

Personality and Situational Determinants of Sustained Helping Towards Ukrainian War Refugees in 2022

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Purpose: The aim of the research was to determine the personality and situational predictors of helping behavior towards war refugees from Ukraine in 2022.

Patients and Methods: A survey with repeated measurement was conducted, in which 720 people participated in the first date in March 2022 and in the next one in June 2022, $n = 127$. The study was conducted online, and the respondents were recruited through advertisements on websites and groups helping refugees. In the context of personality factors, five basic personality traits (IPIP-20), the degree of altruism (IPIP Altruism scale) and locus of control (Drwal's Delta Scale), and trait anxiety (STAI) were measured. The main situational factors included the sense of threat of armed conflict (GAD-7), the level of state anxiety (STAI) and the amount of time spent following information about the war in the media. In addition, the level of social distance towards Russians and Ukrainians was measured (Bogardus Scale), and basic birth data were recorded.

Results: Based on the above variables, a significant linear regression model was built, explaining more than half of the variance in the phenomenon of continuous helping. The important role of both personality factors – altruism, and situational factors such as state anxiety or social distance towards Russians was demonstrated. Moreover, people with a high level of altruism keep helping the refugees regardless of their level of feeling threatened after the war's outbreak, while people with a lower level of altruism keep on helping only when their sense of threat is high.

Conclusion: The level of altruism, perceived situational anxiety and attitude towards the aggressor (in this case Russia) are important factors supporting continuous helping refugees from Ukraine.

Keywords: helping, altruism, fear, threat of war, war refugees

Introduction

The reaction of Polish society to the outbreak of the war in Ukraine and the accompanying impulse to help refugees and soldiers fighting on the front became the point of interest of this article.

Survey research conducted by the Public Opinion Research Center – CBOS shows that over half of Poles (even from 70 to 80%) started to help by organizing support points, collecting financial and material donations and welcoming the injured into private homes.¹ Every third respondent declared that he was motivated to help by a sense of justice and an attempt to put himself in a similar situation. Over time, however, the great social mobilization began to decrease, which could be a consequence of fatigue with the topic of war, burnout, a lower sense of one's own financial security or simple boredom. This does not change the fact that many people have not abandoned their aid activities. This group of people and the mechanisms that guide their behaviour are the focus of the authors of this article. Why do people maintain efforts to help Ukrainian citizens several months after the outbreak of the war?

Theories Explaining the Phenomenon of Helping

Prosocial behavior is explained by several independent but complementary theories. One of them is called the decision-making model of crisis intervention, which assumes that there are necessary and necessary conditions for the occurrence of helping behavior.^{2,3} These conditions include recognizing a situation that requires support, understanding that the other person needs urgent help, demonstrating personal responsibility for providing help, assessing one's competence to provide support, and deciding to take helping actions.²

In another model, called the arousal-balance model developed by Piliavin et al, it was assumed that providing help is associated with the motivation to remove unpleasant emotions caused by seeing someone else's suffering. At the same time, arousal decreases as the distance between the observer and the injured person increases, which seems to be particularly important in the context of the distance of Poles from Ukrainians or Russians. The distance from the injured party or the perpetrator may be a significant factor triggering helping behavior.⁴⁻⁷

Another approach dealing with the genesis of helping behaviors adopts a perspective in which social phenomena are explained in relation to the norm of reciprocity, which obliges people to help those who have previously provided them with support. Such behaviors that build the image capital of the helping person may be especially important in the case of behaviors that demonstrate that someone is helping, eg, on the Internet or on social networking sites.^{8,9}

Situational Determinants of Helping Behavior

Situational factors determining helping can be classified into elements of the external environment, characteristics of the person needing support, and the observer's current emotional states in response to the situation. Starting from the first category, one can notice a relationship between people's willingness to help and the size of the place of residence.¹⁰⁻¹⁴

The presence and behavior of other witnesses to the event play an important role in the occurrence of helping behavior. Bystander passivity in various contexts inhibits the willingness to help.¹⁵⁻¹⁸ At the same time, observing another person behaving prosocially (eg through social media) encourages one to engage in an act of help, which may explain the scale of help in which Poles were involved in helping Ukrainian citizens.¹⁹ The effect of modeling helping behaviors is also seen in shaping pro-social attitudes through the media.^{20,21}

Due to the norm of social responsibility, people are more willing to help dependent and weaker people, as well as those who are more liked. Similarity to the supported persons (eg common psychological or physical features) is also important and the perception of cultural and historical national convergence, but also territorial proximity.²²⁻²⁴ This mechanism may also be intensified by the sense of belonging to a common group and perceiving another person as "one's own" while, at the same time, sharing the aversion to the enemies of members of the own group, in this case Russia.

