

## Mental health issues related to climate change in Poland – Polish psychologists’ and psychotherapists’ perspective

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### Abstract:

**Aim:** The aim of the first Polish pilot study was to conduct an initial analysis of the occurrence of mental issues related to such experiences as: fear, worry, sense of loss and grief in connection with climate change and ecology. The consequences of climate and environmental changes for physical health are increasingly well-documented. In contrast, psychosocial changes due to climate change and, in particular, the impact on mental health, remain unrecognized.

**Material and method:** Psychologists and psychotherapists were asked to share their clinical experience in diagnosing and treatment of patients reporting climate change-related mental symptoms. Climate change-related mental issues were operationalized as clinically significant symptoms meeting the criteria for anxiety and depressive disorders or adjustment disorders, and are known in literature as a solastalgia and ecological anxiety. The collection of data with the use of an on-line survey started lasted 4 months.

**Results:** Issues relating to ecology and climate change were present both in the contents of patient concerns (48.6% of respondents) and in patients’ hypotheses regarding their symptoms (16.7% of respondents) in the past 6 months of the respondents’ clinical work. Mental health professionals considered psychoeducation (62.5%), psychological support (73.6%), short-term psychotherapy (45.8%) and self-help groups (40.3%) to be appropriate mental health support interventions.

**Discussion:** The presented study provides evidence that mental health issues related to climate change are recognized by Polish psychologists and psychotherapists. The professionals can need comprehensive knowledge of climate-related mental health, including appropriate interventions.

**Conclusions:** These findings may be a ground for designing further research on this topic.

climate change; mental health; ecological anxiety; solastalgia

### INTRODUCTION

Climate change has a number of negative psychological, health, social and economic effects. Researchers’ attention is increasingly focused on the mental health implications of climate change [1-5]. Deterioration in mental functioning is associated with experienced stress, anxiety, wor-

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ry and low mood. The direct impact on mental health is associated primarily with natural or man-made catastrophes and their consequences, which, according to numerous studies, affect the deterioration of well-being, sleep, cognitive functions, lead to depressive, stress-related and adjustment disorders [6-8]. Further implications include increased rates of high-risk behaviour (such as domestic violence, alcohol and substance use). Long-term consequences are associated with such phenomena as: food and water shortages, resources access conflicts, displacement and climate-related emigration [9, 10]. These consequences, being the result of complex changes and interactions of various processes, constitute a significant challenge for health protection, especially mental health protection [11].

In terms of mental problems conditioned by climate change, two groups of psychopathological symptoms should be distinguished:

- 1) symptoms of mental disorders related to the experience of an environmental crisis (natural disasters, epidemics, etc.) and their consequences, such as: acute and chronic stress-related reactions, depressive and anxiety disorders, addictions and psychosocial issues of couples/families [12-14].
- 1) increased symptoms of anxiety, depressed mood, worry about the environment, grief related to the loss of elements of the natural environment and ecological values [15].

In recent decades, new terminology relating to climate change and mental health has emerged, including "solastalgia" (understood as mental suffering, including the sense of loss, caused by environmental changes already experienced) and "ecological anxiety" (fear or mourning experienced in connection with anticipated environmental degradation or change) [1, 15, 16].

The psychological problems related to climate change are undertaken more and more widely in the research world. The authors conducted a preliminary analysis of the prevalence of the problem at the national level. Poland is a country in the temperate climate zone. We have not experienced typical extremes associated with the phenomenon of climate change, which are visible for example in Australia or Pacific Asia. The average person living in Poland may not recognize any clear personal consequences of

climate change and hence mental health consequences.

Therefore, the present study focuses on ecological anxiety and solastalgia [1, 15, 16], which are the feelings of anxiety, fear and sadness due to climate change. This study was to provide an answer to the question whether those symptoms are clinically recognized by psychologists and psychotherapists. It should be emphasized that solastalgia and eco-anxiety did not constitute diagnostic categories, but a description of a specific type of clinically significant suffering.

