Developing the Technique for Assessing the Degree of Victimization in Adults

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Abstract
Introduction. Victimity is a predisposition to become a victim of crime. Victimization is (a) the event of violence or the experience of violence, (b) the process of a subject’s transformation into a victim of criminal assault, and also (c) the result of this process. The objective of this paper is to describe the procedure of developing a technique for assessing victimization in adults. No attention has been devoted to such techniques (tests) for adults in previous research.

Methods. A combination of external, deductive, and inductive strategies helped to elaborate test tasks intended to assess the degree of victimization. Two contrasting groups (N = 389 and N = 400) participated in a pilot study. The comparison of the pilot testing results in these groups enabled the authors to select the test tasks for men and women.

Results. The findings confirmed that the developed test met standard reliability criteria (internal consistency and test-retest stability and reliability). The developed test also meets all the known validity criteria such as validation of the test construction process and substantive, obvious, concurrent (diagnostic), consensual, construct, convergent, contrast, and gender validity. The test scales (subtests) diagnose the following seven types of victimization: (i) overall victimization, (ii) implemented victimization, predisposition to (iii) aggressive, (iv) self-destructive, (v) dependent, and (vi) non-critical victimization, and (vii) the degree of a subject’s vulnerability to manipulation.

Discussion. The construct of victimization as diagnosed by this test is positively correlated with the tendency to risky behavior, anxiety, depression, and low self-esteem and negatively associated with assertiveness. All this corresponds well to the essence of victimization. The test standardization was carried out on a sample of 563 men and 513 women, representative of the study prospective population in terms of gender, age, education, profession, official capacity, social status, and region of residence. The representativeness of the study samples was confirmed by a normal distribution of test results.

Keywords
assessment technique, test, victimization, reliability, validity, risky behavior, anxiety, depression, self-esteem, assertiveness, men, women
Highlights

► A reliable and valid test for assessing the degree of victimization in adults was developed. The test scales (subtests) diagnose the following seven types of victimization: (i) overall victimization, (ii) implemented victimization, predisposition to (iii) aggressive, (iv) self-destructive, (v) dependent, and (vi) non-critical victimization, and (vii) the degree of a subject’s vulnerability to manipulation.

► The test is standardized; it provides the norms for men and women that allow expressing the difference between an individual participant’s result and the mean scores in standard deviation units.

► Victimization in adults diagnosed by this test positively correlates with the tendency to risky behavior, anxiety, depression, and low self-esteem and is negatively associated with assertiveness.

For citation

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Introduction

Victimity (derived from the Latin term victima meaning victim) is a predisposition to become a victim of crime. Victimization is (a) the event of violence or the experience of violence, (b) the process of a subject’s transformation into a victim of criminal assault, and also (c) the result of this process. “Victimization is not a simple transformation of personality or social community into a real victim, but rather into a potential victim; this is the process of increasing the degree of victimization” [1, p. 226].

Many factors contribute to the process of victimization, including personal traits of a potential victim, as “individual characteristics are the best predictors for both occurrence and intensity of personal victimization” [2, p. 265].

The experimental studies on adolescents’ victimization actively employ the test of Tendency to Victim Behavior (TVB) developed by O. Andronnikova for teenagers [3]. The absence of such a technique for adults constrains experimental studies on victimization in men and women.

No publications are available in the literature that address techniques for assessing the degree of victimization in adults. At the same time, at least 5 tests for measuring adolescent victimization are available, including (i) the most often used Juvenile Victimization Questionnaire (JVQ) [4]; (ii) RVQ-R – Victimization Questionnaire – Revised [5]; (iii) MPVS-RB [6]; (iv) OVS – Online Victimization Scale [7]. CARAS – Child Abuse Risk Assessment Scale [8], which measures parents’
social and psychological traits as risk factors for cruel treatment with children is also available. The authors of these tests have revealed certain personal factors for victimization in adolescents. Some results are used in this work.

