Patrick A. Bovier[1,2], **Eric Chamot**[3], **Thomas V. Perneger**[2,3]

[1] *Department of Community Medicine, Geneva University Hospitals*
[2] *Quality of Care Unit, Geneva University Hospitals*
[3] *Institute of Social and Preventive Medicine, University of Geneva*

Brief scales for measurement of functional social support and psychological resources in French-speaking adults

Summary

Objectives: Psychological resources and social support are important determinants of health, but brief and validated scales measuring these dimensions in French are lacking.
Methods: Instruments measuring self-esteem and mastery, and affective and confident social support were administered by mail to 1257 university students. Factor analysis, internal consistency statistics, and correlations with related variables were used to derive abbreviated scales and confirm their validity.
Results: Factor analysis and item reduction yielded four brief scales: mastery (4 items), self-esteem (4 items), affective social support (2 items), and problem-solving social support (4 items). All four scales had few missing items and adequate internal consistency (Cronbach's $\alpha > 0.70$). All scores were associated with self-reported general health, and with visits to mental health specialists. Scores of self-esteem and mastery were also associated with physician visits (inversely), and confidence in finishing studies and finding a job. Scores of affective and confident social support correlated with the intensity of social activities and the number of people the respondent could count on.
Conclusions: The abbreviated scales retained adequate psychometric properties and may be usefully applied in health research among similar French-speaking populations.

Keywords: **Social support – Mastery – Self-esteem – French scales – Adolescents.**

The ability of young people to deal with life events and environmental stressors is an important determinant of their health (Heiligenstein et al. 1996; Lepore & Evans 1996; Rice 1999; Ystgaard et al. 1999). Two types of personal resources contribute to their resistance: psychological resources such as mastery and self-esteem (Hobfoll et al. 1994; Thoits 1995), and social support provided by family and friends (Seeman 1996; Berkman & Glass 2000). Previous research has documented that both psychological resources and social support are associated with various health-related outcomes (Medalie 1985; Broadhead et al. 1989; Thoits 1995; Seeman 1996; Berkman & Glass 2000).
Despite the important role of these factors for mental and physical health, they are rarely assessed in clinical research. This may be due in part to a lack of short, valid, self-administered instruments. Although some validated instruments are available in English and can be found in the medical literature, such instruments are almost never available in French, and when they are, publications reporting their psychometric properties are lacking. In this study, we report on the psychometric properties of four brief instruments measuring mastery, self-esteem, and social support in a sample of French-speaking university students.

Methods

Study design
In the fall of 1997, we conducted a cross-sectional mail survey of a random sample of regular students enrolled at the University of Geneva, Switzerland. The total number of registered students on October 31st was 13701. We excluded all students with less than two consecutive semesters in the same faculty, and randomly selected 2000 students from this list (N=8806). The questionnaire was sent by regular mail, and followed by up to two reminders. The primary purpose

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of the survey was to identify the health and health care needs of the students.

Instruments

We searched the medical literature for instruments that were reasonably short, had been validated in clinical settings, and whose psychometric properties had been published. The Pearlin & Schooler's scales of mastery, self-denigration and self-esteem (1978) and the Duke-UNC Functional Social Support Questionnaire (Broadhead et al. 1988) were retained as candidates (UNC: University of North Carolina).

The Pearlin & Schooler's instrument (1978) included 16 items to measure mastery (7 items), self-denigration (4 items), and self-esteem (6 items, of which one is shared with the self-denigration scale). The items assessing self-esteem and self-denigration (i.e., positive and negative feelings toward oneself) were derived from the Rosenberg scale (1965). Mastery scores measured the strength of people's belief that life course is under their own control in contrast to being fatalistically ruled (Pearlin & Schooler 1978). The Duke-UNC Functional Social Support Questionnaire was primarily designed for use in family medicine practice settings. It consists of two subscales measuring *confident support* (5 items) and *affective support* (3 items). Confident support refers to the availability of people the respondent can confide in and receive advice from when challenging situations occur; affective support refers to availability of people who express emotional involvement with and care for the respondent.