Another factor is the source of the problem. If the difficult situation in which a person in need finds himself is the result of his intentional action or negligence, it may contribute to a weakening of the will to help.²⁵ Military activities for which, in the eyes of the respondents, the refugees are not responsible may meet these conditions. Greater social distance from Russians should increase helping behaviors and reduce the feeling of distance from Ukrainians.

Another issue is emotional attitude. Positive mood activates prosocial behavior more effectively than negative mood, mainly by activating positive interpretive categories that make the world seem more pleasant and people seem more deserving of help.²⁶⁻²⁸ At the same time, many studies prove that helping is a relatively simple and common way to improve mood.²⁹⁻³¹ Therefore, we can assume that people help to cope with difficult emotions.

In the perspective of help provided to refugees from Ukraine, the relationship between helping behavior and fear, anxiety or sense of threat seems to be important. Anxiety considered as a state that is a reaction to a situation (reactive-situational) has a significant impact on human behavior.³² At the same time, fear can be a motivator of friendly relationships with the environment. Undertaking acts of help may result in building bonds and relationships with people, which may ultimately contribute to reducing anxiety and the sense of threat.^{33,34} Neuropsychological research has shown that activities aimed at reducing anxiety often take the form of prosocial behavior.³⁵ Based on this, it can be concluded that the sense of threat or situationally intensified anxiety caused by information about the war from the media will strengthen helping behaviors a few months after the start of hostilities.

Analysis of people's reactions to traumatic events confirms that in a threat situation, they begin to engage in helping.^{36,37} Instead of focusing on the potential threat and their own discomfort, Poles started to help the victims, thus activating the mechanism of identification with the victims.

Research conducted following the outbreak of the war has shown a correlation between the level of perceived stress and engagement in helping behaviors. Helping others may thus serve as a coping mechanism for managing psychological tension caused by stress.³⁸

Moreover, studies observed differences in the motives for helping between Ukrainian and Polish volunteers. Ukrainian volunteers were able to significantly reduce negative emotions and strengthen social networks and religious faith through volunteering, while Polish volunteers were more inclined to gain skills and pursue psychosocial development by assisting others.³⁹

Selected Personality Determinants of Providing Help

One of the important personality determinants of helping is an altruistic attitude recognized as a prosocial behavior where individuals engage in acts of assistance without expectations of external rewards, personal gain, or the intent to avoid punishment.^{40,41} Theories propose that individuals are driven by a desire for internal satisfaction, while additional views contend that people can display genuinely altruistic behaviors even in the absence of any external or internal incentives.⁴²

Despite the complexity of the phenomenon of helping, attempts have been made to identify features that could contribute to a generalized tendency to help others, for example Śliwak, based on a meta-analysis of personality correlates of prosocial behavior, distinguished, among others, social responsibility, trust in others, sense of meaning in life and a high level of moral development.⁴³

Locus of control theory can also be used to explain helping behavior.⁴⁴ A relationship is observed between the sense of internal control and greater involvement in pro-social activities. Being in control of your fate drives people to take risks and take initiative. Belief in one's own skills, experience and knowledge encourages one to take action and overcome difficulties.⁴⁵

Research based on the five-factor personality model found that the dimension of agreeableness, characterized as warmth, compassion, trust, and caring, is most strongly associated with helping behaviors.^{45,46} The highest correlations were found with extraversion (understood mainly as sociability, activity, sensation seeking, ambiversion, self-confidence).⁴⁷⁻⁴⁹ This relationship seems to be quite intriguing, because extraversion is rather associated with mechanisms of selfish pursuit of one's own benefits and the lack of the ability to empathize and is rarely compared with helping behaviors.⁵⁰ It can be assumed that people with high extraversion fulfill their own needs when helping someone, while people with high agreeableness act altruistically.⁵¹ Another multilevel meta-analysis found that only agreeableness and openness to experience were associated with prosocial behavior.⁴⁶ Research has also shown that personality determines helping behavior depending on the type of recipient (family, friend, stranger).⁵² And just as extraversion enhances altruism towards all types, conscientiousness contributed to altruism only towards family members, agreeableness towards friends/acquaintances, and openness only towards strangers.^{49,53} Neuroticism correlates negatively with prosocial attitude.^{48,54} Additionally, a positive relationship was observed between affective temperament and engagement in assisting Ukrainian refugees.³⁸

There is a perceived lack of knowledge and research on helping during war crises and providing assistance to refugees.

To conclude, the aim of the article is to determine whether the sustained intense reaction of people involved in helping in the face of hostilities in Ukraine is associated with specific circumstances and emotional states triggered by information about the invasion of Ukraine, such as a sense of threat, reactive-situational fear, distance towards Ukrainians and Russians and exposure to media reports about the situation of refugees and the situation at the front. The authors of this article are also interested in dispositional variables, such as social approval, characterological anxiety (understood as a permanent trait), locus of control and features of the five-factor personality model – FFM.

