



BACHELOR THESIS

# Distress and Coping Strategies in a Time of Overwhelming Climate Change News

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## Abstract

*Background:* The framing of climate change news as well as the complex nature of the problem itself can cause distress for people. Yet little is known about the prevalence of such distress and about how people cope with climate news. It is assumed that the intensity of climate news exposure can influence the way people cope with climate news which in turn is likely to influence the distress experienced.

*Aim:* The aim of this study was to test the association between exposure to climate news and climate distress and whether coping strategies function as mediators in this relation.

*Method:* The study was part of a larger correlational survey conducted by a group of students. In total, 188 people took part of which 169 completed all questionnaires relevant to this research. For this study the variables climate news exposure, ecological coping strategies and climate distress were assessed.

*Results:* Average climate news exposure was between four to six days a week and moderate levels of climate distress ( $M = 2.11$ ,  $SD = .67$ ) were prevalent in the sample. Higher climate news exposure was associated with increased problem focussed coping ( $r = 0.38$ ,  $p < 0.01$ ) and decreased denial ( $r = -.28$ ,  $p < 0.01$ ). Further, higher climate news exposure was associated with increased distress ( $r = 0.39$ ,  $p < 0.01$ ); this association was mediated by problem-focussed coping and denial. Problem-focussed coping increased levels of climate distress ( $r = 0.34$ ,  $p < 0.05$ ) and denial decreased ( $r = -.33$ ,  $p < 0.01$ ) levels of distress.

*Conclusion:* Higher climate news exposure is associated with increased concern for global environmental problems, an increased tendency to take action and belief in climate change. These findings highlight the role of the news in fostering awareness for global environmental problems, but future experimental research is needed to examine the causality of the association.

## Introduction

Climate change is the “defining issue of our age,” according to United Nations (UN) General Secretary Ban Ki Moon (2014). The consequences are likely to include catastrophic weather events, changes in ecosystems, widespread acidification of the oceans, among others (O’Neill, & Nicholson-Cole, 2009). Currently, for most countries in the western hemisphere, the experience of climate change is mostly an indirect and virtual one, such as through the images and texts of media and news (Reser, Morrissey, & Ellul, 2011). The framing of these news as well as the uncontrollable, complex nature of climate change can become a source of distress for people.

In the news a rising trend of climate change coverage is visible (Broadbent et al., 2016). Media portrayal of climate change commonly involves apocalyptic scenes about catastrophic changes, like melting of polar icecaps and desertification (Reser, et al., 2011). Moreover, information is frequently communicated through fear appeals, thus the message is designed to arouse fear in the reader “in order to promote precautionary motivation and self-protective action” (O’Neill, & Nicholson-Cole, 2009, p.360). The use of fear appeals for climate change communication is highly debated (Chen, 2015; Nabi, Roskos-Ewoldsen, & Dillman Carpentier, 2008). On the one hand, fear appeals can be used to increase risk perception and consequently the appreciation for pro-environmental policies (O’Neill, & Nicholson-Cole, 2009). On the other hand, when individuals experience too much fear, reading climate change news can become a source of distress and cause people to feel anxious and helpless (Swim et al., 2009). Even more, it can cause people to deny the information they read. This is especially relevant when the message creates a high fear response in the recipient and when the recipient feels unable to reduce the threat, which is often the case in news about climate change (Hart, & Feldmann, 2014). Thus, high elicited fear combined with low self-efficacy can lead to distress or denial of facts.

Not only the framing of news about climate change can cause people to feel distressed, but also the very nature of the problem. The phenomenon of climate change is highly complex, uncontrollable and characterised by uncertainty (Swim et al., 2009). At its very essence it leads to “profound questions about the long-term sustainability of human life and the Earth’s environment” (Fritze, Blashki, Burke, & Wiseman, 2008, p. 9). Climate change can be conceptualized as a stressor because it is a condition “that the average person would perceive as actually or potentially threatening, damaging, harmful or depriving” (Lepore, & Evans, 1996, p. 350).

### **Distress from Climate News**

Climate change as a stressor can trigger affective responses that may lie on a scale from concern, to moderate distress, to eventually severe distress that can affect one's wellbeing and everyday life (Reser, Bradley, Glendon, Ellul, & Callaghan, 2012). Reser et al. (2012) define climate change distress as “experienced apprehension, anxiety, sorrow, or loss due to the threat and projected consequences of climate change, for oneself, humanity, and/or the natural world” (p. 56). This form of distress can appear as preoccupation, heightened worry and fear, and/or pessimism.

Few studies investigated the phenomenon of climate change distress or concern. In the study conducted by Reser et al. (2012) 64% of the respondents indicated being very or fairly concerned about climate change and 20% reported “feeling, at times, appreciable distress at the prospects and implications of climate change” (Reser et al., 2012, p.9). A study by Metag, Füchslin, and Schäfer (2017) conducted in Germany found that 24% of all respondents are ‘alarmed’ about climate change, that is they scored the highest for being concerned about climate change. Despite global environmental problems being rather distant phenomena, climate distress already appears to be experienced by a substantial number of people.

