Introduction

- Self-rated health is an established marker of general health status and predicts long term morbidity and mortality.
- After Motor Vehicle Accidents, patients experience challenges with self-efficacy and return to work that extend well beyond the immediate time frame of discharge from acute health care.
- There is an abundance of literature on health during Acute Care or while receiving Rehabilitation after trauma. Information on long-term health status after Motor Vehicle Accidents for patients within the community, especially in Australia however is limited.
- In this context, we examined factors associated with general health status after Motor Vehicle Accidents from a survey of a community dwelling Compulsory Third Party (CTP) insurance claimants in Queensland, Australia.

Purpose

Examine the association between demographic, injury related variables and general health status as assessed by responses to questions based on dimensions (i.e. health states) of the EuroQol-5D (EQ-5D).

Methods

Study Population

- Participants from a survey conducted by the Centre of National Research on Disability and Rehabilitation Medicine (CONROD), Griffith University and the Motor Accident Insurance Commission (MAIC).
- Mail-in-surveys distributed to a random sample of 2500 claimants. Criteria for inclusion: age ≥18 years, completion of claim payments and non-critical injuries (fatalities, AIS categories 5 & 6 excluded).
- Responses were returned within 2 months, a draw for a $500 shopping voucher was provided as incentive.
- A total of 426 responses (17%) were received. Those with unusable information (n=216), missing IDs (n=1) and non-specific injuries (n=4) were additionally excluded. Final analytic sample comprised of 205 participants (8.2%).

Results

- A total of 426 responses (17%) were received.
- Responses were returned within 2 months, a draw for a $500 shopping voucher was provided as incentive.

Health Status after Motor Vehicle Accidents:
Results from a survey in Queensland
Srinivas Teppalla, Sanjoti Parekh, Elizabeth Kendall
The Hopkins Centre, Menzies Health Institute, Griffith University

Methods

Study Variables

- We examined age, gender, marital status, country of birth, spoken language, education level, employment status, income, injury severity, time since injury and whether participants received funded rehabilitation care.

Outcomes: EuroQol-5D (EQ-5D) Health States

- Responses to the 3-level EQ-5D health states including: Mobility, Self-Care, Usual Activities, Pain or Discomfort and Anxiety or Depression.

Results

- Table 1. Descriptive characteristics of the sample†

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sample (N=205)</th>
<th>Mean ± SD or N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years</td>
<td>48.4 ± 14.2</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>78 (38.1%)</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>127 (61.9%)</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single/never married</td>
<td>33 (16.1%)</td>
<td></td>
</tr>
<tr>
<td>Married/De facto</td>
<td>129 (62.9%)</td>
<td></td>
</tr>
<tr>
<td>Separated/Divorced/Widowed</td>
<td>43 (21.0%)</td>
<td></td>
</tr>
<tr>
<td>Spoken Language</td>
<td></td>
<td></td>
</tr>
<tr>
<td>From English speaking country</td>
<td>180 (87.8%)</td>
<td></td>
</tr>
<tr>
<td>From Non-English speaking country</td>
<td>23 (11.2%)</td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>81 (39.5%)</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>122 (59.5%)</td>
<td></td>
</tr>
<tr>
<td>Abbreviated Injury Scale categories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor injuries</td>
<td>160 (78.0%)</td>
<td></td>
</tr>
<tr>
<td>Moderate injuries</td>
<td>33 (16.1%)</td>
<td></td>
</tr>
<tr>
<td>Serious/severe injuries</td>
<td>12 (5.9%)</td>
<td></td>
</tr>
<tr>
<td>Time since Accident, years</td>
<td>3.4 ± 1.3</td>
<td></td>
</tr>
<tr>
<td>Received Rehabilitation Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>117 (57.1%)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>71 (34.6%)</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Problems with Mobility</td>
<td>137 (66.8%)</td>
<td></td>
</tr>
<tr>
<td>Have problems with Mobility</td>
<td>68 (33.2%)</td>
<td></td>
</tr>
<tr>
<td>Self-Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Problems with Self-Care</td>
<td>166 (81.0%)</td>
<td></td>
</tr>
<tr>
<td>Have problems with Self-Care</td>
<td>37 (18.1%)</td>
<td></td>
</tr>
<tr>
<td>Usual Activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Problems with Usual Activities</td>
<td>86 (41.9%)</td>
<td></td>
</tr>
<tr>
<td>Have problems with Usual Activities</td>
<td>118 (57.6%)</td>
<td></td>
</tr>
<tr>
<td>Pain or Discomfort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Pain or Discomfort</td>
<td>51 (24.9%)</td>
<td></td>
</tr>
<tr>
<td>Have Moderate to Extreme Pain or Discomfort</td>
<td>152 (74.1%)</td>
<td></td>
</tr>
<tr>
<td>Anxiety or Depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Anxiety or Depression</td>
<td>119 (58.0%)</td>
<td></td>
</tr>
<tr>
<td>Have Anxiety or Depression</td>
<td>86 (41.9%)</td>
<td></td>
</tr>
<tr>
<td>EQ-5D, 3 level index</td>
<td></td>
<td>0.77 ± 0.18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant Factor</th>
<th>Odds Ratio (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1 (referent)</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>0.42 (0.20, 0.89)</td>
<td>0.02*</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>1 (referent)</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>2.35 (1.13, 4.89)</td>
<td>0.02*</td>
</tr>
<tr>
<td>Time since injury, years</td>
<td>1.50 (1.13, 2.00)</td>
<td>0.005*</td>
</tr>
<tr>
<td>Problems with Self-Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>1 (referent)</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>2.00 (1.22, 3.38)</td>
<td>0.001*</td>
</tr>
<tr>
<td>Time since injury, years</td>
<td>1.38 (1.01, 1.86)</td>
<td>0.04*</td>
</tr>
<tr>
<td>Problems with Usual Activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time since injury, years</td>
<td>2.38 (1.68, 3.39)</td>
<td>&lt;0.0001*</td>
</tr>
<tr>
<td>Pain or Discomfort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety or Depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>County of Birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia 1 (referent)</td>
<td>0.33 (0.15, 0.71)</td>
<td>0.0002*</td>
</tr>
<tr>
<td>Other countries</td>
<td>1 (referent)</td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>1.09 (0.87, 1.38)</td>
<td>0.6</td>
</tr>
<tr>
<td>Time since injury, years</td>
<td>1.35 (0.93, 1.77)</td>
<td>0.07*</td>
</tr>
<tr>
<td>EQ-5D Index (3-level)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>0 (referent)</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>-0.10 ± 0.03</td>
<td>0.0003*</td>
</tr>
<tr>
<td>Time since injury, years</td>
<td>-0.03 ± 0.01</td>
<td>0.009*</td>
</tr>
</tbody>
</table>

*Statistically significant for age, gender, country of birth, education, employment, income, injury severity, time since injury and rehabilitation.

Conclusion

- Gender, country of birth, employment status and time since injury were associated with individual health states of the EQ-5D.
- Employment and time since injury were consistently associated with overall health status (EQ-5D index score).
- Future prospective studies with larger representative samples are required to confirm our findings.