The objective of this paper is to describe the procedure of developing the test technique for assessing the degree of victimization in adults.

**Methods**

A combination of external, deductive, and inductive strategies helped to elaborate test tasks, which was determined by the specific character of the studied construct – victimization among individuals. The comparison of contrasting groups underlay the external strategy. Test items directly related to the manifestations of the diagnosed construct of victimization were selected in accordance with the deductive strategy. The inductive strategy was instrumental in analyzing correlations between the observed variables in order to reduce the number of test tasks, thus “allowing the data to speak for themselves” [9, p. 166].

Statistical Package for the Social Sciences SPSS (version 20.00) [10] was used for statistical analysis. Values of $p < 0.05$ were accepted as significant for this study.

Two contrasting groups ($N = 389$ and $N = 400$) participated in a pilot study. The comparison of indices in these groups enabled the authors to select the test items for assessing victimization. The first group included the non-victimized respondents; the second group involved the victimized ones.

The group of non-victimized respondents involved individual participants who reported that they had never been victims of criminal acts including refresher course students from Minsk Academy of Postgraduate Education APE (teachers, school headteachers and deputies, kindergarten heads and teachers, psychologists, and defectologists) and students of the Republican Institute of Higher School RIHS in Minsk (teachers and specialists of technical, humanitarian, creative and military Belarus universities, heads and specialists of enterprises with various forms of ownership). The research participants comprised 389 persons, including 198 women aged 22–78 years ($M = 49.4$) and 191 men aged 24–77 years ($M = 48.6$). The anonymous testing (under the codes) was conducted during refresher courses, as the program included psychological testing.

The contrasting group must be large enough to study it using statistical methods. Victims of crimes are dispersed in space and time; it is impossible to test a large number of them. Moreover, large groups are required for developing a test (i.e., at least 200 men and 200 women are required to verify the reliability of the developed test) [9, p. 177]. All this complicated the process of forming a contrasting group of victimized subjects.
Therefore, we took advantage of the consideration that victimized persons are those who became victims of their own crimes serving their sentences in prison. It turned out that criminal activity as such was a source of a high level of victimization in persons who had broken a law. Thus, “two national victimization surveys in England and Wales showed that criminal activity (...) directly increases the risk of personal victimization” [11, p. 110]. Some authors also draw our attention to “an empirical coincidence between victims and offenders, otherwise known as ‘victim-offenders’” [12, p. 16].

Hence, in the second ‘victimized’ group (a contrasting group for non–victimized persons of the first group) 400 prisoners from Belarusian penal colonies entered the study, including 200 women aged 23–69 years (M = 37.2) and 200 men aged 18–67 years (M = 35.3) with various levels of victimization. Half the women and men were in prison for the first time; another half served their second, third, etc. imprisonment. Specialists and psychologists from correctional colonies for men and women of the Department of Execution of the Ministry of Internal Affairs of the Republic of Belarus selected subjects that constituted the study population.

An individual may become a victim of criminal acts such as fraud. Fraud is a manipulation of a criminal content, but non-criminal manipulation has even more victims [13]. Both law-abiding individuals and violators of the law are subject to manipulation, because criminals often involve others (especially young persons) in criminal activity through manipulation. Therefore, the first group of possible items for the developed test included 20 items of the questionnaire for Assessing the Degree of a Subject’s Vulnerability to Manipulation SVM developed by the authors [14].

As markers of the risk for adolescent victimization may manifest themselves in adulthood, we borrowed the second group of items from the test of Tendency to Victim Behavior (TVB) developed by O. Andronnikova [3] and included all its seven scales (subtests) into the selection procedure – namely, the social desirability scale (SD scale), the scale of implemented victimization (I scale), and five scales of predisposition to (i) aggressive behavior (A scale), (ii) self-harm and self-destructive behavior (S scale), (iii) hypersocial behavior (H scale), (iv) dependent and helpless behavior (D scale), and (v) non-critical behavior (N scale). We supplemented these seven TVB scales with an overall victimization scale as the integrated measure for assessing the degree of victimization, the sum of values of seven TVB scales.