Even though the encounter of climate change is primarily a virtual one, no study has yet put a distinct focus on the effects of climate news on climate distress. Further, no previous research investigated how people cope with climate news and how distress from climate news changes depending on how people cope. The question whether and how coping strategies impact distress from climate news is subject of the next section.

Regarding climate change concern, several socio-demographic differences can be found in the literature. It is not clear whether these differences hold for climate change distress as well, since the distinction between climate concern and distress is not clearly defined. Overall, young people seem to be more concerned about global warming (Lewis, Palm, & Feng, 2019) which may be due to their special position since they will experience the reality of a changing climate (Corner et al., 2015), however, this finding has not been consistent across studies (Van der Linden, 2017). Thus, it needs to be explored whether young people experience more climate distress. As young people seem to be more concerned about the topic, it is assumed that they access more climate news. Moreover, women appear to display stronger environmental attitudes and concerns than males (Gifford, & Nilsson, 2014). According to the “Social Roles” and “Safety Concern Hypothesis” (Davidson, & Freudenberg, 1996) women tend to be socialized into developing stronger caring and other-oriented tendencies. Finally, environmental concerns generally appear to increase with

education, however the effects seem to be relatively small (Lewis et al., 2019) or absent (Van der Linden, 2017). According to cultural cognition theory, individuals select and assimilate knowledge as consistent with their worldviews (Kahan, 2012). Hence, for example a more conservative worldview can hinder the acceptance of climate change as a reality (Hornsey, Harris, Bain, & Fielding, 2016). Hence it is expected that women and young people score higher on environmental distress and that education has no significant effect on distress.

For climate news exposure, however, no previous study investigated socio-demographic differences in exposure between gender, age and education. That women and young people appear to be more concerned about climate change, can be the result of on the one hand a higher exposure to climate news, on the other hand it could be that they rather avoid news as further exposure might increase their concern.

### **Coping with Climate Change News**

In recent years, scholars became interested into how people cope with climate change, as well as the implications of the threat of climate change for wellbeing (e.g. Helm, Pollitt, Barnett, Curran, & Craig, 2018; Homberg, Stolberg, & Wagner, 2007; Ojala, 2013). Coping is defined as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). According to the Cognitive Theory of Stress and Coping (Lazarus & Folkman, 1984), people first think about whether a threat is personally significant for them. If this is the case, they evaluate options of coping.

In the literature different coping strategies are described for climate change (Bradley, Reser, Glendon, & Ellul, 2014). According to interview studies and quantitative studies performed by Ojala (2007a; 2007b; 2008; 2012a), three coping strategies are relevant for dealing with climate change: problem-focussed, emotion-focussed and meaning-focussed coping. Problem-focussed coping means that people approach the problem/stressor and try to do something about it (Lazarus, & Folkman, 1984). A strategy can be, for example, to search information on the problem. When engaging in emotion-focussed coping, people try to cope with the emotions triggered by the stressor rather than with the problem itself and tend to adopt maladaptive behaviours, such as denial, or relativization of the problem (Homberg et al., 2007). Another way to cope with climate change is meaning-focussed coping (Ojala, 2013). When using meaning-focussed coping, people adjust their beliefs, values and goals to the situation (Folkman, 2008) or change their evaluation of the meaning of the situation (Ojala, 2013). An example for this strategy would be to change the perspective on climate

change and to find positive meaning in the situation. A positive aspect might be that more social justice is achieved. For example, many companies that are willing to become more eco-conscious similarly focus on treating their employees more fairly and paying more adequate wages.

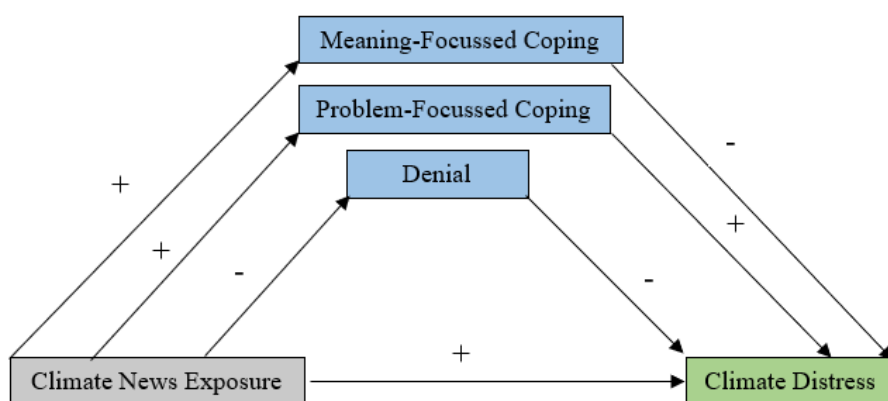
The assumption is made here that climate news exposure influences how people cope. News have the function to inform people and can help fostering climate change belief and pro-environmental action tendencies through increasing knowledge about the issue. According to a study by Metag et al. (2017) people who doubt or deny the existence of climate change are significantly less exposed to climate change news. Hence, it is assumed that increased exposure to climate news is associated with less denial. Further, increased knowledge about the phenomenon has been associated with more problem-focussed coping (Fielding, & Head, 2011). Thus, it is expected that increased news exposure enhances problem-focussed coping. Moreover, an increasing encounter with climate news might evoke the need to make sense of the problem by attributing a higher meaning to it, hence, to use more meaning-focussed coping.

