

Reliability of the KK'017 questionnaire – test-retest female students of tourism and recreation

Authors' Contribution:

- ✍ A Study Design
- 📁 B Data Collection
- 📊 C Statistical Analysis
- 📄 D Manuscript Preparation
- 📁 E Funds Collection

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Abstract

Background & Study Aim:

The author of the publication is aware that the paper is addressed to a limited number of target readers. There are three major reasons for that. First of all, the KK'017 questionnaire is used to examine phenomena rarely studied by researchers, such as courage, self-defence instinct, and survival abilities in a complementary approach. The questionnaire is based on mixed assessment method and in the sense of empirical achievements it is an area of innovative exploration. The third reason is that the KK'017 questionnaire is available to researchers who collaborate with the authors of this unique research tool (intellectual property of Kalina and Kałużny). The purpose of the work is empirical verification of the reliability of the KK'017 questionnaire.

Materials & Methods:

The KK'017 questionnaire includes 12 statements (or questions) informing about hypothetical situations with its participation. The result of each respondent's declaration is based on one of four mixed assessments (conventional points, which simplifies statistical analysis): 3 (most socially desirable); 2 (does not compromise the hypothetical maker in an ethical sense but indicates a lack of efficiency); 1 (testifies to the effectiveness but disgraces the maker); 0 (informs about extreme social maladjustment). The test-retest method was used 14 days apart. Thirty eight female students of tourism and recreation of the second year of study were tested, age 21.57 ± 1.03 years.

Results:

The KK'017 questionnaire reliability confirmed the following highest correlations: $r = 0.869$ for "jump into the water to save somebody drowning"; $r = 0.859$ for "the need to help others"; $r = 0.825$ for "the respondent's preferred way to resolve a conflict with the intention of achieving a relatively long-lasting effect"; $r = 0.770$ for simulation "the purpose of aggression is to kill at the person"; Others from $r = 0.749$ to $r = 0.509$.

Conclusions:

The "test-retest" procedure corroborates the usefulness of the KK'017 questionnaire for studying the phenomena of human actions in various simulated difficult and extreme situations in accordance with mixed assessment criteria. The ease of decomposing the results of the KK'98 questionnaire into methodological mixed assessment standards prompts a recommendation for the authors of this research to reanalyse the empirical data of all 12 statements. I believe that the KK'017 questionnaire adequately adapted to the criteria of the innovative profile of Sense of Positive Health and Survival Abilities can fulfil the role of a simple and reliable tool for diagnosing mental health and social health.

Key words:

extreme situations • innovative agonology • mixed assessment • self-defence instinct • simulation

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Simulation – caused in model an event, which under some circumstances is similar to the event occurring in examined real object [15].

Self-defense instinct – is a component of widely understood bravery [13].

INTRODUCTION

The author of the publication is aware that the paper is addressed to a limited number of target readers. There are three major reasons for that. First of all, the KK-17 questionnaire is used to examine phenomena rarely studied by researchers, such as courage, self-defence instinct, and survival abilities in a complementary approach. The questionnaire is based on mixed assessment method [1, 2] and in the sense of empirical achievements it is an area of innovative exploration. The third reason is that the KK-17 questionnaire is available to researchers who collaborate with the authors of this unique research tool (intellectual property of Kalina and Kałużny [3, 4]).

When studying the phenomenon of aggression and other pathologies among Polish youth [4, 5-9], I was lucky to discover the diagnostic, therapeutic and preventive benefits of Kalina's innovative methods and research tools, which he created alone or in collaboration with others – the list is provided by Kałużny and Kondzior [10]. What is worthy of attention is not only the simplicity and logic of the solutions proposed, but first and foremost the effectiveness, as well as cognitive and practical value of the research results.

Independent external observers may have ethical doubts concerning my undertaking empirical verification of the KK'017 questionnaire reliability. After all, not only have I jointly published papers with Kalina and Kałużny, but also it was precisely with Kałużny that I published the results of medical students research based on the KK'017 questionnaire [4], and with Kalina – the results regarding diagnosing and reducing aggressiveness [5-9] based on other research methods and tools, which he is the main author of. These doubts can be easily dispelled when one considers the question: who else should conduct this procedure, if in order to use a research tool, a consent of the intellectual property owner (or in this case owners) is required?

The decision to simultaneously verify the KK'017 questionnaire reliability using the "test-retest" method by at least two independent researchers

(excluding the participation of the main author of this research tool) meets the expected methodological criteria. It is assumed that the author of the test should not verify its reliability.

The purpose of the work is empirical verification of the reliability of the KK'017 questionnaire.

MATERIAL AND METHODS

The KK'017 questionnaire includes 12 statements (or questions) informing about hypothetical situations with its participation.

