

Effect of the “SHISEI” Meta-Cognition Educational Program Aiming at the Low Back Pain Improvement of the Female New Face Nurses in Japan

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Purpose
We examine an effect of the improvement of low back pain of the female nurse by the “SHISEI” Meta-Cognition educational program that we developed.

Methods
The subjects included were 31 female new face nurses with the low back pain in Japan. The purpose of this education program is to enhance awareness of physical and psychosocial factors affecting posture. The educational program is comprised of two elements (Fig.1). In Part 1, we explained it so that nurses could recognize low back pain as biopsychosocial sharp pain syndrome. In Part 2, we introduced a practical method for improving the symptoms of low back pain and preventing their occurrence. An enforcement period of the programs is two weeks. We examined an effect based on the results of an inventory survey on low back pain (VAS; visual analogue scale) and “SHISEI” of physical, psychological and social, before and after enforcement. The Meta-Cognition is to grasp thought and action itself objectively, and to recognize it. In this program, we assume ‘SHISEI’ Meta-Cognition as the Meta-Cognition for physical posture, psychological attitude and social attitude. We define as the ‘SHISEI’ Meta-Cognition that nurses recognize the low back pain and relations with each one's physical posture, psychological attitude, social attitude and do self-evaluation and adjust it. (approval no. 12002)