In relation to the questions, the following hypotheses were formulated:

H1: Personality factors (personality traits in the Five-Factor personality model, locus of control, self-presentation, trait anxiety, altruism) are significant predictors of maintaining helping.

H2: Situational factors (anxiety as a state, sense of threat, exposure to the war in the media, attitude towards Russians and Ukrainians, involvement in helping at the beginning of the war) are significant predictors of maintaining helping.

Method

Procedure

The study was conducted online, in a repeated measurement model. Two measurements were made, first in March 2022, right after Poles started to help refugees from Ukraine, and the second one in June 2022, when the wave of spontaneous help began to weaken (according to data provided by the Central Statistical Office in Poland, GUS, 2022). The invitation to take part in the first wave of the study was sent to coordinators of groups helping refugees from Ukraine, posted on websites and groups gathering people involved in helping, and made available to students involved to varying degrees in providing or coordinating assistance. Some coordinators of aid groups explicitly refused to distribute the survey, while others agreed to provide a link to the survey to those involved in helping. The study was conducted in accordance with the declaration of Helsinki. It was also approved by the institutional Ethics Review Board in Institute of Psychology, University of Opole, decision 19/2022.

Participants

All participants gave an informed consent before starting the study. The research project procedure was approved by the local ethical committee. In the first measurement, $N = 721$ people responded to the invitation to participate in the study ($N = 186$ men, 26.2% and $N = 525$ women, 73.8%), the average age was $M = 28.5$ years ($SD = 11.3$). Three months after the first measurement, all respondents were contacted with a request to continue the study. The identification data of the respondents were checked and the measurements were matched, then incorrectly completed surveys were removed from the database. $N = 127$ people remained in the database after the second measurement ($N = 41$ men, 32.3% and $N = 86$ women, 67.7%), the average age was $M = 30.12$ ($SD = 11.21$). The condition for inclusion in the analyzes was to correctly complete two online measurements. A description of the sample structure is provided in Table 1.

The data presented in Table 1 was checked for differences in sociodemographic structure at measurement times T1 and T2. There were no statistically significant differences for gender ($p = 0.154$), place of residence ($p = 0.628$) or education ($p = 0.308$).

Table 1 Sociodemographic Variables as Controlled Variables in the Research Model

	Count T1	% of Total	Count T1+T2	% of Total
Gender:				
Male	186	26.2%	41	32.3%
Female	525	73.8%	86	67.7%
Place of living:				
Big city	299	41.8%	41	44.1%
Small city/town	236	33.0%	30	32.3%
Village	181	25.3%	56	23.6%
Wykształcenie:				
Primary/Vocational	4	0.6%	–	–
Secondary	368	51.5%	67	52.7%
Higher	342	47.9%	60	47.2%

Measurement Tools

The main dependent variable in the study was the maintenance of helping three months after the outbreak of the war, understood as the sum of various helping behaviors for refugees, undertaken by the respondents in the last month after the measurement took place. Because help could take many different forms, a scale was created in which respondents declared their various forms of help. Table 2 presents the statements on the basis of which the respondents defined their continued involvement in particular forms of helping three months after the start of the war.

The obtained psychometric parameters can be considered satisfactory. However, to verify the validity of the helping scale, a confirmatory factor analysis was conducted (see Table 3).

Table 2 Statements Defining the Forms of Helping, Along with the Reliability Statistics for Both Measurements

Statement:	% Yes (1st Measurement)	% Yes (2nd Measurement)
1. I changed my profile picture to include the (Ukrainian) flag.	13.38	12.59
2. I shared a post with information about humanitarian aid.	48.81	37.00
3. I "liked" or commented on posts with news about the situation of Refugees.	62.20	46.45
4. I took part in a rally against the war.	11.81	7.08
5. I donated my belongings (clothes, furniture, mattresses, etc.) to Ukrainians in need.	46.45	37.79
6. I bought the necessary products and donated them in the collection point for Ukrainians in need.	49.60	42.51
7. I donated money to a collection for Refugees or gave it directly to those in need.	54.33	44.88
8. I welcomed Ukrainians fleeing the war into my apartment or house.	3.93	7.08
9. I declared on social media or to an appropriate organization my readiness to accept Ukrainians fleeing the war.	5.51	5.51
10. I provided direct advisory or service support to Refugees (eg psychological, legal, medical assistance, free classes for children, transport).	25.98	24.40
11. I have expressed my readiness to provide direct advisory or service support to Refugees (eg psychological, legal, medical assistance, free classes for children, transport), but I have not yet had the opportunity to provide this support.	26.77	22.83
12. I help every day as a volunteer for Refugees or people staying in Ukraine.	9.44	0.78
13. I have helped several times as a volunteer for Refugees or people remaining in Ukraine, but I do not do it every day.	11.81	16.53
14. I have helped once or twice as a volunteer for Refugees or people remaining in Ukraine, but I do not do it every day.	22.83	20.47
15. I offered my help as a volunteer by reporting to the appropriate organization, but I have not yet had the opportunity to participate in specific activities.	11.02	9.44

