Experiences Using Wearable Technology by Persons with Rheumatoid Arthritis Participating in a Physical Activity Counselling Intervention Study: A Relational Ethics Analysis

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Background

• Evidence indicates self-monitoring wearable technologies could support physical activity among people living with chronic illnesses, including arthritis.1
• Emerging research suggests using a physical activity wearable may have positive and negative influence in relationships that persons with arthritis have with themselves (i.e., their self-perception) and their health professionals.1
• Relational ethics is a suitable conceptual lens to further explore positives or negatives experienced in these relationships.2 Better understanding of these experiences can maximize benefits and minimize downsides in incorporating physical activity wearables in arthritis self-management.

Methods

• Guided by social constructivist grounded theory.3
• Participants sampled from a randomized controlled trial following participation in an 8-week physical activity counselling intervention.4 To be eligible, participants:
  • Had a physician-confirmed diagnosis of RA.
  • Had access to an email address and daily access to a computer or mobile device.
  • Lived in British Columbia, Canada.
  • A semi-structured one-to-one interview (50-180 mins) and phone follow-up; transcribed verbatim.
• Concepts of relational ethics (e.g., trust; respect) sensitized interview guide and analysis.
• Analysis continued until theoretical saturation, and peer-checking added rigour.
• Perspectives from patient partners sought to shape the research question and interpretations of data during analysis.

Physical Activity Counselling Intervention

Group education; goal setting

Fitbit

Biweekly phone call with a PT

Participant Characteristics (n=14)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Count</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Female</td>
<td>12</td>
<td>86%</td>
</tr>
<tr>
<td>Age Range (Median)</td>
<td>29-71</td>
<td></td>
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<tr>
<td>Bachelor Degree or Higher</td>
<td>7</td>
<td>50%</td>
</tr>
<tr>
<td>Met physical activity guidelines at baseline</td>
<td>9</td>
<td>64%</td>
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Findings

Negotiating Mutual Trustworthiness

Many felt moral responsibility as a trustworthy participant to wear their Fitbit.

Preserving self-respect through being active

Distrusting wearable data prompted moral tension with study PT.

Making autonomous choices about physical activity

Using Fitbit helped some to “something right”. Some felt ambivalent if physical activity goal wasn’t met.

Being active intertwined with moral values placed on self-control.

Conclusions

Using a relational ethical lens, we explored tensions arising within and influencing the relationships that participants had with themselves and others (i.e., the study PT, family members), as participants sought to construct a positive moral identity in the context of their everyday lives. Findings can inform the development and implementation of physical activity wearables into self-management in ways that are sensitive to ethical tensions experienced by persons with arthritis.