Appendix 1

Consent form
Appendix 2

Personal information data sheet (developed by investigator)
### Hamilton Anxiety Rating Scale (HAM-A)

Below is a list of phrases that describe normal feeling that people have. Rate the patient by finding the answer which best describes the extent to which he/she has these conditions. Select one of the five responses for each of the fourteen questions.

<table>
<thead>
<tr>
<th>0 = Not present</th>
<th>1 = Mild</th>
<th>2 = Moderate</th>
<th>3 = Severe</th>
<th>4 = Very severe</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Anxiety mood</strong></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Worry, anticipation of the worst, fearful anticipation, irritability.</td>
<td></td>
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</tr>
<tr>
<td><strong>2. Tension</strong></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Feelings of tension, fidgeting, startle response, moved to tears easily, trembling, feelings of restlessness, inability to relax.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>3. Fears</strong></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Of dark, of strangers, of being left alone, of animals, of traffic, of crowds.</td>
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<td></td>
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<tr>
<td>Difficulty in falling asleep, broken sleep, unrefreshing sleep and fatigue on waking, dreams, nightmares, night terrors.</td>
<td></td>
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<tr>
<td>Difficulty in concentration, poor memory.</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Loss of interest, lack of pleasure in hobbies, depression, early waking, durnal swing.</td>
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<tr>
<td><strong>7. Somatic (muscular)</strong></td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Pain and aches, trembling, stiffness, rigidity, tension, cramping of teeth, unsteady voice, increased muscular tone.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tinnitus, blurring of vision, hot and cold flashes, feelings of weakness, probing sensation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tachycardia, palpitations, pain in chest, throbbing of vessels, fluctuating feelings, moving heart.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure or constriction in chest, choking feelings, sighing, deep breath.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty in swallowing, wind abdominal pain, burning sensations, abdominal fulness, nausea, vomiting, constipation, looseness of bowels, loss of weight, constipation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency of micturition, urgency of micturition, amenorrhea, menorrhagia, development of rigidity, premature ejaculation, loss of libido, impotence.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry mouth, flushing, pallor, tendency to sweat, giddiness, tension headache, nausea of hair.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fidgeting, redness of nose, pinching of hands, finger tremor, strained face, sighing or rapid respiration, facial pallor, swallowing, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 4

Hamilton anxiety rating scale (Malayalam translation)
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Appendix 5

Beck depression inventory (English)

Beck's Depression Inventory
This depression inventory can be self-scored. The scoring scale is at the end of the questionnaire.

1. 0 I do not feel sad.
1 1 I feel sad.
2 2 I am sad all the time and I can’t snap out of it.
3 3 I am so sad and unhappy that I can’t stand it.

2. 0 I am not particularly discouraged about the future.
1 1 I feel discouraged about the future.
2 2 I feel I have nothing to look forward to.
3 3 I feel the future is hopeless and that things cannot improve.

3. 0 I do not feel like a failure.
1 1 I feel I have failed more than the average person.
2 2 As I look back on my life, all I can see is a lot of failures.
3 3 I feel I am a complete failure as a person.

4. 0 I get as much satisfaction out of things as I used to.
1 1 I don’t enjoy things the way I used to.
2 2 I don’t get real satisfaction out of anything anymore.
3 3 I am dissatisfied or bored with everything.

5. 0 I don’t feel particularly guilty
1 1 I feel guilty a good part of the time.
2 2 I feel quite guilty most of the time.
3 3 I feel guilty all of the time.

6. 0 I don’t feel I am being punished.
1 1 I feel I may be punished.
2 2 I expect to be punished.
3 3 I feel I am being punished.

7. 0 I don’t feel disappointed in myself.
1 1 I am disappointed in myself.
2 2 I am disgusted with myself.
3 3 I hate myself.

8. 0 I don’t feel I am any worse than anybody else.
1 1 I am critical of myself for my weaknesses or mistakes.
2 2 I blame myself all the time for my faults.
3 3 I blame myself for everything bad that happens.

9. 0 I don’t have any thoughts of killing myself.
1 1 I have thoughts of killing myself, but I would not carry them out.
2 2 I would like to kill myself.
3 3 I would kill myself if I had the chance.

