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JOURNAL OF MODERN SCIENCE
TOM 2/49/2022
www.jomswsge.com
DOI: https://doi.org/10.13166/jms/155804

LOSSES AND GAINS AMONG ADULT POLES DURINGTHE COVID-19 PANDEMIC

Abstract

Objectives:
The COVID-19 pandemic causes severe stress that disrupts the lives of many people. The presented research, based on the conservation of resources theory, was carried out to identify the areas of gains and losses in resources among adult Poles during the COVID-19 pandemic.

Material and methods:
The research was based on the quantitative research paradigm. It was conducted using the snowball method. Personal resources were assessed using the Self-Assessment Questionnaire of Gains and Losses by S. Hobfoll. Statistical calculations were made using the Statistica 13 package and in the R statistical environment.

Results:
The research showed that family resources were the most significant ones for the respondents. Obtained data showed the COVID-19 pandemic affected the balance of gains and losses in resources. During the research, clusters were found differentiating people who balance gains and losses in their resources in various ways. The research did not reveal any correlation between the clusters and socio-demographic variables.

Conclusion:

It is requested to nurture proper, positive and multidimensional interpersonal relationships that will enhance resources and protect against their loss in challenging, stressful situations such as the COVID-19 pandemic.

Keywords: *resources; COVID-19; Personal resources; Conservation of Resources (COR) Theory; gains, and losses in resources*

Introduction – the SARS-CoV-2 (COVID-19) coronavirus pandemic – new reality

The beginning of 2020 radically changed the functioning of people in almost all spheres. The pandemic we are dealing with can be classified as a Black Swan, i.e. a phenomenon that is difficult to predict and results in significant consequences (Taleb, 2007, p.16-17). The SARS-CoV-2 coronavirus pandemic began in Wuhan, China in December 2019, radically changing the way people function in many areas. The consequences of this situation concern not only the biological sphere – they are also visible in economics, interpersonal relations, and mental functioning. The sense of danger is ubiquitous: neither the country of residence, age, or financial resources protect against the coronavirus; it has no end date; it affects all aspects of human activity, self-esteem, and worldview; and it destroys the sense of meaning and control over one's own life. The stress that people experience in connection with a pandemic is referred to as pandemic stress (Hornowska et al., 2020, p.4).

Due to the serious health consequences of COVID-19 and the rapid spread of the virus, restrictions have been placed on human functioning in most countries. Their goal is to limit physical interpersonal contacts to maintain social distancing manifested in lockdowns. This means restriction of human freedom in mobility, forced isolation of people in quarantine, the introduction of distance teaching and remote work, closure of many workplaces, and consequently also for many people loss of jobs, inability to repay loans, forced isolation of the elderly, difficulties in access to medical services, administration, culture, free physical activity, restriction of tourism and participation in mass events or family celebrations. Despite the benefits of lockdown to society, there

are enormous psychological costs for individuals. These costs result not only from the limitations related to the lockdown but also from the feeling of lack of information and transparency of actions taken by the public administration, as well as the feeling of uncertainty about tomorrow and the inability to define the date by which the pandemic will stop. In many cases, this leads to difficulties and disorders in mental health such as sadness, boredom, anxiety, frustration, anger, lack of time structure, depression, suicide attempts, uncontrolled emotional outbursts, and sleep and eating disorders. Moreover, this situation results in an increase in addictions, domestic violence, and a sense of loneliness, which can especially affect marginalized people (Brooks et al., 2020; Galea et al., 2020; Javed et al., 2020; Shek, 2021).