Two medical researchers and one bilingual non-medical professional produced independent French translations of the instruments. All translations were reviewed by an expert panel and a final version was obtained by consensus. This version was pre-tested for acceptability and clarity among 20 University students, during face-to-face interviews.

The questionnaire mailed to the students also included socio-demographic characteristics (age, sex), the "general health" item from the 36-item short form health survey (Ware et al. 1996; Gandek et al. 1998), and questions about the number of people the respondent could count on in case of need (Blake & McKay 1986), the number of visits to medical specialists (primary care physician, mental health specialist, other medical specialist), the frequency of socio-cultural activities, living arrangements (alone versus with other people), any previous unwanted sexual experience (threats, touching, sex), and the degree of confidence that students will successfully complete their studies and find a job after graduation.

Data analysis

Descriptive statistics were calculated for each item (mean, standard deviation, percentage of responses in the lowest and highest choice categories). Factor analysis was performed to examine the underlying dimensional structure of the scales (principal component analysis with varimax rotation) and Cronbach's coefficient α were used to assess their internal consistency. Scales were shortened by elimination of items that contributed the least to the scale internal consistency. After scale reduction, summary scores were obtained for each scale by summing the responses of the corresponding items.

Scale validity was not assessed in depth because validity studies had already been carried out previously for all scales. Nevertheless we tested the following construct validity hypotheses: (1) students who were confident that they would successfully complete their studies and find a job after graduation have higher scores of self-esteem and mastery; (2) students living alone have lower scores of social support; (3) students who were engaged in more frequent socio-cultural activities and could count on more people in case of need have higher scores of social support. Furthermore, we described the relationships of each score with socio-demographic characteristics, perceived general health, unwanted sexual experience, and visits to medical specialist.

We used analysis of variance to test for difference in mean scores across levels of categorical variables and also performed tests for linear trend when the categorical variable was measured on an ordinal scale. This strategy eased interpretation compared to Pearson's correlation coefficient and also assessed linearity. To facilitate comparisons, scores were standardised to a mean of 50 and a standard deviation of 10 (T-score). All statistical tests were two-tailed, with a significance level of 0.05.

Results

Of the 1 954 students who remained eligible after deletion of incorrect or foreign addresses (97.7%), 1257 answered the questionnaire (response rate 64%). Mean age of the respondents was 26 years (SD 5.5, range 18–56). Almost three quarters were Swiss (n=916, 73%), 20% were from a European country (European Community: 17%), 3% came from the American continent, and 2% from Africa and Asia. The majority (58%, n=735) were women. Most students were single (n=1105, 89%), 125 (10%) were married, and 11 (1%) divorced. A minority lived alone (n=244, 20%). The mean number of years spent at the University was 4 (SD 2.2, range 1–20). No significant difference was observed between the socio-demographic characteristics of respondents and non-respondents.

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Mastery and self-esteem

After reversion of items that were negatively phrased (a high score meaning higher psychological resources), factor analysis including all 16 items did not confirm the three dimensions described by the original authors, as self-denigration and self-esteem items aggregated on the same factor (Appendix 1). Based on these results, we performed a separate item-reduction analysis for each dimensional structure suggested by factor analysis of the translated scale. This resulted in two sub-scales of four items each (Tab. 1). The factor analysis of these eight items confirmed a two-dimensional structure. Mean scores for individual items ranged from 1.4 to 4.0 on a five-point scale, with standard deviations ranging from 0.8 to 1.2. Two scores measuring mastery and self-esteem/denigration were constructed by averaging corresponding items. The two short scales were moderately correlated with each other (0.58). The four-item mastery scale correlated strongly with the seven-item original (0.93) and the four-item self-esteem/denigration scale correlated with both the original six-item scale of self-esteem (0.90) and the original four-item scale of self-denigration (0.87). Cronbach's α coefficients were 0.72 and 0.81 respectively.