10. 0 I don’t cry any more than usual.
1 1 I cry more now than I used to.
2 2 I cry all the time now.
3 3 I used to be able to cry, but now I can’t cry even though I want to.
<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>I am no more irritated by things than I ever was.</td>
<td>1</td>
<td>I am slightly more irritated now than usual.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>I am quite annoyed or irritated a good deal of the time.</td>
<td>3</td>
<td>I feel irritated all the time.</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>I have not lost interest in other people.</td>
<td>0</td>
<td>I am less interested in other people than I used to.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I have lost most of my interest in other people.</td>
<td>2</td>
<td>I have lost all of my interest in other people.</td>
<td>3</td>
</tr>
<tr>
<td>13.</td>
<td>I make decisions about as well as I ever could.</td>
<td>0</td>
<td>I put off making decisions more than I used to.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I have greater difficulty in making decisions more than I used to.</td>
<td>2</td>
<td>I can't make decisions at all anymore.</td>
<td>3</td>
</tr>
<tr>
<td>14.</td>
<td>I don't feel that I look any worse than I used to.</td>
<td>0</td>
<td>I am worried that I am looking old or unattractive.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I feel there are permanent changes in my appearance that make me look unattractive</td>
<td>2</td>
<td>I believe that I look ugly.</td>
<td>3</td>
</tr>
<tr>
<td>15.</td>
<td>I can work about as well as before.</td>
<td>0</td>
<td>It takes an extra effort to get started at doing something.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I have to push myself very hard to do anything.</td>
<td>2</td>
<td>I can't do any work at all.</td>
<td>3</td>
</tr>
<tr>
<td>16.</td>
<td>I can sleep as well as usual.</td>
<td>0</td>
<td>I don't sleep as well as I used to.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.</td>
<td>2</td>
<td>I wake up several hours earlier than I used to and cannot get back to sleep.</td>
<td>3</td>
</tr>
<tr>
<td>17.</td>
<td>I don't get more tired than usual.</td>
<td>0</td>
<td>I get tired more easily than I used to.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I get tired from doing almost anything.</td>
<td>2</td>
<td>I am too tired to do anything.</td>
<td>3</td>
</tr>
<tr>
<td>18.</td>
<td>My appetite is no worse than usual.</td>
<td>0</td>
<td>My appetite is not as good as it used to be.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>My appetite is much worse now.</td>
<td>2</td>
<td>I have no appetite at all anymore.</td>
<td>3</td>
</tr>
<tr>
<td>19.</td>
<td>I haven't lost much weight, if any, lately.</td>
<td>0</td>
<td>I have lost more than five pounds.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I have lost more than ten pounds.</td>
<td>2</td>
<td>I have lost more than fifteen pounds.</td>
<td>3</td>
</tr>
</tbody>
</table>

339
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>I am no more worried about my health than usual.</td>
</tr>
<tr>
<td>0</td>
<td>I am worried about physical problems like aches, pains, upset stomach, or constipation.</td>
</tr>
<tr>
<td>1</td>
<td>I am very worried about physical problems and it's hard to think of much else.</td>
</tr>
<tr>
<td>2</td>
<td>I am so worried about my physical problems that I cannot think of anything else.</td>
</tr>
</tbody>
</table>

|21 | I have not noticed any recent change in my interest in sex. |
|0  | I am less interested in sex than I used to be. |
|1  | I have almost no interest in sex. |
|2  | I have lost interest in sex completely. |
Appendix 6

Beck depression inventory (Malayalam translation)
Appendix 7
PGI General well being measure (English & Malayalam)
## Appendix 8
### Oswestry low back pain scale (English)

**MODIFIED OSWESTRY LOW BACK PAIN DISABILITY QUESTIONNAIRE**

<table>
<thead>
<tr>
<th>Section 1: To be completed by patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>Occupation:</td>
</tr>
</tbody>
</table>

| Section 2: To be completed by patient |

This questionnaire has been designed to give your therapist information as to how your back pain has affected your ability to manage in every day life. Please answer every question by placing a mark on the line that best describes your condition today. We realize you may feel that two of the statements may describe your condition, but *please mark only the line which most closely describes your current condition.*

### Pain Intensity

- The pain is mild and comes and goes.
- The pain is moderate and does not vary much.
- The pain is severe and comes and goes.
- The pain is not severe and does not vary much.