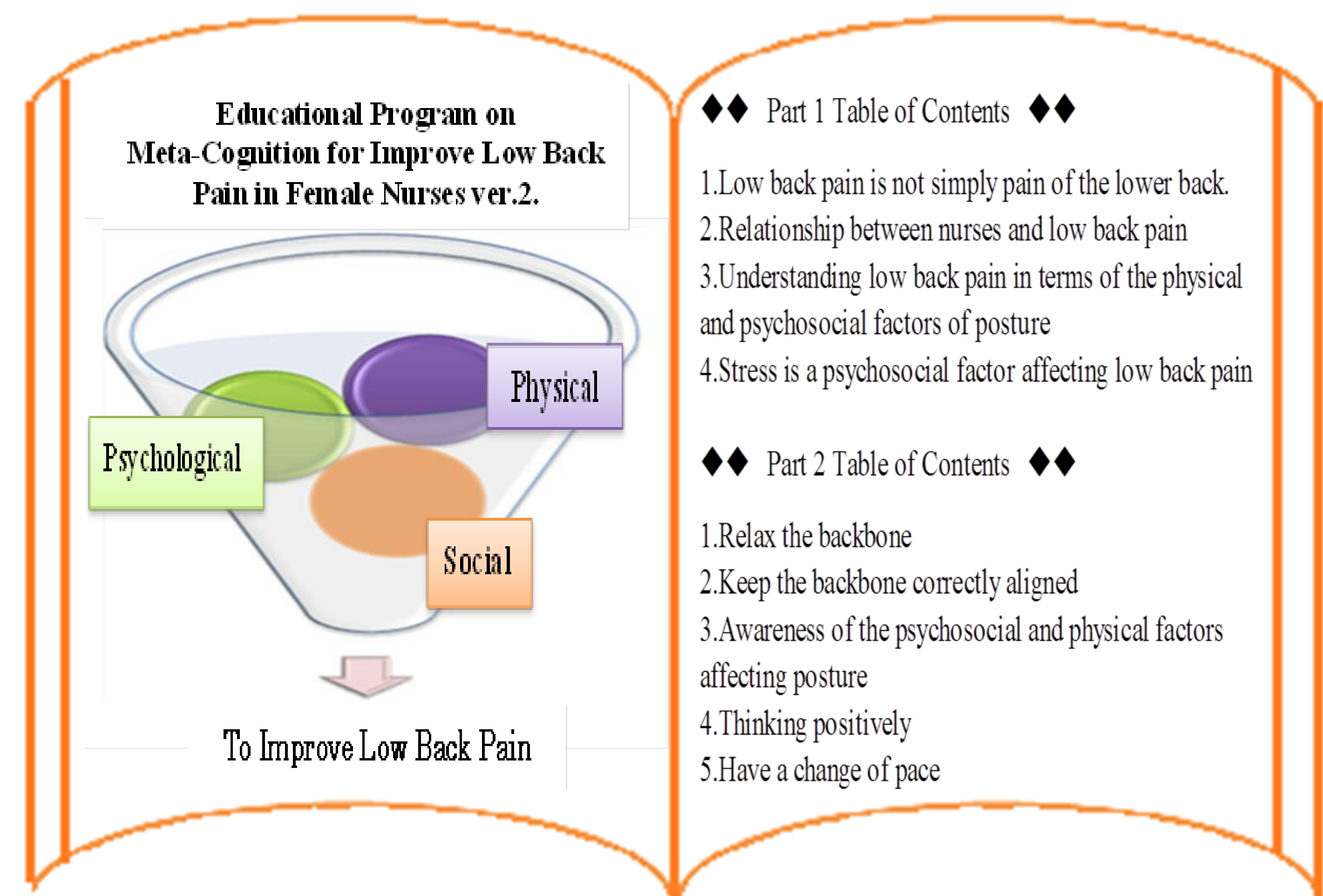


Fig.1 “SHISEI” Meta-Cognition Educational Program

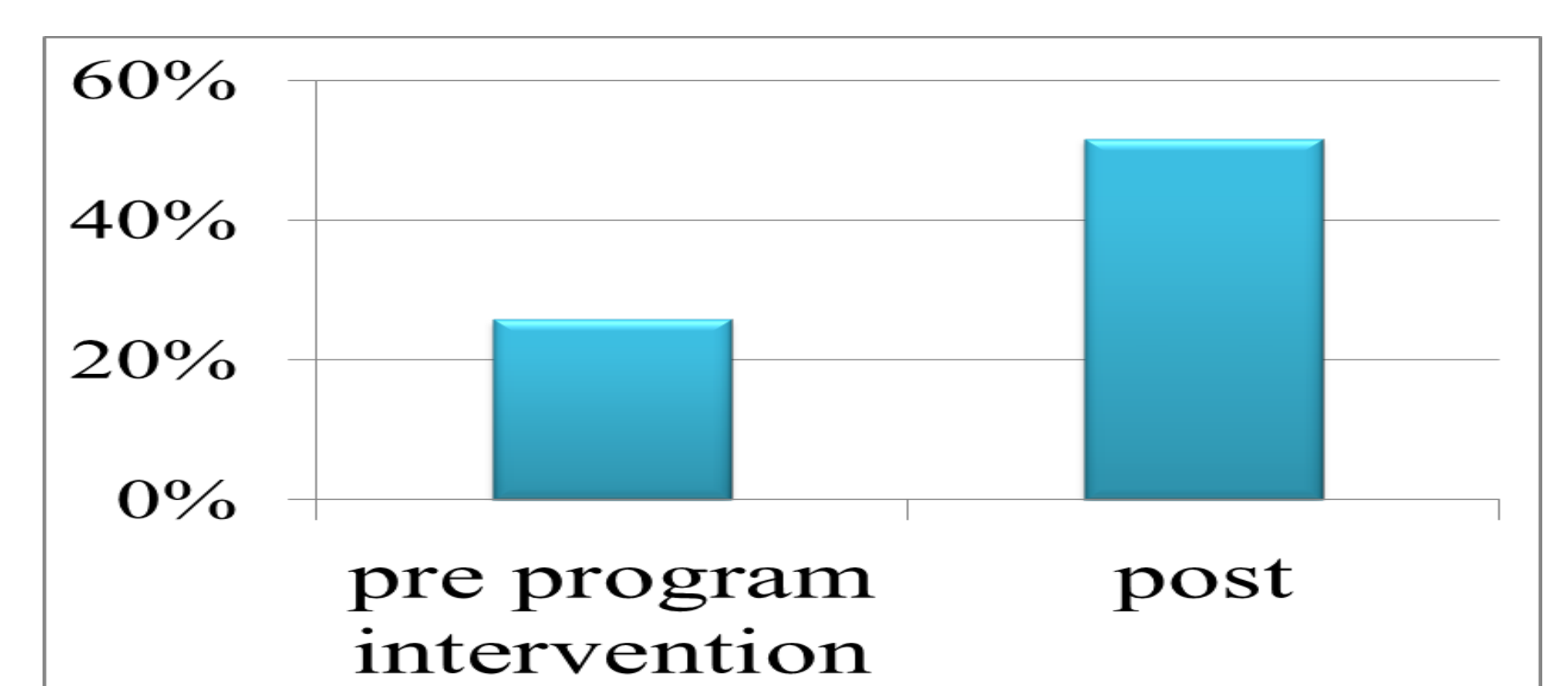


Fig.2 nurses who recognized low back pain as biopsychosocial sharp pain syndrome

Results
It was eight nurses (25.8%) who recognized low back pain as biopsychosocial sharp pain syndrome before intervention, but increased to 16 nurses (51.6%) after intervention (Fig.2). Low back pain significantly improved nurses who recognized low back pain as biopsychosocial sharp pain syndrome than nurses who did not recognize it ($t=-2.2$, $p=.040$) (Fig.3). After program practice, Use of the body mechanics of nurses significantly increased ($t=2.4$, $p=.030$). And muscular workout ($t=2.2$, $p=.045$), relax the backbone ($t=4.4$, $p=.000$), keep the backbone correctly aligned ($t=5.4$, $p=.000$). In addition, as for nurses, have a change of pace ($t=2.15$, $p=.048$), talk and solve a problem ($t=2.5$, $p=.023$), check a cause and solve a problem ($t=2.2$, $p=.041$), to talk about ($t=2.4$, $p=.029$), reflected one's opinion in a policy of the work ($t=2.4$, $p=.029$) significantly increased (Fig.4).