Affective and confident social support

Factor analysis identified two principal components, as hypothesised in the original publication. However, two items had substantial cross-loadings on the unrelated subscale and decreased the internal consistency of their own subscale (App. 2); they were removed from further analyses. Mean scores for individual items ranged from 4.1 to 4.5 on a five-point scale, with standard deviations ranging from 0.9 to 1.1 (Tab. 2). Two scales were constructed (Tab. 3). The new subscales were strongly correlated with the original subscales

Table 1 Descriptive statistics and factor analysis (principal component analysis, varimax rotation) of the personal resources sub-scales (mastery and self-esteem) for 1257 respondents

How strongly do you agree or disagree that:	Percent responding			Mean (SD)	Factor loading	
	Missing	Totally disagree	Totally agree		Factor 1	Factor 2
Self-esteem						
On the whole, I am satisfied with myself.	0.3	2.6	27.2	4.0 (0.9)	0.78	0.24
I take a positive attitude toward myself.	0.2	2.8	23.6	3.8 (1.0)	0.77	0.19
At times I think I am no good at all.*	0.4	52.6	2.4	1.8 (1.1)	0.77	0.14
All in all, I am inclined to feel that I am a failure.*	0.2	66.5	0.8	1.4 (0.8)	0.76	0.21
Mastery						
I have little control over the things that happen to me.*	0.6	30.4	1.4	2.0 (0.9)	0.43	0.54
There is really no way I can solve some of the problems I have.*	0.2	46.7	2.5	1.9 (1.0)	0.31	0.71
There is little I can do to change many of the important things in my life.*	0.6	27.3	4.4	2.4 (1.2)	0.20	0.86
I often feel helpless in dealing with the problems of life.*	0.2	23.4	2.4	2.3 (1.1)	0.49	0.56

Answer scale: 1: Totally disagree – 5: Totally agree. * reversed score for the summary scale.

Table 2 Descriptive statistics and factor analysis (principal component analysis, varimax rotation) of social support sub-scales (affective and confident support) for 1257 respondents

I get…	Percent responding			Mean (SD)	Factor loading	
	Missing	Much less than I would like	As much as I would like		Factor 1	Factor 2
Affective support						
…people who care what happens to me.	0.4	1.9	39.8	4.1 (1.0)	**0.83**	0.26
…love and affection.	0.2	4.5	45.9	4.1 (1.1)	**0.84**	0.25
Confident support						
…chances to talk to someone about problems at work, with my housework, or my studies.	0.2	1.8	68.7	4.5 (0.9)	0.24	**0.78**
…chances to talk to someone I trust about my personal and family problems.	0.2	3.2	66.1	4.4 (1.0)	0.19	**0.83**
…chances to talk about money matters.	0.5	3.1	68.6	4.5 (1.0)	0.23	**0.74**
…useful advice about important things in life.	0.3	3.8	49.6	4.2 (1.1)	0.32	**0.64**

Answer scale: 1: Much less than I would like – 5: As much as I would like.

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(affective support: 0.95; confident support: 0.96), and moderately correlated with each other (0.57). Cronbach's α was 0.70 for affective support and 0.79 for confident support.

Construct validity of the scales

As hypothesised, students who trusted that they would successfully complete their studies and find a job after graduation had significantly higher scores of mastery and self-esteem (Tab. 4).

Students who lived alone scored significantly lower on the scales of affective and confident support (Tab. 5), whereas those who reported more frequent socio-cultural activities had higher scores on these scales. A strong and significant progression of both social support scores was observed, from students who reported that they could count on no one in case of need to those who estimated they could count on 10 or more persons.

