FORGIVENESS AS A PREDICTOR OF MENTAL
HEALTH IN CITIZENS LIVING IN THE MILITARY
CONFLICT ZONE (2019-2020)

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ABSTRACT

Aim. Empirical research focused on the study of forgiveness as a predictor of mental health in citizens living in the east of Ukraine in a situation of military conflict.

Methods. The participants were 302 Ukrainian citizens (152 women; 150 men): 145 citizens living in eastern Ukraine (74 women; 71 men), aged 18 to 50 years and 157 citizens living in the centre of Ukraine (78 women; 79 men), aged 18 to 50 years. The main research methods were as follows: Mental Health Inventory-5 (MHI-5); Mental Health Outcome (BSI-12); Trait Forgivingness (dispositional) Scale; A Short-Version of Forbearance Scale (FS-8); Forgiveness Measures Decision to Forgive Scale (DTFS); Emotional Forgiveness Scale (EFS); The Adult Hope Scale; Flourish and Secure Flourish Scales.

Results. The phenomenon of forgiveness is examined in the article. A more pronounced degree of depression and anxiety was found in citizens living in eastern Ukraine compared to citizens living in the centre of Ukraine. A more pronounced degree of mental health, happiness, and life satisfaction has been observed in citizens living in the centre of Ukraine compared to citizens living in eastern Ukraine.

Conclusion. Hope, happiness, life satisfaction, and a tendency to forgiveness are factors of mental health. Tendency to forgiveness is positively correlated with decisional forgiveness, hope, emotional forgiveness, tolerance, and acceptance of others, mental health, happiness, and life satisfaction, as well as tolerance for the mistakes of others.

Key words: forgiveness, mental health, depression, anxiety, hope, life satisfaction
INTRODUCTION

In recent years, scholars have significantly increased their research interest in the problem of forgiveness (Asici, 2019; Crandall et al., 2019; Karduz & Saricam, 2018). The authors believe that the tendency to forgive is one of the essential factors of mental health.

The war in eastern Ukraine has been going on since 2014. As a result of it, the socio-economic living conditions of Ukrainians deteriorated. Serious negative consequences of deteriorating socio-economic living conditions are depression, psychosomatic diseases, tendency to aggression, alienation from friends and relatives, antisocial behaviour or illegal actions. Due to the negative consequences of the war in eastern Ukraine and the declining quality of life, more and more people in this country need psychological help. The psychological effects of the wartime condition require further research.

For the past two decades, the topic of forgiveness has been studied by psychologists in the context of mental health. The correlation was found linking forgiveness and rumination, specifically rumination accompanied by angry and vengeful thoughts (Berry et al., 2005).

Some scholars reported that forgiveness has been studied as a factor of psychological well-being and physical functioning (Mavrogiorgou et al., 2018; VanderWeele, 2018). Some studies have shown that the emotion-focused process of forgiveness affects mental and physical health symptoms over time (Raj et al., 2016; Valdes, 2018). Research has shown that the growth rate of forgiveness was correlated with a decrease in stress (Lijo, 2018).

Nevertheless, the concept of forgiveness in a military conflict zone is poorly understood, and has not been systematically researched. The connection between forgiveness and mental health in the context of the military conflict in Ukraine has not been investigated.

RESEARCH AIMS

The empirical research was focused on the study of forgiveness and its relationship to the mental health of citizens living in the military conflict zone in eastern Ukraine. The following hypotheses have been formulated:

- H1: Citizens living in eastern Ukraine in the military conflict zone have significantly greater symptoms of depression and anxiety than people living in central Ukraine. Citizens living in central Ukraine have more pronounced degree of mental health, life satisfaction, and happiness than citizens living in eastern Ukraine in the military conflict zone.
- H2: Tendency to forgiveness is positively correlated with mental health, decisional forgiveness, emotional forgiveness, happiness and life satisfaction, tolerance and acceptance of others, tolerance for the mistakes of others, and hope.
• H3: Tendency to forgiveness is negatively correlated with anxiety and depression.
• H4: Mental health is positively correlated with hope, tendency to forgiveness, happiness and life satisfaction, tolerance and acceptance of others, tolerance for the mistakes of others.
• H5: Significant factors of mental health are tendency to forgive, happiness, life satisfaction, and hope.

