

Cross-Cultural Identified Affect Coding System for Observing Marital Affective Interaction in Taiwan

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The Specific Affect Coding System (SPAFF), developed by Gottman, has been used to predict the stability of a marriage by observing interaction and emotional expression between couples. In recent observational studies of couples, the SPAFF has been recognized as the best evidence of construct and criterion validity. However, habitual behaviors derived from traditional Chinese culture, such as discouraging expression, indirect communication, and emotion suppression, may impede exploration in emotional expression. Therefore, it is necessary to explore the construct of emotional expression and reflect the essence of couple interaction through observational approaches. The aims of this study were to develop a culturally validated Chinese version of the SPAFF (SPAFF-C-24) and examine its appropriateness for use in marital and couple studies in Taiwan. Using a methodology that combines translational study, expert panel review, and small-scale study with 20 couple dyads, we established the reliability and validity of the SPAFF-C-24 through expert validity, inter-rater reliability, and criteria-related validity. The SPAFF-C-24 was reviewed by 10 experts, who found that the Content Validity Index (CVI) ranged from .79~.96, indicating a reliable instrument with good content validity. Throughout the coder training with 20 couples in a small-scale study, the mean consistency between two coders with the agreement score in husbands and wives were .82 and .70, respectively. The mean inter-rater stability with Kappa values in husbands and wives were .53 and .57, respectively. Acceptable coding stability was thus endorsed with the overall agreement of 85.4% and its stability with a mean Kappa value of .55 among coders. In the criteria-related validity, the negative/neutral emotional aspects of the SPAFF-C-24 were significantly correlated with the scores in the Brief Version of Chinese Marital Affection Scale, Marital Quality Scale, and Couple Interaction Scale. Nevertheless, only partial correlations were identified between positive emotional aspects of the SPAFF-C-24 and those aforementioned subscales. In conclusion, the newly derived SPAFF-C-24 could be used to observe affective expressiveness among Chinese couples in Taiwan. However, the appropriateness of added codes and positive affects in the SPAFF-C-24 requires further validation through a large-scale study.

Keywords: *culturally identified translational study, marital and couple studies, Specific Affect Coding System*

Extended Abstract

To validate his proposal that couples' affect expression predicts marital stability, the American scholar Gottman developed the Specific Affect Coding System (SPAFF; Gottman, 1994). This system has the best construct and concurrent validity in observational

studies of couples. However, although the SPAFF has been used to analyze affect expression in a wide range of relationships and regions, its validity in the Taiwanese Chinese cultural context has yet to be verified. This verification is necessary because Chinese culture does not

encourage expression, and more indirect communication makes it difficult to study affect expression.

This study, which was divided into two substudies, was carried out to create and validate a Chinese version of the SPAFF (SPAFF-C). In the first substudy, we translated the SPAFF into Chinese, deleted unsuitable codes, and constructed additional localized codes through expert discussion. In the second substudy, we used a small sample of couples to verify the applicability and feasibility of the SPAFF-C. We replicated Gottman's method of videotaping couples' interactions and then trained coders to encode and analyze the couples' affect expression. In summary, the contents of the study were as follows:

1. Sub-Study 1: Gottman's SPAFF was translated into Chinese and five affect codes were added and one original code was deleted to compile the SPAFF-C.
2. Sub-Study 2: A small-sample study was conducted to test the reliability and validity of the SPAFF-C.

Sub-Study 1: Translation and Validation of the Specific Affect Coding System-Chinese Version (SPAFF-C)

Research Methods: To reduce the conceptual mismatch caused by language and cultural differences, we created SPAFF-C from the original English version via the following procedures. First, the original version was translated into Chinese. We then invited 10 experts in marriage and family from Taiwan to evaluate the preliminary Chinese version to determine its compatibility with Taiwanese Chinese culture. This version was classified according to the following three criteria: a. applicability of content, i.e., the suitability of the definition and content of each affect code for the study; b. text clarity, i.e., the definition and content of each affect code could be operated by the coders; and c. cultural congruence, i.e., the applicability of the definition and content of each affect code to the local cultural context. This last criterion was specially added to this study. We then conducted precoding, deleted unsuitable affect codes, and added localized codes to construct a second version of SPAFF-C. Then We held a second expert meeting

with the same experts to discuss this second version and the assessment of the first expert panel and then made adjustments to obtain the final version.