The applied research tool is a modification of the KK'98 questionnaire [11]. The questionnaire includes 12 statements (or questions) informing about hypothetical situations with its participation: six of them about aggression is directed to the respondent, a person close to the respondent, a person unknown to the respondent (at one time the aggression is aimed at depriving the victim of life, at another – a goal of physical aggression is not specified); jump into the water to save somebody drowning (diagnosing bravery); the need to help others; a serious accident on the road when the respondent is in a hurry for an important meeting; the respondent's conduct in a sporting combat; the respondent's preferred way to resolve a conflict with the intention of achieving a relatively long-lasting effect; the way the respondent presents people the facts in various life situations.

Each of the 12 simulated circumstances (situations) is complemented by four alternative actions, from which the respondent selects only one (accurately illustrating his/ her actions in the described situations or is the closest to the action the respondent would be willing to take).

The result of each respondent's declaration is based on one of four mixed assessments (conventional points, which simplifies statistical analysis): **3** (most socially desirable); **2** (does not compromise the hypothetical maker in an ethical

sense but indicates a lack of efficiency); **1** (testifies to the effectiveness but disgraces the maker); **0** (informs about extreme social maladjustment).

Participants

The test-retest method was used 14 days apart. Thirty eight female students of tourism and recreation of the second year of study were tested, age 21.57 ± 1.03 years

Statistical analysis

The estimation of empirical variables (arithmetic mean X , sample standard deviation SD , etc.) and hypothesis testing (significance test – independent correlation coefficients). Correlation coefficient between pairs of specified variables (test re-test).

RESULTS

The KK'017 questionnaire reliability confirmed the following highest correlations: $r = 0.869$ for “jump into the water to save somebody drowning”;

$r = 0.859$ for “the need to help others”; $r = 0.825$ for “the respondent's preferred way to resolve a conflict with the intention of achieving a relatively long-lasting effect”; $r = 0.770$ for simulation “the purpose of aggression is to kill at the person”; Others from $r = 0.749$ to $r = 0.509$ (Tables 1 to 5).

DISCUSSION

Discussing their own research results of the KK'017 questionnaire reliability using the “test-retest” method, Kałużny and Kondzior [10] stress that a significant drawback is the small number of respondents ($n = 22$). My research meets the condition of a sufficiently large sample size. Similar research results (concerning the correlation coefficients of the questionnaire individual statements) confirm that the KK'017 questionnaire is a reliable research tool.

This similarity of results encourages to reflect on the diagnostic value of the KK'017 questionnaire.

Table 1. Estimation of indicators (test and re-test) of the respondent's declared activity in two simulated situations of physical aggression directed at him.

Statistic indicator	Simulated situations described			
	the purpose of physical aggression is not clear		the purpose of aggression is to kill the respondent	
	test	re-test	test	re-test
X	2.421	2.500	1.684	1.947
SD	0.64	0.65	0.99	0.87
Min	1	1	0	0
Max	3	3	3	3
r	0.585		0.609	

Table 2. Estimation of indicators (test and re-test) of the respondent's declared activity in two simulated situations of physical aggression directed at the person close to the respondent.

Statistic indicator	Simulated situations described			
	the purpose of physical aggression is not clear		the purpose of aggression is to kill at the person	
	test	re-test	test	re-test
X	1.605	1.947	2.421	2.289
SD	0.82	0.96	1.01	1.02
Min	1	1	1	1
Max	3	3	3	3
r	0.556		0.594	

Table 3. Estimation of indicators (test and re-test) of the respondent's declared activity in two simulated situations of physical aggression.

Statistic indicator	Simulated situations described			
	the purpose of physical aggression is not clear		the purpose of aggression is to kill at the person	
	test	re-test	test	re-test
X	2.000	2.158	1.974	2.079
SD	0.84	0.89	0.75	0.75
Min	0	0	0	0
Max	3	3	3	3
r	0.509		0.770	

Table 4. Estimation of indicators (test and re-test) of the respondent's declared activity in three simulated situations.

Statistic indicator	Simulated situations described					
	jump into the water to save somebody drowning		the need to help others		a serious accident on the road when the respondent is in a hurry for an important meeting	
	test	re-test	test	re-test	test	re-test
X	2.579	2.553	1.763	1.868	2.632	2.632
SD	0.55	0.55	0.88	0.78	0.54	0.54
min	2	1	0	0	1	1
max	3	3	3	3	3	3
r	0.869		0.859		0.723	

Table 5. Estimation of indicators (test and re-test) of the respondent's declared activity in three simulated situations.

Statistic indicator	Simulated situations described					
	the respondent's conduct in a sporting combat		the respondent's preferred way to resolve a conflict with the intention of achieving a relatively long-lasting effect		the way the respondent presents people the facts in various life situations	
	test	re-test	test	re-test	test	re-test
X	1.658	1.868	2.421	2.500	2.211	2.132
SD	1.19	1.19	1.00	0.98	0.53	0.47
Min	0	0	0	0	1	1
Max	3	3	3	3	3	3
r	0.749		0.825		0.641	

Kałużny and Kondzior [10] not only point out the shortcomings of their own research, but also their strong points. The authors pay attention to the advantage of a unique research material. Military cadets are trained to conduct unique defence-related tasks in their own country and in territories where peacekeeping missions are operating.