METHODOLOGY

Participants
The participants were 302 Ukrainian citizens (female – 152, 50.3%; male – 150, 49.7%): 145 citizens living in eastern Ukraine (Donetsk and Luhansk regions) (female – 74, 24.5%; male – 71, 23.5%), aged 18 to 50 years old, and 157 citizens living in the centre of Ukraine (Kyiv, Zhytomyr, Cherkasy, Kirovohrad, Vinnytsia, Dnipropetrovsk, Poltava regions) (female – 78, 25.8%; male – 79, 26.2%), aged 18 to 50 years old.

The study was conducted in the years 2019-2020. Characteristics of the sample of respondents are presented in Table 1.

Table 1
Characteristics of the Sample of Respondents

<table>
<thead>
<tr>
<th>Groups</th>
<th>Citizens living in eastern Ukraine</th>
<th>Citizens living in central Ukraine</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>№</td>
<td>%</td>
<td>№</td>
</tr>
<tr>
<td>Female</td>
<td>74</td>
<td>24.5</td>
<td>78</td>
</tr>
<tr>
<td>Male</td>
<td>71</td>
<td>23.5</td>
<td>79</td>
</tr>
<tr>
<td>Total</td>
<td>145</td>
<td>48.0</td>
<td>157</td>
</tr>
</tbody>
</table>

Source: own research.

Each participant filled out the test forms and questionnaires in individual form voluntarily and confidentially.

In conducting the study, the authors relied on the American Psychological Association’s Code of Ethics. An ethical council was created at the Ukrainian institute of arts and sciences (protocol no. 1 dated December 16, 2019), which approved ethical standards for research.

Measurement Instruments
• Mental Health Inventory-5 (MHI-5) (the authors: Berwick, Murphy, Goldman, Ware, Barsky & Weinstein) consists of one scale.
• Mental Health Outcome Measures. Depression and Anxiety (BSI-12) (the author: Derogatis) consists of two scales: anxiety, depression.
• Trait Forgivingness (dispositional) Scale (the authors: Berry, Worthington, O’Connor, Parrott & Wade) consists of one scale.
- A Short-Version of Forbearance Scale (FS-8) (the author: Ho) consists of two scales: tolerance & acceptance subscale, tolerance for others’ mistakes subscale.
- Forgiveness Measures Decision to Forgive Scale (DTFS) (the authors: Davis, Hook, Van Tongeren, DeBlaere, Rice & Worthington) consists of one scale.
- Emotional Forgiveness Scale (EFS) (the authors: Worthington, Hook, Utsey, Williams & Neil) consists of one scale.
- The Adult Hope Scale (the authors: Snyder, Harris, Anderson, Holleran, Irving, Sigmon & Harney) consists of one scale.
- Flourish and Secure Flourish Scales (the author: VanderWeele) consists of six scales: happiness and life satisfaction; mental and physical health; meaning and purpose; character and virtue; close social relationships; financial and material stability.

Methods of Mathematical Statistics
The obtained data were statistically processed in IBM SPSS Statistics 21 Premium+AMOS and Mplus, version 7.4. Statistical analysis of the data consisted of the following stages:
- Reliability of measures was confirmed by the calculation of the rate of McDonald’s omega.
- The Mann Whitney U test determined the mean values of psychological characteristics in citizens living in eastern Ukraine in the military conflict zone and in citizens living in central Ukraine.
- Spearman’s correlation coefficient determined the ratio of tendency to forgiveness and decisional forgiveness, emotional forgiveness, anxiety, depression, mental health, life satisfaction and happiness, hope, tolerance and acceptance of others, tolerance for the mistakes of others.
- Spearman’s correlation coefficient determined the ratio of mental health and happiness, life satisfaction, hope, tendency to forgiveness, tolerance and acceptance of others, tolerance for the mistakes of others.
- Factors of mental health were identified based on multiple regression analysis.