### Personal Care (Washing, Dressing, etc.)

- I do not have to change the way I wash and dress myself to avoid pain.
- I do not normally change the way I wash or dress myself even though it causes some pain.
- Washing and dressing increases my pain, and I find it necessary to change the way I do it.
- Because of my pain I am partially unable to wash and dress without help.

### Lifting

- I can lift heavy weights without increased pain.
- I can lift heavy weights but it causes increased pain.
- Pain prevents me from lifting heavy weights off of the floor, but I can manage if they are conveniently positioned (ex. on a table, etc.).
- Pain prevents me from lifting heavy weights off of the floor, but I can manage light to medium weights if they are conveniently positioned.
- I can lift only very light weights.
- I can not lift or carry anything at all.

### Walking

- I have no pain when walking.
- I have pain when walking, but I can still walk my required normal distances.
- Pain prevents me from walking long distances.
- Pain prevents me from walking intermediate distances.
- Pain prevents me from walking even short distances.
- Pain prevents me from walking at all.

### Sitting

- Sitting does not cause me any pain.
- I can only sit as long as I like providing that I have my choice of seating surfaces.
- Pain prevents me from sitting for more than 1 hour.
- Pain prevents me from sitting for more than 1/2 hour.
- Pain prevents me from sitting for more than 10 minutes.
- Pain prevents me from sitting at all.
### OSWESTRY QUESTIONNAIRE, p. 2

**Section 2 (cont'd): To be completed by patient**

**Standing**
- I can stand as long as I want without increased pain.
- I can stand as long as I want but my pain increases with time.
- Pain prevents me from standing more than 1 hour.
- Pain prevents me from standing more than 1/2 hour.
- Pain prevents me from standing more than 10 minutes.
- I avoid standing because it increases my pain right away.

**Sleeping**
- I get no pain when I am in bed.
- I get pain in bed, but it does not prevent me from sleeping well.
- Because of my pain, my sleep is only 1/4 of my normal amount.
- Because of my pain, my sleep is only 1/2 of my normal amount.
- Pain prevents me from sleeping at all.

**Social Life**
- My social life is normal and does not increase my pain.
- My social life is normal, but it increases my level of pain.
- Pain prevents me from participating in more energetic activities (ex. sports, dancing, etc.)
- Pain prevents me from going out very often.
- Pain has restricted my social life to my home.
- I have hardly any social life because of my pain.

**Traveling**
- I get no increased pain when traveling.
- I get some pain while traveling, but none of my usual forms of travel make it any worse.
- I get increased pain while traveling, but it does not cause me to seek alternative forms of travel.
- I get increased pain while traveling which causes me to seek alternative forms of travel.
- My pain restricts all forms of travel except that which is done while I am lying down.
- My pain restricts all forms of travel.

**Employment/Homemaking**
- My normal job/homemaking activities do not cause pain.
- My normal job/homemaking activities increase my pain, but I can still perform all that is required of me.
- I can perform most of my job/homemaking duties, but pain prevents me from performing more physically stressful activities (ex. lifting, vacuuming)
- Pain prevents me from doing anything but light duties.
- Pain prevents me from performing any job or homemaking chores.

**Section 3: To be completed by physical therapist/provider**

**SCORE: Initial %**  Subsequent %  Subsequent %  Discharge %

**Number of treatment sessions:**

**Diagnosis/ICD-9 Code:**
Neck Disability Index

This questionnaire has been designed to give the doctor information as to how your neck pain has affected your ability to manage in everyday life. Please answer every section and mark in each section only the ONE box which applies to you. We realise you may consider that two of the statements in any one section relate to you, but please just mark the box which most closely describes your problem.

Section 1 – Pain Intensity

- The pain is very mild at the moment. (1)
- The pain is moderate at the moment. (2)
- The pain is fully severe at the moment. (3)
- The pain is very severe at the moment. (4)
- The pain is the worst imaginable at the moment. (5)

Section 2 – Personal Care (Visting, Dressing, etc.)

