Development of the Measurement Tools of Personal Cognitive Features from the View Point of Yoga Therapy

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TODAY’S TOPICS

1. Why Does Yoga Therapy Need Assessment Tools?
2. Ultimate Goal of Yoga Therapy
3. What is Yoga therapy Darshana?
4. Measuring Personal Cognitive Features
Treatment/Instruction Theory
after Yoga Therapy Assessment

- Annamaya Kosha (Food Sheath) ➔ Yoga Therapy Assessment ➔ Asana (pose), Pranayama (breathing)
- Pranamaya Kosha (Vital Sheath) ➔ Asana, Pranayama
- Manomaya Kosha (Mind Sheath) ➔ Pratyahara, Mindful Observation
- Vijnanamaya Kosha (Intellect Sheath) ➔ Meditation, Psycho-education, Darshana
- Anandamaya Kosha (Bliss Sheath) ➔ Meditation, Psycho-education, Darshana
Why Does Yoga Therapy Need Assessment Tools?
- Effective Assessment
- Modify Cognition for Perfect Health
Cognitive Modification

- Guide the client to modify cognition for perfect health
- Identify the problem areas in the client’s cognition
- Guide the client so that cognitive changes occur as a result of the client’s own efforts
- Provide instruction in meditation with an understanding of the client’s cognitive features
- Darshana for modifying client’s deeper beliefs
- Interviewing skills are essential
Yoga Therapy Darshana is based on the Traditional Yogic Interview, called Darshana.

• Assess and give instructions.
• Correcting wrong cognition and distorted recognition.
Process of Cognitive Modification in Darshana

1. Psychoeducation (Buddhi education)
2. Alignment of goals
3. Collecting information
4. Assessment of personal cognitive features
5. Interpretation and confrontation
6. Let go of attachments
7. Re-education with the wisdom of yoga
8. Construct alternative solutions
9. Experiment with the alternatives
Measuring Personal Cognitive Features
We Need Assessment Tools Measuring Personal Cognitive Features

For the assessment of personal cognitive features

Our assessment tools tries to identify the points of the personal deep attachment

This assessment is different from the assessment about the states of cognitive functions
Scales measuring "psychological tendencies" and “degrees of cognitive functions“ are common, and can be divided into the following categories:

- **Self** (self-concept, self-conceit feelings, a self-feeling of affirmation, the formation of the self identity)
- **Cognitive feelings and desires** (cognitive tendency of judgment, feelings, incentive, desire)
- **The interpersonal recognitions and attitudes** (interpersonal attitudes, interpersonal emotions, empathy (compassion), attachment, dependence)
- **Close relationships** (couple, parents and children, family, friends, lovers)
- **Interpersonal actions** (helping, attack, anger)
- **Communications** (self-openness, self-expression, communication, the Internet, cell-phone)
- **Social Attitudes** (sense of values, social attitudes, gender)

There are many scales about cognition, but they show the relative tendencies of target psychological characteristics.

<table>
<thead>
<tr>
<th>Cognition Scale</th>
<th>Representative Example</th>
<th>Measured Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self</strong></td>
<td>Rosenberg (1965) Self Esteem Scale; RSES</td>
<td>The degree of self-esteem.</td>
</tr>
<tr>
<td><strong>Cognition, feelings and desires</strong></td>
<td>Rotter (1966) I-E Scale</td>
<td>The degree a person thinks he/she can control success or failure.</td>
</tr>
<tr>
<td><strong>The interpersonal recognitions and attitudes</strong></td>
<td>Katsuya (2004) Revised edition-Reassurance-seeking Scale</td>
<td>The degree a person’s thinking/actions seeks reassurance that others important to that person care about him/her.</td>
</tr>
<tr>
<td><strong>Interpersonal actions</strong></td>
<td>Hakoi, Takagi (1987) Normative attitude towards Helping Scale</td>
<td>The degree of the moral consciousness.</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Jourard &amp; Laskow (1978) JSDQ</td>
<td>The degree of the self-openness.</td>
</tr>
<tr>
<td><strong>Social manner</strong></td>
<td>Sakai, Yamaguchi, Hisano (1998) Value-Intention Scale</td>
<td>The degree of intentional based on the types of personal values based on Spranger (1966)</td>
</tr>
</tbody>
</table>
These cognitive function scales measure the degree of the function.