RESULTS
The results obtained by the Mann Whitney U test show there were more pronounced degrees of anxiety and depression in citizens living in eastern Ukraine compared to citizens living in the centre of Ukraine. There were greater degrees of mental health, life satisfaction and happiness identified in citizens living in the centre of Ukraine compared to citizens living in eastern Ukraine. The results obtained are shown in Table 2.
Table 2
The Degree of Anxiety, Depression, Mental Health, Life Satisfaction, and Happiness (n = 302)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Groups of study participants</th>
<th>Number</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Mann-Whitney U test</th>
<th>Level of Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>Citizens living in eastern Ukraine</td>
<td>145</td>
<td>168.63</td>
<td>24451.50</td>
<td>8898.50</td>
<td>0.001 (p&lt;0.01)</td>
</tr>
<tr>
<td></td>
<td>Citizens living in central Ukraine</td>
<td>157</td>
<td>135.68</td>
<td>21301.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>Citizens living in eastern Ukraine</td>
<td>145</td>
<td>174.69</td>
<td>25329.50</td>
<td>8020.50</td>
<td>0.000 (p&lt;0.001)</td>
</tr>
<tr>
<td></td>
<td>Citizens living in central Ukraine</td>
<td>157</td>
<td>130.09</td>
<td>20423.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental health</td>
<td>Citizens living in eastern Ukraine</td>
<td>145</td>
<td>106.10</td>
<td>15384.00</td>
<td>4799.00</td>
<td>0.000 (p&lt;0.001)</td>
</tr>
<tr>
<td></td>
<td>Citizens living in central Ukraine</td>
<td>157</td>
<td>193.43</td>
<td>30369.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness and life</td>
<td>Citizens living in eastern Ukraine</td>
<td>145</td>
<td>105.97</td>
<td>15365.50</td>
<td>4780.50</td>
<td>0.000 (p&lt;0.001)</td>
</tr>
<tr>
<td>satisfaction</td>
<td>Citizens living in central Ukraine</td>
<td>157</td>
<td>193.55</td>
<td>30387.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own research.

Based on correlation analysis, the authors were able to determine the relation between tendency to forgiveness with decisional forgiveness, emotional forgiveness, anxiety, depression, mental health, life satisfaction and happiness, tolerance and acceptance of others, tolerance for others’ mistakes, and hope in citizens living in eastern Ukraine. Table 3 presents significant correlations (p<0.001)

Table 3
Tendency to Forgiveness: Spearman’s Correlation Coefficients (n = 145)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Tendency to forgiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spearman’s correlation coefficient</td>
</tr>
<tr>
<td>Decisional forgiveness</td>
<td>0.375</td>
</tr>
<tr>
<td>Emotional forgiveness</td>
<td>0.317</td>
</tr>
<tr>
<td>Happiness and life satisfaction</td>
<td>0.292</td>
</tr>
<tr>
<td>Mental health</td>
<td>0.304</td>
</tr>
<tr>
<td>Tolerance and acceptance of others</td>
<td>0.310</td>
</tr>
<tr>
<td>Tolerance for others’ mistakes</td>
<td>0.277</td>
</tr>
<tr>
<td>Hope</td>
<td>0.352</td>
</tr>
<tr>
<td>Anxiety</td>
<td>- 0.355</td>
</tr>
<tr>
<td>Depression</td>
<td>- 0.324</td>
</tr>
</tbody>
</table>

Source: own research.
It has been empirically established that anxiety and depression are negatively related to the tendency to forgive. The obtained correlations show that the more a person is prone to forgiveness, the less anxiety and depression a person has.