Subgroup analysis

Small but significant gender differences were found, as women reported higher confident support and slightly lower self-esteem (Tab. 6). Self-esteem increased slightly with age, whereas affective and confident support decreased with age. Contrasting with these small differences, respondents who rated their perceived health as excellent had much higher scores on all four scales, as compared to those who rated their perceived health as fair or poor. Respondents who reported unwanted sexual experiences also had significantly lower scores on all four scales, in particular on self-esteem and mastery.

With respect to use of medical services (Tab. 7), respondents who reported three or more visits to a primary care physician in the past year had slightly lower self-esteem and mastery scores. Differences of greater magnitude were found on all scales for those who reported at least one past visit to a mental health specialist (psychiatrist or clinical psychologist) as compared to those who reported no such visit. No significant difference was found for visits to other medical specialists.

Table 3 Descriptive statistics of the four short scales

	N	mean	SD	Minimum	Maximum	Percentile		
						75th	50th	25th
Mastery	1254							
Raw score		3.8	0.8	1.0	5.0	3.3	4.0	4.5
T-score		50	10	13.5	64.8	42.4	52.0	58.4
Self-esteem	1254							
Raw score		4.1	0.8	1.0	5.0	3.8	4.3	4.8
T-score		50	10	8.5	61.8	45.1	51.8	58.4
Affective support	1254							
Raw score		4.1	0.9	1.0	5.0	3.5	4.0	5.0
T-score		50	10	16.6	60.1	43.8	49.2	60.1
Confident support	1254							
Raw score		4.4	0.8	1.0	5.0	4.0	4.8	5.0
T-score		50	10	5.1	58.0	44.8	54.7	58.0

Table 4 Relationship between personal resources and other related items

	N	Self-esteem scores (mean)	p value	Mastery scores (mean)	p value
How much do you agree that you will successfully complete your studies. [a] (11 missing)			p < 0.001		p < 0.001
Disagree or unsure	136	45.0		45.7	
Agree	320	48.1		48.0	
Totally agree	790	51.6		51.6	
How much do you agree that you will find a job after graduation. [a] (28 missing)			p < 0.001		p < 0.001
Disagree or unsure	580	47.8		47.5	
Agree	370	50.5		50.8	
Totally agree	279	53.4		53.7	

[a] ANOVA, test for linearity.

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Table 5 Relationships between social support subscales and other related items

	N	Affective support scores (mean)	p value	Confident support scores (mean)	p value
Living alone[a] (17 missing)			p = 0.001		p = 0.004
Yes	243	48.1		48.4	
No	997	50.5		50.4	
Socio-cultural activities[b] (7 missing)			p < 0.001		p < 0.001
Never	33	43.3		44.2	
Once a month	297	49.2		47.9	
1–2 times per week	757	50.4		50.7	
3–5 times per week	133	50.4		51.2	
>5 times per week	30	54.1		54.4	
Number of people you can count on in case of need[b] (6 missing)			p < 0.001		p < 0.001
0	8	26.8		25.8	
1	57	40.6		39.1	
2–5	682	49.0		49.1	
6–9	343	51.9		52.0	
10 or more	161	54.8		54.5	

[a] Student t-test.
[b] ANOVA, test for linearity.

Table 6 Relationships of stress, self-esteem, mastery, affective and confident support to demographic variables, perceived health, and unwanted sexual experience

	N	Mean scores			
		Self-esteem	Mastery	Affective support	Confident support
Sex[a]		p = 0.02	p = 0.15	p = 0.16	p < 0.001
Male	522	50.8	50.5	49.5	48.5
Female	735	49.5	49.7	50.3	51.0
Age[b] (1 missing)		p = 0.04	p = 0.90	p = 0.002	p < 0.001
< 25	611	49.6	49.8	50.3	50.8
25–29	400	50.0	50.6	50.7	50.5
30–34	144	50.5	49.5	49.0	47.7
> 34	101	51.8	49.7	46.7	46.8
Overall health rating[b] (6 missing)		p < 0.001	p < 0.001	p < 0.001	p < 0.001
Excellent	242	54.1	54.2	53.4	53.2
Very good	525	51.4	51.6	51.1	51.1
Good	458	46.7	46.4	47.4	47.4
Fair or Poor	26	40.6	41.4	43.4	45.5
Unwanted sexual experience[a] (3 missing)		p < 0.001	p < 0.001	p = 0.002	p = 0.02
Never	1047	50.6	50.6	50.4	50.3
Ever	207	46.7	46.7	48.0	48.5

[a] Student t-test.
[b] ANOVA, test for linearity.

