

# PSYCHOMETRIC PROPERTIES OF THE SENSITIVITY TO PUNISHMENT AND SENSITIVITY TO REWARD QUESTIONNAIRE (SPSRQ) IN HUNGARIAN SAMPLE



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## Aim

The negative and positive affectivity is one of the most important temperament factors of personality. Gradually growing of exact measurement of the compositions of temperament is stimulated by the demand of deeper looking into the aetiology of depression, anxiety and psychosomatic diseases.

## Methods

The negative and positive affectivity is one of the most important temperament factors of personality. Gradually growing of exact measurement of the compositions of temperament is stimulated by the demand of deeper looking into the aetiology of depression, anxiety and psychosomatic diseases.

The Susceptibility to Punishment is a questionnaire which was developed to measure the individual differences in the BIS activation (Behavioural Inhibition System (Gray, 1981)). At the end of psychometrical analysis Torrubia (et al., 2001) has 24 items, and he renamed the scale as The Sensitivity to Punishment scale. The final version measures the individual differences dependent on BIS. These are the following: (1) behavioural inhibition, passive avoidance in general situation, (2) worry or cognitive processes as a reaction on the threat of punishment or failure (Torrubia, et al. 2001).

The Sensitivity to Reward scale was developed to measure the individual differences in the Gray's impulsivity dimension, the BAS (Behavioural Approach System (Gray, 1981)). The final version consists of 24 items, which contents include e.g.: sensation-seeking; topics of money, sex, social events related behaviour, or behaviour where people can do something to obtain reward.

## Subjects

363 students were recruited from an university sample. 251 females; (mean age: 21, 33; (S.D.=2, 22) with a range from 19 to 29) 112 males (mean age: 22, 53; (S. D.=2, 31) with a range from 19 to 30).

## Results

Females obtained significantly higher scores ( $t=-3,205$ ;  $p\leq 0,001$ ) than males on SP. Males obtained significantly higher scores ( $t=1,977$ ;  $p\leq 0,05$ ) than females on SR.

SP and SR scales were negatively correlated with the age. SR:  $r = 0,182$  ( $p\leq 0,001$ ). SP:  $r = -0,120$  ( $p\leq 0,02$ ).

## Tables and figures

Table 1. Shows the descriptive data of SP and SR scales separately to each gender, too.

	SR	SP
Normality (Kolmogorov-Smirnov Z)	1,45 (p=0,029)	1,64 (p= 0,009)
Mean (S.D.)		
Females	10,66 (3,96)	11,32 (5,98)
Males	11,77 (4,77)	8,95 (5,96)
All	11,00 (4,25)	10,59 (6,07)
Cronbach-alfa	0,76	0,88

Table 2. Shows the results of factor analysis of SPSRQ.

	SP	SR
47. Do you often refrain from doing something because of your fear of being embarrassed?	0,72	0,03
5. Are you often afraid of new or unexpected situation?	0,65	-0,08
39. Comproing yourself to people you know, are you afraid of many things?	0,65	-0,06
37. Do you, on a regular basis, think that you could do more things if it was not for your insecurity or fear?	0,63	-0,02
17. Are you a shy person?	0,63	-0,14
31. Are you often worried by things that you said or did?	0,62	0,09
43. Do you often refrain from doing something you like in order not to be rejected or disapproved of by others?	0,58	0,19
15. Are you easily discouraged in difficult situations?	0,56	-0,01
19. Whenever possible, do you avoid demonstrating your skills for fear being embarrassed?	0,56	-0,15
41. Do you often find yourself worrying about things to the extent that performance in intellectual abilities is impaired?	0,56	0,13
25. Do you think a lot before complaining in a restaurant if your meal is not well prepared?	0,53	-0,02
9. Do you often renounce your rights when you know you can avoid a quarrel with a person or an organisation?	0,52	0,04
35. Do you generally try to avoid speaking in public?	0,51	-0,25
7. Is it difficult for you to telephone someone you do not know?	0,51	-0,08
33. Would it be difficult for you to ask your boss for a raise (salary increase)?	0,50	-0,15
27. Would you be bothered if you had to return to a store when you noticed you were given to wrong change?	0,48	-0,03
1. Do you often refrain from doing something because you are afraid of it being illegal?	0,47	0,11
45. Generally, do you pay more attention to threats than to pleasant events?	0,45	0,09
13. In tasks that you are not prepared for, do you attach great importance to the possibility of failure?	0,43	0,09
23. Is it often difficult for you to fall asleep when you think about things you have done or must to do?	0,43	0,13
21. When you are with a group, do you have difficulties selecting a good topic to talk about?	0,41	-0,18
29. Whenever you can, do you avoid going to unknown places?	0,39	-0,08
11. As a child, were you troubled by punishments at home or in school?	0,33	0,06
3. Do you prefer not to ask for something when you are not sure you will obtain it?	0,32	-0,10
34. Are there a large number of objects or sensations that remind you of pleasant events?	-0,06	0,00
32. Is it easy for you to associates tastes and smells to very pleasant events?	0,05	0,03
12. Do you like being a centre of attention at a party or social meeting?	-0,27	0,53
42. Are you interested in money to the point being able to do risky jobs?	-0,14	0,52
38. Do you sometimes do things for quick gains?	0,08	0,51
10. Do you often do things to be praised?	0,17	0,50
20. Do you often take the opportunity to pick up people you find attractive?	-0,17	0,50
4. Are you frequently encouraged to act by the possibility of being valued in your work, in your studies, with your friends and with your family?	0,21	0,49
24. Does the possibility of social advancement, move you to an action, even if this involves not playing fair?	-0,05	0,49
46. Would you like to be a socially powerful person?	-0,17	0,48
14. Do you spend a lot of your time on obtaining a good image?	0,21	0,47
18. When you are in a group, do you try to make your opinions the most intelligent or the funniest?	-0,04	0,45
30. Do you like to compete and do everything you can to win?	-0,37	0,45
2. Does the good prospect of obtaining money motivate you strongly to do some things?	-0,06	0,45
44. Do you like to put competitive ingredients in all of your activities?	-0,33	0,43
48. Do you like displaying your physical abilities even though this may involve danger?	-0,09	0,41
22. As a child, did you do a lot of things to get people's approval?	0,11	0,37
26. Do you generally give preference to those activities that imply an immediate gain?	0,04	0,37
40. Does your attention easily stray from your work in the presence of an attractive stranger?	0,10	0,36
28. Do you often have trouble resisting the temptation of doing forbidden things?	0,11	0,35
6. Do you often meet people that you find physically attractive?	-0,04	0,30
16. Do you need people to show their affection for you all the time?	0,27	0,29
36. When you start to play with a slot machine, is it often difficult for you to stop?	0,01	0,25
8. Do you like to take some drugs because of the pleasure you get from them?	-0,01	0,21