Positive correlations were found between tendency to forgiveness and decisional forgiveness, hope, emotional forgiveness, tolerance and acceptance of others, mental health, happiness and life satisfaction, tolerance for others’ mistakes. The obtained correlations indicate that a person with a high tendency to forgiveness is characterized by higher levels of decisional forgiveness, hope, emotional forgiveness, tolerance and acceptance of others, mental health, happiness and life satisfaction, as well as tolerance for others’ mistakes.

Correlation analysis also allows the authors to analyse the relationship between mental health and happiness, life satisfaction, tendency to forgiveness, tolerance and acceptance of others, tolerance for others’ mistakes, and hope. Table 4 presents correlation coefficients between mental health and other variables in the behaviour of citizens living in eastern Ukraine.

**Table 4**

*Mental Health: Spearman’s Correlation Coefficients (n = 145)*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mental health</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spearman’s correlation coefficient</td>
<td>p level</td>
</tr>
<tr>
<td>Happiness and life satisfaction</td>
<td>0.357</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Tendency to forgiveness</td>
<td>0.304</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Tolerance and acceptance of others</td>
<td>0.129</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Tolerance for others’ mistakes</td>
<td>0.086</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Hope</td>
<td>0.598</td>
<td>p&lt;0.001</td>
</tr>
</tbody>
</table>

Source: own research.

Positive correlations were found between mental health and hope, happiness and life satisfaction, and tendency to forgiveness.

Another analysis focuses on the assessment of significant factors in the mental health of citizens living in eastern Ukraine. In order to study the significant factors as predictors of mental health, the authors applied the method of forward stepwise regression. This method allows for identifying the statistically significant predictors of mental health. Table 5 presents the analysis of forward stepwise regression.
Table 5

**Analysis of Forward Stepwise Regression and Mental Health** (n = 145)

\[ R = 0.615; \quad R^2 = 0.378; \quad \text{Adjusted } R^2 = 0.372 \]

\[ F = 60.379, \quad p < 0.001 \]

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised coefficients</th>
<th>Standardised coefficients</th>
<th>t</th>
<th>p level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B Standard error Beta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(const.)</td>
<td>2.425 0.496 4.889 0.000</td>
<td></td>
<td>p&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Happiness and life satisfaction</td>
<td>0.069 0.026 0.137 2.629</td>
<td></td>
<td>0.009</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Hope</td>
<td>0.092 0.010 0.495 9.288</td>
<td></td>
<td>0.000</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Tendency to forgiveness</td>
<td>0.033 0.016 0.098 1.991</td>
<td></td>
<td>0.047</td>
<td>p&lt;0.05</td>
</tr>
</tbody>
</table>

Source: own research.

The regression result is statistically significant and explains 38% of mental health. Hope, life satisfaction and happiness, and tendency to forgiveness were included in the model as predictors. Based on multiple regression analysis, positive significant (p<0.05) regression coefficients were established. More pronounced hope, happiness and life satisfaction, as well as tendency to forgiveness increase the mental health of citizens living in eastern Ukraine.

**DISCUSSION**

The situation of the military conflict in eastern Ukraine has a negative impact on psychological well-being and mental health in citizens living there. The military conflict in eastern Ukraine produces significant situational stressors, especially for those citizens who live in the zone of the military conflict. That is why citizens living in eastern Ukraine in a situation of military conflict are observed to have a stronger degree of anxiety, depression, compared to citizens living in the centre of Ukraine. Military conflict creates difficult living conditions, tensions, threats to life, well-being, and thus increases stress level. At the same time, a stronger degree of mental health, life satisfaction and happiness have been observed among citizens living in the centre of Ukraine, compared to citizens living in eastern Ukraine in a situation of military conflict.

