University of Huddersfield Repository

Edward, K., Cook, M., Holland, C., Perry, L., Stephenson, John, Giandinoto, Jo-Ann, Crane, R., Molly, T., Alderson, K. and Kay, K.

Using self-management to control seizures

Original Citation


This version is available at http://eprints.hud.ac.uk/id/eprint/28471/

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

http://eprints.hud.ac.uk/
Using self-management to control seizures

Edward, K. 1, 2, 3, Cook, M. 4, 5, Holland, C. 1, Perry, L. 5, Stephenson, J. 3, Giandinoto, J. 1, 2, Crane, R. 1, Molly, T. 5, Alderson, K. 5 & Kay, K. 2

1 St Vincent’s Private Hospital Melbourne, 2 Australian Catholic University, 3 University of Huddersfield (UK), 4 University of Melbourne, 5 St Vincent’s Hospital Melbourne

Introduction

Good lifestyle management has been shown to improve seizure control significantly. Benefits to almost 43% of patients have been reported from lifestyle interventions, a figure comparable to the introduction of new pharmacological agents (1-3). Education programs aimed at enhancing self-management behaviours for people with epilepsy may improve quality of life, seizure frequency and self-confidence, but they often do not feature in a comprehensive epilepsy treatment plan.

Aim

The aim of this study was to develop, deliver and evaluate the impact of an education intervention regarding lifestyle self-management in the control of seizures, health related quality of life (HRQoL), satisfaction with life and resilience for adults with epilepsy.

Method

A cohort with control study design was undertaken to evaluate the efficacy of the self-management education. Participants (n=60) were purposively sampled and allocated to the intervention (n=23) or a control condition (care as usual) (n=37). Baseline measures including medication adherence, resilience, HRQoL and satisfaction with life were taken on recruitment. Participants were also instructed to keep a seizure diary and these measures were repeated six months post intervention (time point 2).

The intervention

Self-management and lifestyle education for adults living with epilepsy is a theory informed, evidence-based and peer-reviewed education package developed specifically for the purpose of this study. The framework of the education package was based on Self-determination Theory (SDT) (4) and divided into four education modules: Managing Epilepsy and Medical Care, Socialising on a Budget, Leading a Healthy Lifestyle and Emotional Self-management. Education facilitators included Clinical Nurse Specialists in neurosciences, who received prior training from the research team comprising background information and instructions on how to conduct the two-hour face-to-face group session.

The participating site

The participating sites were two large hospitals in Melbourne, Australia, [one public and one large private hospital].

Sample

Participants (n=60) meeting the inclusion criteria were recruited through the neurology wards and consulting clinics of neurologists. Due to being a pilot study no sample size calculations were undertaken.

Results

Sixty patients were analysed at time point 1 [at recruitment] (37 control; 23 intervention). Thirty five patients were analysed at time point 2 (18 control; 17 intervention) (see table 1 for demographic data). Little’s MCAR test showed no evidence that data was not missing at random (N=0.04; p=0.809); hence attrition bias is not expected.

At time point 2 (6 months after the education) findings suggested moderate correlations particularly between resilience and satisfaction with life scores (r=0.551; p=0.001), medication adherence and psychological quality of life (QoL) scores (r=0.546; p=0.001), and psychological QoL and satisfaction with life scores (r=0.518; p=0.001). The mean seizure occurrences between the control and intervention groups were 12.71 (SD 13.40) and 6.76 (SD 13.40) respectively post intervention. Although not statistically significant, a reduction in seizure frequency within the intervention group may be substantiated in a study with a larger sample size.

Table 1. Participant demographic data at time point 2

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Category</th>
<th>COMPARISON GROUP: Frequency / Percentage (n = 60)</th>
<th>INTERVENTION GROUP: Frequency / Percentage (n = 23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>38 (63.3%)</td>
<td>16 (69.6%)</td>
</tr>
<tr>
<td>Age</td>
<td>18-24</td>
<td>11 (18.3%)</td>
<td>6 (26.1%)</td>
</tr>
<tr>
<td></td>
<td>25-34</td>
<td>16 (26.7%)</td>
<td>9 (39.1%)</td>
</tr>
<tr>
<td></td>
<td>35-44</td>
<td>6 (10.0%)</td>
<td>4 (17.4%)</td>
</tr>
<tr>
<td></td>
<td>45-54</td>
<td>4 (6.7%)</td>
<td>2 (8.7%)</td>
</tr>
<tr>
<td></td>
<td>55-64</td>
<td>3 (5.0%)</td>
<td>2 (8.7%)</td>
</tr>
<tr>
<td></td>
<td>Over 64</td>
<td>1 (1.7%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Diagnosis duration</td>
<td>Less than 6 months</td>
<td>18 (30.0%)</td>
<td>10 (43.5%)</td>
</tr>
<tr>
<td></td>
<td>6-12 months</td>
<td>12 (20.0%)</td>
<td>7 (30.4%)</td>
</tr>
<tr>
<td></td>
<td>1-5 years</td>
<td>20 (33.3%)</td>
<td>10 (43.5%)</td>
</tr>
<tr>
<td></td>
<td>More than a year</td>
<td>13 (21.7%)</td>
<td>7 (30.4%)</td>
</tr>
<tr>
<td>Distance from city</td>
<td>Less than 25km</td>
<td>10 (16.7%)</td>
<td>9 (39.1%)</td>
</tr>
<tr>
<td></td>
<td>25-50km</td>
<td>23 (38.3%)</td>
<td>7 (30.4%)</td>
</tr>
<tr>
<td></td>
<td>50-100km</td>
<td>1 (1.7%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td></td>
<td>Over 100km</td>
<td>4 (6.7%)</td>
<td>4 (17.4%)</td>
</tr>
<tr>
<td>VHA Ep Foundation (years)</td>
<td>No</td>
<td>17 (28.3%)</td>
<td>17 (73.9%)</td>
</tr>
</tbody>
</table>

Conclusion

This study has provided encouragement to further explore how lifestyle self-management practices for people with epilepsy can improve their sense of well-being and increase their personal potential for controlling seizures through the recognition and management of seizure triggers.

References


Contact

For more information: Prof Karen-Leigh Edward
SVPHM/ACU Research Unit
Tel: +61 3 9411 7338
Email: karenleigh.edward@svha.org.au

Acknowledgements

This study was gratefully supported by St Vincent’s Private Hospital Melbourne.

The researchers would also like to thank the participants for their time to be involved in the study.