Table 3 Helping Scale Confirmatory One Factor Models

	CFI	TLI	RMSEA	RMSEA 90% PU		χ^2	df	p
				-95	+95			
A1	0.766	0.727	0.094	0.076	0.113	193	90	<0.001
B1	0.985	0.978	0.026	0.001	0.059	79.6	73	0.280
A2	0.642	0.582	0.090	0.071	0.109	183	90	<0.001
B2	0.914	0.891	0.046	0.004	0.070	106	83	0.048

Notes: A1 Model with no covariances of items pretest; B1 Model with covariances of items pretest; A2 Model with no covariances of items posttest; B2 Model covariances of items posttest.

Results suggest that models B1 and B2 with items covariances have better parameters for model fit (RMSEA, CFI). Models with covariances also have a better X^2 statistic, which suggests a better model fit to data. It shows that those covariances seems to be related with scale construction, like for example, the form of helping (virtual or real-life help). A post-hoc *t*-test was also performed to check whether the level of the helping index differed for the first and second measurement. There was no statistically significant difference in involvement in helping in the first measurement and in maintaining helping in the second ($t(1,127)=1.83$; $p = 0.070$; $d = 0.16$). Result shows that there was no effect of helping. The data show that there was no effect of a decrease in involvement in helping. The subjects who remained in the study in the first and second measurements were similarly involved in helping.

The table presents the questions that constitute the helping maintenance index. Table 4 presents the psychometric parameters for the aggregated helping maintenance indicator, obtained on the basis of the questions described in Table 2.

In the first measurement wave, situational factors were measured using the following scales: locus of control (LOC), tendency to present oneself in a favorable light (self-presentation), both using the Delta Scale level of state anxiety and generalized sense of threat (adapted GAD-7 scale).^{55–57} The adaptation of the GAD-7 scale equaled to modifying the instructions regarding the generalized sense of threat, by specifying the context - The threat of war. Personality factors such as anxiety understood as a trait were measured in the first wave using the STAI scale, and the intensity of altruism was understood as a personality variable (a scale consisting of 5 questions regarding altruistic behavior).^{56,58} In the second measurement wave, personality traits were measured in accordance with the FFM model (IPIP-BFM-20) and social distance towards Ukrainians and Russians.^{59,60} Additionally, the measurement of state anxiety (STAI Scale) and the generalized sense of threat, in this case the threat of war (GAD-7), were repeated. Moreover, in both measurements, the time of exposure to media information about the war was controlled using single declarative questions (How much time do you devote to obtaining information about the current situation in Ukraine? Specify how many minutes a day) and the total time spent on helping in the last week (Estimate how many hours in the last 7 days have you devoted to helping refugees or people staying in Ukraine. Enter the time in hours). The variable of media exposure time was added as a controlled variable, similarly as in other studies, in which the influence of media on the formation of attitudes is probable.⁶¹ Descriptive data on the scales and reliability indicators are presented in Table 5.

All variables presented in Table 5 (except for the self-presentation subscale, measured by the Delta questionnaire in T1) obtained satisfactory psychometric parameters. It is worth noting that the GAD-7 scale adapted for the purposes of the study obtained very good reliability parameters.

Analytical Approach

In order to verify the hypotheses, a hierarchical stepwise regression analysis model was built. To verify the hypotheses, we conducted a hierarchical stepwise regression analysis using IBM SPSS v. 30 and Jamovi v. 2.5.3 software packages. The assumptions for the use of this analysis were met (VIF ranged from 1.1 to 1.9 for all variables except for Altruism, where it was 7.8, and the Durbin–Watson statistic for autocorrelation was not significant ($D-W = 2.077$; $p = 0.616$)). We entered the data in our model from the most stable traits to the most variable. Those steps were as follows: (1) demographic variables, such as gender – being a woman (0–1), place of residence (village, small town, large city), education, age in years; then, (2) personality variables were introduced: neuroticism, extraversion, agreeableness, conscientiousness, intellect, locus of control, self-presentation, anxiety as a trait, altruism; afterwards, (3) attitudes towards three nations were introduced (Czechs – control, Ukrainians and Russians); then, (4) situational variables measured in the first measurement were introduced, such as time spent helping (T1), time spent following the media to obtain information about the war, the sense of war threat, and anxiety as a state (T1); in the next step, (5) variables

