Influence of Personal and Contextual Factors and Cognitive Appraisal on Quality of Life over Time in Persons Newly Diagnosed with Cancer

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Efficacy of Treatment

- Medical outcomes of cancer treatment and recovery are insufficient.
- Comprehensive outcome measurements evaluating recovery and survival as perceived by the individual are necessary.
- Measurement of this personal experience must include cognitive appraisal and quality of life.
The Cancer Diagnosis

- Different Meanings
- Responses
  - Emotional
  - Behavioral
- Time of Making Decisions
  - Treatment
  - Day to day functioning
  - Survival
The purpose of this longitudinal study was to assess personal and contextual factors and cognitive appraisals and their impact on quality of life over time for individuals facing a new diagnosis of cancer.
Transactional Model of Stress and Coping
(Lazarus & Folkman, 1984)

- Personal Characteristics
- Cognitive Appraisals
- Contextual Characteristics
- Affective Responses
- Physiological Responses
- Coping Strategies
- Adaptation
Method

- **Repeated Measures Design**
  - Collection of data at 3 times
  - Initial diagnosis, 4 months & 12 months

- **Non-probability Sample \((N = 120)\)**
  - Initial – 84 subjects with various cancer diagnoses; 70% response rate
  - 4 Months – 65 subjects (77%)
  - 12 Months – 48 subjects (74%)

- **Instruments**
  - Measures of: personal and contextual characteristics, cognitive appraisal, & quality of life
Instruments

- **Personal & Contextual Characteristics**
  - Researcher developed instrument to measure personal characteristics and treatment outcomes related to cancer

- **Cognitive Appraisal of Health Scale (CAHS)**
  - Measures primary (threat, challenge, harm/loss, benign/irrelevant) & secondary appraisals on a 5-point Likert scale (Kessler, 1993, 1998)

- **Quality of Life Index (QLI)**
  - Measures satisfaction & importance of factors contributing to overall quality of life on a 6-point Likert scale (Ferrans & Powers, 1984, 1998)
Personal Characteristics & Treatment Outcomes

- **Age:**
  \[ M = 62.04 \ (SD = 13.15) \]

- **Education:**
  \[ M = 13.5 \text{ years} \ (SD = 2.9) \]

- **Gender:**
  Females 71.4%

- **Marital Status:**
  Married 78.6%

- **Employment:**
  - 43% retired
  - 25% full time
  - 14% part-time
  - 11% disabled
  - 7% unemployed

- **Self-Treatment:** (\( n = 42 \))
  - 92.9% vitamins
  - 7.1% herbs
# Findings

<table>
<thead>
<tr>
<th></th>
<th>Threat (5-25)</th>
<th>Harm/Loss (8-40)</th>
<th>Challenge (6-30)</th>
<th>Benign/Irrelevant (4-20)</th>
<th>Quality of Life Index (0-30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Diagnosis</td>
<td>14.73</td>
<td>20.86</td>
<td>22.83</td>
<td>10.10</td>
<td>22.41</td>
</tr>
<tr>
<td>Time 2 4 months</td>
<td>12.98</td>
<td>22.15</td>
<td>17.33</td>
<td>13.54</td>
<td>23.29</td>
</tr>
<tr>
<td>Time 3 12 months</td>
<td>13.08</td>
<td>19.10</td>
<td>23.65</td>
<td>10.49</td>
<td>23.87</td>
</tr>
</tbody>
</table>
Findings

- **Regression Model at Initial Diagnosis**
  - Variables entered: age, time since diagnosis, number of symptoms, cognitive appraisals – threat, challenge, harm/loss, & benign/irrelevant on QOL

  - 7 Variables explained 86% of variance in QOL \( (F = 64.77, p < .001) \)

  - Challenge appraisals explained the greatest proportion of variance in QOL
Findings

- Regression Model 4 Months after Diagnosis
  - Variables entered: age, time since diagnosis, number of symptoms, cognitive appraisals – threat, challenge, harm/loss, & benign/irrelevant on QOL
  - 7 Variables explained 79% of variance in QOL ($F = 17.06, p < .001$)
  - Again, challenge appraisals explained the greatest proportion of variance in QOL
Findings

Regression Model 12 Months after Diagnosis

- Variables entered: age, time since diagnosis, number of symptoms, cognitive appraisals – threat, challenge, harm/loss, & benign/irrelevant on QOL

- 7 Variables explained 90% of variance in QOL ($F = 35.79, p < .001$)

- Now harm/loss and benign irrelevant appraisals explained the greatest proportion of variance in QOL
The findings provide theoretical support for the impact personal and contextual factors and cognitive appraisals have on quality of life following a diagnosis of cancer.

Personal characteristics of age, treatment outcomes of time since diagnosis and symptoms, along with primary appraisals explained quality of life at each measurement point.

There were variations in how these factors explained quality of life, with the strongest explanatory power at 12 months after diagnosis.
Conclusions

- Cognitive appraisals had a changing pattern over time.
  - Threat appraisals (past harm/loss) tended to decrease over time.
  - Surprisingly, harm/loss and benign/irrelevant appraisals increased while challenge appraisals decreased at 4 months indicating this time in the trajectory was associated with more negative appraisals.
  - Despite the cancer diagnosis and treatment, cognitive appraisals and quality of life were appraised positively.
Implications

- Understanding personal characteristics and treatment outcomes along with primary appraisals may help providers improve care and support survivors as they adapt to a cancer diagnosis and its treatment over time.
- Cognitive appraisals may change significantly during the first year following diagnosis along the treatment trajectory.
- Need to examine how those with differing diagnoses appraise and adapt to cancer over time.
Thank you.

Questions?

This project was supported by a Wheat Ridge Research Grant.