Coping strategies in turn seem to influence the distress people experience. In a study by Homberg et al. (2007), problem-focussed coping has been associated with increased stress from ecological problems. Problem-focussed coping is claimed to be an effective way of dealing with stress when the stressor is controllable, however, when the stressor is uncontrollable, like climate change, problem-focussed coping can cause more distress because the complexity and seriousness of the problem becomes apparent (Ojala, 2013). Thus, when people cope with climate news using a problem-focussed coping style it is expected that they experience more distress. The strategy denial has been associated with decreased distress from environmental problems (Homberg et al., 2007). Meaning-focussed coping is claimed to be beneficial when the stressor cannot be reduced at once, or not at all (Folkman, 2008). It can increase positive emotions which can help the person deal with the stressor. Hence, for this study it is expected that meaning-focussed coping and denial decrease climate distress.

Thus, exposure to climate news can influence how people cope with climate change which in turn appears to influence climate distress. Therefore, it is assumed that the relation between climate news exposure and climate distress is mediated by the use of different coping strategies. Coping strategies are likely to function as moderators similarly by buffering the emotional impacts of news but for this study the focus lies on coping as a mediator. An illustration of the mediation of climate distress from climate news by ways of coping can be found in Figure 1.

**Figure 1**

*Distress from Climate News Exposure Mediated by three Coping Strategies and Expected Directions of Correlations*



Until now, the coping structure defined by Ojala (2012a) has only been used in studies with young adolescents and socio-demographic differences in the use of these coping strategies are unknown. Hence, it is worth investigating to what extent adults make use of these coping mechanisms and whether the use of coping strategy varies between gender, age group or educational background. Finally, the potential mediating role of problem-, emotion- and meaning-focussed coping in the relationship between news exposure and climate concern has not yet been explored.

### **The current study**

Some studies have shown that global environmental problems can be a source of distress for people (e.g. Helm, Pollitt, Barnett, Curran, & Craig, 2018; Homberg, Stolberg, & Wagner, 2007), but no previous study focussed on the impact of climate news on distress. The present study aims to investigate to what extent the participants experience distress from climate news and whether the coping dimensions defined by Ojala (2012a) function as mediators in this relation. Further, it is examined whether socio-demographic differences in exposure to climate news, climate distress and coping can be found.



It is expected that climate distress increases with climate news exposure and that coping strategies mediate this relation. Further it is anticipated that denial and meaning-focussed coping decrease distress and that problem-focussed coping increases distress.

The following research questions (RQ) are being investigated:

- (1) To what extent are the participants exposed and interested in climate news, and is media exposure associated with age, gender or education?
- (2) To what extent is ecological distress prevalent in the sample and to what extent is ecological distress associated with age, gender or education?
- (3) To what extent are the participants making use of meaning-focussed, emotion-focussed or problem-focussed coping, and are the coping strategies associated with age, gender or education?
- (4) What is the relation between climate news exposure and ecological distress, and is this relation mediated by coping style?

## **Method**

### **Design**

This study was part of a larger survey of a research group of five third-year students studying psychology at the University of Twente. Therefore, the survey assessed more variables than used in the study. A correlational (online) survey design was used to examine whether coping strategies mediate the influence of climate change news exposure on climate change distress.

### **Participants and Procedure**

In order to participate in the study, the participants were required to be at least 16 years old; from 16 years, individuals of all ages could take part. Further, participants needed to have English or German language proficiency as well as an internet connection. The participants partly formed a convenience sample or were recruited through SONA Systems Utwente, a test subject pool for behavioural sciences at the University of Twente. The latter received 0.25 credits for participation. The participants that were self-selected were invited to the study via an email (Appendix A). This study was approved by the Ethics Committee of the Faculty of Behavioural Sciences at the University of Twente (request nr. 200164).

Before commencing with the survey, the participants were asked to read and accept informed consent (see Appendix B). The survey started with questions regarding general news exposure; this was the same for all participants. The order of the subsequent questionnaires was randomized to ensure sufficient data for all questionnaires in case people quit

prematurely. Questionnaires that belonged to the same topic, such as climate change, were always presented together. The completion of the study took 20-30 minutes.

### **Instruments**

For this study, the variables demographics, climate change news exposure and interest, ecological coping and climate distress were investigated, using the instruments that are described below. The whole survey of the research group contained more questionnaires that additionally asked for general news and media exposure, exposure to crime news and fear of crime, stress, wellbeing and psychological capital.