Therefore, development of resistance to stress for citizens living in a military conflict zone is essential for effective psychological rehabilitation. Results of our empirical study show that the more pronounced degree of tendency to forgiveness is correlated with less pronounced anxiety and depression. Therefore, we can say that one of the significant predictors of
mental health is tendency to forgiveness. Results of our empirical study show that the more pronounced degree of tendency to forgiveness is correlated with a more pronounced degree of decisional forgiveness, hope, emotional forgiveness, tolerance and acceptance of others, mental health, happiness and life satisfaction, tolerance for the mistakes of others. Also, the results show that the more pronounced degree of mental health is correlated with a more pronounced degree of hope, happiness and life satisfaction, and tendency to forgiveness.

Those who know how to forgive are able to replace negative thoughts and emotions from negative to neutral and then to positive. Previous research has shown that forgiveness involves overcoming negative emotions and judgments about the offender (Enright, 2001). The literature indicates that forgiveness contributes to the rejection of resentment, hatred, anger (Freedman & Zarifkar, 2016). Interestingly, some studies point out that the offender’s forgiveness involves the release of resentment, sadness, hatred, anger (Wade & Worthington, 2005).

Practising forgiveness has the potential to aid greatly in the psychological rehabilitation of citizens living in a military conflict environment. The results obtained in our study indicate that important factors in mental health are hope, happiness, life satisfaction, tendency to forgiveness.

Some scholars reported that forgiveness reduces stress (Thompson, 2005). It also promotes mental health. Some research confirms that forgiveness reduces mental suffering (North, 1987) and some scholars have shown that forgiveness is positively correlated with behaviour control (Porada et al., 2018).

Hope, happiness, life satisfaction, and tendency to forgiveness can allow citizens living in eastern Ukraine to recover quickly from psychological trauma, contribute to the successful overcoming of negative effects of military conflict and functioning successfully. The results of this study demonstrate some factors as the personal potential of mental health and psychological well-being of citizens living in eastern Ukraine.

**CONCLUSION**

Based on the empirical study of predictors of mental health of citizens living in eastern Ukraine in a situation of military conflict, the following conclusions may be formulated: Citizens living in eastern Ukraine in a situation of military conflict are observed to have higher levels of anxiety, depression, compared to citizens living in the centre of Ukraine. A greater degree of mental health, life satisfaction, and happiness has been observed in citizens living in the centre of Ukraine, compared to citizens living in eastern Ukraine in a situation of military conflict. Moreover, significant positive correlations of tendency to forgiveness with decisional forgiveness, hope, emotional forgiveness, tolerance and acceptance of others,
mental health, life satisfaction and happiness, tolerance for the mistakes of others were identified. The more pronounced degree of tendency to forgiveness is correlated with more pronounced degree of decisional forgiveness, hope, emotional forgiveness, tolerance and acceptance of others, mental health, happiness and life satisfaction, as well as tolerance for the mistakes of others. What is more, significant negative correlations of tendency to forgiveness with anxiety and depression were found. The more pronounced degree of tendency to forgiveness is correlated with less pronounced degree of anxiety and depression. Furthermore, significant positive correlations of mental health with hope, happiness and life satisfaction, and tendency to forgiveness were identified. More pronounced degree of mental health is correlated with more pronounced degree of hope, happiness and life satisfaction, as well as tendency to forgiveness. Finally, individual predictors of mental health have been empirically identified. More pronounced degree of hope, happiness and life satisfaction, as well as tendency to forgiveness increase the mental health. Understanding psychological characteristics of tendency to forgiveness and mental health will contribute to effective psychological counselling and psychotherapy.

The practical value of this research lies in expanding and deepening the understanding of the phenomenon of forgiveness, in the process of developing responses to work in the mental health sphere. The results obtained in this study may be used by social workers, practical psychologists and others in providing psychological assistance to citizens living in eastern Ukraine in a situation of military conflict. In the future, based on this article’s findings, the authors plan to develop psychological training, educational and therapeutic approaches aimed at the development of personal self-realisation and stress management. These programs will be especially useful for psychological assistance for citizens living in eastern Ukraine in a situation of military conflict.

ACKNOWLEDGEMENTS AND COVERAGE

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