enquire the effectiveness of the training would be assessed by change in the knowledge, attitude and practices, addressing caregiver burnout management and another on geriatric depression symptoms among elderly, by a post-test questionnaire.

4.10. Once the contact details are noted down, the caregivers and senior citizens are identified, they are contacted by phone and verbal informed consent is taken

1. *Step 1:* Senior citizens will be identified and explained about the questions the caregiver would be asking about their level of depression using the Geriatric depression scale (GDS), arising from the loneliness during the lockdown period of the CoVID-19 pandemic like situations. GDS-SF contains 15 questions with each question scored one point each. A score of 5 and more would indicate depression. Their Knowledge, attitude and practice questions on depression would be asked to them by their caregivers.
2. *Step 2:* The caregiver peer educator, should be first identified by telephonic interview, based on the years of experience in managing caregiver burnout during caregiving by the interviewer by a health care professional. Once identified he would be trained first to detect the caregiver burnout using the Zarit Caregiver burden scale (ZCBS) among other caregivers. ZCBS has 22 questions, with scoring of four point each. A score of 0-20 would have no burden, 21-40 would mean mild to moderate burden, 41-60 moderate to severe burden and scores more than 61-88 would mean severe burden.
3. *Step 3:* Details of the caregiver training is explained to the other caregivers and the importance of caregiver training through peer caregivers is highlighted. Peer education would be delivered by a peer educator caregiver.

4.11. The audio-visual Aids used are

Power-point presentation and pamphlet and an awareness videos regarding the importance of Person-centred care.

4.12. Differences in learning preferences among trainees

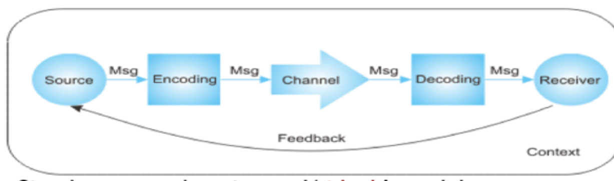
All the caregivers will be given an opportunity to express their concerned issues related to caregiving of the senior citizens. If any difference of opinion among the trainees would arise they would be solved through interactive discussions, moderated by the health care professional (doctor), to alleviate the differences between among the trainees.

4.13. Reinforcement sessions: Frequency of the training sessions:

The reinforcement session would be for 5 fortnights, where the highlight and reemphasize stress identification and management strategies through the checklist, which would be the tools for prevention of caregiver burnout.

4.14. Communication process (Westley Macleans' model)

1. *Step 1:* The sender would be the source of information transmitting the message through the channel.
2. *Step 2:* The receiver is a beneficiary who would receive the information through the channel of communication.
3. *Step 3:* Feedback by the beneficiary would be the most important aspect of the communication process which would complete the process.



4.15. *Approach of health education incorporated in the training sessions*

Primary health care approach: A radically new approach starting from the people with their full participation and active involvement in the planning and delivery of health services based on principals of Primary health care –i.e. involving the community through Inter-sectoral coordination. It has begun with an objective to help individuals to become self-reliant in matters of health. They also receive the necessary guidance from health care professionals.

4.16. *Barriers of communication anticipated and encountered during the training process*

Uninterrupted power supply and adhering to time limit, during the discussion, would be major barriers that have to be addressed, regarding the venue and the requirement of more than one moderator to address the issues arising during the interactive sessions. The caregivers' literacy status, would also be an important criterion, that would determine the level of interaction and in-depth discussion.

4.17. *Outcome assessment through Internal and external quality assessment*

The training sessions should be monitored internally by the healthcare professionals and external quality assessment of the training session would be taken care by the dean of our universities, which governs the functioning of tertiary care hospitals.

5. Summary

This training session is an attempt to address the rise of incident cases of depression among the senior citizens and caregiver burnout due to lockdown imposed by the National Government due to the CoVID-19 pandemic in India. The details of the training have been summarised as a SWOT analysis below:

5.1. *Strengths*

Training session addresses an important health issue, a rising tip of an iceberg which would go unnoticed if not addressed.

5.2. *Weaknesses*

Practical implementation of stress management, would have to be incorporated and implemented by the Senior citizen himself, irrespective of the quality and intensity of the training administered to them and their caregivers.

5.3. *Opportunities*

Sessions like these would motivate the senior citizens to learn operating the electronic devices like telephone/ tablets for the access to training content and guidelines.

6. Threats or Challenges Faced: Related to the equipment

6.1. *Devise compatibility with the android application*

It was very challenging to have everyone use the device at the same time of the training with efficiency.

6.2. *Power supply*

at the centre where the main web-streaming of the content was about to be done, providing uninterrupted power supply was a challenge.

6.3. *Internet connectivity*

Fluctuations in the internet connectivity would vary according to the service provider subscribed by the user in the training area**.**

6.4. *Comments: knowledge transfer into practice*

As stated by (Baumbusch et al. 2008)[7] new knowledge is not enough to sustain changes in practice and thus we believe this training session can be used as a part of a larger project wherein various methods of learning come together also involve all levels of background experience and culture to firmly incorporate the learned content into practice and practical usage. Davies 2000[8] describes learning as a team would bring about equal collaborations from every member of the teaching learning team and would definitely be more informative than leaning individually.

7. Recommendations

Effective training of the facilitator is very essential for the success of the training program as highlighted by Tiwari et al. 2005.[9]

Usage of range of interpersonal skills is mandatory as described by Harvey et al. 2002,[10] however there is lack of evidence about the use of interpersonal skills during a training program.

7.1. Coproduction

A joint collaboration between the trainers and the trainees to coproduce knowledge, ideas and concepts by reducing the gap through pre-test and post-test feedback findings which could be used as tools for future implementation of better training through new ideas jointly coproduced by trainers and trainees.

The development of *Dementia Champions* is an approach to improving practice that promotes knowledge transfer at the practice level by up-skilling health professionals who then promote (transfer) good practice and new ideas among their peers.

Addressing the mental health issue through the mental helpline in our hospital

Using 24 X7 helpline number which would be functional throughout the year for any queries related to any mental health issues.

8. Source of Funding

None.

9. Conflict of Interest

None.

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