- I can look after myself normally without causing extra pain. (1)
- I can look after myself normally but it causes extra pain. (2)
- It is painful to look after myself and I am slow and careful. (3)
- I need some help but manage most of my personal care. (4)
- I need help for every day in most aspects of self care. (5)

Section 3 – Lifting

- I can lift heavy weights without extra pain. (1)
- I can lift heavy weights but it causes extra pain. (2)
- Pain prevents me from lifting heavy weights off the floor, but I can manage if they are conveniently positioned, for example on a table. (3)
- Pain prevents me from lifting heavy weights, but I can manage light to medium weights if they are conveniently positioned. (4)
- I can lift very light weights. (5)

Section 4 – Handling

- I can hold as much as I want to with no pain in my neck. (1)
- I can hold as much as I want to with slight pain in my neck. (2)
- I can hold as much as I want to with moderate pain in my neck. (3)
- I can hold as much as I want to because of moderate pain in my neck. (4)
- I can hardly hold at all because of severe pain in my neck. (5)

Section 5 – Recreations

- I have no headaches at all. (1)
- I have occasional headaches which are infrequent. (2)
- I have moderate headaches which come infrequently. (3)
- I have severe headaches which come frequently. (4)
- I have headaches almost all the time. (5)

Section 6 – Concentration

- I can concentrate fully when I want to with no difficulty. (1)
- I can concentrate fully when I want to with slight difficulty. (2)
- I have a fair degree of difficulty in concentrating when I want to. (3)
- I have a lot of difficulty in concentrating when I want to. (4)
- I have a great deal of difficulty in concentrating when I want to. (5)

Section 7 – Work

- I can do as much work as I want to. (1)
- I can do my usual work, but not more. (2)
- I can do most of my usual work, but not more. (3)
- I cannot do my usual work. (4)
- I can hardly do any work at all. (5)

Section 8 – Driving

- I can drive my car without any neck pain. (1)
- I can drive my car as long as I want with slight pain in my neck. (2)
- I cannot drive my car as long as I want because of moderate pain in my neck. (3)
- I cannot drive my car as long as I want because of moderate pain in my neck. (4)
- I can hardly drive at all because of severe pain in my neck. (5)
- I cannot drive my car at all. (6)

Section 9 – Sleeping

- I have no trouble sleeping. (1)
- My sleep is slightly disturbed (less than 1 hour sleeploss). (2)
- My sleep is moderately disturbed (1-2 hours sleeploss). (3)
- I sleep is moderately disturbed (3-4 hours sleeploss). (4)
- My sleep is greatly disturbed (5-6 hours sleeploss). (5)
- My sleep is completely disturbed (7 hours sleeploss). (6)

Section 10 – Recreation

- I am able to engage in all my normal recreational activities with no neck pain at all. (1)
- I am able to engage in all my normal recreational activities, with some pain in my neck. (2)
- I am able to engage in most, but not all, of my normal recreations activities because of pain in my neck. (3)
- I am unable to engage in any of my usual recreations activities because of pain in my neck. (4)
- I cannot do any recreational activities because of pain in my neck. (5)

S-4 No disability
S-14 Mild disability
15-24 Moderate disability
25-34 Severe disability
> 35 Complete disability
Appendix 9
Oswestry low back pain scale (Malayalam)
### Physical examination checklist

#### Posture
- Creases
- Sway back
- Flat back
- Kypholordosis
- Shifted posture

#### Movements
- Active movements
  - Flexion
  - Extension
  - Side flexion
- Passive Physiological Inter Vertebral Movements
  - Over pressure
  - Repeated Movements

#### Assessing the Sacro Iliac joints
- Sitting flexion (Piedello’s sign)
- Standing flexion (Stolk test)

#### Compression tests
- Posterior ligament
- Anterior ligament (Faber’s test)

#### Neurological testing
- Referred pain
- Paraesthesia
- Anesthesia
Dermatome

Myotome
- L2 Hip flexion
- L3 Hip flexion, Knee extension
- L4 Knee extension, Ankle dorsi flexion
- L5 Great toe, dorsi flexion, eversion
- S1 / S2 Ankle plantar flexion, knee flexion
- S3 / S4 Rectal sphincter

Reflexes
- Patellar reflex
- Ankle reflex
- Babinske reflex
Adverse Mechanical tension

- Passive neck flexion
- Straight leg raise (Lasegue's test)
- Prone knee bent (Femoral nerve stretch)
- Slump test

Test for Lumbopelvic stability

Palpation

Accessory spinal movements