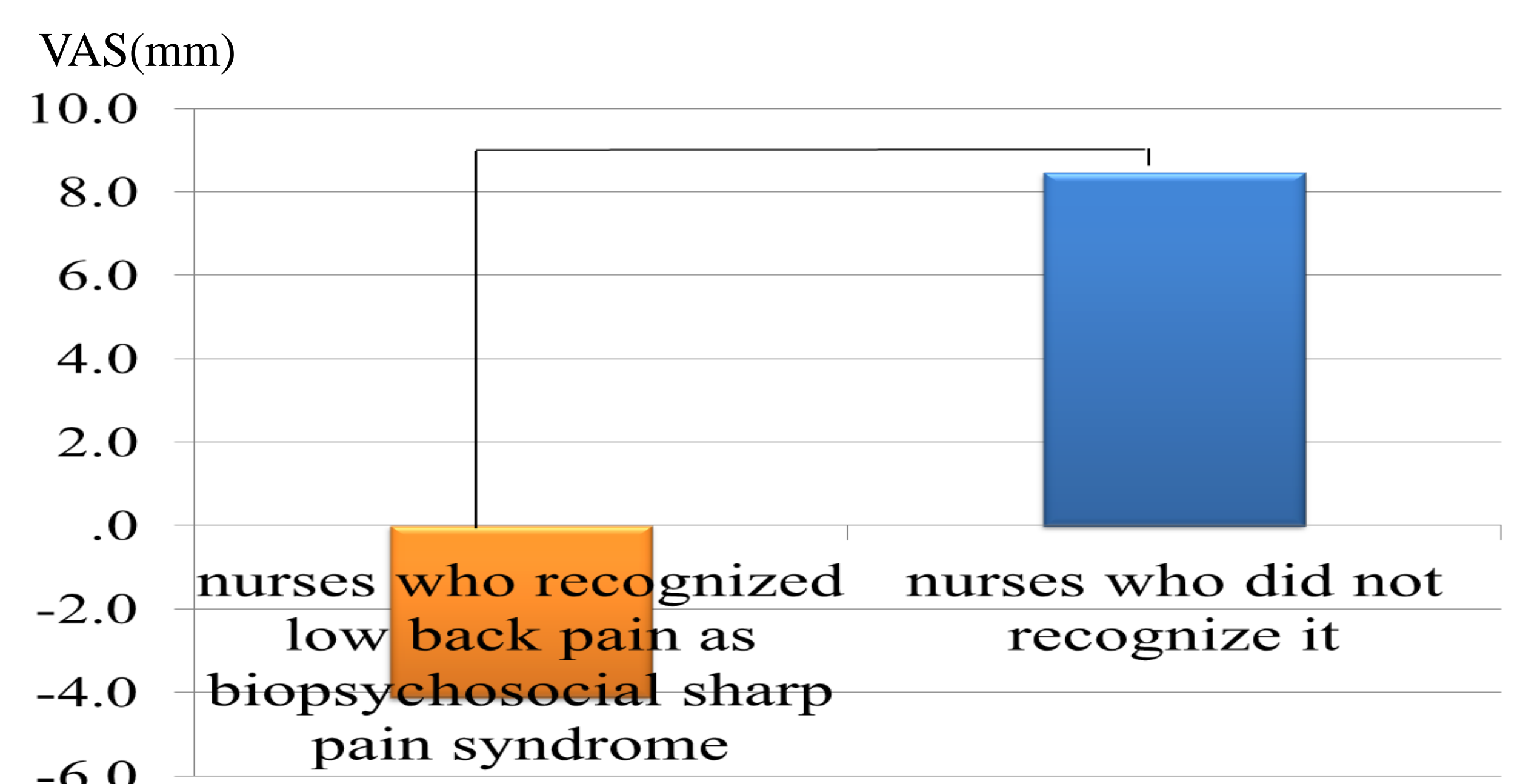


Fig.3 Amount of change * $p<.05$

Discussion
Medical guidelines changed the definition of low back pain from pain occurring due to biological damage to a biopsychosocial sharp pain syndrome (Japan, 2012). However, many nurses still regard low back pain as biological damage model. Posture is only one of the factors causing low back pain. Low back pain can reduce if nurses recognize it as biopsychosocial pain syndrome.