Table 4 Descriptive Statistics and Reliability Indexes for the Integrated Helping Scale in Measurements 1 and 2

	M	SD	Cronbach's α	McDonald's ω
T1 helping scale, measurement 1 (sum of behaviors after 1 month)	4.04	2.76	0.73	0.73
T2 helping scale, measurement 2 (sum of behaviors after 3 months)	3.35	3.17	0.82	0.83

Table 5 Reliability Indicators for the Scales Used in the Research*

	Min.	Max.	M	SD	Skew.	Kurtosis	Cronbach's α	McDonald's ω
Neuroticism IPIP T2	5	20	12.05	3.72	0.34	-0.46	0.81	0.81
Extraversion IPIP T2	4	20	12.38	3.82	-0.27	-0.86	0.86	0.86
Agreeableness IPIP T2	4	20	15.55	3.14	-1.20	2.10	0.79	0.80
Conscientiousness IPIP T2	5	20	13.34	3.69	-0.27	-0.78	0.76	0.77
Intellect IPIP T2	6	20	15.55	2.88	-0.53	0.31	0.70	0.71
Locus of control Delta T1	0	12	4.01	2.57	0.72	0.22	0.72	0.74
Self-presentation T1	0	8	2.57	1.50	0.50	0.46	0.34	0.37
Distance Czechs T2	1	5	4.92	0.41	-7.57	67.63	0.9	0.90
Distance Ukrainians T2	0	5	4.77	0.77	-4.80	25.33	0.81	0.91
Distance Russians T2	0	5	4.04	1.62	-1.70	1.52	0.90	0.92
Time devoted to helping T1	0	100	9.75	21.54	3.46	11.57	-	-
Time devoted to helping T2	0	30	1.36	3.77	4.82	29.07	-	-
Sense of threat of war (GAD-7) T2	0	70	29.72	18.42	0.27	-0.90	0.95	0.95
Sense of threat of war (GAD-7) T1	0	70	42.34	18.16	-0.65	-0.51	0.94	0.94
Altruism T1	14	34	25.57	4.05	-0.74	0.44	0.84	0.85
STAI state T1	21	58	38.16	8.79	-0.01	-0.76	0.92	0.92
STAI state T2	22	59	35.66	8.99	0.65	-0.11	0.93	0.94
STAI trait T1	25	54	39.20	6.97	-0.15	-0.76	0.93	0.94
Time devoted to media T2	0	180	24.14	36.26	2.30	5.49	-	-
Time devoted to media T1	0	360	62.79	71.89	1.36	1.55	-	-

Notes: * T1 and T2 in the description of the variable mean the measure in which the data was collected, the first or second, respectively.

measured in the second measurement were introduced, ie, time spent on helping (T2), anxiety as a state (T2), time spent following information about the war in the media, the sense of war threat; lastly, (6) interactions between variables were introduced, both from the first and second measurement.

In the next analytical step, the power of the test was calculated, taking into account the final sample. It was assumed that the model would include 24 variables (all factors), the effect size would be $f^2 = 0.25$, the statistical power would be 0.8, and the probability level would be $p = 0.05$. For these assumptions, a minimum sample size of $n = 110$ was calculated.⁵⁷ A post-hoc power analysis with the final sample of $n = 127$ and all other parameters as in pre-analysis, using the G-Power app⁵⁶ yielded a critical $F = 2.189$, which is lower than the value for any of the observed significant effects.

Results

After building the model, its assumptions were checked (autocorrelations were 0.03, Durbin-Watson statistics was $D-W = 2.08$ with $p > 0.05$). The final model turned out to be statistically significant, explaining over half of the variance. Data on the parameters of individual steps are presented in Table 6.

Table 6 Regression Model Parameters

Step in the Model	R	R ²	F	Model comparison	ΔR^2	ΔF
1. Demographic variables	0.36	0.13	3.44*	–	–	–
2. Personality variables	0.53	0.28	2.95**	1–2	0.15	2.46*
3. Distance towards the 3 nations	0.61	0.38	3.69**	2–3	0.09	5.40*
4. Situational variables T1	0.62	0.38	2.95**	3–4	0.01	0.26
5. Situational variables T2	0.66	0.43	3.07**	4–5	0.04	2.78*
6. Interactions	0.72	0.52	3.28**	5–6	0.08	2.76*

Notes: *marks the significance $p < 0.05$, ** marks the significance $p < 0.001$.

