Intentional Nonadherence in Cancer Treatment Implementation: Identifying Key Factors for Personalised Interventions

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Background

- Self-administered cancer treatments offer greater convenience but continue to pose significant adherence challenges
- Poor adherence undermines treatment effectiveness and contributes to worse clinical outcomes and higher healthcare costs (Reshma et al., 2024)
- Nonadherence is multifactorial, encompassing both intentional and unintentional behaviours (Clifford et al., 2008)
- Intentional nonadherence reflects a deliberate decision not to take treatment, often driven by beliefs about necessity or concerns about side effects (Horne et al., 2013)
- Given this complexity, one-size-fits-all strategies are rarely effective (Nieuwlaat et al., 2014), highlighting the need for tailored interventions that address individual motivations and barriers to adherence in self-administered cancer treatments

Methodology

Aim Identify key reasons for intentional nonadherence in self-administered cancer treatment implementation

Design Cross-sectional e-survey of 126 adults with cancer

Measures
- Medication Adherence Report Scale (MARS-5; Chan et al., 2020) for adherence, with total scores dichotomised into adherent (score = 25) or nonadherent (score < 25)
- Intentional Nonadherence Scale (INAS; Weinman et al., 2018) for reasons for intentional nonadherence

Analysis
- Principal component analysis (maximum likelihood extraction, PROMAX rotation), specifying a four-factor solution
- Independent samples t-tests compared factor scores between adherent and nonadherent participants

Results

Sample Characteristics
- Age: 64% aged between 35–64 years
- Gender: 76% women
- Location: 44% UK; 40% US; 13% Europe; 3% Australasia
- Cancer: 50% breast; 17% thyroid; 7% blood; 6% male urologic
- Treatment: 97% prescribed oral treatment; 87% to take once-daily

Adherence Behaviour in the Implementation Phase
- 56% classified as nonadherent during the implementation phase
- No statistically significant differences in demographic or clinical characteristics between adherent and nonadherent participants

Four INAS Factors
- Accounted for 79% of the total variance and demonstrated high internal consistency (Cronbach's α = 0.90–0.96)
- Nonadherent participants scored significantly higher on all four factors ($p < .001$)

Reasons for Intentional Nonadherence

Figure 1: Percentage of participants endorsing each INAS item

1. **Sensitivity to Medicines** Concerns about side effects, harshness, bodily sensitivity
2. **Testing Treatment** Deliberate experimentation (e.g., skipping doses to see effects)
3. **Inconvenience** Schedule doesn't fit lifestyle, remembering is burdensome
4. **Resisting Illness & Medication** Desire to feel healthy, avoid reminders of illness

Discussion

- Identifies a four-factor structure underlying intentional nonadherence in cancer, providing a foundation for tailored adherence interventions in self-administered treatments
- Acceptance and Commitment Therapy (ACT) provides a promising framework to support self-management and treatment adherence in oncology (Al-Abbadey et al., 2025)
- ACT processes apply to the four factors of intentional nonadherence:
  - ➢Openness: Accepting side effects and treatment doubts (Sensitivity to Medicines; Testing Treatment)
  - ➢Awareness: Mindful engagement with treatment routines (Inconvenience)
  - ➢Engagement: Values-based action despite illness (Resisting Illness & Medication)
- Limitations: Self-selection and e-survey bias, self-reported data, potential oversimplification from dichotomising MARS-5 scores, and ACT-informed interventions remain conceptual and untested

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