Nine scales were analyzed for their ability to assess victimization in adults. Victimization determinants are not equal for men and women [15–19]. This refers to a subject’s vulnerability to manipulation. Thus, it was established [14, p. 153] that men were more vulnerable to manipulations.

Therefore, we decided to create parallel victimization tests for men and women and to develop a single test if the selected items coincided.
Results

Constructing the test. The first step was selecting the scales diagnosing victimization in adults (after comparing mean scores in contrasting groups of women and men). The columns of Tables 1 and 2 contain means for initial scales in the group of victimized prisoners, which were significantly greater than those measured in the group of non-victimized law-abiding citizens. The last rows of the Tables provide the two-tailed significance level (p < 0.001), where differences between the means were statistically reliable. SPSS-20.00 independent samples t-test was used to compare the means [10].

**Table 1.** Means for initial scales in the groups of victimized and non-victimized women (N = 398)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean scores</th>
<th>SVM Scale</th>
<th>SD Scale</th>
<th>Scale A</th>
<th>Scale S</th>
<th>Scale H</th>
<th>Scale D</th>
<th>Scale N</th>
<th>Scale I</th>
<th>Sum Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-victimized</td>
<td>Total</td>
<td>20.02</td>
<td>3.93</td>
<td>7.69</td>
<td>7.17</td>
<td>7.67</td>
<td>7.77</td>
<td>7.54</td>
<td>6.08</td>
<td>47.88</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>24.27</td>
<td>3.36</td>
<td>10.01</td>
<td>10.04</td>
<td>7.33</td>
<td>9.4</td>
<td>10.22</td>
<td>8.06</td>
<td>60.41</td>
</tr>
<tr>
<td></td>
<td>Min.</td>
<td>23.47</td>
<td>3.02</td>
<td>9.68</td>
<td>9.94</td>
<td>6.00</td>
<td>8.94</td>
<td>9.58</td>
<td>7.83</td>
<td>55.83</td>
</tr>
<tr>
<td></td>
<td>Max.</td>
<td>26.69</td>
<td>4.67</td>
<td>12.73</td>
<td>10.65</td>
<td>8.67</td>
<td>10.31</td>
<td>10.52</td>
<td>9.67</td>
<td>67.11</td>
</tr>
<tr>
<td>Significance</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
</tr>
</tbody>
</table>

**Table 2.** Means for initial scales in the groups of victimized and non-victimized men (N = 391)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean scores</th>
<th>SVM Scale</th>
<th>SD Scale</th>
<th>Scale A</th>
<th>Scale S</th>
<th>Scale H</th>
<th>Scale D</th>
<th>Scale N</th>
<th>Scale I</th>
<th>Sum Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-victimized</td>
<td>Total</td>
<td>20.95</td>
<td>3.70</td>
<td>8.87</td>
<td>7.98</td>
<td>7.35</td>
<td>7.62</td>
<td>7.70</td>
<td>6.50</td>
<td>48.77</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26.85</td>
<td>3.24</td>
<td>10.59</td>
<td>10.05</td>
<td>7.10</td>
<td>9.09</td>
<td>8.92</td>
<td>7.78</td>
<td>56.79</td>
</tr>
<tr>
<td></td>
<td>Min.</td>
<td>25.8</td>
<td>3.00</td>
<td>9.85</td>
<td>9.80</td>
<td>7.50</td>
<td>8.67</td>
<td>8.57</td>
<td>7.50</td>
<td>54.5</td>
</tr>
<tr>
<td></td>
<td>Max.</td>
<td>30.62</td>
<td>3.69</td>
<td>11.17</td>
<td>10.75</td>
<td>8.13</td>
<td>9.60</td>
<td>9.29</td>
<td>8.44</td>
<td>60.06</td>
</tr>
<tr>
<td>Significance</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
<td>,000</td>
</tr>
</tbody>
</table>
Seven columns in Tables 1 and 2 provide the scales revealing victimization in men and women, with significant differences among them.