Research results: 1. We used multiple rounds of translation to achieve functional equivalence between the original English and Chinese versions of the SPAFF. First, we worked with a Chinese-American language expert to translate the original coding system into Chinese. We focused on ensuring that the translated affect codes could appropriately and precisely express the characteristics of the affect. Another American scholar fluent in both Chinese and English then back-translated this Chinese version into English and discussed with us the accuracy of the English translation. 2. After holding two expert meetings, we developed the preliminary SPAFF-C into a version with 24 codes (SPAFF-C-24). These codes comprised 9 positive affects (affection, high validation, low validation, humor, surprise/joy, interest, gratitude, appreciation, inclusiveness), 14 negative affects (contempt, belligerence, high domineering, low Domineering, criticism, defensiveness, stonewalling, tension, disgust, anger, tense humor, sad, impatience, tolerance) and one neutral affect. Using the assessments given by 10 experts, we calculated the content validity index distribution of these 24 codes and obtained a range from .79 to .96. The SPAFF-C-24 thus showed good content validity.

Sub-Study 2: Small-sample study

Research methods: We conducted a small-sample study to test the reliability and validity of the SPAFF-C.

1. **Participants:** We conducted our study with 20 couples who had engaged in a romantic relationship for an average of 3.97 years before marriage/cohabitation, had experienced 32–34 years of marriage/cohabitation and had two children on average. Most of these couples had children all grown (55%), lived with their children (65%), and had ordinary economic status (65%).

2. **Research procedures:** First, we collected the marital history of each couple by asking them to complete the Brief Version of Chinese Marital Affection Scale (Hsiao & Li, 2009), Marital Quality Scale (Li & Hsiao, 2008) and Couple Interaction Scale (Jou, 2011). We then selected

marital conflict topics based on the Couple Problem Inventory and asked couples to discuss these topics in the laboratory. During their discussion, we recorded their interactions on video. Each participant then evaluated whether their spouse showed particular affects in their daily life and laboratory performance using our self-developed Perceived Spouse Affect Expression Scale. 3. Reliability and validity testing of the SPAFF-C: a. Two trained coders analyzed the videos using the SPAFF-C-24. We then calculated the consistency between the coders (Kappa value). A kappa value of more than .5 indicates good interrater reliability and that the SPAFF-C-24 can be used by coders independently. b. We carried out a Pearson product difference correlation analysis to assess the degree of consistency between the participants' perceived spouse affect expression ratings with respect to their daily lives and laboratory performances. c. We used the Brief Version of Chinese Marital Affection Scale, Marital Quality Scale and Couple Interaction Scale to examine the concurrent validity of the SPAFF-C-24. We carried out Pearson correlation analysis to test whether there was a significant correlation between the participants' responses to the validated measures and the coders' SPAFF-C-24 ratings.

Research results: In terms of interrater reliability, the average percent agreements of husband and wife rated by the two coders were 85.6% and 85.2%, and the average Kappa values of husband and wife were .53 and .57, respectively. The overall percent agreement and Kappa values were 85.4% and .55, respectively, indicating acceptable interrater reliability. In terms of concurrent criterion validity, the negative and neutral affects of the SPAFF-C-24 were significantly correlated with the Brief Version of Chinese Marital Affection Scale, Marital Quality Scale and Couple Interaction Scale, whereas the positive affects were only partially correlated with these scales.

Conclusions: 1. In the first substudy, the SPAFF-C-24 was compiled through rigorous translation, back translation, expert discussion, and review procedures. The definitions, characteristics, and evaluation methods of the 24 codes were shown to have good content validity and expert validity. In the second substudy, trained coders were able to use the scoring criteria consistently, thus indicating that the SPAFF-C-24 had good interrater reliability. Spouse affect expression as perceived by the participants in the laboratory and in daily life were also shown to have a high correlation, which suggests that the videos of the couples' conflict event discussions reflected their daily interactions and that the emotional expressions in the videos marked by the coders reflected the couples' daily emotional interactions. 2. The negative and neutral affects of the SPAFF-C-24 had good concurrent criterion validity compared with the localized marital self-report scales currently used in Taiwan. This suggests that the SPAFF-C-24 can be used to effectively observe and predict marital intimacy, quality, and interaction in Taiwan. 3. There was no significant correlation between the positive affects of the SPAFF-C-24 and the localized marital self-report scales, which may be because positive affects were expressed less frequently by the participants (only 6% of the total time). This result suggests that the SPAFF-C-24 is limited when used to observe and predict Taiwanese Chinese couples' positive affects, which may not be as observable as their negative and neutral affects. 4. This study established the feasibility of using the SPAFF-C-24 as a research tool to study affective interaction in Taiwanese Chinese couples. However, the appropriateness of its positive affect codes and new localized codes like gratitude, appreciation, and inclusiveness remains to be further confirmed in future studies with larger samples.