<table>
<thead>
<tr>
<th>Representative Examples of Cognitive Function Scales</th>
<th>Characteristic of the Scale</th>
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</thead>
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<tr>
<td>Folstein, M. F. (1975) MMSE</td>
<td>Scale to quantify cognitive functional disorders</td>
</tr>
<tr>
<td>Hughes (1982) CDR</td>
<td>Method to evaluate clinical dementia</td>
</tr>
<tr>
<td>Wechsler (1955) WAIS</td>
<td>IQ test for adults</td>
</tr>
<tr>
<td>Yesavage (1982) GDS</td>
<td>Depression scale for elderly people</td>
</tr>
<tr>
<td>Rosen (1984) ADASCOG</td>
<td>Alzheimer’s disease rating scale</td>
</tr>
<tr>
<td>Cummings (1994) NPI (Neuropsychiatric Inventory)</td>
<td>Evaluating scale for BPSD of dementia.</td>
</tr>
<tr>
<td>Representative scale name</td>
<td>Factors</td>
</tr>
<tr>
<td>----------------------------</td>
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</tr>
<tr>
<td>DACS：Depression and Anxiety Cognitive Scale (measures thoughts that cause depression and anxiety)</td>
<td>Negative view of the future, prediction of threatening/disgusting situations, negative self-evaluation, negative evaluation of the past, threat/disgust of specific situations.</td>
</tr>
<tr>
<td>DAMS：Depression and Anxiety Mood Scale (measures degrees of depression and anxiety).</td>
<td>Feelings of depression, feelings of anxiety</td>
</tr>
<tr>
<td>JIBT-R：Japanese Irrational belief Test - Revised</td>
<td>Self-expectation, dependence, avoidance, feeling of external helplessness, feeling of internal helplessness</td>
</tr>
<tr>
<td>PMS ：The Positive Mood Scale</td>
<td>Relaxation, friendliness, liveliness, concentration</td>
</tr>
<tr>
<td>PATS：Positive Automatic Thought Scale</td>
<td>Trust in positive evaluations, positive evaluation of life, trust of others, trust in surroundings, feeling like there is plenty of time, motivation</td>
</tr>
</tbody>
</table>

A characteristic of the questionnaire under development is that cognitive characteristics are defined based on teachings of traditional Yogic philosophy.
DEVELOPING TOOLS

1. The Yoga Therapy Assessment Scale of Spirituality
2. Questionnaire for Alexicosmia for Yoga Therapy Assessment
3. Questionnaire for Evaluating Psychological Dosha
The Yoga Therapy Assessment Scale of Spirituality and Clarification of Factor Structure

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2 Graduate School of Information Sciences and Arts, Toyo University
3 Department of Information Sciences and Arts, Toyo University
4 Kurokawa Internal Medicine Clinic
5 Japan Yoga Therapy Society
Purpose of This Study

• This study tried to develop the scale of **spirituality**. Spiritual health is expected to improve with yoga therapy.

• Spirituality: one of the criteria for evaluation of human health and the abilities to control five psychological aspects:
  - Adherence
  - Violent Impulses
  - Gain and Loss
  - Doubtful Feeling
  - Anger
Definition of Spirituality

Spirituality in mindfulness training

- the quality of being concerned with one’s own spirit or soul

Spirituality in yoga therapy

- To measure discrepancy
- To measure relative tendencies
- Yogic ideal conditions
Participants

111 university students

- Male: 61, Female: 40, Unknown: 10
- Mean age: 20.5±1.3
- Only four participants had yoga experiences or instruction (from two months to one year)
Analysis Method

Factor analysis

- Method of maximum likelihood, Promax rotation
- The number of factors was fixed at four.
- The items whose factor loadings were more than 0.4 were adopted as the question items.
- The other items were excluded from the following analysis.