All questionnaires were translated from the original English version into German, using the method forward-backward-translation and according to guidelines of the World Health Organization (WHO, n.d.). The method was followed according to the guidelines of the WHO except from the third step of cognitive interviewing. The English version of the questionnaires can be found in Appendix C and the German translation of the scales can be found in Appendix D.

**Demographics.** In order to obtain demographical information about the sample, individuals were presented with four questions that asked for their gender, age, nationality and highest completed level of education. For the highest completed level of education, the answering categories were the following: 0 ‘No degree’, 1 ‘Middle school degree’, 2 ‘Highschool degree’, 3 ‘Vocational education (MBO)’, 4 ‘University Bachelor’s degree (or equivalent)’, 5 ‘University Master’s degree and higher’. In order to show the age distribution of the sample, the following categories were formed: ‘16-35 years’, ‘36-55 years’, ‘56 years and older’. For further analyses the continuous variable age was used.

**Climate change news exposure.** In order to measure exposure to climate change news, item 1b of the Reuters Digital News Report Questionnaire 2019 was used and adapted to news about climate change: “Typically, how often do you access [climate change news] (on purpose or accidentally)? By news we mean national, international, regional/local news and other topical events accessed via any platform (radio, TV, newspaper, smartphone or online).” For an overview of the answering options, see Table 2 in the results section.

**Climate News Interest.** In order to measure climate change news interest, item 1c of the Reuters Digital News Report Questionnaire 2019 was used and adapted to news about climate change: “How interested, if at all, would you say you are in [climate change news]?”. This item could be answered on a 5-point scale from ‘Extremely interested’ to ‘Not at all interested’ and ‘Don’t know’.

**Main Source for Climate News.** In order to assess how the respondents access climate news, question 4 of the Reuters Digital News Report Questionnaire 2019 was used and adapted: “Which, if any, of the following have you used in the last week as a main source of climate news? Please select one.” For this question the original 14 answer options have been summarized into seven options. An overview of answering options can be found in Table 2 of the results section.

**Ecological coping.** In order to measure ecological coping, a questionnaire developed by Ojala (2012a) was used. It consists of 15 items that can be rated on a five-point Likert scale ranging from 1 ‘not true at all’ to 5 ‘completely true’. The questionnaire tests three dimensions of coping: meaning-focussed coping, de-emphasizing the seriousness of climate change (denial) and problem-focussed coping. Both meaning-focussed coping and denial are measured with six items; respective example items are “Even though it is a big problem, one has to have hope.” and “I think that the problem is exaggerated.” Three items measured ‘Problem-focussed coping’, an example item is “I think about what I myself can do.” The scores of each coping strategy were calculated by averaging the scores on the respective items. Higher average scores indicate higher levels of the respective coping strategy. Acceptable reliabilities were found for meaning-focussed coping ( $\alpha = 0.71$ ) and denial ( $\alpha = 0.79$ ) in the present study. The problem-focussed coping scale showed good reliability ( $\alpha = 0.83$ ) in the present sample.

**Climate Distress.** In order to measure climate distress, the Distress Composite Scale developed by Reser, Bradley, Glendon, Ellul and Callaghan (2012) was used. For the present study, the shorter 7-item version was used. The statements could be rated on a 5-point scale from 1 ‘strongly disagree’ to 5 ‘strongly agree’. An example item is “I experience some distress each time I see or read media coverage of the likely impacts and consequences of climate change.” The scores of climate distress were calculated by averaging the scores on the items. Higher total mean scores indicated higher levels of climate distress. The scale showed good reliability in the present study ( $\alpha = 0.81$ ).

### **Data Analysis**

The data was analysed using IBM SPSS Statistics version 25.0. First of all, the dataset was screened for missing values and incomplete data from participants who did not complete the questionnaire was removed. Boxplots were created for the variables climate news exposure, climate distress and the three coping strategies to examine the data for outliers. Values more

than three interquartile ranges from the end of a box were identified as outliers. This was the case for the answers of two participants on the meaning-focussed coping scale.

Descriptive statistics were computed for the demographic variables, climate news exposure, the three coping dimensions and climate distress. In order to answer RQ (1-3), Spearman Correlations were computed between demographic variables and climate news exposure, the three coping strategies and climate distress. To answer RQ (4) bivariate correlations between coping styles and climate news exposure and distress were computed. Further, a multiple mediator analysis was performed using the PROCESS macro from Hayes (2018). Here, climate news exposure served as the independent variable, the three coping strategies as mediators and climate distress as the dependent variable. The statistical significance of indirect effects was tested using bootstrapping of 5000 samples and 95% confidence intervals were computed by calculating the indirect effects at the 2.5<sup>th</sup> and 97.5<sup>th</sup> percentiles.

## **Results**

### **Demographic Characteristics of the Sample**

Descriptive statistics of the sample are presented in Table 1. In this study, 188 individuals participated of which 169 completed all questionnaires relevant to this study. In the sample, about two-thirds of the respondents were women and one-third men. The majority of respondents (70%) were aged between 16 to 35 years, 14% between 36 and 55 years and 17% 56 or older. Note that for further analyses the continuous variable age was used. For the most part, the participants had a German nationality and only a small proportion of the sample had a different nationality. Moreover, in the sample a large proportion of respondents had completed higher education and only a small part had obtained no school degree or a middle school degree.