Conclusion
As a result of having intervened in female new face nurses with the low back pain by the ‘SHISEI’ meta-cognition educational program, the low back pain was improved if they were recognizable when low back pain was biopsychosocial sharp pain syndrome.

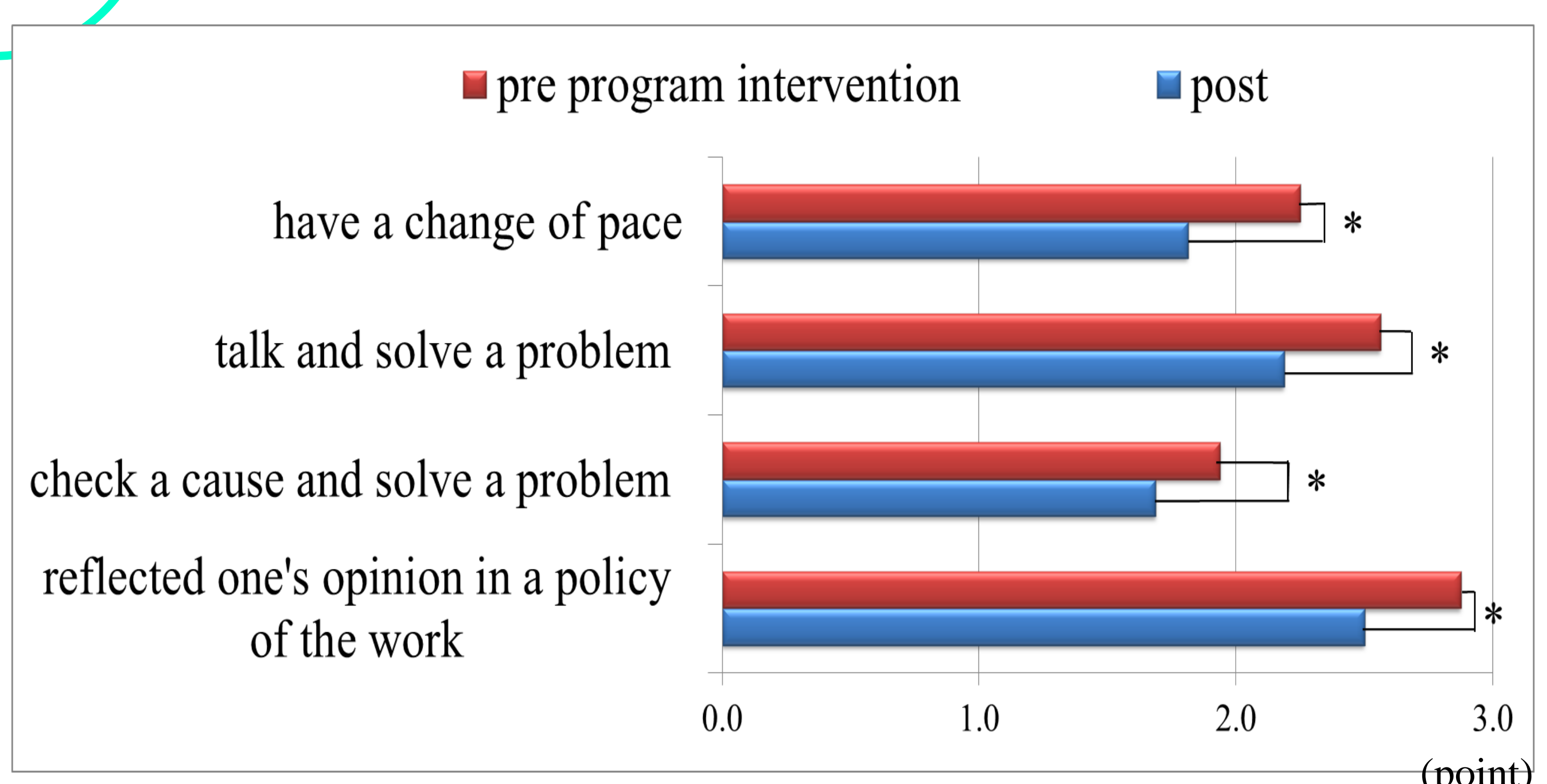


Fig.4 Significant of pre and post program intervention (nurses who recognized low back pain as biopsychosocial sharp pain syndrome) * $p<.05$