## MATERIAL AND METHOD

### *Procedure*

For the purposes of this study, an online semi-structured questionnaire was developed using Google forms, with a consent form appended to it. Invitations to participate in the study were disseminated among relevant professional organizations and associations and posted on social media, mostly in closed groups of psychologists and psychotherapists. The quantitative and qualitative data obtained in the study were concerning clinical experiences of mental health care professionals working with individual patients as well as couples/families with regard to mental health issues caused by climate change. The online survey started lasted 4 months.

### *Ethical approval*

The Maria Grzegorzewska University of Ethics Committee approved the study procedures. The participants voluntarily responded to the anonymous survey after expressing their informed consent to the participation in the study. The procedures were clearly explained, and participants could interrupt or quit the survey at any point without explaining their reasons for doing so. Confidentiality was maintained by omitting personal identifiers.

### *Setting and Participants*

The sample consisted of 72 mental health professionals: 51 (70.8%) psychologists, 49 (68.1%)

psychotherapists and psychologists during psychotherapy training, 9 (12.5%) psychiatrists and psychiatry residents. The majority of participants were females (61; 84.7%); 45 respondents were married (62.5%). The age ranged from 37 to 41 years ( $M = 40.90$ ;  $SD = 0.54$ ). The experience in mental health service was on average 11.99 years ( $SD = 8.76$ ). The participants spent on av-

erage 25.22 hours on clinical work ( $M = 25.22$ ;  $SD = 14.93$ ). Majority of participants work in private practice (44; 61.1%), 26 (36.1%) in mental health outpatient clinic and 13 (18.1%) in psychiatric ward. The vast majority of respondents have been working in large cities, including the capital city (52; 72.2%). Characteristics of the participants are presented in Table 1.

**Table 1.** Socio-demographic and work characteristics of the sample in the study ( $N = 72$ )

	Category	Frequency					
Profession/ educationa	Psychologist	51 (70.8%)					
	Psychotherapist	27 (37.5%)					
	Psychologist during psychotherapy training	22 (30.6%)					
	Psychiatrist	5 (6.9%)					
	Psychiatry resident	4 (5.6%)					
Professional status	Active	70 (97.2%)					
	Inactive (maternity/parental leave)	2 (2.8%)					
Gender <sup>b</sup>	Female	61 (84.7%)					
	Male	10 (13.9%)					
Age	Mean (SD)	40.90 (0.54)					
	Median	41.00					
	min – max	37 – 41					
	Q1; Q3	41; 41					
Work experience [years]	Mean (SD)	11.99 (8.76)					
	Median	10.00					
	min – max	0 – 45					
	Q1; Q3	5; 15					
Hours of clinical work	Mean (SD)	25.22 (14.93)					
	Median	25					
	min – max	0-70					
	Q1; Q3	15; 36.5					
Marital status		Total	< 1 year	1-5	6-15	16-30	> 30 years
	Single	4 (5.6%)	1 (1.4%)	1 (1.4%)	0 (0%)	2 (2.8%)	0 (0%)
	Divorced	6 (8.3%)	1 (1.4%)	2 (2.8%)	3 (4.2%)	0 (0%)	0 (0%)
	Widowed	2 (2.8%)	0 (0%)	0 (0%)	0 (0%)	2 (2.8%)	0 (0%)
	Separated	1 (1.4%)	1 (1.4%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	Informal relationship	18 (25%)	5 (6.9%)	8 (11.1%)	4 (5.6%)	1 (1.4%)	0 (0%)
	Married	45 (62.5%)	4 (5.6%)	18 (25%)	15 (20.8%)	5 (6.9%)	3 (4.2%)