**Table 1**

*Frequencies and Percentages of Demographic Variables (N = 169)*

Variable	Frequency	Percent	M (SD)
<i>Gender (N = 169)</i>			
Male	62	37	
Female	107	63	
<i>Age (N = 169)</i>			
			33 (16.8)
Age 16-35	118	70	
Age 36-55	23	14	
Age 56 and older	28	17	
<i>Nationality (N = 169)</i>			
German	145	86	
Dutch	10	6	
Other	13	8	
<i>Highest degree obtained (N = 169)</i>			
No degree	2	2	
Middle school degree	6	6	
Highschool degree	44	44	
Vocational education (MBO)	7	7	
University Bachelor's degree (or equivalent)	21	21	
University Master's degree and higher	21	21	

### **Climate Change News Exposure and Interest in Climate News**

To answer research question one, to what extent the respondents are exposed to climate news, frequencies and percentages of exposure climate change news were calculated. The results are displayed in Table 2. The exposure to climate news differed extremely in the sample and varied between never accessing climate change news to more than ten times a day. On average, exposure to climate change news was between four to six days a week. Few people accessed climate news less often than once a week and most people accessed such news either weekly, or between one to five times a day. Therefore, the answering categories of this item have been subsumed into five categories that can be seen in Table 2.

**Main Source of Climate Change News.** Main ways through which the participants access climate news are displayed in Table 2. Most participants access climate news through social media (e.g. Facebook, Twitter, YouTube) or websites. Only few participants used the radio or

newspaper as a main source. Further, a small proportion of participants indicated to use other sources, such as podcasts or news apps.

**Interest in Climate Change News.** Descriptive statistics for the variable ‘Interest in Climate Change News’ can be found in Table 2. In the sample, interest for climate news varied between no interest at all to extreme interest. Average interest in climate news was moderate to high.

**Table 2**

*Frequencies, Percentages and Descriptive Statistics of Climate News Exposure, Source of Climate News and Interest in Climate News (N=166)*

Variable	Frequency	Percent	Min	Max	M	SD
<i>Climate News Exposure (N=166)</i>						
Never	5	3.0				
< often than once a month	6	3.6				
< often than once a week	16	9.6				
Once a week	29	17.5				
2-3 days a week	21	12.7				
4-6 days a week	21	12.7				
Once a day	34	20.5				
2-5 times a day	26	15.7				
6-10 times a day	7	4.2				
>10 times a day	1	.6				
<i>New Climate News Exposure* (N=166)</i>						
< once a month or never	11	6.6				
< than once a week	16	9.6				
weekly	71	42.8				
1-5 times a day	60	36.1				
> 5 times a day	8	4.8				
<i>Source of Climate News (N=165)</i>						
Newspaper	19	11,5				
Radio	9	5,5				
TV	32	19,4				
Social media	51	30,9				
Websites	45	27,3				
Other	9	5,5				
<i>Interest in Climate News (N=166)</i>			0	4	2.52	0.95

*Note:* \*The original eleven answering categories of the variable ‘climate news exposure’ subsumed into five categories.

**Socio-demographic differences on Climate News Exposure.** To answer research question one, to what extent socio-demographic factors are associated with climate news exposure, demographic variables were correlated with climate news exposure. Results are shown in Table 3. Women reported significantly higher climate news exposure than men. No differences in exposure were found for age or different educational levels.

**Table 3**

*Correlation Coefficients (Spearman's) between Demographic Variables and Climate News Exposure (N=169)*

Demographic Variables	Climate News Exposure <sup>b</sup>
Gender <sup>a</sup>	.18*
Age	-.02
Education	.11

*Note:* \*Correlation is significant at the 0.05 level (2-tailed);

<sup>a</sup> Gender is coded as 0=male and 1=female;

<sup>b</sup> Variable 'New Climate News Exposure' with the five subsumed categories

### **Prevalence of Climate Distress**

To answer research question two, to what extent the respondents experience ecological distress, descriptive statistics were computed. The results can be found in Table 4. On average, moderate levels of climate distress were found in the sample. Moreover, levels of climate distress ranged between almost no distress to extremely high distress. In order to find out whether climate distress is associated with demographic variables correlations with climate distress were performed. The results can be found in Table 4. Women were more likely to reported higher levels of climate distress than men. Age and education were not significantly associated with climate distress. In order to give an indication about the relation between climate news exposure and climate distress, correlations between the two variables were performed (see Table 4). The results show that, as expected, higher climate news exposure is associated with increased climate distress.

