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Laboratory of Cognition, Santé, Socialisation, on, 50140, Participants (complete questionnaire including 59185 /4s, R)36sly
graphic variables and the PSS. The psychometric properties of this scale were analyzed: internal consistency, factorial struc-
ture, and discriminative sensibility. ResultsFor the PSS-14 andPSS-10, the Exploratory Factor Analysis (EFA) provided
D WZR IDFWRU VWUXFWXUH FRUUVSRQGLQJ WR WKH SRVLWLYHO\ DQG QH
correlated ($r = 0.43$ and 0.50 , respectively). For thePSS-4, theEFA yielded a one-factor structure. The reliability was high
IRU DOO WKUHH YHUVLRQV RI WKH 366 &URQEDFK·V / YDOXH V UDQJHG IURP
gender, marital, parental and occupational statuses showed that the 10-item version had the best discriminative sensibility.
Conclusions: 7KH ÀQGLQJV FRQÀUPHG VDWLVIDFWRU\ SV\FKRPHWULF SURSHUWLH
recommend the use of the PSS-10 in research settings because of its good psychometric properties.

Key words:

Stress, Scale, Validation

0H[LFDQ 6SDQLVK > @ -DSDQHVV
7XUNLVK > @ \$UDELF > @ 8UGX
Lithuanian [12], Danish, Brazilian, Korean, Russian, Po-
lish, Bulgarian, Hungarian, Italian, Hebrew [13].

Those international studies suggest that the psychomet-
ric properties of the scale are satisfactory. However, but
for one study that has been published for the sake of the
validation of the French 10-item version [14], no study has
been published that would present the psychometric pro-
perties of the 14-item version of the scale in French. More
over, no study that has been published explored a large
range of professions.

Therefore, the aim of this study is to provide data on the
psychometric properties of the PSS-14 in a sample of
workers and to explore its scores for different professions

UHOLDELOLW\ IDFWRULDO VWUXFWXU

Ög @@

and (13) & A total score of the PSS can be obtained by sum-
ming the 14 items scores. A one-dimensional structure is
considered). Thus, the total score ranges from 0 to a maxi-
mum of 56, a higher score indicating a higher level of per-
ceived stress.

A shorter 10-item version (range: 0–40) can be extracted
IURP WKH 366 SRRO RI LWHPV LWHPV
and 14) [3] as well as an even shorter one, 4-item version

ZLWK LWHPV DQG > @

Descriptive statistics (demographics, means, and standard
deviations) were calculated with all the variables. More
over, we performed an exploratory factor analysis (EFA)
to explore the structure of the instrument, with Oblimin
rotation. Eigenvalues above 1 were retained. The cutoff of
factor loadings adopted was > 0.5 [16].

UHOLDELOLW\ IDFWRULDO VWUXFWXU

Ög @@

LQW & HURQEDFRHMÀDLQDWRPRJHQHLW\

EDFKFRHÀRLHQRWJUHDDQDQDQWHLU

item correlations situated within a 0.20 to 0.40 range

ZHUFHQVLCVWHLQIDF@KRWHDQDQKH

YDULDRQDFLWHPVFRP SXZLHVKFRQ

ÀGHGDLFPBWQVLRWLVKLVWZDHDVVHÉVHG

means of group comparisons (based on age, gender,
profession).

RESULTS

The mean age of the 501 participants was 40.4 years

FRQÀGHQFH LQWHUYDO²

7D

ZRPHQ ZHUH HYHQO\ UHSUHVHQWHG

range of professions is represented in this sample, they
have been regrouped into four occupational statuses,
according to the French occupational status index.

An exploratory principal components analysis with an Obli-
min rotation was conducted on the 14 items of the PSS that
yielded to two distinct factors for the PSS-14 and PSS-10

Table 2. Standardized factor loadings of the Perceived Stress Scale – PSS-14, PSS-10, and PSS-4

Items	PSS-14		PSS-10		PSS-4
	factor 1	factor 2	factor 1	factor 2	factor 1
Negative items					
1 upset because of something that happened unexpectedly	0.64		0.66		–
2 unable to control the important things in your life					
3 nervous and “stressed”					–
FRXOG QRW FRSH ZLWK DOO WKH W.61LQJV WKDW0.62 X KDG WR GR					–
11 angered because of things that happened that were beyond your control	0.66				–
12 thinking about things that you have to accomplish	0.42		–		–
GLIÀFXOWLHV ZHUH SLOLQJ XS VR0.65LJK WKDW \RX FRXOG QRW overcome them					
Positive items					
4 dealt successfully with irritating life hassles				–	–
5 felt that you were effectively coping with important changes that were occurring in your life				–	–
IHOW FRQÀGHQW DERXW \RXU DELOLW\ WR KDQGOH \RXU SHUVRQDO problems					
IHOW WKDW WKLQJV ZHUH JRLQJ \RXU ZD0.60				0.63	
ZHUH DEOH WR FRQWURO LUULWDWLRQ L061RXU OLIH					–
10 felt that you were on top of things					–
13 were able to control the way you spend your time?				–	–
Factor correlation	0.43		0.50		–
H[SODLQHG YDULDQFH			55		55
&URQEDFK.V /					0.– –

Extraction method: principal component analysis. Rotation method: oblimin with Kaiser normalization.

S DQG IRU WKH 36 DISCUSSION DQG PSS-4, respectively) The total scores of the 3 versions are higher for workers having children (p-values <0.01 for the three versions), and an effect of gender was found only for the PSS-10 (p < 0.05). No other effects (resulting from the marital status, gender, or professional status) were found, but for the effect of gender on the PSS-10 showing that women experience more perceived stress than men.

The aim of this paper was to provide some data on the psychometric properties of the PSS-14, and explore its structure, as well that on the two shorter versions, namely the PSS-10 and the PSS-4 (extracted from the longer one). The results showed that the properties of the French version are quite satisfactory. However, before going further into the discussion, we want to highlight two points that need to be reminded. First of all, it is important to note

CONCLUSION

Given the data we provided on the psychometric properties of the 3 versions of the PSS, we can say that all three can be used to assess perceived stress. However, this is the 10-item version that provides the best discriminative sensibility, and overall the best psychometric properties. The 4-item version is an interesting alternative as it keeps satisfying properties. It is important to note however that studies using real 10- and 4-item versions of the PSS, have

WR E H F R Q G X F W H G WR F R Q À U P W K R V H U

The PSS scale is tool based on the transactional model of stress. Although it is well-known and widely used, scarce data has been published on its French versions. The study we have presented here showed that the psychometric properties of the scale are indeed satisfactory and in accordance with the literature. A 10-item version could also be an inte-

U H V W L Q J

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