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Table 7 Relationships of stress, self-esteem, mastery, affective and confident support to visit to primary care physicians, mental health specialists, and other medical specialists

	N	Mean scores			
		Self-esteem	Mastery	Affective support	Confident support
Visit to primary care physician in past 12 months[b]		p = 0.009	p < 0.001	p = 0.97	p = 0.82
0 visit	496	50.5	50.9	49.8	49.7
1–2 visits	491	50.4	50.3	50.4	50.7
3 or more visits	270	48.3	47.8	49.6	49.2
Visit to mental health specialist in past 12 months[a]		p < 0.001	p < 0.001	p < 0.001	P = 0.03
0 visit	1126	50.8	50.7	50.4	50.2
1 or more visit	131	43.5	44.0	46.3	48.2
Visit to other medical specialist in past 12 months[a]		p = 0.44	p = 0.28	p = 0.58	p = 0.63
0 visit	915	49.9	50.2	49.9	49.9
1 or more visit	342	50.4	49.5	50.3	50.2

[a] Student t-test.
[b] ANOVA, test for linearity.

Differential correlations between the four scales, health ratings and gender was assessed by including an interaction term between gender and health ratings in linear regression models predicting internal resources and social support respectively. Self-esteem and mastery were lower in people reporting worst perceived health in both men and women. In contrast, women had higher affective and confident support independently from their health ratings. No interaction term was significant.

Discussion

Starting from existing instruments, we developed shorter and potentially useful scales to measure mastery, self-esteem, and the confident and affective dimensions of social support among French-speaking adults. Factor analyses of the scales for personal resources and social support produced solutions that were simple and clearly interpretable. The only difference with the original publications was that we could not confirm self-esteem and self-denigration as distinct dimensions. For the measurement of functional social support, the resulting confident support scale now includes only items in relation with the possibility of sharing or receiving support regarding problems at work or personal situations. Therefore, its name could be changed into a better fitting term such as "problem-solving" support scale.

Without assessing scale validity in depth, our results suggested that the new and shorter instruments had good internal and construct validity. In particular, all four personal resource scores were only weakly related to demographic characteristics such as sex and age, but strongly associated with perceived general health, unwanted sexual experience, and use of mental health services. Finally, our experience indicates that good completion rates are likely if the new scales are used in self-administered mail surveys.

Several limitations deserve comment. The generalisability of our findings to other settings requires verification. As we worked with a population that was particularly well educated and used to fill in questionnaires, whether the questionnaires will prove useful in other situations and with other populations, such as younger adolescents or older adults, remains open to study. However less educated or older respondents may not necessarily have more difficulties with these instruments, as the items are short, clear, and unambiguous. Because we worked with French versions of the original items, we cannot be certain whether the observed differences in psychometric characteristics were due totally or in part to translation. Due to the cross-sectional design of this study, the causality of the associations between general health and the four personal resource scores cannot be determined, and would require verification in a prospective study.

In summary, the promising psychometric properties of these brief scales suggest that they may be usefully applied to the study of health and its determinants in populations of French-speaking young adults.