**Table 4**

*Descriptive Statistics of Climate Distress and Correlation Coefficients (Spearman's) between Demographic Variables, Climate News Exposure and Climate Distress (N = 169)*

Variable	Min	Max	M	SD	Climate Distress
<i>Climate Distress [0-4]</i> (N=169)	.14	3.57	2.11	.67	
<i>Demographic Variables</i> (N=169)					
Gender <sup>a</sup>					.34**
Age					-.07
Education					-.10
<i>Climate News Exposure</i> <sup>b</sup> (N=166)					0.39**

*Note:* \*\* Correlation is significant at the 0.01 level (2-tailed); <sup>a</sup> Gender is coded as 0=male and 1=female; <sup>b</sup> Variable 'New Climate News Exposure' with the five subsumed categories

### **Use of Coping Strategies**

To answer research question three, to what extent the respondents make use of the different ways of coping, descriptive statistics were computed. The results can be found in Table 5. The application of the three ecological coping strategies varied within the sample. On average, problem-focussed coping was used the most and participants indicated rather high levels of this form of coping. The strategy denial was used the least and rather low levels of climate change denial were found in the sample. Further, no participant indicated high or extremely high levels of climate change disbelief. On average, the use of meaning-focussed coping was rather moderate but a tendency towards rather high use of this form of coping was prevalent. To answer research question three, whether the use of coping strategies was associated with age, gender or education, demographic variables were correlated with the three coping strategies to examine socio-demographic differences in coping. The results can be found in Table 5. Women were more likely to report a more problem-focussed coping style and older age was associated with increased climate change denial. Further, gender, age or education did not impact the use of meaning-focussed coping.



**Table 5**

*Descriptive Statistics of Coping Strategies and Correlation Coefficients (Spearman's) between Coping Styles and Demographic Variables (N=169)*

Coping Strategies	Min	Max	M	SD	Gender <sup>a</sup>	Age	Education
Problem-focussed coping [0-4]	.00	4.00	2.55	.85	.29**	.11	-.09
Denial [0-4]	.00	2.50	.57	.57	-.11	0.20**	.05
Meaning-focussed coping [0-4]	.00	3.50	2.12	.57	.11	0.04	.12

*Note:* \*\* Correlation is significant at the 0.01 level (2-tailed); <sup>a</sup> Gender is coded as 0=male and 1=female

### **Relation between Climate News Exposure and Climate Distress Mediated by Coping Style**

To answer research question four, to what extent the relation between climate news exposure and climate distress is mediated by coping styles, firstly bivariate correlations between coping styles and climate news exposure and climate distress were computed (see Table 6). The results show that a more problem-focussed coping style was moderately associated with more climate news exposure as well as moderately associated with more climate distress. Denial was weakly associated with less climate news exposure and moderately associated with less climate distress. In the present study meaning-focussed coping did not show significant correlations with climate news exposure and climate distress.

**Table 6**

*Correlation Coefficients (Spearman's) between Coping Strategies and Climate News Exposure and Climate Distress (N=166)*

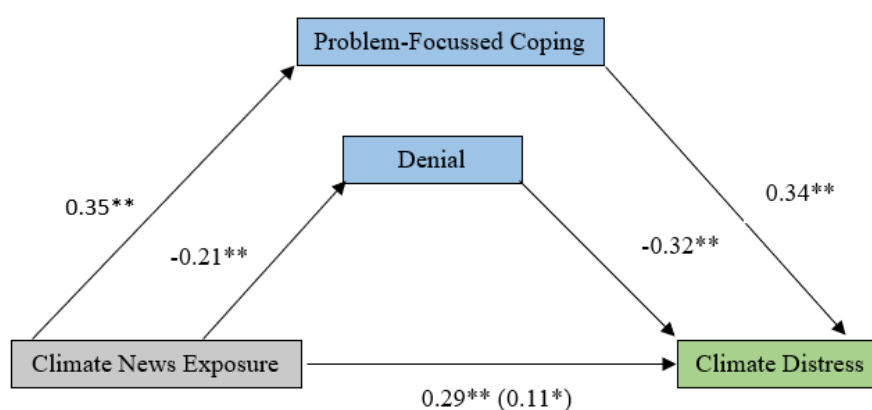
Coping Strategies	Climate News Exposure <sup>a</sup>	Climate Distress
Problem-focussed coping	.38**	.55**
Denial	-.28**	-.43**
Meaning-focussed coping	.13	-.06

*Note:* <sup>a</sup> Variable 'New Climate News Exposure' with the five subsumed categories; \*\* Correlation is significant at the 0.01 level (2-tailed)

Secondly, to answer research question four, a series of regression analyses were carried out to test whether the association between climate news exposure and climate distress is mediated by all three coping styles. The results show that the relationship between climate news exposure and climate distress was mediated by climate change denial and problem-focussed coping as it is illustrated in Figure 2. No significant indirect effects for meaning-focussed coping were found. Individuals who reported higher levels of climate news exposure were more likely to report lower levels of climate change denial and higher use of problem-focussed coping. Increased denial in turn was associated with less climate distress and the opposite was the case for people rather using problem-focussed coping, which was associated with rather high levels of distress. After accounting for the mediating role of climate change denial and problem-focussed coping, climate news exposure still had a significant, but weak positive impact on climate distress.