Reliability analysis

- Cronbach’s alpha was adopted.
The four factors acquired in the preliminary study

A: Control of Violent Impulses
B: Control of Anger
C: Control of Doubtful Feeling
D: Control of Profit-and-Loss Calculation

The four factors acquired in this study

A: Control of Violent Impulses
B: Control of Anger
C: Control of Doubtful Feeling
D: Control of Profit-and-Loss Calculation

Adherence

Gain and Loss

Gain and Loss?

Adherence?
Developing a Questionnaire for Alexicosmia for Yoga Therapy Assessment

O Aiko Nakata, Minoru Kamata, Keishin Kimura, Chieko Kato, Keiko Kioka
Yogic Ideal Forms

◆ The ultimate goal of the yoga therapist is to guide the client to modify cognition for perfect health, as defined by yogic philosophy.
◆ Perfect health is defined using yogic ideal forms described in many yogic scriptures.
◆ One of the ideal forms is unification with the cosmos.
◆ Dr. Yujiro Ikemi mentioned Alexicosmia. This concept was not defined clearly.
Alexicosmia

Dr. Ikemi mentioned that people with psychosomatic disorders have difficulty being conscious of connections with society, nature, and the universe. Ikemi (1992) pointed out that we can find a characteristic of living in a self-centered attitude which is trapped by desire in psychosomatic disorder patients. He called these features Alexicosmia, but he did not defined clearly.

Ideal yogi is unified with cosmos. Then, he harmonizes with all apart from his desire in accord with the universe and the society.

Because Ikemi’s Alexicosmia seems to be similar to our ideal forms, we utilized the word Alexicosmia for our measuring tool which scales discrepancy from yogic ideal form base on the yogic scriptures. So, we decided to develop a Questionnaire for Alexicosmia for Yoga Therapy Assessment