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Appendix 1 English items and French translation of the original personal resources subscales, and factor analysis results (principal component analysis, varimax rotation)

How strongly do you agree or disagree that.	Indiquez pour chaque proposition dans quelle mesure vous êtes d'accord ou pas.	Factor 1	Factor 2
Self-denigration			
I certainly feel useless at times. (r) *	Je me sens parfois complètement inutile.	0.63	0.31
At times I think I am no good at all. (r)	Parfois je me dis que je suis un bon à rien.	0.68	0.24
I wish I could have more respect for myself. (r) *	J'aimerais bien avoir plus de respect pour moi-même.	0.51	0.35
All in all, I am inclined to feel that I am a failure. (r)	Tout bien considéré, j'ai tendance à penser que je suis un raté.	0.68	0.25
Self-esteem			
I feel that I have a number of good qualities. *	J'ai le sentiment d'avoir beaucoup de qualités.	0.65	−0.01
I feel that I am a person of worth, at least on equal plane with others. *	Je pense que je suis quelqu'un de valable, au moins aussi bien que les autres.	0.73	0.05
I am able to do things as well as most other people. *	Je suis capable de faire les choses aussi bien que la plupart des autres personnes.	0.62	0.20
On the whole, I am satisfied with myself.	Dans l'ensemble, je suis content(e) de moi.	0.72	0.29
I take a positive attitude toward myself.	J'ai une attitude positive envers moi-même.	0.72	0.26
Mastery			
I have little control over the things that happen to me. (r)	J'ai peu de contrôle sur ce qui m'arrive.	0.35	0.59
There is really no way I can solve some of the problems I have. (r)	Il n'y a vraiment aucun moyen pour moi de résoudre certains de mes problèms actuels.	0.27	0.63
There is little I can do to change many of the important things in my life. (r)	Je ne peux pas changer grand chose en ce qui concerne certains aspects importants de ma vie.	0.02	0.75
I often fell helpless in dealing with the problems of life. (r)	Je me sens souvent impuissant(e) face aux problèmes de la vie.	0.44	0.57
Sometimes I fell that I am being pushed around in life. (r)*	Quelquefois, j'ai l'impression de me faire «marcher sur les pieds» dans la vie.	0.33	0.43
What happens to me in the future mostly depends on me.*	Ce qui arrivera dans le futur dépend surtout de moi.	−0.02	0.59
I can do just about anything I really set my mind to do.*	Je peux faire pratiquement tout ce que je veux, une fois que j'ai vraiment décidé de le faire.	0.24	0.50

Answer scale: 1: Totally disagree / Pas du tout d'accord – 5: Totally agree / Tout à fait d'accord. (r): reversed score (a higher score corresponds to higher psychological resources). * items deleted from final short scales.

Appendix 2 English items and French translation of the original social support subscales (affective and confident support), and factor analysis (principal component analysis, varimax rotation)

Here is a list of some things that other people do for us or give us that may be helpful or supportive. Please read each statement carefully and place a check in the blank that is closest to your situation. I get…	Voici une liste de choses que d'autres personnes peuvent faire pour vous ou vous donnent, pour vous aider ou vous soutenir. Lisez attentivement chaque proposition et indiquez pour chacune d'elles dans quelle mesure vous êtes d'accord ou pas.	Factor 1	Factor 2
Affective support			
…people who care what happen to me.	Des gens attachent de l'importance à ce qui m'arrive.	0.23	0.80
…love and affection.	Je reçois de l'amour et de l'affection.	0.24	0.79
…help when I am sick in bed.*	Je peux obtenir de l'aide quand je suis malade au lit.	0.52	0.42
Confident support			
…chances to talk to someone about problems at work, with my housework, or my studies.	J'ai la possibilité de parler avec quelqu'un des problèmes de travail (y compris tâches ménagères) ou d'études.	0.77	0.24
…chances to talk to someone I trust about my personal and family problems.	J'ai la possibilité de parler avec une personne de confiance de mes problèmes personnels ou de famille.	0.81	0.20
…chances to talk about money matters.	J'ai la possibilité de parler des question d'argent.	0.73	0.23
…invitations to go out and do things with other people.*	Je reçois des invitations pour sortir et avoir des activités avec d'autres personnes.	0.29	0.63
…useful advice about important things in life.	J'ai quelqu'un qui me donne des conseils utiles concernant les choses importantes de la vie.	0.61	0.36

Answer scale: 1: As much as I would like / Autant que je le désire – 5: Much less than I would like / Beaucoup moins que je le désire). * items deleted from final short scales.