The most stable variables were entered into the model first, in this case those were demographic and personality variables, then situational variables were included. Data showing the steps of a hierarchical regression analysis show that almost every data set added to the analysis significantly increases the explained variance (except for step 4). This means that our packaging of variables in the described steps is Step 4 illustrates that the situational variables measured in the first measurement do not translate significantly into the level of maintaining helping measured in the second measurement. Then, the parameters of individual factors were assessed (see Table 7).

In the first regression step, an important factor was the place of residence. In the second step, personality variables were added, of which only altruism turned out to be significant. In the third step, social distance towards 3 nations was introduced, of which the distance towards Russians was significant, and towards Ukrainians, it is close to the level of $p < 0.05$. Step 4, which involved entering the situational variables measured in the first measurement, revealed no statistically significant factors. In the fifth step, describing the addition of situational variables in the second measurement, only anxiety as a state turned out to be an important factor. Finally, step 6, which presented the interactions between variables, was added to the model. The interactions between altruism and the sense of threat T1 and T2 turned out to be significant. Figure 1 presents the interactions in detail.

Table 7 Factors in the Final Regression Model

Variable in the Model	Step	Stand. B	t	p
Age	1	0.27	3.19	0.071
Place of living	1	-0.29	2.43	0.039
Education	1	0.10	0.11	0.519
Gender	1	0.19	1.46	0.616
Neuroticism T2	2	0.01	-0.01	0.987
Extraversion T2	2	0.12	1.37	0.172
Agreeableness T2	2	-0.06	-0.43	0.662
Conscientiousness T2	2	-0.12	-1.32	0.187
Intellect T2	2	0.10	1.11	0.268
Fear as a trait T1	2	0.17	1.22	0.224
Altruism T1	2	0.09	-2.74	0.007
Locus of Control Delta T1	2	-0.05	-0.32	0.749
Self-Presentation Delta T1	2	0.11	1.55	0.124
Distance towards Czechs	3	-0.02	-0.40	0.683
Distance towards Ukrainians	3	0.19	1.94	0.055
Distance towards Russians	3	-0.22	-2.37	0.020
The threat of war T1	4	0.09	0.25	0.801
Fear as a state T1	4	-0.02	-1.50	0.135
Time for media T1	4	0.02	-0.28	0.779
Helping T1	4	0.10	0.41	0.680
Time for helping T1	4	0.25	1.80	0.074
The threat of war T2	5	0.03	-0.01	0.993
Time for media T2	5	0.04	-1.04	0.300
Fear as a state T2	5	0.14	2.77	0.007
Time for helping T1*T2	6	-0.12	-1.17	0.244
Fear as a state T1*T2	6	0.03	0.17	0.863
The threat of war T1*T2	6	0.04	0.51	0.610
T1_Time for media T1*T2	6	-0.16	-1.58	0.117
Altruism T1 * Threat of war T1	6	0.23	2.15	0.034
Altruism T1 * fear as a state T1	6	-0.01	-0.16	0.868
Altruism T1 * Threat of war T2	6	0.25	2.46	0.016
Altruism T1 * fear as a state T2	6	0.01	-0.01	0.987

Notes: * T1 and T2 in the description of the variable mean the measure in which the data was collected, the first or second, respectively.