The conservation of resources model by Stevan Hobfoll

Because of the pandemic, many people experienced severe stress, the risk of losing resources, and at the same time limited possibility of obtaining them. Therefore, the present research was undertaken based on Stevan Hobfoll's theory of resource conservation (COR). The authors believe that the experienced stress and the ensuing behaviour do not only result from the individual's beliefs and the behaviours that follow them, but they are also caused by external and objective conditions that often prevent a person from introducing important changes in their life (Hobfoll, 1989; Hobfoll et al., 2012). The theoretical approach adopted in this study uses the model based on the assumption that people strive to preserve, protect and pursue new resources. The possibility of potential or actual loss of resources causes stress. This approach was called the conservation of resources model by Stevan Hobfoll. In this concept, resources are defined as objects, personality traits, conditions, or energy reserves that are valued by an individual or that serve as a means of gaining new resources (Hobfoll, 1989, p. 516). Resource analysis is essential for understanding stress. According to Hobfoll, psychological stress is a reaction to the environment in which there are: a threat of losing resources, loss of resources, or lack of new resources despite pursuing them. Following this theory, both the potential

and actual loss of resources and the lack of new resources are sources of stress (Hobfoll, 1989, p. 516).

The conservation of resources model determines human behaviour in both stressful and stress-free situations. In a stressful situation, people tend to minimize the loss of resources. In non-stressful situations, people strive to increase their resources, creating a surplus aimed at reducing the possibility of losing resources in a future stressful situation (Hobfoll, 1989, p.517). When people have surplus resources, they experience a sense of well-being (Hobfoll, 1989, p. 517). People with more resources are less likely to lose them and have greater opportunities to gain new resources than people with fewer resources. People who lack resources are more likely to suffer the extreme consequences of loss because they are unable to gain new resources. The scarcity of resources increases the risk of loss and the fact that this loss causes the risk of further loss of resources. People in such a situation tend to be defensive and focus on protecting what they have. People with resources are more capable of creating new resources, which results in gaining more resources (Hobfoll, 2006, p. 97-100). The acquisition of resources and their loss is fundamental to the quality of life and the way people function.

Aim of the study

The presented research aimed to determine the importance of resources possessed by adults, to assess the balance of gains and losses in resources in the situation of adults' experience of the COVID-19 pandemic, and on this basis to identify groups of respondents with a different perception of their resources.

Considering the research goal and the literature on the subject, the following hypotheses were posited:

- For adults the most important group of resources are those related to the family (Badora, 2020; Wosik-Kawala, Sarzyńska-Mazurek, 2017; Zawadzka, Bętkowska-Korpała, 2012).
- During the COVID-19 pandemic, the respondents will experience changes in their resources. Losses will be felt predominantly in economic

resources (Bareket-Bojmel et al., 2020; Batool et al., 2020) and gains in family resources (Lau et al., 2006; Mancini, 2020).

- During the COVID-19 pandemic, the respondents will differ in their assessment of the experienced gains and suffered losses (Mancini, 2020). In the group of respondents, there will be people reporting gains in this situation and those for whom the loss will be dominant.

Materials and methods

Participants and procedure

The research was conducted in Poland from January to March 2021 asynchronously online. All applicable institutional and government regulations regarding the ethical use of volunteers were followed during the survey. Participation in the study was voluntary, anonymous, and was not rewarded with any benefits. The only eligibility criterion was being an adult. Respondents were recruited using the snowball method: participants for research are recruited by other participants. This method is also known as chained sampling or chain-referral sampling (Frey, 2018).

The study included 327 people: 252 women (77.06%) and 75 men (22.94%) aged 18 to 75 years; the average age of the respondents was 29.9 years. Most of the respondents, 193 people, (59.02%) were city dwellers, the rest, 134 people (40.98%), lived in the countryside. In terms of marital status, 118 people (36.09%) declared that they were single, 107 (32.72%) that they were in a partner relationship, 92 people (28.13%) were married, while a few people were divorced, 8 people (2.45%), and widowed, 2 (0.61%). Most of the respondents, 235 people (71.87%), did not have children. Almost half of the respondents, 163 people (49.85%), had a university degree, slightly fewer people, 153 (46.79%), graduated from high school, a few respondents, 8 people, graduated from vocational schools (2.45%), and 3 people (0.92%) finished primary school or middle school. More than half of the respondents, 177 (54.13%) people, were professionally active, every third respondent, 108

people (33.03%), was a student, 36 people (11.01%) were unemployed, and 6 people (1.83%) were retirees or pensioners.