Tables 1 and 2 provide the minimum and maximum mean scores in the groups of the convicted of various crimes in order to more confidently draw the boundaries between non-victimized and victimized subjects. It turned out that in groups of prisoners the lowest rates of vectorization significantly exceed those for law-abiding citizens.

Meanwhile, the highest rates were found among recidivists, men and women, serving more severe punishments for the most serious offences (murder, serious bodily injury, mugging, and robbery). Hence, the scales differentiating victimization also characterize the degree of victimization.

As Tables 1 and 2 indicate, two scales do not diagnose victimization among both men and women – the SD scale (social desirability) and H scale (hypersocial behaviour). It is noteworthy that the test scores on these two scales were negatively correlated with test scores on differentiating scales in both male and female samples. This confirms once more that the SD and H scales have no associations with victimization in adults. Therefore, the SD and H scales were excluded from further consideration in our study.

At the same time, all the correlations between the differentiating scales are positive for both men and women, which indicates that they represent a single complex characterizing various manifestations of victimization.

Thus, the items of seven differentiating scales may qualify for inclusion in the test developed for both men and women. These were the SVM, A, S, D, N, and I scales and overall victimization.

However, the questionnaire should include only those items of differentiating scales that are discriminative and measure the same psychological characteristics as the scale itself.

Discrimination (discriminant validity) of items was checked by correlation coefficients between each item and the total scale score. We calculated these coefficients for all the differentiating scales (in accordance with recommendations [9, p. 174]) and deleted the items which correlation coefficient with the scale total score was less than 0.2. In result the number of items was reduced from 27 to 14 in the A scale, from 21 to 9 in the S scale, from 19 to 11 in the D scale, from 19 to 10 in the N scale, and from 18 to 10 the I scale. The total number of items was reduced from 86 to 54. The SVM scale passed this test without changes as it was developed for adults.

It is important to note that the deleted items were non-discriminative for both female and male samples. As a result, the discrimination of the reduced differentiating scales increased in both female and male samples.

Internal consistency (homogeneity) of all the scales of the test is a necessary condition for reliability of the developed test. A measure of homogeneity – the
Cronbach’s alpha coefficient – was not high enough for the initial and the majority of differentiating scales. Applying the ‘alpha if item deleted’ [10] SPSS procedure in two stages, we deleted some items in order to increase the homogeneity of the scales (see the last row in Table 3). The SVM, S and I scales did not change in result of the second reduction. It turned out that the items recommended for removal were the same for both women and men. This enabled us to elaborate the test valid for both sexes. Complete coincidence of the remaining items in female and male samples was an indirect confirmation that the remaining items of the subtests describe the same construct.

Table 3. Standardized Cronbach’s alpha for male (M) and female (F) samples (N = 789)

<table>
<thead>
<tr>
<th>Scales</th>
<th>A Scale</th>
<th>S Scale</th>
<th>D Scale</th>
<th>N Scale</th>
<th>I Scale</th>
<th>SVM Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>Initial</td>
<td>.661</td>
<td>.478</td>
<td>.254</td>
<td>.333</td>
<td>.394</td>
<td>.387</td>
</tr>
<tr>
<td></td>
<td>.341</td>
<td>.138</td>
<td>.157</td>
<td>.147</td>
<td>.789</td>
<td>.775</td>
</tr>
<tr>
<td>First reduction</td>
<td>.768</td>
<td>.566</td>
<td>.470</td>
<td>.388</td>
<td>.668</td>
<td>.661</td>
</tr>
<tr>
<td></td>
<td>.475</td>
<td>.374</td>
<td>.617</td>
<td>.606</td>
<td>.789</td>
<td>.775</td>
</tr>
<tr>
<td>Second reduction</td>
<td>.783</td>
<td>.613</td>
<td>.626</td>
<td>.637</td>
<td>.668</td>
<td>.661</td>
</tr>
<tr>
<td></td>
<td>.704</td>
<td>.600</td>
<td>.617</td>
<td>.606</td>
<td>.789</td>
<td>.775</td>
</tr>
</tbody>
</table>

