**Supplementary Material 1**

**Part 1 Demographic information**

1. **Gender:**

□ Male

□ Female

□ Other

2. **Age:**

3. **Grade:**

First Grade

 Second Grade

 Third Grade

 Fourth Grade

 Fifth Grade

3. **Major:**

□ Science

□ Engineering

□ Agriculture

□ Medicine

□ Other

4. **Only Child:**

□ Yes

□ No

5. **Place of Residence:**

□ City

□ Town/Village

6. **Number of online interest-based communities you have been involved in for a long time:**

□ None

□ 1

□ 2-5

□ More than 5

7. **Internet Age:**

□ Less than 1 year

□ 1-3 years

□ 3-5 years

□ More than 5 years

8. **Daily Online Duration:**

□ Online all day

□ Online 3-5 hours

□ Online 1-3 hours

□ Online 1 hour or less

9. **Number of Friends Met Online:**

□ None

□ Less than 10

□ 10-50

□ 50-100

□ More than 100

**Part 2 Self-Esteem**

The Self-Esteem Scale (SES) used in this study were the Rosenberg Self-Esteem Scale(Rosenberg, 1965). It uses the Likert scoring method, divided into four points from 1 "completely does not apply" to 4 "completely applies," with the degree increasing sequentially. There are a total of ten items, with scores ranging from 10 to 40. The structure of the questionnaire indicates that the higher the score, the higher the level of self-esteem. In this study, the coefficient α of the scale is 0.678.

**Part 3 The Satisfaction With Life**

The Satisfaction With Life Scale (SWLS) was originally developed by Pavot and Diener(Diener et al., 1999) . The SWLS uses a 5-item version revised by Qiu Lin and Zheng Xue (Biao-bin & Xue, 2006). The scale employs a 7-point scoring system, ranging from 1 = strongly disagree to 7 = strongly agree. In this study, coefficient α of the scale is 0.775.

**Part 4 The Positive and Negative Affect**

The Positive and Negative Affect Schedule (PANAS) was originally developed by Watson, Clark, and Tellegen(Watson et al., 1988). The Positive and Negative Affect Scales use an 18-item version revised by Qiu Lin(Lin et al., 2008). The PANAS consists of two subscales, Positive Affect and Negative Affect, each containing 9 items. The scales use a 5-point Likert scoring system, ranging from 1 = "very slightly or not at all" to 5 = "extremely," with the degree of intensity increasing sequentially.

In this study, the Cronbach's alpha coefficients for the positive affect and negative affect scales are 0.895 and 0.991.

**Part 5 Resilience**

This study uses the CD-RISC scale(Connor & Davidson, 2003) revised by Zhang Jianxin et al.(Yu & Zhang, 2007), with a five-point scoring system, ranging from 0 indicating "not at all true" to 5 indicating "almost always true." According to Zhang Jianxin's classification, the scale has three dimensions: tenacity, strength, and optimism. The questionnaire contains 25 items. The CD-RISC scale has been widely recognized for its predictive validity of psychological resilience and is widely used in practice. In this study, the internal consistency coefficient α of the scale is 0.905.

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