Factors Associated with Hematopoietic Stem Cell Transplant Survivors’ Adherence to Medical Recommendations

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INTRODUCTION

- Hematopoietic Stem Cell Transplant (HSCT), a toxic but often lifesaving cancer treatment, puts patients at risk for life-threatening complications.
- To reduce these risks, transplant survivors must take medications and change their lifestyle and environment (e.g., avoiding certain foods) for months and sometimes years after treatment.
- Only a few studies have examined adherence to medication/medical advice in HSCT survivors.
- One study found 80% of participants reported non-compliance with medications/medical advice on at least one day.1
- Another study found that 58% of participants reported nonadherence with medications.2
- Elevated distress, male gender, and depression were associated with lower adherence.1
- This study assesses self-reported adherence rates in a sample of HSCT survivors and explores potential correlates with non-adherence.
- Findings could have important implications for understanding non-adherence in HSCT survivors.

OBJECTIVES

- To assess rates of self-reported adherence among a sample of HSCT survivors.
- To identify demographic and medical variables associated with lower adherence in HSCT survivors.

Study Design and Population

315 HSCT survivors enrolled in a randomized controlled trial to evaluate a psychosocial intervention.3 All were 9 months to 3 years post-transplant. Data for this study came from a pre-intervention baseline survey.

Measures

- Adherence to medical recommendations was assessed by asking participants if their medical team recommended: 1) dietary changes; 2) changes to social environment; 3) changes to home environment; 4) taking medications. They reported the extent to which they followed each recommendation.
- Demographic and medical variables that were significant in univariate analysis or indicated as an important predictor in prior research were included in the final model.
- Psychological distress was assessed using the Brief Symptom Inventory Global Severity Index.4

RESULTS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1 B</th>
<th>SE</th>
<th>Step 2 B</th>
<th>SE</th>
<th>Step 3 B</th>
<th>SE</th>
<th>Step 4 B</th>
<th>SE</th>
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<tbody>
<tr>
<td>Intercept</td>
<td>2.97</td>
<td>0.59</td>
<td>3.49</td>
<td>0.69</td>
<td>3.53</td>
<td>0.71</td>
<td>3.46</td>
<td>0.71</td>
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<tr>
<td>Education</td>
<td>0.10***</td>
<td>0.03</td>
<td>0.10***</td>
<td>0.03</td>
<td>0.08***</td>
<td>0.03</td>
<td>0.00***</td>
<td>0.03</td>
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<tr>
<td>Sex</td>
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<td>0.13</td>
<td>0.10</td>
<td>0.13</td>
<td>0.11</td>
<td>0.14</td>
<td>0.07</td>
<td>0.13</td>
</tr>
<tr>
<td>Race/ethnicity</td>
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<td>0.17</td>
<td>-0.26</td>
<td>0.17</td>
<td>-0.26</td>
<td>0.17</td>
<td>-0.27</td>
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<tr>
<td>Age</td>
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<td>0.01</td>
<td>-0.00</td>
<td>0.01</td>
<td>-0.00</td>
<td>0.01</td>
<td>-0.00</td>
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<td>Financial strain</td>
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<td>-</td>
<td>-0.14</td>
<td>0.10</td>
<td>-0.13</td>
<td>0.10</td>
<td>-0.16</td>
<td>0.10</td>
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<td>Distress</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.04</td>
<td>0.16</td>
<td>-0.10</td>
<td>0.16</td>
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<tr>
<td>History of GVHD</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.40**</td>
<td>0.13</td>
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<tr>
<td>F for step</td>
<td>4.25***</td>
<td>2.00</td>
<td>0.06</td>
<td>9.41</td>
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<td>R² for step</td>
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<td>0.06</td>
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<td>F for full model</td>
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</table>

- Slightly less than half (n=147; 46%) of survivors reported receiving at least one recommendation. Of these survivors:
  - 51.7% (n=76) reported less than complete adherence (<5)
  - 12.9% (n=19) reported moderate adherence (<3).

- Years of education (p<0.001) and prior history of GVHD (p<0.05) were associated with adherence.
- Financial strain was associated with adherence in univariate analysis (r=-0.184, p<0.05) but lost significance in the final model.

CONCLUSIONS

- Of those required to adhere to a recommendation, over half reported being less than completely adherent.
- Education, a variable associated with health disparities, was associated with lower adherence. Future investigation could explore whether health disparities impact adherence among HSCT survivors.
- Survivors with a history of GVHD, a life-threatening complication (almost exclusively experienced by people who receive transplanted stem cells from a donor, rather than their own stem cells) reported greater adherence.
- In contrast to other studies, gender and distress were not associated with adherence.

Limitations

- A self-reported measure of adherence could be subject to recall bias or social desirability bias.
- Our study design did not allow us to make causal inferences about factors that could predict lower adherence.

REFERENCES

4. Deming, LR, & Spencer, MS. The Brief Symptom Inventory (BSI): Administration, scoring, and procedures manual - 1. Baltimore: Johns Hopkins University School of Medicine, Clinical Psychometrics Research Unit; 1982.

CONTACT

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