Table 3 shows a consistent improvement in the homogeneity index, starting from the initial state of the scales and then after the first and second reductions. After all the reductions the number of items was reduced to 13 in the A scale, to 7 in the S scale, to 11 in the D scale, to 7 in the N scale, and to 10 in the I scale. A total number of items was reduced from 86 to 40.

The procedure for selecting items of scales points was duplicated by nonparametric exploratory factor analysis. It turned out that the selected items exhibited high factor loadings for both female and male samples.

The test of Tendency to Victim Behavior was developed by O. Andronnikova for adolescents, however not all the markers of victimization manifest themselves in adults.

The question may be posed weather the reduction in the number of items in the scales would affect their validity? We have verified this by measuring correlations between the test scores for the initial and reduced scales. The results presented in Table 4 show the highest correlation (p < 0.001). This indicates that the content of the construct obtained after the reduction process corresponds to the original one. A further detailed analysis of the validity of the test will confirm this.
Verifying the reliability of the developed victimization test

We verified the reliability in three ways, in accordance with the generally accepted procedure [20, p. 110–118; 9, p. 176–177]: internal consistency and test-retest stability and reliability. Since the test consists of seven scales (subtests), we verified each scale.

1. Table 3, the ‘Initial (state)’ row, shows that the internal consistency of initial scales was rather low in most cases. Cronbach’s alpha below 0.6 was considered a sign of test unreliability [21]. Removal of some items enabled us to obtain quite acceptable indices of the homogeneity of scales (see the ‘Second reduction’ row), which compound the developed victimization test.

2. We verified split-half reliability by dividing the scales into equivalent halves. In accordance with the recommendations of experts in psychodiagnostics [20, p. 114], we distinguished even and odd items as the most protected against the possible nonequivalence of the parts of the scales.

Table 5 shows the level of reliability of equivalent halves of scales characterized by Spearman-Brown and Guttman split-half coefficients. The parts of all the scales demonstrate an acceptable level of reliability for both male and female samples.

3. We estimated test-retest reliability in two contrasting groups of victimized and non-victimized respondents. The first group included the students of
training groups from the APE and RIHS (representatives of various professions, specialties, and positions). A total of 202 women and 194 men aged 25–48 years participated in this testing. The interval between group testings was 5 weeks.

Table 6 shows the correlations of test results. All correlations are significant at p < 0.001 level. Table 6 demonstrates a good level of retest reliability.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>A Scale</th>
<th>S Scale</th>
<th>D Scale</th>
<th>N Scale</th>
<th>I Scale</th>
<th>Overall victimization</th>
<th>SVM Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>.868</td>
<td>.781</td>
<td>.859</td>
<td>.808</td>
<td>.832</td>
<td>.851</td>
<td>.941</td>
</tr>
<tr>
<td>Male</td>
<td>.935</td>
<td>.852</td>
<td>.917</td>
<td>.897</td>
<td>.907</td>
<td>.922</td>
<td>.918</td>
</tr>
</tbody>
</table>

Table 7 shows test-retest correlations in groups of victimized respondents (200 men and 200 women). All correlations are statistically significant at p < 0.001. Table 7 also demonstrates a good level of the 4-week test-retest reliability.