The special nature of this type of education consists in preparation for effective functioning in difficult and extreme situations. In contrast, the expectations for students of tourism and recreation studies are very different. Gender is irrelevant here, as women also study in military academies, although Kałużny and Kondzior [10]

conducted their research on men, while I conducted mine on women. However, the results seem to display certain differences in the impact of education.

Military cadets are more prone to action of the category “effective – ethical” and “ineffective – ethical” when helping people in danger. I want to emphasize here the importance of the ethical factor. The social expectation for this group of professionals is that the officer ethos is respected in all circumstances. However, it is obvious that in some circumstances even the most professional help may prove ineffective, let alone when the person providing that help lacks skills or full competence. Military cadets' score for declared actions in a simulated situation of providing help to others without a specific description was: for the “test” 2.86 ± 0.35 (with a maximum indicator of 3.00) and for the “retest” 2.68 ± 0.72 . In turn, female students' score was respectively 1.76 ± 0.88 and 1.87 ± 0.78 . The “test-retest” correlation coefficients also differ: for military cadets $r = 0.766$ ($R^2 = 58.7\%$), whereas for female students $r = 0.859$ ($R^2 = 73.8\%$). When the simulated circumstances are described more specifically, such as “saving a drowning person”, these differences become blurred: military cadets' score for “test” 2.82 ± 0.39 and for “retest” 2.68 ± 0.65 , $r = 0.882$ ($R^2 = 77.8\%$), whereas female students' score for “test” 2.58 ± 0.55 and for “retest” 2.55 ± 0.65 , $r = 0.869$ ($R^2 = 75.5\%$). Similarity of the results also applies to the simulated scenario of providing help to victims of a traffic accident.

Such comparative analysis related to the phenomenon of interpersonal aggression (half of the statements of the KK'017 questionnaire concerns declared actions in this category of simulated situations) partly confirms the legitimacy of the shortcomings of the education model based on traditional standards in reference to the previous generation of military cadets [12]. However, the military cadets' responses regarding the situations monitored when the aggressor's aim is, in one case, taking the respondent's life (average score for “test” 2.33 and for “retest” 2.18), and in the other case, taking the life of a stranger (2.55 and 2.66, respectively), prove in its favour. Responses of female students regarding declared actions in the case of the first simulation scored at 1.68 and 1.95, and in the second case, 1.97 and 2.08.

An in-depth analysis of these results indicates that for female students of tourism and recreation studies, responding to the simulated scenario of being deeply convinced that the aim of someone's physical aggression is taking the respondent's life with a declaration assessed at 18.4% means that their hypothetical action would belong to the category of “effective – unethical”, whereas 13.16 % to the category “ineffective – unethical”. The ratio for this category of response, in the case of being fully convinced that the aim of someone's physical aggression towards a stranger is to take the stranger's life, was: “effective – unethical” 7.89%, “ineffective – unethical” 5.26%. I do not know these ratios for Kałużny and Kondzior's research [10].

The above argumentation, based on empirical data, proves that Kałużny and Kondzior's [10] postulate to conduct a secondary analysis of the research using the KK'017 questionnaire is justified. The authors of this postulate suggest prior decomposition of the KK'98 questionnaire results. In particular, Kałużny's research results [11, 13] conducted on the Polish population more than 20 years ago concerned the generation that was, in a way, accumulating experiences of the social transformation period in Poland. He conducted his research on such groups as: land forces officers, policemen, prison officers, students, military cadets, high school graduates, mountain rescuers, firefighters, high school teachers, athletes, and various professionals.

I believe that research performed using the KK'98 questionnaire (after decomposing the results according to the KK'017 questionnaire methodology) will have even greater cognitive value. The dynamics of various social pathologies and interpersonal relations determined predominantly by manifestations of violence in different forms can be analysed using the mixed assessment method, and the KK'017 questionnaire can be effectively used for that end.

CONCLUSIONS

The “test-retest” procedure corroborates the usefulness of the KK'017 questionnaire for studying the phenomena of human actions in various simulated difficult and extreme situations in accordance with mixed assessment criteria. The ease

of decomposing the results of the KK'98 questionnaire into methodological mixed assessment standards prompts a recommendation for the authors of this research to reanalyse the empirical data of all 12 statements. I believe that the KK'017 questionnaire adequately adapted to the criteria of the innovative profile of Sense of Positive Health and Survival Abilities [14] can fulfil the role of a simple and reliable tool for diagnosing mental health and social health.

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