Table 3. shows the means, standard deviation and sex differences of the questionnaires which were used to validate the SPSRQ.

	MALES n=112 (Mean, S. D.)	FEMALES n=251 (Mean, S. D.)
<i>TCT - R</i>		
Novelty seeking(NS)	118,61 (1,31)	117,65 (0,89)
Harm avoidance (HA)	76,29 (12,27)	84,42 (14,59)
Reward dependence (RD)	91,58 (10,66)	100,86 (11,68)
Persistence	42,21 (7,47)	41,65 (6,36)
Self-directedness (SD)	182,95 (16,12)	184,90 (15,29)
Cooperativeness	133,91 (14,04)	139,79 (14,59)
Self-transcendence(ST)	70,52 (14,87)	72,31 (15,29)
<i>Panic and Phobia Questionnaire</i>		
Agoraphobia	11,14 (8,86)	21,37 (13,81)
Interceptiv fear	2,71 (3,73)	4,52 (5,24)
Social phobia	13,62 (9,85)	18,14 (12,29)
<i>STAI</i>	42,27 (8,52)	46,00 (8,97)
<i>ASP</i>		
fear of arousal-related symptoms	89,77 (30,54)	100,41 (30,01)
fear of cognitive dyscontrol,dissociation	40,45 (15,72)	41,39 (15,58)
fear of gastrointestinal symptoms	34,14 (12,77)	36,33 (13,43)
fear of cardiac symptoms	8,49 (3,47)	9,33 (3,67)
<i>FSS</i>		
Social fears	13,84 (8,51)	18,64 (9,52)
Agoraphobic fears	7,01 (5,26)	10,94 (6,94)
Fears of sexual and aggressive scenes	5,62 (3,90)	8,14 (4,68)
Bodily injury, death and illness fears	9,23 (8,10)	12,78 (9,45)
Fears of harmless animals	4,67 (4,076)	8,52 (5,74)

Table 4. shows the correlations between the questionnaires. (\* $p<0,05$ , \*\* $p<0,01$ )

	SR	SP
<i>TCT - R</i>		
Novelty seeking(NS)	0,35**	-0,31**
Harm avoidance (HA)	-0,18**	0,75**
Reward dependence (RD)	0,15**	0,08
Persistence	0,21**	-0,23**
Self-directedness (SD)	-0,19**	-0,56**
Cooperativeness	-0,28**	-0,08
Self-transcendence(ST)	0,16**	0,13**
<i>Panic and Phobia Questionnaire</i>		
Agoraphobia	0,09	0,41**
Interceptiv fear	0,08	0,26**
Social phobia	-0,06	0,61**
<i>STAI</i>	-0,04	0,73**
<i>ASP</i>		
fear of arousal-related symptoms	0,17**	0,31**
fear of cognitive dyscontrol,dissociation	0,11*	0,34**
fear of gastrointestinal symptoms	0,15**	0,34**
fear of cardiac symptoms	0,09	0,23**
<i>FSS</i>		
Social fears	0,09*	0,59**
Agoraphobic fears	0,07	0,39**
Fears of sexual and aggressive scenes	0,06	0,38**
Bodily injury, death and illness fears	0,14**	0,25**
Fears of harmless animals	0,09*	0,27**

The results obtained in this study clearly indicate that the validity of SPSRQ is supported by anxiousness, anxiety, fear and temperament factor scores but the factor analyses points to some open question of the cultural stability of sensitivity to reward (SR) and sensitivity to punishment (SP) factors and the measurement of sensitivity to reinforcement theory. The results obtaining on the Hungarian sample are controversial so need of further well controlled research to revise the factor structure of SPSRQ before clinical utilization.