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Statistical Validation of the Self-Harm Antipathy Scale-Japanese Version (SHAS-J)

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Abstract

Aim: This study aimed to determine the reliability and validity of the Self-Harm Antipathy Scale-Japanese Version (SHAS-J).

Methods: A self-administered questionnaire was distributed to 764 nurses working in 32 emergency departments across Japan and 302 (39.5%) of them responded effectively. The questionnaires collected demographic data about the nurses and the SHAS-J. Data were evaluated with Cronbach's alpha along with exploratory factor, confirmatory factor, and correlation analyses.

Results: Factor analysis of the SHAS-J resulted in extraction of four factors. The four factors comprised "low empathic practice competence", "care futility", "lack of active understanding" and "ignorance about rights and responsibilities". Cronbach's alpha for the four factors were 0.83-0.54.

Conclusion: The reliability and validity of the SHAS-J were approximately verified.

Keywords: Antipathy; Nursing care; Statistical validation; Self-injury

Background

Suicide rates in Japan are high compared with other countries [1] and have become a serious social problem. Patients who attempt suicide require care-based sympathy from a nurse [2]. However, caring for patients who attempt suicide or self-harm is difficult for nurses working in an emergency setting, and this situation is not beneficial to patients [3,4]. In Japan, no measures are currently in place to evaluate negative feelings such as antipathy in patients who engage in self-injury. Therefore, to help evaluate the difficulties associated with such patients encountered by nurses, a reliable Japanese version of the Self-Harm Antipathy Scale (SHAS) developed in the U.K. is needed.

Aim

This study aimed to determine the reliability and validity of the SHAS-Japanese Version (SHAS-J).

Method

An anonymous self-report questionnaire survey was conducted on 764 nurses working in emergency departments in Japan. The questionnaires collected demographic data about the nurses and the SHAS-J. To assess the concept validity of the SHAS-J, exploratory factor analysis was used to verify the factor structure, and covariance structure analysis using confirmatory factor analysis was used to verify the factor structure between the original SHAS and the SHAS-J and confirm the conformance. Data were analyzed using SPSS (Ver. 22 for Windows) and Amos (Ver. 22 for Windows). In translation to Japanese of the original SHAS, the original author Patterson was already retired and the authorship Whittington received license and translation permission. The original version of the SHAS was translated into Japanese by a certified translator. This study was approved by the ethics committee of Hamamatsu University School of Medicine (E 14-240) [5].

Results

The questionnaire was distributed to 764 nurses working in 32 emergency departments across Japan; 302 (39.5%) responses were received. The mean age of the respondents was 34.8 years (standard deviation=7.4 years). As shown in Table 1, the largest number of respondents were members of the High care units (73 persons; 24.2%), followed by the Intensive care units (65 persons; 21.5%).

Factors	Mean ± SD (n)	%
Female	249	82.5
Male	53	17.5
Age	average 348 ± 74	
Years of work as nurses	average 127 ± 72	
Years of work as emergency department nurses	average 59 ± 49	
Department in which you work		
First-line treatment	45	14.9
Intensive Care Units	65	21.5
High Care Units	73	24.2

General Ward	31	10.3
Other Emergency service overlap	7	2.3
Overlap	78	25.8
Unknown	3	1

Table 1: The nurses demographic data, n=302.

Validation of reliability

Cronbach's α coefficient for each SHAS-J factor ranged from 0.83 to 0.54 (Table 2).

Validation of validity

Regarding the 30 items on the original SHAS, the ceiling and floor effects, Item-Total correlation, and inter-item correlation were confirmed, but it was decided that the content of the item was not excluded considering the contents of the item (Table 2). In the same way as the original SHAS, a factor analysis was performed using the varimax rotation, and four factors were extracted. After excluding six items with a factor loading of 0.35 or less were excluded (Items 3, 13, 18, 19, 20 and 25), the resulting scale was named the SHAS-J (Table 3). The first and third factors were reverse-scored items. The first factor consisted of seven items, such as "I find it rewarding to care for self-harm patients" and "I try to help self-harm patients feel positive about them", so it was named "Low Empathic practice competence". The second factor consisted of 11 items, such as "A self-harm patient is someone who is only trying to get attention" and "A self-harm patient is a complete waste of time", so it was named "Care futility". The third factor consisted of three items, such as "Acts of self-harm are a form of communication about their situation" and "For some individuals, self-harm can be a way of relieving tension", so it was named "Lack of active understanding". The fourth factor consisted of three items, such as "People should be allowed to engage in self-harm in a safe environment" and "An individual has the right to engage in self-harm", so it was named "Rights and responsibilities". Then, to examine the validity of the constitutive concept, the factor structure of the SHAS-J was analyzed. In terms of compatibility, for the four-factor model of the SHAS-J, the GFI=0.85, AGFI=0.82, CFI=0.37 and RMSEA=0.06. In terms of the compatibility of the six-factor model, which was assumed to have the same factor structure as the original SHAS, the GFI=0.85, AGFI=0.81, CFI=0.21 and RMSEA=0.07.