Instrument

Personal resources were assessed using the Self-Assessment Questionnaire of Gains and Losses by Dudek, Koniarek, and Gruszczyńska, which is the Polish adaptation of COR-EVALUATION by S.E. Hobfoll (Dudek et al., 2012, p.54-59). The study used the version consisting of 91 statements. The study consisted of two stages. In the first one, the respondents were to determine the importance of individual resources on a scale from 1 to 5, where 1 – meant unimportant, 2 – not very important, 3 – moderately important, 4 – important, and 5 – very important (Gruszczyńska 2012, p. 169-175). The importance of the resources was analysed in five groups of resources selected by Gruszczyńska (2012, p.104-107). These were: hedonistic / vital, spiritual, family, economic and political, as well as power and prestige. Then, the respondents were asked to determine whether they had experienced any changes in the resources they assessed in the first stage since the announcement of the COVID-19 pandemic. These changes were assessed on two scales: the Loss Scale and the Gains Scale. In this way, it was possible to calculate the balance of gains and losses in resources. Gains (change for the better) and Losses (change for worse) were rated on a scale from 0 to 5, where *0 meant no change, 1 – very small change, 2 – small change, 3 – significant change, 4 – big change, and 5 a very big change*. The total loss was calculated by multiplying the importance of each resource from a given resource group (from the first stage of the study) by the loss in this resource (from the second stage of the study), and then adding these products. Gains were calculated in the same way.

The questionnaire used in the research has satisfactory psychometric properties (internal consistency assessed using the Cronbach coefficient for losses was 0.96, and for gains 0.92; absolute stability assessed using the test-retest technique was 0.77 for losses and 0.75 for gains; the content validity of the scale was for losses $r = 0.37$, for gains $r = -0.098$) (Gruszczyńska, 2012, p. 100-101).

Data analysis

The applied procedure of statistical analyses aligns with the adopted research model and the research problems posed in the work. Statistical calculations were made using the Statistica 13 package and in the R statistical environment (R Core Team, 2020) with packages extending the capabilities of the basic package, such as: factoextra (Kassambara, Mundt, 2020), dplyr (Wickham et al., 2020), and ggplotz (Wickham, 2016).

The study was based on descriptive statistics, as well as the dependent t-test for paired samples, chi-square test, and cluster analysis using agglomeration and k-means.

Results

the first step in the conducted analyses was to distinguish subgroups of resources. We referred here to the results of the exploratory factor analysis of the resource importance scale conducted by E. Gruszczyńska (2012, p. 104 – 107), which allowed the author to distinguish five groups of resources, i.e. hedonistic (8 statements), spiritual (6 statements), family (10 statements), economic and political (8 statements) and power and prestige (7 statements). In order to establish the hierarchy of importance of the distinguished resources, the average score within a given group was calculated by summing up the results of the statements constituting a given subgroup and dividing this sum by the number of items in the group. Table 1 presents the results and the respondents' hierarchy of resources together with descriptive statistics.

Table 1. Respondents' hierarchy of resources

No.	Groups of resources	M	SD
1	Family	4.53	.58
2	Economic and political	4.42	.53
3	Hedonistic	4.20	.52
4	Spiritual	3.73	.74
5	Power and prestige	3.24	.65

Source: author's research.

The data presented in table 1 indicate that all the analysed resource groups are important for the respondents, as evidenced by the average score obtained in each of the analysed resource areas (average above 3 points on a scale from 1 to 5). Data show that family resources were the most significant for the respondents. This means that the following are extremely important for the respondents: health and happiness of their relatives, including their own children, being loved by their children, and having support in the family. Economic and political resources were also of great importance for the respondents. They included: a stable income, having a flat, a house that meets the needs, access to medical services and income sufficient for current expenses. Hedonistic resources occupied the third position in the analysed hierarchy. They encompass: the possibility of implementing one's own plans, having life energy, "a drive", noticing the good sides of life, the possibility of pursuing interests and hobbies, and a sense of personal development. Spiritual resources such as having a clear conscience, hope, having role models worth following, faith and religious beliefs were valued less by the respondents. The last in the hierarchy were the resources of power and prestige, i.e. a chance for promotion at work, the possibility of using new technologies, own car, and high social position.

