



University of Dundee

Intention, beliefs and mood assessed using electronic diaries predicts attendance at cardiac rehabilitation

Jones, Martyn; Smith, Karen; Herber, Oliver; White, Myra; Steele, Fiona; Johnston, Derek W.

Published in:
International Journal of Nursing Studies

DOI:
[10.1016/j.ijnurstu.2018.08.015](https://doi.org/10.1016/j.ijnurstu.2018.08.015)

Publication date:
2018

Document Version
Peer reviewed version

[Link to publication in Discovery Research Portal](#)

Citation for published version (APA):
Jones, M., Smith, K., Herber, O., White, M., Steele, F., & Johnston, D. W. (2018). Intention, beliefs and mood assessed using electronic diaries predicts attendance at cardiac rehabilitation: An observational study. *International Journal of Nursing Studies*, 88, 143-152. <https://doi.org/10.1016/j.ijnurstu.2018.08.015>

General rights

Copyright and moral rights for the publications made accessible in Discovery Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from Discovery Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain.
- You may freely distribute the URL identifying the publication in the public portal.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Supplementary materials:

Table 1 (supplemental): Descriptive analysis of participants

| | Not attend | Attend | Total | | Not attend | Attend | Total |
|---------------------------|--|-----------|-------|----------------------------|------------|-----------|-------|
| Gender | | | | Living arrangements | | | |
| Male | 22/16.5% | 111/83.5% | 133 | Not alone | 22/16.4% | 11/83.6% | 134 |
| Female | 6/18.2% | 27/81.8% | 33 | yes, alone | 6/19.4% | 25/80.6% | 31 |
| Total | 28/16.9% | 138/83.1% | 166 | Total | 28/17.0% | 137/83.0% | 165 |
| Social deprivation | | | | Previous CHD | | | |
| Cat 1 (most) | 8/36.4% | 14/63.6% | 22 | No | 15/12.5% | 105/87.5% | 120 |
| Category 2 | 3/14.3% | 18/85.7% | 21 | MI | 10/33.3% | 20/66.7% | 30 |
| Category 3 | 4/12.9% | 27/87.1% | 31 | UAP | 3/25.0% | 9/75.0% | 12 |
| Category 4 | 11/19.6% | 45/80.4% | 56 | ACS | 0/0% | 1/100% | 1 |
| Cat 5 (least) | 2/5.6% | 34/94.4% | 36 | CABG | 0/0% | 1/100% | 1 |
| Total | 28/16.9% | 138/83.1% | 166 | OTHER | 0/0% | 1/100% | 1 |
| | | | | Total | 28/17.0% | 137/83.0% | 165 |
| Diagnosis | | | | Diabetes | | | |
| STEMI | 5/7.9% | 58/92.1% | 63 | No | 21/14.6% | 123/85.4% | 144 |
| NON-STEMI | 22/24.4% | 68/75.6% | 90 | NIDDM | 7/36.8% | 12.63.2% | 19 |
| UAP | 1/8.3% | 11/91.7% | 12 | IDDM | 0/0% | 3/100% | 3 |
| Total | 28/17.0% | 137/83.0% | 165 | Total | 28/16.9% | 138/83.1% | 166 |
| Smoking | | | | CVA | | | |
| Never smoked | 8/14.0% | 49/86.0% | 57 | No | 27/16.9% | 133/83.1% | 160 |
| Ex-smoker | 5/8.1% | 57/91.9% | 62 | Yes | 1/25.0% | 3/75.0% | 4 |
| Current | 15/31.9% | 32/68.1% | 47 | Total | 28/17.1% | 136/82.9% | 164 |
| Total | 28/16.9% | 138/83.1% | 166 | | | | |
| Exercise | | | | PVD | | | |
| No regular exercise | 12/26.7% | 33/73.3% | 45 | No | 22/14.9% | 126/85.1% | 148 |
| <20 mins x 3 wk | 4/21.1% | 15/78.9% | 19 | Yes | 4/30.8% | 9/69.2% | 13 |
| >20 mins x 3 wk | 12/11.8% | 90/88.2% | 102 | Total | 26/16.1% | 135/83.9% | 161 |
| Total | 28/16.9% | 138/83.1% | 166 | | | | |
| Key | % = row percentages: STEMI- ST elevation myocardial infarction; NSTEMI- Non- ST elevation myocardial infarction; UAP- Unstable Angina Pectoris; ACS- Acute Coronary Syndrome; CABG- Coronary Artery Bypass Grafting NIDDM- Non Insulin Dependent Diabetes; CVA- Cerebral Vascular Accident; PVD- Peripheral Vascular Disease | | | | | | |