<table>
<thead>
<tr>
<th>Convicts</th>
<th>A Scale</th>
<th>S Scale</th>
<th>D Scale</th>
<th>N Scale</th>
<th>I Scale</th>
<th>Overall victimization</th>
<th>SVM Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>.734</td>
<td>.729</td>
<td>.730</td>
<td>.725</td>
<td>.741</td>
<td>.867</td>
<td>.911</td>
</tr>
<tr>
<td>Male</td>
<td>.803</td>
<td>.701</td>
<td>.794</td>
<td>.706</td>
<td>.755</td>
<td>.885</td>
<td>.949</td>
</tr>
</tbody>
</table>

Thus, the victimization test met all the standard reliability criteria.

**Determining the validity of the developed victimization test**

We checked the validity by examining all the known validity criteria [20, p. 6; 9, pp. 181–182] such as validation of the test construction process and substantive, obvious, concurrent (diagnostic), consensual, construct, convergent, contrast, and gender validity.

1. **Validation of the test construction process.** The test construction process involved only items that diagnosed the construct of victimization. This refers to the questionnaire for Assessing the Degree of a Subject’s Vulnerability to Manipulation SVM developed by the authors and to O. Andronnikova’s test of Tendency to Victim Behavior TVB. The above-described empirical analysis enabled us to select the items having the highest validity and reliability levels.
2. The final stimulus set included situations that were directly associated with psychological factors of victimization, significant for men and women from different age and social groups. This provided *substantive (internal) validity* [22, p. 46].

3. *Obvious (external) validity* refers to respondents’ judgements that the test looks reasonable [22, p. 42]. In our study none of the respondents doubted the subject of testing and its result. Many of those who had an increased level of victimization reported that they had related problems.

4. Our test has adequate *concurrent (diagnostic) validity*, as the respondents can “diagnose a current situation” [22, p. 140] – namely, to what extent the respondents suffer from victimization in the present.

5. *Consensual validity* refers to “establishing connections (correlations) between the test data and the data obtained from external experts who were well-acquainted with respondents” [22, p. 38]. The participants of court hearings who sentenced (victimized) them were external experts for the prisoners in our study. Their conclusions regarding offenders’ real level of victimization correlated with prisoners’ increased rates of victimization for all seven scales of the test. A previous study confirmed consensual validity for the SVM scale [14, p. 152]. “Each case of such correlation proves that we are dealing with a valid test, and with a ‘valid expert’” [23, p. 113]. The master of validation, D. T. Campbell, also claimed that “the assumed validity of both measuring instrument increases when there is a consent between them” [24, p. 548].

6. *Construct validity* includes all the considered types of validity [20, p. 134] and also convergent, contrast, and gender validity.

7. *Convergent validity* means that “proceeding from the theoretical assumptions, the test must have high correlations with other variables” [20, p. 151].

O. O. Andronnikova [3] found that adolescents’ victimization was positively associated with risk-taking propensity, personal anxiety, and low self-esteem. Previous studies have also established that adolescent victimization was associated with increased symptoms of anxiety [5, 25, 26], depression [5, 26–28], and low self-esteem [6, 29, 30]. It is natural to expect that these characteristics of victimization in teenagers can manifest themselves in adults.

We tested the relationships between these qualities and victimization in groups of students of the Republican Institute of Higher School RIHS in Minsk. We examined a total of 292 participants (139 men and 153 women) aged 23–74 years. We measured risk-taking propensity by Schubert Test [31], anxiety and depression by a modified [32] Hospital Anxiety and Depression Scale [33], and the level of self-esteem by a modified [34] Rosenberg’s Self-esteem Scale [35].

Table 8 confirms the expected positive associations between victimization in adults and their risk-taking propensity, anxiety, and depression and a negative association between victimization and self-esteem.
Table 8. Correlations between victimity and risk-taking, anxiety, depression, and self-esteem (N = 292)

<table>
<thead>
<tr>
<th></th>
<th>A Scale</th>
<th>S Scale</th>
<th>D Scale</th>
<th>N Scale</th>
<th>I Scale</th>
<th>Overall victimization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk-taking</td>
<td>.730/000</td>
<td>.310/007</td>
<td>.363/003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>.539/000</td>
<td>.239/037</td>
<td>.606/000</td>
<td>.637/000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td></td>
<td>.469/000</td>
<td></td>
<td>.289/003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-.461/023</td>
<td>-.431/036</td>
<td>-.381/046</td>
<td>-.401/025</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Numerators represent the Pearson correlation coefficients; denominators represent two-tailed significance levels (in Tables 8 and 9).