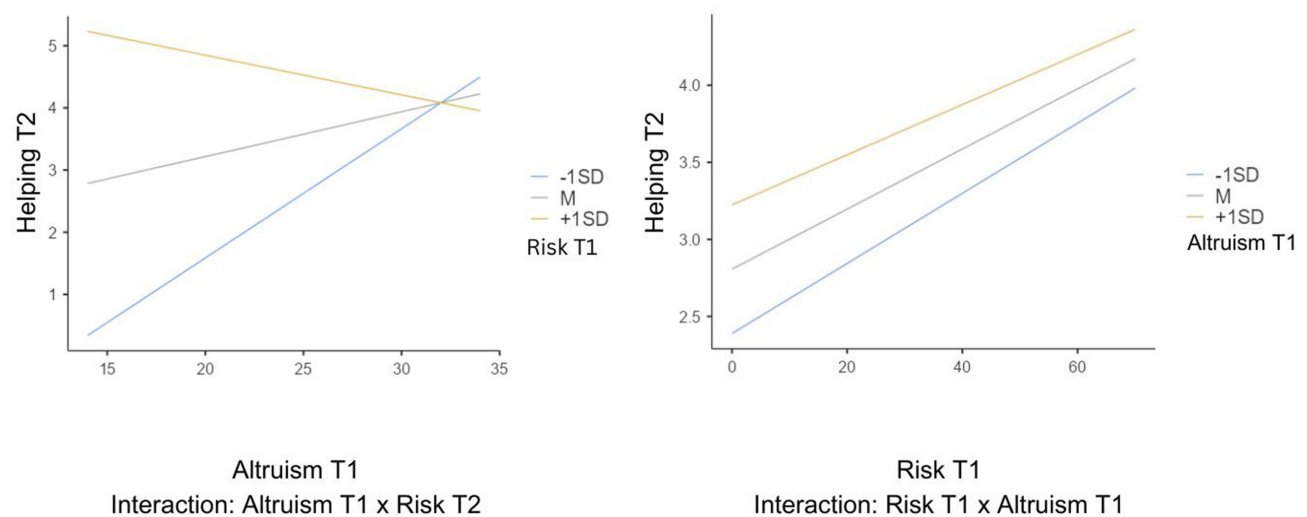


Figure 1 Significant interactions of altruism and the threat of war (simple slopes), explaining the maintenance of helping refugees in the second measurement.

In [Figure 1](#), we can see the visualisation of the interaction that has been added to the model of stepwise regression. The interpretation of this interaction is that helping depends on altruism as a personality trait and the state of risk in the two moments of war. T1 measures the first moment when the war began, while T2 represents the measure after 3 months.

The interaction of altruism at T1 and risk at T2 gives the picture that high altruism results in high involvement in helping after 3 months after the war began, while people with a low level of altruism need to experience a high level of risk to be still involved in helping after 3 months. The fact that variable risk was measured at T2 means that this was quite a fresh feeling of risk.

The second interaction presented in simple slopes is the same interaction, with variables measured at the start of war. We can observe that the level of altruism makes the difference in involvement in helping at the start, and the level of risk at the start of war makes helping higher at almost the same rate.

It also shows that the moment of measuring the level of risk makes the difference. Fresh measurement of the feeling of risk makes the relation stronger.

Discussion

The authors intended to determine the factors explaining the reasons for the continuation of help offered to Ukrainian fugitives and fighters. The authors focused on the psychological and situational factors that determined the continuation of helping three months after the escalation of the war, especially when the influx of the first wave of help for refugees began to decline. It can be assumed that the spontaneous outburst of Poles' help immediately after the outbreak of the war could have been triggered by such mechanisms as reaction to the crisis, coping with stress through action or imitating others.^{62,63} The authors wanted to determine the factors responsible for repeated or sustained actions, which is why the helping behaviour was measured twice and the results included analyses of people, who declared their help both directly after the outbreak of the war when huge crowds of Poles took action, but also when sustained helping became more and more difficult and a decline in interest in the fate of Ukrainians fleeing to Poland was observed (which is confirmed by the survey conducted by the Public Opinion Research Center - CBOS).⁶⁴

As a result of the conducted research, it was established that, on the one hand, the analysis of collective indicators allows for a cautious conclusion that personality traits explain the involvement in helping to the greatest extent (~15% of the total variance). However, a closer look at individual personality factors shows that only people with a high level of altruism help statistically significantly more intensively, which is consistent with the general concept of altruism.^{1,19} Interestingly, there is an interaction effect between altruism and the sense of threat. While immediately after the escalation of hostilities, both a higher level of altruism and a higher level of sense of threat were associated with a higher level of helping, after 3 months, for a high sense of threat, the level of helping was independent of the level of

altruism. Altruists helped equally intensely at low and high levels of perceived threat, and people with a lower level of altruism helped intensively only at high levels of perceived threat. It is worth considering linking this effect with the important role of anxiety as a state. People feeling strong anxiety were more involved in helping than people who did not experience this negative reactive-situational emotion. This effect is consistent with previous research which showed that people with increased levels of anxiety have a greater tendency to help.^{65,66}

Although the results presented above suggest that overall personality factors are a significant predictor of maintaining helping after 3 months (Table 6, step 2), it should be emphasized that, at the detailed level, only one personality variable – altruism (Table 7), turned out to be statistically important. Variables postulated in the literature, such as agreeableness or extraversion, did not work as factors influencing maintaining helping behavior.^{33,35,45–47} Also, the locus of control, which is rather clearly associated with the willingness to help, was not a significant factor in the current study.^{44,48,49} This lack of a relationship can be explained by the specificity of the studied group, which turned out to be mostly internally driven, as evidenced by the high index of LOC's skewness (Table 5). Therefore, it can be concluded that people with a high level of internal control both started helping and participated in the current study more willingly. As already mentioned, the sense of agency or control over events affects the motivation to act, which seems to directly explain the reasons for helping and other behaviours of Poles (like buying supplies of food or purchasing gasoline for fear of a shortage of certain items as a consequence of the outbreak of war). Due to the above, we can only speak of partial confirmation of the first hypothesis, which states that personality factors are important factors in maintaining helping.