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Zusammenfassung

Kurz-Skalen zur Messung sozialer Unterstützung und psychologischer Ressourcen von frankophonen Erwachsenen

Fragestellung: Psychologische Ressourcen und soziale Unterstützung sind wichtige Gesundheitsfaktoren. Kurze und valide Skalen, die diese Faktoren messen, existieren auf Französisch nicht.

Methoden: Instrumente, die Selbstachtung und Beherrschung, sowie Instrumente, die affektive und problemlösende soziale Unterstützung, messen, wurden per Post an 1257 Universitätsstudenten versandt. Faktoranalysen, interne Konsistenz und Korrelationen mit verschiedenen Variabeln wurden berechnet, um verkürzte Skalen abzuleiten und deren Validität zu messen.

Ergebnisse: Faktoranalysen und Itemreduktionen erbrachten vier kurze Skalen: Beherrschung (4 Items), Selbstachtung (4 Items), affektive soziale Unterstützung (2 Items), und problemlösende soziale Unterstützung (4 Items). Alle vier Skalen zeigten eine adäquate interne Konsistenz (Cronbachs $\alpha > 0.70$). Alle Skores waren mit selbst berichtetem Gesundheitszustand und Konsultation beim Psychiater assoziiert. Die Skores der Selbstachtung und Beherrschung waren mit Ärztebesuch (invers) und Vertrauen in der Suche nach einem Job assoziiert. Die Skalen für soziale Unterstützung korrelierten positiv mit der Intensität der sozialen Aktivitäten und der Anzahl der Personen, auf die sich die Befragten stützen können.

Schlussfolgerungen: Die verkürzten Skalen behalten adäquate psychometrische Eigenschaften. Sie könnten sich im Gebiet der Gesundheitsforschung in frankophonen Ländern und in gleichartigen Gruppen als nützlich erweisen.

Résumé

Echelles de mesures courtes du soutien social et des ressources psychologiques chez des adultes francophones

Objectifs: Les ressources psychologiques et le soutien social sont des déterminants importants de la santé, mais des échelles de mesure courtes et validées manquent en langue française.

Méthodes: Des questionnaires mesurant différents aspects du soutien social et des ressources psychologiques personnelles ont été administrés par voie postale à 1257 étudiants universitaires. L'analyse factorielle et de fiabilité, ainsi que les corrélations avec des variables socio-démographiques ont été utilisées pour établir des échelles plus courtes et confirmer leur validité.

Résultats: Quatre échelles distinctes ont été identifiées: maîtrise (4 questions), estime de soi (4 questions), soutien affectif (2 questions) et soutien pour la résolution de problèmes (4 questions). Toutes ces échelles avaient une bonne fiabilité (Cronbach $\alpha > 0.70$) et étaient associées avec l'état de santé des répondants et les visites chez un spécialiste de santé mentale. La maîtrise et l'estime de soi étaient associés avec le nombre de visites médicales (relation inverse), et avec l'assurance de trouver un travail à la fin des études. Les scores de soutien social étaient associés avec l'intensité des activités sociales et le nombre de personnes sur lesquels les répondants pouvaient compter en cas de besoin.

Conclusions: Ces échelles abrégées ont des propriétés psychométriques similaires aux échelles d'origines et peuvent s'avérer utiles pour des enquêtes sur la santé auprès de jeunes adultes francophones.

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Address for correspondence

Dr. Patrick A. Bovier
Department of Community Medicine
Geneva University Hospitals
24 rue Micheli-du-Crest
CH-1211 Geneva 14

Tel.: +41-22-37-29525
Fax: +41-22-37-29600

e-mail: patrick.bovier@hcuge.ch.


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