There are many cognitive scales, but we do not have a scale of measuring the personal points of deep attachments.
<table>
<thead>
<tr>
<th>Question</th>
<th>Belonging to society</th>
<th>Harmony</th>
<th>Conforming with/connection to nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q15. I feel that I support a part of society</td>
<td>0.939</td>
<td>-0.235</td>
<td>-0.040</td>
</tr>
<tr>
<td>Q21. No matter what the situation, I do not feel like rejecting others.</td>
<td>0.599</td>
<td>0.032</td>
<td>-0.171</td>
</tr>
<tr>
<td>Q30. I do not hesitate to contribute money if it is necessary for society.</td>
<td>0.586</td>
<td>0.135</td>
<td>-0.024</td>
</tr>
<tr>
<td>Q11. I think that encounters with people have some meaning.</td>
<td>0.541</td>
<td>0.224</td>
<td>-0.049</td>
</tr>
<tr>
<td>Q17. I have no trouble interacting with people, even with people who hurt me deeply in the past.</td>
<td>0.523</td>
<td>-0.002</td>
<td>-0.122</td>
</tr>
<tr>
<td>Q27. I strongly feel that all people, including myself, are a part of nature and the universe.</td>
<td>0.470</td>
<td>-0.016</td>
<td>0.418</td>
</tr>
<tr>
<td>Q3. I think that I am being supported by society</td>
<td>0.458</td>
<td>0.201</td>
<td>0.099</td>
</tr>
<tr>
<td>Q2. When I spend money, I think about how to make sure it contributes to society.</td>
<td>0.439</td>
<td>0.180</td>
<td>0.074</td>
</tr>
<tr>
<td>Q23. I think that one of my important roles is to raise the next generation of young people</td>
<td>0.405</td>
<td>0.202</td>
<td>-0.020</td>
</tr>
<tr>
<td>Q26. I do not want to spend money on things that are unnecessary for society</td>
<td>0.401</td>
<td>-0.065</td>
<td>-0.041</td>
</tr>
<tr>
<td>Question</td>
<td>Belonging</td>
<td>conforming with/connection</td>
<td></td>
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<tr>
<td>Question 7. I feel strongly that it is important that people support one another in life.</td>
<td>-0.283</td>
<td>0.950</td>
<td></td>
</tr>
<tr>
<td>Question 19. I feel strongly that I am who I am now thanks to my ancestors, grandparent and parents.</td>
<td>0.029</td>
<td>0.601</td>
<td></td>
</tr>
<tr>
<td>Question 5. I can interact with people in any situation without thinking about my own self-interests.</td>
<td>0.099</td>
<td>0.582</td>
<td></td>
</tr>
<tr>
<td>Question 6. I try to make sure that the way I earn money does not create problems for other people.</td>
<td>0.089</td>
<td>0.559</td>
<td></td>
</tr>
<tr>
<td>Question 22. I do not feel so strongly about making money that I would hurt others to make a profit.</td>
<td>-0.020</td>
<td>0.496</td>
<td></td>
</tr>
<tr>
<td>Question 1. I can interact with anyone in any situation without getting caught up in likes and dislikes.</td>
<td>0.118</td>
<td>0.491</td>
<td></td>
</tr>
<tr>
<td>Question 9. I do not compete to get the upper hand over others, no matter what the situation is.</td>
<td>0.042</td>
<td>0.432</td>
<td></td>
</tr>
<tr>
<td>Question 31. Even when unexpected situations arise, I feel connected to family and friends and can overcome such situations.</td>
<td>0.174</td>
<td>0.405</td>
<td></td>
</tr>
<tr>
<td>Question 29. I am grateful for all my relationships with other people as opportunities to learn, no matter what kind of relationships they are.</td>
<td>0.245</td>
<td>0.382</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Belonging to society</td>
<td>Harmony</td>
<td>Conforming with/connection to nature</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Question 16. I think that birth and death are both just a natural part of life.</td>
<td>-0.133</td>
<td>0.038</td>
<td>0.889</td>
</tr>
<tr>
<td>Question 24. It is a natural part of life that my grandparent and parents die before me, and I accept that.</td>
<td>-0.118</td>
<td>-0.080</td>
<td>0.807</td>
</tr>
<tr>
<td>Question 4. I live with the awareness that death is inevitable.</td>
<td>-0.287</td>
<td>0.197</td>
<td>0.575</td>
</tr>
<tr>
<td>Question 28. In a way, I also think that it is a natural part of life that there are people younger than I am who will die before I do.</td>
<td>0.041</td>
<td>-0.212</td>
<td>0.572</td>
</tr>
<tr>
<td>Question 8. I understand that people who are no longer part of my life had their own reasons for leaving.</td>
<td>0.116</td>
<td>0.123</td>
<td>0.543</td>
</tr>
<tr>
<td>Question 12. I accept that people who are no longer part of my life simply were not meant to stay.</td>
<td>0.317</td>
<td>-0.050</td>
<td>0.529</td>
</tr>
<tr>
<td>Question 20. Whether I am around or not, I think my family will manage and the world will continue to turn.</td>
<td>-0.033</td>
<td>-0.082</td>
<td>0.386</td>
</tr>
</tbody>
</table>

a. Rotation converged in 5 iterations.
Conclusion

Preliminary study

People have yoga experiences or instruction

They showed more ceiling effects
Low discrepancy from yogic ideal states

Current study

Male and female University students

different factor structures of spirituality
A Questionnaire for Evaluating Psychological Dosha

Minoru KAMATA, Shin MURAKAMI, Shuji Otomo
Conclusion

• We are developing two scales to measure discrepancies from yogic and ayurvedic ideal conditions which show the personal cognitive features in the view point of yoga, and one scale to measure degrees of three doshas.

• Western medical and psychological scales do not give us this information.

• When we have this information, we can try to guide clients to let go their deep attachments and we can give them yogic wisdoms.
THANK YOU FOR YOUR ATTENTION.