A person’s assertiveness should have a negative correlation with his/her victimization. “Assertiveness is a person’s ability to confidently defend his/her interests and rights without trampling on the rights and interests of others” [36, p. 40]. It is shown [37] that this definition unifies the opinions of the authors who made a significant contribution to studying assertiveness. Assertiveness is a constructive alternative to dependent behavior, manipulation, and aggression [38]. We measured assertiveness using our corresponding test which was proved to be reliable and valid [38].

Table 9 demonstrates a negative relationship between victimization and assertiveness test scales for a group of the first- and second-year cadets (N = 78, half boys and half girls) of Belarusian State Academy of Aviation and for a group of training teachers of Minsk Republican Institute of Higher School (N = 142, 73 women and 69 men aged 21–76 years). As we established earlier, the SVM scale had a negative correlation with assertiveness [38, p. 112–113].

Table 9. Correlations between victimization and assertiveness (N = 220)

<table>
<thead>
<tr>
<th>Respondents</th>
<th>A Scale</th>
<th>D Scale</th>
<th>I Scale</th>
<th>Overall victimization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadets</td>
<td>-.240/049</td>
<td>-.526/000</td>
<td>-.283/021</td>
<td>-.346/004</td>
</tr>
<tr>
<td>Teachers</td>
<td>-.339/000</td>
<td>-.147/048</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These results support the convergent validity of the victimization test. Other correlations also testify to convergent validity. Thus, the SVM scale positively correlates with other scales of the victimization test, which corresponds to the nature of these scales and confirms the reliability of the estimates. The SVM scale positively correlated with implemented victimization (r = 0.185, p = 0.027),
dependent behavior \( r = 0.162, p = 0.047 \), and overall victimization \( r = 0.194, p = 0.020 \) in the groups of teachers. The SVM scale positively correlated with implemented victimization \( r = 0.250, p = 0.043 \) in the groups of students.

8. Validation by contrasting groups. We compared the contrasting groups of (a) non-victimized men and women \( N = 389 \) and (b) victimized men and women serving their prison sentences \( N = 400 \). Table 10 shows their recalculated answers on the reduced differentiating scales, where both victimized men (even lines) and victimized women (odd lines) have higher test scores.

Table 10. Means of the victimization test scales for women and men \( (N = 789) \)

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Gender</th>
<th>SVM Test</th>
<th>A Scale</th>
<th>S Scale</th>
<th>D Scale</th>
<th>N Scale</th>
<th>I Scale</th>
<th>Overall victimization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>20,02</td>
<td>4,75</td>
<td>2,96</td>
<td>3,88</td>
<td>3,52</td>
<td>3,59</td>
<td>13,34</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>20,95</td>
<td>5,24</td>
<td>3,74</td>
<td>3,71</td>
<td>3,68</td>
<td>3,57</td>
<td>14,11</td>
</tr>
<tr>
<td>Victimized</td>
<td>Female</td>
<td>24,27</td>
<td>7,41</td>
<td>4,30</td>
<td>4,72</td>
<td>4,76</td>
<td>4,77</td>
<td>26,88</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>26,85</td>
<td>6,26</td>
<td>4,72</td>
<td>4,43</td>
<td>4,12</td>
<td>4,27</td>
<td>24,91</td>
</tr>
<tr>
<td>Non-victimized</td>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Men and women, whose scores are compared below, represent another pair of contrast groups.

