Quality of life and social function of earthquake survivors with spinal cord injury one year after returning to community

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Background

- 30 months after Wenchuan Earthquake
- Functional recovery after the early-stage of rehabilitation rescue in SCI survivors
- ? QOL & social function in the community
- ? What will be paid attention to in the long-term rehabilitation strategy for SCI?
Method

Quality of Life

Social Function

On-site Survey

AISA

Complication

Pain

Ability of Daily Living

Depression

Gender/ Age/ Marriage/ Education/ Employment/ Annual income
World Health Organization Quality of Life Assessment Instrument-Bref (WHOQOL-BREF)

- The most appropriate scale for QOL of SCI patient

- Individual’s overall perception of QOL & health
- Domain: Physical Health/ Psychological/ Social Relationship/ Environment

Method

Quality of Life

Social Function

Craig Handicap Assessment and Reporting Technique Short Form (CHART-SF)

- Physical Independence
- Cognitive Independence
- Mobility
- Occupation
- Social Integration
- Economic Self-Sufficiency


Gender/ Age/ Marriage/ Education/ Employment/ Annual income
Method

Quality of Life

Social Function

On-site Survey

- Gender/ Age/ Marriage/ Education/ Employment/ Annual income
- AISA
- Complication
- Pain
- Ability of Daily Living
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Method

Quality of Life

Social Function

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- Gender/ Age/ Marriage/ Education/ Employment/ Annual income
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Method

Quality of Life

Social Function

(1) AIS A-C

(2) AIS D-E & SCI Syndrome

Complication

Pain

Ability of Daily Living

Depression

Gender/ Age/ Marriage/ Education/ Employment/ Annual income

AISA

AIS A-C

AIS D-E & SCI Syndrome

Method
Method

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Complication

Pressure Sore/ UTI / Cystolith / Neurogenic Bladder/ Rectum Impairment of Renal Function ...

Living

Depression

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Quality of Life

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Visual Analogue Scale (VAS)

Depression
Method

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Pain

Ability of Daily Living

Modified Barthel Index (MBI)

Depression
Method

Patient Health Questionnaire Depression Module (PHQ-9)

- < 5 point: No need for treatment
- 5-14 point: Support, watchful waiting
- > 15 point: Antidepressant and/or psychotherapy

Result

Age from 20 to 79 (52.6 ± 15.8 years old)
Result

Gender
- Male: 58.8%
- Female: 41.2%

Marriage
- Married: 80.8%
- Single: 15.4%
- Widowed: 3.85%
The average family income in 2010:

RMB $5375 \pm 3186$

Below the average annual income in rural China
## Result

<table>
<thead>
<tr>
<th>AIS</th>
<th>Above C7</th>
<th>C8-T6</th>
<th>T7-L2</th>
<th>L3-S2</th>
<th>Below S2</th>
<th>Total</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>23.1%</td>
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<tr>
<td>B</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>7.60%</td>
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<tr>
<td>C</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>26.9%</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td></td>
<td>11</td>
<td>42.3%</td>
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<tr>
<td>Total</td>
<td>3</td>
<td>1</td>
<td>19</td>
<td>1</td>
<td>2</td>
<td>26</td>
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## Result

<table>
<thead>
<tr>
<th></th>
<th>Above C7</th>
<th>C8-T6</th>
<th>T7-L2</th>
<th>L3-S2</th>
<th>Below S2</th>
<th>Total</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td><strong>Wheelchair Independent</strong></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td>53.8%</td>
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<tr>
<td><strong>Using orthotics and/or aids</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>23.1%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Walk independently</strong></td>
<td>3</td>
<td>5</td>
<td></td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>23.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3</td>
<td>1</td>
<td>19</td>
<td>1</td>
<td>2</td>
<td>26</td>
<td></td>
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## Result

<table>
<thead>
<tr>
<th>Condition</th>
<th>Above C7</th>
<th>C8-T6</th>
<th>T7-L2</th>
<th>L3-S2</th>
<th>Below S2</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>3</td>
<td>1</td>
<td>19</td>
<td>1</td>
<td>2</td>
<td>26</td>
<td>100%</td>
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<tr>
<td>New pressure sore</td>
<td>1</td>
<td>10</td>
<td></td>
<td></td>
<td>1</td>
<td>12</td>
<td>46.2%</td>
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<tr>
<td>Neurogenic bladder</td>
<td>1</td>
<td>12</td>
<td></td>
<td></td>
<td>1</td>
<td>14</td>
<td>53.8%</td>
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<tr>
<td>Cystolith</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>7.69%</td>
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<tr>
<td>Neurogenic Rectum</td>
<td>1</td>
<td>8</td>
<td></td>
<td>2</td>
<td></td>
<td>11</td>
<td>42.3%</td>
</tr>
<tr>
<td>Heterotopic ossification</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3.85%</td>
</tr>
</tbody>
</table>
Result

- Discharge VS Return to community for 1 year
- Paired T test

<table>
<thead>
<tr>
<th>CHART</th>
<th>Discharge</th>
<th>In community</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total score</td>
<td>322±87.0</td>
<td>344±80.8</td>
<td>-1.58</td>
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<tr>
<td>Physical Independence</td>
<td>89.4±11.2</td>
<td>96.4±4.70</td>
<td>-3.90</td>
<td>0.001</td>
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<tr>
<td>Cognitive Independence</td>
<td>78.5±24.5</td>
<td>56.9±19.8</td>
<td>4.01</td>
<td>0.000</td>
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<tr>
<td>Mobility</td>
<td>51.2±20.5</td>
<td>67.4±28.0</td>
<td>-2.84</td>
<td>0.009</td>
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<td>Occupation</td>
<td>39.5±32.0</td>
<td>42.2±35.4</td>
<td>-2.90</td>
<td>0.108</td>
</tr>
<tr>
<td>Social Integration</td>
<td>63.0±25.5</td>
<td>66.6±27.7</td>
<td>-1.03</td>
<td>0.315</td>
</tr>
</tbody>
</table>
Attention for the next step

- Chronic neuropathic pain
- Depression
- Employment
Rehabilitation Rescue after the Disaster

- Early and comprehensive intervention of rehab

- **Functional impact:**
  Improve ADL, reduce complication and relieve symptom of depression

- **Long-term impact:**
  Improve QOL and social participation, promote re-employment


QOL and social function were significantly improved after Returning to the community.

Main factors: ADL, pain and depression.

Early rehabilitation can improve QOL and social function, even can be extended in the community.

Long-term rehabilitation strategy should pay attention to vocational training and social integration.
Thank you!