**Figure 2**

*Standardized Regression Coefficients for the Relationship between Climate News Exposure and Climate Distress Mediated by Denial and Problem-Focussed Coping*



*Note:* The standardized regression coefficient between climate news exposure and climate distress, controlling for denial and problem-focussed coping, is in parentheses.

\* $p < .05$ ; \*\*  $p < .01$

## Discussion

This study provided insights into climate news exposure and to what extent this can result in feelings of distress for people. Further, it explores coping mechanisms with climate change news as potential mediators between climate news exposure and climate distress.

### **Climate News Exposure and Climate Distress**

The majority of respondents indicated being exposed to climate news weekly or daily and on average moderate levels of climate news interest were reported. It is difficult to compare news exposure with other studies as different scales were employed. For example, in the study by Metag et al. (2017) participants could not indicate whether they access news daily and different answering categories were used. Thus, for future research it is recommended to establish a more coherent measure for exposure to climate news. Regarding climate distress, on average moderate levels of climate distress were prevalent in the sample which relates to the findings by Reser et al. (2012).

Regarding socio-demographic differences, as was expected, women indicated higher climate distress than men. This was similarly found in previous research (e.g. Liu, Vedlitz, & Shi, 2014; Reser et al., 2012). Furthermore, females indicated higher climate news exposure than men. This is a novel finding as exposure to climate news has only been scarcely researched. An explanation for this tendency might be that due to the higher concern of women about global warming, they access more climate news. Generally, women tend to assume more responsibility for other people than men due to their socialization (Davidson, & Freudenberg, 1996). Thus, the increased concern and tendency to access more climate news might be a consequence of an increased feeling of responsibility for others. The correlations between female gender and climate distress and climate news exposure have been moderate and weak respectively. Compared to a study conducted by Poortinga, Whitmarsh, Steg, Böhm and Fisher (2019) the correlations for climate distress and female gender are a slightly lower in their study as they only found weak correlations. According to the study by Poortinga et al. (2019) motivations, values and ideology are more crucial factors in determining climate concern. To conclude, even though males and females seem to experience different levels of climate distress and seem to differ in climate news exposure, gender only seems to be a marginal determinant of these variables and other factors, such as motivations and values are more crucial.

A surprising finding was that no significant differences in climate distress and climate news exposure for young people were found. It was expected that young people feel more distressed about climate change and are more exposed to climate news due to the relevance of the topic for younger generations. Some previous studies have found that young people tend to feel more concerned about climate change (Lewis, Palm, & Feng, 2019) but the findings on this have been mixed with a number of other studies reporting no significant differences between age groups (Van der Linden, 2017). According to studies by Liu et al. (2014) other

factors, such as knowledge, environmental values and political ideology seem to be more crucial determinants for climate concern. To conclude, age is a rather weak determinant for climate distress and personality factors, such as values and ideology are more important.

As expected, higher climate news exposure was significantly associated with higher climate distress, however this association was only weak. As a number of studies have shown that the reporting of climate change in the news causes fear and worry for people (e.g. O'Neill, & Nicholson-Cole, 2009; Reser, et al., 2011; Swim et al., 2009), this association has been expected to be stronger. An explanation for this finding might be that the emotional impacts of climate news vanish after some time and do not develop into concern. The findings need to be interpreted with caution as this study relied on recall of news exposure, thus different results might have been found in experiential and longitudinal studies. Thus, for future research it is recommended to investigate in experimental and longitudinal studies how initial distress changes from climate news. Furthermore, exposure to climate news only partly explains the distress of individuals. Hence other factors seem to be relevant that need to be investigated in future studies. For example, Reser et al (2012) investigated experience of extreme weather extremes, environmental values and perceived self-efficacy as contributing factors.

### **Use of Coping Strategies**

A positive finding was that few people negated the problem of climate change and that respondents rather tended to use problem-focussed or meaning-focussed coping strategies. Regarding climate change denial, older age was weakly associated with more denial. This trend has similarly been found in previous research and it was found that other factors, such as political ideology or concern for the environment appear to have a stronger influence on climate change belief (Hornsey, et al., 2016). A reason for this age difference in climate change denial might be that older people are more integrated in existing social orders which makes it more difficult for them to accept environmental reforms which often require changes to the prevailing system (Liu, et al., 2014). Another explanation to this difference in climate change belief might be the tendency that people become more (politically) conservative with age (Cornelis, Van Hiel, Roets, & Kossowska, 2009). Political ideology is one of the strongest predictors for belief (or disbelief) in global warming (Hornsey, et al., 2016).