9. Gender validation. Compared with women, men (a) are less likely to be protected against manipulation [14], (b) are more aggressive, and (c) have more self-destructive habits. Hence, it follows that among male respondents mean scores for the SVM, A, and S scales should be higher than those among female respondents. Women generally are more dependent than men. Thus, the N scale scores should be higher among female respondents. Table 10 represent mean scores for the scales among male and female respondents, both victimized and non-victimized, which correspond to these gender stereotypes. All differences in the SVM, A, S, and D scales are statistically significant at \( p = 0.05 \) level.

The above paragraphs 1–9 enable us to conclude that the proposed adult victimization test is valid.

Test standardization

Table 11 shows the norms for men and women presented in mean scores and standard deviations. They express the difference between an individual participant’s result and the mean scores in standard deviation units.
Table 11. Normative indices for the victimization test scales among men and women (N = 1076)

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Indices</th>
<th>SVM Scale</th>
<th>A Scale</th>
<th>S Scale</th>
<th>D Scale</th>
<th>N Scale</th>
<th>I Scale</th>
<th>Overall victimization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female (N = 563)</td>
<td>Mean score</td>
<td>20.02</td>
<td>5.04</td>
<td>2.98</td>
<td>3.92</td>
<td>3.58</td>
<td>3.66</td>
<td>19.18</td>
</tr>
<tr>
<td></td>
<td>Standard derivation</td>
<td>5.18</td>
<td>2.51</td>
<td>1.59</td>
<td>1.95</td>
<td>1.59</td>
<td>1.57</td>
<td>5.55</td>
</tr>
<tr>
<td>Male (N = 513)</td>
<td>Mean score</td>
<td>20.95</td>
<td>5.47</td>
<td>3.80</td>
<td>3.79</td>
<td>3.70</td>
<td>3.64</td>
<td>20.47</td>
</tr>
<tr>
<td></td>
<td>Standard derivation</td>
<td>6.34</td>
<td>3.18</td>
<td>1.77</td>
<td>1.70</td>
<td>1.93</td>
<td>1.50</td>
<td>6.23</td>
</tr>
</tbody>
</table>

When calculating the standard indices, we were guided by the recommendations for the standardization of tests [9, p. 182–183] – namely, large representative samples (more than 500 subjects). We calculated normative indices for both the female (N = 563) and male (N = 513) samples.

**Discussion**

The test standardization was carried out on the sample representative of the study prospective population in terms of gender, age, education, profession, official capacity, social status, and region of residence. The representativeness of the study samples was confirmed by a normal distribution of test results.

The test scores are normally distributed. This testifies to the fact that the samples are “representative of the study prospective population” [20, p. 201].

We used the one-sample Kolmogorov-Smirnov test for assessing normal distribution of test results in the groups. Calculating Z-scores and the error probability (p) showed that all the studied variables were normally distributed and significant at the p = 0.05 level. This enabled us to apply parametric statistical methods.

Thus, the representativeness of the samples was confirmed by statistical analysis.

**Conclusions**

A test technique for assessing the degree of victimization in adults was developed. The developed test meets standard reliability criteria (internal consistency, split-half reliability, and test-retest reliability).

The developed test meets all the known validity criteria such as validation of the test construction process and substantive, obvious, concurrent (diagnostic), consensual, construct, convergent, contrast, and gender validity.
The test scales (subtests) diagnose the following seven types of victimization: (i) overall victimization, (ii) implemented victimization, predisposition to (iii) aggressive, (iv) self-destructive, (v) dependent, and (vi) non-critical victimization, and (vii) the degree of a subject’s vulnerability to manipulation. The test is standardized; it provides the norms for men and women expressed in the mean scores and standard deviation scores.

Victimization in adults diagnosed by this test positively correlates with the tendency to risky behavior, anxiety, depression, and low self-esteem and is negatively associated with assertiveness. The developed test was prepared for publication. We plan to publish it in a scientific journal.

References