Workplace*	Private practice	44 (61.1%)
	Psychiatric ward in multidisciplinary hospital	2 (2.8%)
	Psychiatric ward in psychiatric hospital	11 (15.3%)
	Multidisciplinary clinic – public	4 (5.6%)
	Multidisciplinary clinic – non-public (including private networks of outpatient clinics)	0 (0%)
	Outpatient mental health clinic – public	12 (16.7%)
	Outpatient mental health clinic – private	14 (19.4%)
	Hospital	3 (4.2%)
	Other	11 (15.3%)
Residential environment of workplace*	Rural area	0 (0.0%)
	Small town (< 20,000 inhabitants)	1 (1.4%)
	Medium-sized town (20,000-100,000 inhabitants)	9 (12.5%)
	City (100,000 – 300,000 inhabitants)	10 (13.9%)
	Large city (> 300,000 inhabitants)	23 (31.9%)
	Capital city (Warsaw)	29 (40.3%)

**Note:** a – answers to multiple-choice questions; b – the percentages do not sum up to 100, since not all respondents answered the question.

### Statistical analysis

All statistical descriptive analyses were done with SPSS version 25 for Windows (IBM, 2016).

## RESULTS

The results presented in Table 2 indicate that mental issues related to ecology and climate change appear both in the contents reported by patients (an affirmative answer was given by 48.6% of respondents) and as a patient's hypothesis concerning the causes of symp-

toms (affirmative answer was given by 16.7% of the respondents). Few professionals (6.9%) reported the emergence of ecological issues as a theme within a family or couple therapy session. According to mental health professionals, most patients with clear diagnosis do not link their depressive, anxiety or adjustment disorders to ecological/climate change issues (61.1%). Importantly, the vast majority of patients (69.4%) whose symptoms did not meet the criteria for adjustment, anxiety or depressive disorders did not link their experiences to ecological issues.

**Table 2. Prevalence of ecological issues during work with patients**

Items	Answer	Frequency
Have ecology or climate change-related themes appeared in the CONTENTS provided by your patients?	Yes	35 (48.6%)
	No	37 (51.4%)
How many such patients have you diagnosed or treated within 6 months?	Mean (SD)	2.94 (6.96)
	Median	1
	min – max	0-50
	Q1; Q3	0; 3
Have ecology or climate change-related issues appeared as a patient's hypothesis of the cause of their symptoms/disorder/crisis?	Yes	12 (16.7%)
	No	60 (83.3%)

How many such patients have you diagnosed or treated within 6 months?	Mean (SD)	2.10 (7.29)
	Median	0.00
	min – max	0 – 50
	Q1; Q3	0; 1
Have ecology or climate change-related themes appeared as CONFLICT THEMES / symptoms of conflict in couples/family therapy?	Yes	5 (6.9%)
	No	67 (93.1%)
How many such couples/families have you diagnosed or treated within 6 months?	Mean (SD)	0.85 (5.91)
	Median	0.00
	min – max	0 – 50
	Q1; Q3	0; 0
What is the estimated number of your patients who link their symptoms of adjustment, anxiety or depressive disorders to ecological issues or climate change? Please take into account your patients from the last 6 months.	None	44 (61.1%)
	Individual patients	19 (26.4%)
	1-2%	4 (5.6%)
	3-5%	3 (4.2%)
	6-10%	1 (1.4%)
	> 10%	1 (1.4%)
What is the estimated number of your patients who reported symptoms which do NOT meet the criteria of adjustment, anxiety or depressive disorders, but are the cause of suffering and are linked to ecological issues/climate change? Please take into account your patients from the last 6 months.	None	50 (69.4%)
	Individual patients	19 (26.4%)
	< 10 patients	1 (1.4%)
	10-20 patients	1 (1.4%)
	20-30 patients	1 (1.4%)

The participants considered psychoeducation (45, 62.5%), psychological support (53, 73.6%), short-term psychotherapy (33, 45.8%) and self-help groups (29, 40.3%) to be effective therapeutic methods for the disorders discussed in this paper. The cognitive-behavioural therapy techniques and psychoeducation techniques were found useful in therapeutic work by 19.4% of professionals. At the same

time, 21 (29.2%) respondents indicated body-based methods and 16 (22.2%) respondents indicated nature-based interventions as useful non-psychological techniques. However, almost every fifth specialist indicated that none of the non-psychological methods is applicable in the treatment of disorders related to climate change. These data have been presented in Table 3.