Since with time situations and states that people consider important may change, respondents were asked to rate the extent to which they had experienced changes for better or worse in terms of their resources during the COVID-19 pandemic. The indices of the losses and gains in resources in particular subgroups were obtained by multiplying the importance of each

resource included in each subgroup by the loss/gain within it, respectively, and then summing up these products. Table 2 shows the results of the Student's t-test with descriptive statistics.

Table 2. Changes in respondents' resources during the COVID-19 pandemic (n = 327)

Groups of resources	Losses		Gains		t
	M	SD	M	SD	
Family	26.48	41.89	50.24	60.54	−8.303***
Economic and political	54.39	42.66	27.58	41.99	8.751***
Hedonistic	39.97	37.96	39.68	43.21	.094
Spiritual	16.53	22.87	21.67	31.39	−3.155**
Power and prestige	12.78	22.29	18.27	27.65	−4.179***

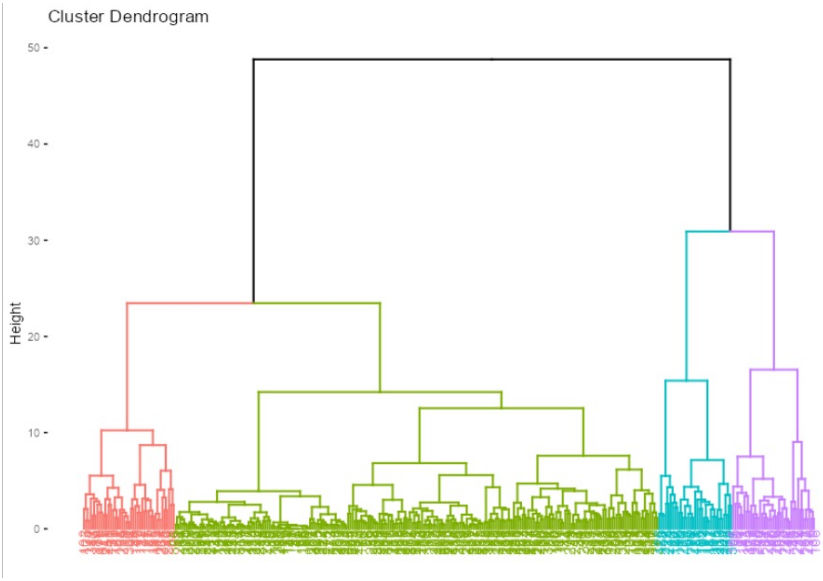
*$p < .05$, **$p < .01$, ***$p < .001$

Source: author's research.

The conducted statistical analyses show that in the case of five groups of resources, statistically significant differences occurred for four resources: family, economic and political, spiritual, and power and prestige. However, there were no significant differences in hedonistic resources. Changes in resources during the COVID-19 pandemic assessed by the respondents as gains occurred in family and spiritual resources as well as power and prestige, while losses occurred in economic and political resources.

The gains and losses of resources experienced by the respondents during the COVID-19 pandemic led to the selection of groups of respondents with similar results in this regard. In order to determine the number of clusters, the Ward agglomeration method with the Euclidean metric was used (Figure 1), and the clustering was carried out using the k-means method (Figure 2).

Figure 1. Gains and Losses in Resources Tree Diagram (Ward Agglomeration with Euclidean metric)



Based on tree diagrams and agglomeration charts and using the k-means method, four groups of clusters were distinguished which are illustrated in Figure 2. 187 people (57.19%) constituted the first cluster, 41 people (12.54%) the second cluster, the third cluster consisted of 36 people (11.01%), and the fourth of 63 people (19.27%).