S. No.		Ceiling effect	Floor effect	Item-total correlation	Inter-item correlation
1	People who self-harm are usually trying to get sympathy from others	5.8	3.2	0.37	-0.12~0.46
2[*]	People should be allowed to self-harm in a safe environment	7.2	4.9	0.12	0.12~0.42
3[*]	A rationale person can self-harm	5.6	2.3	0.23	-0.11~0.19
4	Self-harming clients do not respond to care	4.3	1.5	0.53	-0.12~0.58
5	When individuals self-harm. It is often to manipulate carers	5.1	2.6	0.14	-0.21~0.25
6	People who self-harm are typically trying to get even with someone	4.1	1.8	0.16	-0.14~0.34
7	A self-harming client is complete waste of time	4.0	1.3	0.58	-0.19~0.58
8[*]	An individual has the right to self-harm	6.4	3.5	0.21	-0.15~0.42
9	Self-harm is a serious moral wrong doing	5.4	2.7	0.25	0.11~0.28
10	There is no way of reducing self-harm behaviours	4.5	2.0	0.38	-0.13~0.5
11	People who self-harm lack solid religious convictions	4.5	2.2	0.30	0.13~0.29
12[*]	Self-harm may be a form of reassurance for the individual that they are really alive and human	5.2	2.6	0.24	0.12~0.32
13[*]	Self-harming individuals can learn new ways of coping	5.1	2.7	0.27	-0.12~0.26
14[*]	Acts of self-harm are a form of communication to their situation	5.3	2.7	0.20	-0.21~0.39
15	A self-harming client is a person who is only trying to get attraction	5.2	2.8	0.51	-0.12~0.47
16	Self-harming clients have only themselves to blame for their situation	4.3	2.0	0.39	-0.17~0.41

17*	For some individuals self-harm can be a way of relieving tension	5.0	2.7	0.28	-0.12~0.39
18*	Self-harming clients have a great need for acceptance and understanding	4.5	2.2	0.08	-0.1~0.27
19*	A self-harming client deserves the highest standards of care on every occasion	5.3	2.5	0.36	-0.12~0.31
20*	I listen fully to self-harming clients problems and experiences	4.5	2.1	0.29	-0.12~0.31
21*	I feel concern for the self-harming clients	5.0	2.5	0.53	-0.13~0.53
22	I feel critical towards self-harming clients	5.3	2.7	0.64	-0.12~0.53
23*	I demonstrate warmth and understanding to self-harming clients in my care	4.6	2.6	0.52	-0.13~0.53
24*	I help self-harming clients feel positive about themselves	5.0	2.9	0.47	-0.22~0.51
25	I feel to blame when my clients self-harm	6.4	3.7	-0.16	-0.19~-0.1
26*	I acknowledge self-harming clients qualities	5.1	3.2	0.34	-0.15~0.51
27*	I find it rewarding to care for self-harming clients	6.2	3.8	0.58	0.12~0.57
28*	I can really help self-harming clients	6.3	4.0	0.38	0.13~0.57
29	I would feel ashamed if a member of my family engaged in self-harm	5.4	2.3	0.28	0.13~0.3
30*	I am highly supportive to clients who self-harm	6.3	4.0	0.51	0.13~0.52
*Statements in the questionnaire that have been reverse scored					

Table 2: Result of item analysis of "SHAS-J" (30 item).