**Table 3. Views and preference for treatment of climate change-related mental health issues**

Items	Answer	Frequency
What kind of psychological and psychiatric aid seems appropriate to you? <sup>a</sup>	No psychological help needed	8 (11.1%)
	No psychiatric help needed	8 (11.1%)
	Psychological support	53 (73.6%)
	Pharmacotherapy	7 (9.7%)
	Short-term individual psychotherapy	33 (45.8%)
	Long-term individual psychotherapy	21 (29.2%)
	Group psychotherapy	15 (20.8%)
	Crisis intervention	11 (15.3%)
	Psychoeducation	45 (62.5%)
	Self-help/support groups	29 (40.3%)

What are the most appropriate techniques of therapeutic work? <sup>a</sup>	Psychoeducation	14 (19.4%)
	CBT	14 (19.4%)
	Relaxation/meditation	10 (13.9%)
	Psychological support	7 (9.7%)
	Socratic dialogue	5 (6.9%)
What non-psychological models can be applied effectively in therapy? <sup>a</sup>	None	14 (19.4%)
	Models based on religions and philosophy of the East (e.g. buddhism, confucianism, meditations)	5 (6.9%)
	Models based on contact with nature (e.g. nature & forest therapy)	16 (22.2%)
	Based on working with the body (e.g. yoga, breathing, choreotherapy, movement medicine)	21 (29.2%)
	Based on Western religions (e.g. Christianity)	2 (2.8%)
	Based on philosophy (e.g. minimalism)	5 (6.9%)
	All of the above	5 (6.9%)

**Note:** a – answers to multiple-choice questions.

## DISCUSSION

To the best of our knowledge, the present study is the first Polish research study concerning prevalence of climate change-related mental issues. Overall, our results have shown that mental disorders related to ecology/climate change are present and clinically noted by mental health professionals. Similar studies have not been conducted so far [1-5]. The main conclusion is that more attention should be given to further analyses, in particular, analyses involving elements of therapeutic work. At the current stage of research, solastalgia and ecological anxiety may constitute initial operationalization of a clinically noted construct. Some authors believe, however, that introducing these concepts to clinical practice may be a factor hindering diagnosis and minimizing clinical symptoms requiring pharmacological and psychotherapeutic interventions [2-4].

There are some limitations of this study that need to be discussed. One of them is its limited representativeness due to the small study group and response bias. The majority of the respondents came from the largest cities in Poland, where climate and pro-environmental organizations are more active, thus, a higher environmental activity of the inhabitants can be expected. Another limitation to be looked at re-

sults from the online form of the questionnaire distribution.

## CONCLUSIONS

The results of this pilot study suggest that mental health professionals need comprehensive knowledge of climate-related mental health, including appropriate interventions. These data may be important for planning mental health care. Further extensive research is needed to assess the prevalence of climate-related mental health problems.

## REFERENCES:

- Gawrych M. Climate change and mental health: a review of current literature. *Psychiatr Pol* 2021 Mar 22; online first 223: 1–13. doi: <https://doi.org/10.12740/PP/Online-First/131991>
- Clayton S. Climate Change and Mental Health. *Curr Environ Health Rep*. 2021 Jan 2. doi: 10.1007/s40572-020-00303-3. Epub ahead of print.
- Cianconi P, Betrò S, Janiri L. The Impact of Climate Change on Mental Health: A Systematic Descriptive Review. *Front Psychiatry*. 2020 Mar 6; 11:74. doi: 10.3389/fpsy.2020.00074.
- Schramm PJ, Ahmed M, Siegel H, Donatuto J, Campbell L, Raab K, Svendsen E. Climate Change and Health: Local Solutions to Local Challenges. *Curr Environ Health Rep*.