Figure 2. Four clusters distinguished by the k-means method

The data on the respondents' assessment of gains and losses in resources in individual clusters are presented in table 3.

Table 3. Types of clusters of respondents based on the assessment of gains and losses in resources

Resources		Cluster 1 (n = 187)		Cluster 2 (n = 41)		Cluster 3 (n = 36)		Cluster 4 (n = 63)	
		M	SD	M	SD	M	SD	M	SD
Family	loss	8.83	13.52	11.39	19.69	127.17	37.18	31.14	25.44
	gain	17.98	22.81	140.12	56.43	137.22	47.33	37.79	36.89
Economic and political	loss	32.60	22.09	36.61	34.50	99.14	31.45	105.05	36.98
	gain	9.61	16.82	77.59	50.52	95.56	37.22	9.54	18.76
Hedonistic	loss	21.53	20.55	18.59	23.06	95.39	29.11	76.92	31.46
	gain	21.42	23.13	105.76	44.48	87.39	39.21	23.62	24.32
Spiritual	loss	6.76	10.83	11.56	15.82	66.22	20.16	20.32	15.95
	gain	7.66	15.83	61.59	37.32	66.33	26.11	11.75	15.58
Power and prestige	loss	2.97	6.83	7.07	10.62	59.56	29.09	18.87	17.34
	gain	6.98	11.98	45.46	35.74	60.86	29.99	9.73	16.04

Source: author's research.

During the pandemic, people in the first cluster experienced the least changes in gains and losses in terms of their resources. Based on the cluster analysis, the largest number of people was included in this group. The time of the pandemic did not change much in their existing resources.

People in the third cluster assessed their resources completely differently. This group experienced the most changes in their resources. The experience of losses and gains by people in this group was very strong. This group was the least numerous in the studied sample. The timing of the pandemic caused major shifts in their assessment of their resources.

People in the second cluster experienced low losses in resources and high gains. In the case of this group, the respondents had the lowest sense of loss and at the same time the highest sense of gains in relation to hedonistic / vital resources compared to people belonging to the other clusters. This group of people perceived the time of the pandemic as favourable.

The fourth cluster comprised people who rated the perceived losses in resources as relatively high and at the same time gains as relatively low. A feature

that distinguished these people from other clusters was the experience of significant losses and low gains in economic and political resources. These people perceived the time of the pandemic as definitely unfavourable. They may therefore experience high levels of stress.

The chi-square test was used to search for the relationship between the affiliation of the respondents to particular clusters and their socio-demographic data. The performed analysis did not show any relationship between the clusters and such variables as: gender (= 5.080, df = 3, p = .166), age (= 4.249, df = 6, p = .643), place of residence (= 1.412, df = 3, p = .703), marital status (= 15.814, df = 12, p = .120) and professional situation (= 13.742, df = 9, p = .132) of the respondents. Thus, the affiliation of the respondents to particular clusters was not conditioned by the analysed socio-demographic variables.

Conclusions

The research results confirmed the hypotheses posed in the study. The research confirmed the first hypothesis that the most important group of resources for the respondents was family resources. The highest position of the family in the hierarchy of resources is not surprising because for years this resource has been highly valued by Poles (Badora, 2020; Wosik-Kawala, Sarzyńska-Mazurek, 2017). In the situation of uncertainty and insecurity resulting from the spread of the SARS-CoV-2 virus and the COVID-19 disease, family is among the values that should be protected – especially since, in the light of Hobfoll's conservation of resources theory, the family environment strengthens other resources possessed by the individual (Hobfoll, 2012, p. 21).

The second research hypothesis was also confirmed. The COVID-19 pandemic caused significant changes in the resources available to the respondents. The changes they experienced concerned economic and political resources, family resources, power and prestige, and spiritual resources. In the case of economic and political resources, there were mainly unfavourable changes, in contrast to family and spiritual resources, where changes were perceived as favourable, i.e. gains dominated over losses. In the area of power and prestige, most changes were positive.

