for this specific role for 8 hours per day for a period of six months. There were a total of 9 squadrons of policewomen on duty during the study period. Each squadron contains about 80 to 90 policewomen. Three of these squadrons were randomly selected to receive this survey We did not recruit male police officers because it was outside the scope of the larger study of which this study is a part. Study procedures were explained in detail to all the policewomen in the three selected squadrons, and those who provided written informed consent were included in the study. In total, 260 policewomen were invited to participate, and 245(94.5%) of them agreed to take part in this study. Of these, 240 policewomen completed all of the study measures. All participants were asked to complete a set of self-administered questionnaires in a designated room, and then return the completed questionnaires to an on-site research assistant. Thirty-six participants were randomly selected to complete all the questionnaires again two weeks after the initial testing.

In $ me $

Perceived Stress Scale-10 (PSS-10). The PSS-10 [10] measures the degree to which one perceives aspects of one's life as uncontrollable, unpredictable, and overloading. Participants are asked to respond to each question on a 5-point Likert scale ranging from 0 (never) to 4 (very often), indicating how often they have felt or thought a certain way within the past month. Scores can range from 0 to 40, with higher composite scores indicative of greater perceived stress. The PSS-10 has demonstrated good reliability and validity, with Cronbach's alphas ranging from 0.78 to 0.91 and test-retest reliability coefficients ranging from 0.55 to 0.85 [9,10,20].

The PSS-10 was translated from the original English version into Simplified Chinese by two native Chinese-speaking psychiatrists working independently of each other and, in a second step, they agreed on a final common translation. After that, the

Table 1. Exploratory factor analysis and reliability coefficients of PSS-10 (n = 120).

PSS Items	Factor loading	
	Factor 1	Factor 2
1. In the last month, how often have you been upset because of something that happened unexpectedly?	**0.74**	0.12
2. In the last month, how often have you unable to control the important things in your life?	**0.76**	0.20
3. In the last month, how often have you felt nervous and 'stressed'?	**0.83**	0.17
4. In the last month, how often have you confident about your ability to handle your personal problems?	0.24	**0.77**
5. In the last month, how often have you felt that things were going your way?	0.13	**0.75**
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	**0.77**	0.16
7. In the last month, how often have you been able to control irritation in your life?	0.09	**0.76**
8. In the last month, how often have you felt that you were on top of things?	0.38	**0.72**
9. In the last month, how often have you been angered because of things that were outside of your control?	**0.75**	0.25
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	**0.74**	0.26
Eigenvalue	4.76	1.48
% variance	47.61	14.80
Cronbach's alpha coefficient	0.87	0.77

Reliability

Cronbach's alpha for assessing the internal consistency reliability of the PSS-10 was 0.86 for the whole scale, 0.87 for Factor 1, and 0.77 for Factor 2. The two-week test-retest reliability of the PSS-10 was 0.68 for the whole scale, 0.72 for Factor 1, and 0.63 for Factor 2.

Concurrent Validity

Correlations between the PSS, the BDI-II, and the BAI were calculated (Table 2). As expected, both the latter scales correlated positively with the PSS. The correlation coefficient between the factors and total score of C-PSS-10 and other two scales ranged from 0.36 to 0.67.

Discussion

To the authors' knowledge, this is the first study designed to evaluate the reliability and validity of the Simplified Chinese version of the PSS-10 scale. Overall, the psychometric data presented in this study support the conclusion that the Simplified Chinese version of the PSS-10 (C-PSS-10) has adequate psychometric properties.

The overall Cronbach's alpha of the Simplified Chinese version of PSS-10 was 0.86 in this sample. This value is in accord with findings from other studies of different language versions, where reliability coefficients ranged from 0.78–0.91 [10,11,12,13,14,15,20,25]. The two-week test-retest reliability of C-PSS-10 was 0.68, which is

acceptable when compared with the original findings that the test-retest reliability was 0.85 in the college sample after 2 days and 0.55 in the community sample after 6 weeks [9].

Previous studies have shown that the PSS-10 has concurrent validity with a number of other measures including the State Trait Anxiety Inventory (STAI) and the Beck Depression Inventory (BDI) [15,26]. In the current study, the Simplified Chinese version of PSS-10 was also found to be significantly and moderately positively correlated with measures of anxiety and depression (r = 0.58 for BAI and 0.67 for BDI; p<0.001), and thus the construct validity of this scale was confirmed. These results also indicate that psychological stress is associated with mental health issues.

With regard to the PSS-10's factor structure, researchers have found that it has 2 related latent factors [10,14,15,25], representing positive and negative feelings. In the present study, the EFA yielded the same result as those found in other language versions [10,14,15]. In Cohen's original analysis, two factors yielded eigenvalues of 3.4 and 1.4, which accounted for 48.9% and 14.5% of the variance respectively [10]. In the present study, the Simplified Chinese version of the PSS-10 yielded eigenvalues of 4.76 and 1.48, and accounted for 47.61% and 14.80% of the variance respectively. Concerning item loadings, item 8 had high loadings (>0.3) on the other factors in the present study. Similar results have been reported in other studies [15]. The CFA demonstrated a relatively better goodness-of-fit for the two-factor solution model for the Simplified Chinese version compared to the original version, which found that the PSS-10 revealed an adequate two-factor solution: goodness of fit index = 0.926, Root Mean Square Residual = 0.039, Comparative Fit Index = 0.931 [10]. Although we confirmed the two-factor model of PSS-10, we do not recommend using two separate sub-scales clinically. The PSS-10's authors suggested that any distinction between these factors is irrelevant [10], and another study also suggested to use the full scale as a whole to evaluate perceived stress level [14].

There are several limitations to this study that should be noted. First, police have a very special occupation, which is full of stressful events in daily work. We can see this stress in our data because the sample's average score on the C-PSS-10 was relatively high compared to the community residents used in the original norms

Table 2. Correlation of PSS-10 to depression (BDI-II) and anxiety (BAI).

	PSS (total)	Factor 1	Factor 2	BDI-II
Factor 1	0.93			
Factor 2	0.76	0.47		
BDI-II	0.67	0.63	0.49	
BAI	0.58	0.59	0.36	0.72

[10]. Additionally, we recruited only female police officers in this study, and all the participants were relatively young. Thus, the characteristics of this sample may limit its generalizability of the results to other populations. However, it is worth noting that according to studies of the English version, the PSS is not a specific-population- dependent instrument. Similar psychometric properties have been found across a variety of different sub-populations in different locations [10,20,27]. The Traditional Chinese version of PSS has also been found to have similar psychometric properties in two different sub-groups in Hong Kong [11,28]. Therefore, on the basis of these findings we expect that