Table 2 (supplemental): Descriptive statistics for time-varying variables from electronic diary

| Variable | N | Mean | s.d. | Min | Max | Between person reliabilities | Within- person reliabilities |
|--------------------------|----------|-------------|-------------|------------|------------|---|---|
| Weeks | 811 | 3.27 | 3.28 | 0.0 | 20.0 | - | - |
| Timeline (acute/chronic) | 811 | 58.06 | 35.34 | 0.0 | 100.0 | .99 | .70 |
| Consequences | 811 | 47.12 | 27.53 | 0.0 | 100.0 | .97 | .56 |
| Personal control | 811 | 79.07 | 18.44 | 11.0 | 100.0 | .89 | .14 |
| Treatment control | 811 | 71.28 | 20.85 | 0.0 | 100.0 | .94 | .44 |
| Illness coherence | 811 | 73.10 | 25.82 | 0.0 | 100.0 | .97 | .57 |
| Timeline (cyclical) | 811 | 32.88 | 26.48 | 0.0 | 100.0 | .96 | .54 |
| Emotional representation | 811 | 32.56 | 28.41 | 0.0 | 100.0 | .98 | .66 |
| Perceived necessity | 811 | 74.57 | 24.63 | 0.0 | 100.0 | .96 | .62 |
| Concerns re exercise | 811 | 26.96 | 26.59 | 0.0 | 100.0 | .94 | .08 |
| Practical barriers | 811 | 23.40 | 30.81 | 0.0 | 100.0 | .96 | .21 |
| Perceived suitability | 811 | 24.56 | 28.08 | 0.0 | 100.0 | .97 | .57 |
| CSE-Controlling symptoms | 748 | 2.61 | 0.92 | 0.0 | 4.0 | .98 | .66 |
| CSE-Maintaining function | 804 | 2.41 | 1.04 | 0.0 | 4.0 | .99 | .72 |
| Do not intend | 811 | .75 | 0.65 | 0.0 | 2.00 | - | - |
| Negative affect | 811 | 23.14 | 21.23 | 0.0 | 100.0 | .97 | .69 |
| Positive affect | 811 | 63.27 | 23.15 | 0.0 | 100.0 | .84 | .61 |

Table 3 (supplemental): Regression of EMA diary measures of cardiac-related beliefs and mood on validated questionnaire equivalents.

| Measure | Coefficient | SE | T | Sig |
|--------------------------------------|--------------------|-----------|----------|------------|
| Timeline Acute chronic (t1) | | | | |
| Intercept | 58.71 | 0.99 | 59.30 | <.0001 |
| Slope | 3.92 | 0.18 | 21.78 | <.0001 |
| Emotional representation (t1) | | | | |
| Intercept | 33.31 | 0.82 | 40.62 | <.0001 |
| Slope | 4.05 | 0.20 | 20.25 | <.0001 |
| Perceived necessity (t1) | | | | |
| Intercept | 74.39 | 0.83 | 89.63 | <.0001 |
| Slope | 3.45 | 0.36 | 9.58 | <.0001 |
| CSE-controlling symptoms (t1) | | | | |
| Intercept | 14.61 | 0.89 | 16.42 | <.0001 |
| Slope | 3.99 | 1.44 | 2.77 | 0.006 |
| CSE-maintaining function (t1) | | | | |
| Intercept | 11.12 | 0.52 | 21.34 | <.0001 |
| Slope | 3.00 | 0.56 | - | |
| Intention (t1) | | | | |
| Intercept | 85.07 | 0.85 | 100.08 | <.0001 |
| Slope | 9.76 | 0.93 | 10.49 | <.0001 |
| Anxiety (t1) with negative affect | | | | |
| Intercept | 23.46 | 0.68 | 34.50 | <.0001 |
| Slope | 2.40 | 0.18 | 13.33 | <.0001 |
| Depression (t1) with negative affect | | | | |
| Intercept | 23.46 | 0.67 | 35.01 | <.0001 |
| Slope | 2.71 | 0.20 | 13.55 | <.0001 |
| Anxiety (t1) with positive affect | | | | |
| Intercept | 63.01 | 0.76 | 90.01 | <.0001 |
| Slope | -2.29 | 0.20 | -11.45 | <.0001 |
| Depression (t1) with positive affect | | | | |
| Intercept | 63.01 | 0.72 | 87.51 | <.0001 |
| Slope | -3.21 | 0.21 | 15.29 | <.0001 |