Based on the conducted research, four groups of respondents balancing gains and losses in their resources in different ways during the COVID-19 pandemic were distinguished, thus confirming the third research hypothesis. These people have different experiences of the pandemic. For many of them it was a time that did not significantly contribute to spectacular changes in their resources. However, some people felt significant repercussions caused by loss of resources, and there were also those who strengthened their resources. For some, the pandemic resulted in both resource gains and losses. Similar conclusions were drawn from a study in Italy that showed that the mental health impact of the COVID-19 pandemic was heterogeneous (Prati, 2020).

Loss of resources has a huge impact on human functioning, especially as it has more power than gaining resources (Hobfoll, 2010). Loss or even the fear of losing resources disrupts human life. Because experiencing loss is associated with a greater likelihood of further losses, actions should be taken to strengthen people's potential to constructively deal with difficult situations.

Galea, Merchant and Lurie (2020) propose strategies for functioning during the COVID-19 pandemic aimed at counteracting the destructive consequences of lockdown. Among the recommendations, they highlight the use of digital technologies, especially video connections that allow people to maintain contacts while respecting social distancing. An important aspect is also taking care of the organization of one's activity so that it reflects the rhythm of the day before the pandemic. Other researchers also point to the possibility of using new technologies for psychological support for people experiencing negative effects of losing their resources and, consequently, experiencing disorders in their mental health (Saladino et al., 2020). Mobile applications can also help individuals to take up physical activity, take care of healthy eating or monitor the amount of sleep (Ammar et al., 2020). In the case of the elderly, it is important to provide them with the possibility of using medical help and psychological support (Serafini et al., 2020). According to Hobfoll, having experienced loss, individuals learn gain-making strategies that may protect their relatives in the future, and then try to implement these strategies. Thus, sense of loss can help activate gains in order to compensate for the loss, also due to the increased awareness of possible future losses and the desire to prevent them (Hobfoll, 2006, p. 84-85). Referring these reflections to the

situation of resource losses during the SARS-CoV-2 coronavirus pandemic, it can be assumed that the experienced losses may trigger actions aimed at obtaining resources in the future. At the same time, Hobfoll points out that the perception of high losses and small gains by an individual increases the level of stress (2006).

It deserves to be noted that this study has several limitations. Firstly, it was conducted in one country – Poland – and it is uncertain whether the results obtained can be made universal to other countries, taking into account the need to consider the socio-cultural context of Hobfoll's theory. It would be worth undertaking similar studies in other countries in order to make comparisons and generalise the results obtained in the view of the consequences of changes in resources during the COVID-19 pandemic. Moreover, the tool used in the study is a self-reporting method and examines the subjective assessment of the losses and gains incurred by the respondents, hence their declarations may be distorted. Another limitation was the complexity of the questionnaire and the rather long time required to respond to the questions it contained. It would undoubtedly have been preferable to conduct the research by direct contact with the respondents, but due to the restrictions related to the COVID-19 pandemic this form was not feasible.

In conclusion, the consequences of the losses experienced during the COVID-19 pandemic can significantly affect people's lives in many areas. This is visible in the area of adults' professional functioning, their sense of being deprived of economic stability, job security or lack of financial resources to guarantee a high quality of life in the future. An undesirable phenomenon experienced by the respondents is reduced accessibility to medical care, which intensifies their health and life anxiety. It is therefore important to monitor the psycho-physical condition of citizens in each country on an ongoing basis and to take action to minimise the impact of any resource losses. It is also essential to cultivate correct, positive and multidimensional interpersonal relationships that contribute to enhancing resources and preventing their loss in demanding or stressful situations such as the COVID-19 pandemic. It is also important to initiate interdisciplinary research showing the possibility of reinforcing personal resources, especially when they are threatened (Ammar et al., 2020).

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