S. No	Factor Loading			
	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1: Low empathic practice competence				
27* — I find it rewarding to care for self-harming clients	0.725	0.255	0.095	0.035
24* — I help self-harming clients feel positive about themselves	0.655	0.136	0.058	0.027
23* — I demonstrate warmth and understanding to self-harming clients in my care	0.646	0.145	0.133	0.013
26* — I acknowledge self-harming clients qualities	0.636	-0.073	0.033	0.106
28* — I can really help self-harming clients	0.612	0.158	-0.012	0.032
30* — I am highly supportive to clients who self-harm	0.574	0.207	0.106	0.14
21* — I feel concern for the self-harming clients	0.565	0.283	0.166	-0.07
Factor 2: Care futility				

S. No		Factor 1	Factor 2	Factor 3	Factor 4
15	A self-harming client is a person who is only trying to get attraction	0.217	0.632	-0.025	0.118
7	A self-harming client is complete waste of time	0.374	0.609	0.119	0.01
4	Self-harming clients do not respond to care	0.307	0.601	0.103	-0.136
16	Self-harming clients have only themselves to blame for their situation	0.429	0.543	0.117	0.166
22	I feel critical towards self-harming clients	0.13	0.53	0.026	-0.011
10	There is no way of reducing self-harm behaviours	0.15	0.499	0.158	-0.112
1	People who self-harm are usually trying to get sympathy from others	0.147	0.499	-0.106	0.1
6	People who self-harm are typically trying to get even with someone	-0.131	0.491	-0.139	-0.009
11	People who self-harm lack solid religious convictions	-0.025	0.39	0.096	0.055

29	I would feel ashamed if a member of my family engaged in self-harm	0.075	0.383	0.01	0.026
5	When individuals self-harm. It is often to manipulate carers	0.069	0.369	-0.317	-0.058
Factor 3: Lack of active understanding					
14*	Acts of self-harm are a form of communication to their situation	0.099	-0.038	0.655	0.048
17*	For some individuals self-harm can be a way of relieving tension	0.147	0.059	0.561	0.01
12*	Self-harm may be a form of reassurance for the individual that they are really alive and human	0.075	0.078	0.462	0.1
Factor 4: Ignorance about rights and responsibilities					
2*	People should be allowed to self-harm in a safe environment	0.104	-0.088	-0.014	0.647
8*	An individual has the right to self-harm	0.067	0.003	0.276	0.598
9	Self-harm is a serious moral wrong doing	0.023	0.31	0.025	0.421
	Cronbach α	0.83	0.8	0.6	0.54
	Cumulative Proportion %	14.2	27.61	33.07	37.62

*statements in questionnaire that have been reverse scored

The result of principal factor method Varimax rotation was shown

The enclosure of numbers shows the factor loading with the highest factor

Table 3: Resurt of factor analysis of "SHAH-J".

Discussion

Cronbach's α coefficient for each factor of the SHAS-J ranged from 0.83 to 0.54, which is the same as that for the original SHAS, thereby confirming the internal consistency of the SHAS-J. The reliability of the SHAS-J was also confirmed using Cronbach's α. The results of the exploratory factor analysis showed that the SHAS-J had a four-factor structure and was not completely consistent with the six-factor structure of the original SHAS. The reason for the difference in the factor structure between the original SHAS and the SHAS-J was thought to be the cultural differences between Japan and the U.K. in terms of religion and individual rights and responsibilities. However, although the SHAS-J has a different factor structure than does the original SHAS, the measurable content of both scales are considered similar. These results suggest that the SHAS-J has good reliability and validity, but back-translation should be carried out the in future.

It is important that nurses empathize with their patients, but it is difficult for nurses do it [2,4]. Rogers reported that to sense the client's private world as if it were your own, but without ever losing the "as if" quality – this is empathy and this seems essential to therapy. Item of "Lack of active understanding" is indicated "empathy" [6] and considered that it is significant attitudes in understanding self-harm patients.

References

1. World Health Organization (2015) Suicide date.
2. World Health Organization (2000) Preventing Suicide.
3. Fukuda N, Ishikawa T, Kubo M, Ishimori K (2006) Nurse attitude towards suicidal patients in critical care and emergency center. J Jpn Soc Nurs 15: 15-24.
4. Japan Clinical Paramedic Society (2009) Responding to patients who tried to commit suicide Handbook for Emergency Outpatient (ER), Emergency Department, Emergency First Aid Center staff.
5. Patterson P, Whittington R, Bogg J (2007) Measuring nurse attitudes towards deliberate self-harm: The Self-Harm Antipathy Scale (SHAS). J Psychiatr Ment Health Nurs 14: 438-445.
6. Rogers CR (1957) The necessary and sufficient condition of therapeutic personality change. J Consult Psychol 21: 95-103.