- 2020 Dec;7(4):363-370. doi: 10.1007/s40572-020-00294-1. Epub 2020 Oct 28.
6. Palinkas LA, Wong M. Global climate change and mental health. *Curr Opin Psychol*. 2020 Apr;32:12-16. doi: 10.1016/j.copsyc.2019.06.023. Epub 2019 Jul 2.
  7. Moosavi S, Nwaka B, Akinjise I, Corbett SE, Chue P, Greenshaw AJ, Silverstone PH, Li XM, Agyapong VIO. Mental Health Effects in Primary Care Patients 18 Months After a Major Wildfire in Fort McMurray: Risk Increased by Social Demographic Issues, Clinical Antecedents, and Degree of Fire Exposure. *Front Psychiatry*. 2019 Sep 18;10:683. doi: 10.3389/fpsy.2019.00683.
  8. Brown MRG, Agyapong V, Greenshaw AJ, Cribben I, Brett-MacLean P, Drolet J, McDonald-Harker C, Omeje J, Mankowski M, Noble S, Kitching DT, Silverstone PH. Significant PTSD and Other Mental Health Effects Present 18 Months After the Fort McMurray Wildfire: Findings From 3,070 Grades 7-12 Students. *Front Psychiatry*. 2019 Aug 30;10:623. doi: 10.3389/fpsy.2019.00623.
  9. Graham H, White P, Cotton J, McManus S. Flood – and Weather-Damaged Homes and Mental Health: An Analysis Using England's Mental Health Survey. *Int J Environ Res Public Health*. 2019 Sep 5;16(18):3256. doi: 10.3390/ijerph16183256.
  10. Hayes K, Blashki G, Wiseman J, Burke S, Reifels L. Climate change and mental health: risks, impacts and priority actions. *Int J Ment Health Syst*. 2018 Jun 1;12:28. doi: 10.1186/s13033-018-0210-6.
  11. Yusa A, Berry P, J Cheng J, Ogden N, Bonsal B, Stewart R, Waldick R. Climate Change, Drought and Human Health in Canada. *Int J Environ Res Public Health*. 2015 Jul 17;12(7):8359-412. doi: 10.3390/ijerph120708359.
  12. Sheath D, Flahault A, Seybold J, Saso L. Diverse and Complex Challenges to Migrant and Refugee Mental Health: Reflections of the M8 Alliance Expert Group on Migrant Health. *Int J Environ Res Public Health*. 2020 May 18;17(10):3530. doi: 10.3390/ijerph17103530.
  13. Larrance R., Anastario M., Lawry L.: Health status among internally displaced persons in Louisiana and Mississippi travel trailer parks. *Annals of Emergency Medicine* 2007, 49(5):590 – 601.
  14. Fritze JG, Blashki GA, Burke S, Wiseman J. Hope, despair and transformation: Climate change and the promotion of mental health and wellbeing. *Int J Ment Health Syst*. 2008 Sep 17;2(1):13. doi: 10.1186/1752-4458-2-13.
  15. Acierno R, Ruggiero KJ, Galea S, Resnick HS, Koenen K, Roitzsch J, de Arellano M, Boyle J, Kilpatrick DG: Psychological sequelae resulting from the 2004 Florida hurricanes: implications for post-disaster intervention. *American Journal of Public Health* 2007, 97: S103-S108.
  16. Galway LP, Beery T, Jones-Casey K, Tasala K. Mapping the Solastalgia Literature: A Scoping Review Study. *Int J Environ Res Public Health*. 2019 Jul 25;16(15):2662. doi: 10.3390/ijerph16152662.
  17. Nicholas PK, Breakey S, White BP, Brown MJ, Fanuele J, Starodub R, Ros AV. Mental Health Impacts of Climate Change: Perspectives for the ED Clinician. *J Emerg Nurs*. 2020 Sep;46(5):590-599. doi: 10.1016/j.jen.2020.05.014.