The Effects of Dichotomous Thinking on Depression in Japanese College Students.

Takeyasu Kawabata(Shokei Gakuin University, Naohiko Abe(Shokei Gakuin University)

Background: Recently, an approach to assessing dysfunctional thinking has emerged that focuses on the form of cognition rather than its content. A cognitive style known as extreme responding has been found to predict depressive relapse (Forand & DeRubeis, 2014; Teasdale et al., 2001). Many studies demonstrated that cognitive therapy reduced relapses of depression via changes in the style rather than the contents of thinking, reducing absolutist or dichotomous thinking. But there are few empirical researches about the relation between dichotomous thinking and depression. The first purpose of this study was to explore the effect of dichotomous thinking on depression.

Rumination, which consists of longer chains of repetitive, recycling, negative, and self-focused thinking is also a key cognitive or behavioral feature of dysphoria and major depressive disorder.

We expected that dichotomous thinking will increase depression (Hypothesis 1). It was expected that dichotomous thinking will enhance ruminative thinking (Hypothesis 2). Our Hypothetical model are showed in Figure 1.

Figure1 Hypothetical model

Method: Two-hundreds Japanese college students (Males: 107, Females:93, *M* age= 20.02 ± 1.42) participated in the study. They were asked to fill out three questionnaires. The Dichotomous Thinking Inventory(DTI) (Oshio, 2009), Kessler 6 (Kessler et al. 2002; Furukawa et al., 2003) and the Japanese version of Rumination-Reflection Questionnaire (RRQ)(Trapnell & Campbell,1999; Takano & Tanno, 2008). . DTI consists of three subscales: *Preference for Dichotomy* (a thinking style that leads to preferring distinctness, clarity, and conciseness as opposed to ambiguity, obscurity, and vagueness.), *Dichotomous Belief*(thinking that anything in the world can be divided into two categories such as “black or white”, “good or bad”, or “winner or loser”.) and *Profit-and-Loss Thinking* (thinking of how to get access to the benefits in a situation for oneself and how to avoid the disadvantages.)

Findings: A structural equation analysis based on maximum likelihood estimation was applied to test the hypothesis (Amos Ver.20.0 for Windows). The final model showed that *Preference for Dichotomy* only enhanced depression by increasing *Dichotomous Thinking* and *Profit-and-Loss Thinking*, *Dichotomous Belief* directly increased depression and *Profit-and-Loss Thinking* only enhanced depression by increasing rumination. The overall fitness of the final model was of an acceptable level, as indicated by $\chi^2(5) = 8.40$, $p = .14$, GFI=.98, AGFI=.95, RMSEA=.06 (Figure 2).

Discussion: Hypothesis 1 was supported. Dichotomous thinking enhanced depression. In detail, *Preference for dichotomy* enhanced depression by increasing *Dichotomous Belief* and *Profit-and-Loss thinking*. *Dichotomous Belief* directly enhanced depression and *Profit-and-Loss thinking* enhanced depression by increasing rumination.

Preference for dichotomy indirectly increased depression by increasing of other two subscales. This result might show that *Preference for Dichotomy* is core schema of dichotomous thinking. *Dichotomous Belief* might be similar to negative belief (schema) behind depression, because it shows strong belief about the world. *Profit-and-loss thinking* consists of the items which ask meaning of the events relating to him/herself. Therefore, the person who get high score in *Profit-and-Loss thinking* is likely to focus his

attention to himself. As Trapnell & Cambell (1999) divided self attention into rumination. and reflection. It was possible that *Profit-and-Loss thinking* contains the activation of self-focusing rumination

Hypothesis 2 was supported. Dichotomous thinking increased rumination. Only one subscale of DTI: Profit-and-Loss thinking increased rumination. Rumination increased depression as prior researches generally confirms.

Conclusion:

- 1) Three components of dichotomous thinking have different effect on depression.
- 2) Dichotomous thinking has two way to increase depression: direct path and indirect path via rumination.

Further researches are needed.

df=5 $\chi^2 = 8.398$ $p = .136$
GFI=.983 AGFI=.95 RMSEA=.058

Figure 2 Final model of SEM

Contact : kawabata@shokei.ac.jp
(Takeyasu KAWABATA, Prof. Shokei Gakuin University, Japan)