The second most important group of factors turned out to be sociodemographic variables. They explain approximately ~13% of the total variance. These results can be interpreted in the context of Penner model, which assumes that profits are maximized and costs associated with helping are minimized.⁶¹ This is explained by the fact that people living in large cities were the most willing to help (Table 6). When we observe that in the first months of the war, Ukrainians came mainly to larger urban centers, which may have been the result of the network of previous, pre-war contacts (having friends or family), knowledge of the specific big town, and, on the other hand, due to logistics, because it was easier to get to large cities. On top of that the big cities also provided easier access to international helping organizations, education, etc.^{43,67} As a result, people willing to help and living in large cities could act at a lower cost (financial and time) than if they had to go from a small to a larger city to engage in aid activities. It is worth emphasizing that in studies conducted in less extraordinary circumstances, the relationship between place of residence and the motivation to help is inverse to the one obtained in the current study. According to the urban overload hypothesis, people who live in large agglomerations are less willing to engage in altruistic behaviour.^{10–12}

Third, in terms of overall importance, were variables illustrating the distance to the three nationalities: Ukrainians (aid recipients), Russians (as causing harm) and Czechs, who were included in the study as a control variable, intended to eliminate the effect of ethnocentrism (see Table 6). This group of variables explains ~10% of the total variance in helping. To a great extent, it was hostility towards Russians that turned out to be an important factor in maintaining help to Ukrainians. The effect of sympathy (lack of distance) towards Ukrainians, although slightly smaller, turned out to be statistically insignificant given the size of the analyzed sample. It can therefore be concluded that the phenomenon of maintaining help was caused to a greater extent by reluctance towards the aggressor (attitude towards Russians) than by sympathy towards Ukrainians, although the results for the attitude towards Ukrainians are at the level of the statistical trend. Furthermore, the European identity, grounded in values such as tolerance and egalitarianism, can be viewed as a shared ingroup encompassing individuals from diverse European nations, including Ukrainians. Therefore, this identity should be linked to helping behaviors and may amplify the effects of contact and empathy.⁵

In other studies conducted with a Belgian sample, it was found that dispositional prosociality and European identification were positively correlated with intentions to help Ukrainians.⁶⁸ The individuals with high prosocial tendencies and strong European identification were particularly inclined to assist. Additionally, dispositional prosociality was positively associated with empathy towards Ukrainians, which predicted helping intentions. Second, European identification correlated positively with both empathy and identity fusion with Ukrainians, further influencing participants' intentions to help. Overall, these findings suggest that individual prosocial dispositions and overarching identities provide cumulative pathways to intergroup assistance.

To sum up, the model showed that the level of altruism, perceived situational anxiety and attitude towards the aggressor (in this case Russia) is important factors for predicting the maintenance of help for war victims. Moreover, the important role of demographic variables, such as place of residence, was demonstrated. This, however, seems to be an obvious connection resulting from the logistics of aid activities.

Conclusion

Undoubtedly, the study was subject to numerous limitations, such as its cross-sectional nature and the research group consisting only of volunteers. Moreover, this study is based on natural events, which increases the ecological validity of the study, but also results in lesser control of the variables and processes that contribute to the variance explained. In the authors' opinion, the researcher's sample was selected deliberately to reach people who were actively involved in helping refugees from Ukraine. Invitations sent were often refused on the grounds of lack of time due to the involvement in the aid campaign. Also, the final size of the research group (especially the second wave of measurement) is not fully satisfactory, although it allowed us to capture, in our opinion, a unique phenomenon. What is problematic in the study is the percentage of people who resigned from taking the second measurement, which means that the final answers were provided only by a specific group of respondents.

The Research Has Some Practical Implications

Engaging in helping can be a way to cope with anxiety and a sense of threat in the case of people with low altruism indicators. This fact can also be effectively used, for example, in working with terminally ill patients.

The study has certain limitations, including the declarative nature of the dependent variable. Additionally, the research was conducted in response to a unique social context and does not fully capture the phenomenon of Polish assistance to Ukrainians. Although the study did not employ behavioral measures to assess the actual extent of assistance provided, it should be noted that participants were recruited from groups engaged in aid efforts and active on social media. As a result, they were likely either directly involved in helping or at least interested in humanitarian issues.

At the same time, recruitment via social media raises the concern that the sample may not have included individuals most deeply involved in providing assistance. It should also be noted that a limitation of the study was the overestimation of altruism in comparison to group norms. Social pressure, which was not controlled for in the study, likely played a significant role in influencing behavior.

Despite these limitations, the study represents a valuable effort to explore the mechanisms that underlie human behavior during the extraordinary circumstances of a war in a neighboring country.

Disclosure

The authors report no conflicts of interest in this work.

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