Regarding use of coping strategies, an unexpected finding was that women use more problem-focussed coping than men. Other studies have similarly shown that women tend to use a more problem-focussed coping style (Liu, et al., 2014; Vicente-Molina, Fernández-

Sáinz, & Izagirre-Olaizola, 2013). However, similar to the findings from other studies (Liu, et al., 2014; Vicente-Molina et al., 2013) the association between female gender and problem-focussed coping has only been weak. Vicente-Molina et al. (2013) emphasize the role of altruistic motivations as a determinant for problem-focussed coping. According to the Norm Activation Model (Schwartz, 1977) altruistic behaviour (which includes pro-environmental behaviour) is more probably when it is perceived as moral obligation to adopt such behaviour. Moral obligation describes awareness of the impact of actions for others and a sense of personal responsibility. As has been described above, women tend to feel more responsible for others and thus might feel more morally obliged to adopt pro-environmental behaviours. These findings imply that men seem to have altruistic motivations to a lesser extent and thus tend to use less problem-focussed coping, but this should be investigated in future studies.

Higher climate news exposure was associated with increased problem-focussed coping and weakly associated with decreased denial. This may indicate that reading climate news can increase knowledge about global warming which supports climate change belief and encourages people to become active about the problem. These results are in line with previous studies showing that increased knowledge mitigates climate change denial (Hornsey, et al., 2016) and predicts for pro-environmental behaviour (Fielding, & Head, 2011). However, information about climate change is searched, remembered and assimilated in a way that it corresponds to people's worldviews and ideologies. This might explain why the decrease in climate change denial from exposure to news is only small. Many scholars cite political affiliation and ideologies as the strongest predictors for climate change denial (Gifford, & Nilsson, 2014; Hornsey, et al., 2016). These findings highlight the role of news in creating awareness for global environmental problems as well as mitigating climate change denial. Further, these results suggest that climate change news need to be adjusted to the characteristics of the audience, such as age and political affiliation, so that the message is accepted. Further research is needed to find out how to address different audience segments.

### **Coping Strategies as Mediators for Distress from Climate Change News**

The association between climate news exposure and climate distress was mediated by problem-focussed coping and denial. Higher climate news exposure was associated with higher problem-focussed coping which in turn was associated with higher climate distress. Further, fewer climate news exposure was associated with more denial and higher denial in turn, lead to less distress. Hence, part of the association between news exposure and climate distress is explained by the way people cope with climate news. If people cope with climate

news by trying to do something about the problem, they tend to experience higher climate distress. This relates to other studies showing that using problem-focussed coping for societal problems is associated with a high degree of stress because these problems are less controllable (e.g. Homberg et al., 2007; Ojala, 2013). An explanation for this finding is that climate change is a collective problem and the individual person is unable to solve it. Thus, anything the individual does to mitigate climate change as a stressor might provide them with a sense of psychological control, but it does not solve the problem. This is likely to result in distress for people. Further, problem-solving behaviour, such as searching more information on the problem might reveal the seriousness and complexity of the problem (Ojala, 2013). If people cope with climate news by denying the information they receive, they tend to experience less distress. For future research it is recommended to investigate which aspects of problem-focussed coping cause distress for people. Further, Chen (2015) highlights the importance of collective actions and joint efforts to reduce global warming. Hence, it might be fruitful to investigate to what extent collective efficacy reduces climate distress.

Against expectations, meaning-focussed coping did not mediate the association between climate news exposure and climate distress. Previous research indicates that meaning-focussed coping does indeed increase positive emotions but has no significant effect on negative affect (Guo, Gan, & Tong, 2013; Ojala, 2013). An explanation for this might be that this form of coping primarily activates positive emotions (Folkman, 2008) which were not assessed in this study. According to a study by Folkman (1997), negative and positive emotional states can co-occur, thus people might experience distress from global environmental problems but at the same time cope by altering the meaning of the situation to a more positive appraisal. Thus, future research about coping with climate change should further investigate the role of meaning-focussed coping. For example, it might be interesting to study whether positive affect or hope increase when people employ this form of coping.

### **Strengths of the Study**

One main strength of the study is the investigation of climate news exposure of respondents as well as the distinctive focus on how exposure to news can impact climate distress of individuals which has presently not been studied much. As the experience of climate change is primarily a virtual one for people living in the western hemisphere the study adds to our understanding of determinants for climate distress. Furthermore, it is to the knowledge of the author, the first study to assess how people cope with climate news and whether use of these strategies changes the level of experienced climate distress. Another asset of the study is the

use of the coping structure by Ojala (2012a) in a wider population that includes adults and the exploration of socio-demographic differences in coping styles. Several practical implications follow from this study. The results imply that the news play a great role in fostering climate change belief and persuading people to become active about the problem. Furthermore, the findings imply the need for environmental organizations to address the needs and concerns of older people and males in environmental campaigns in order to engage them about climate protection.

### **Limitations of the Study**

A first limitation of the study is that it was conducted during the outbreak of the corona virus COVID-19 in most countries of the world, including Germany. The Covid-19 virus was the dominant topic in the news for several weeks and months. Consequently, people most likely had been less exposed to news about climate change than before. Moreover, it is likely that individuals have generally felt more distressed which might have affected their answers on the Climate Distress Scale.

Another limitation is that this study is correlational in nature hence experimental studies need to be conducted in order to find out more about the causal relation between climate distress and news exposure. Furthermore, this study relied on self-report and recall which can be incorrect and subject to biases.

The next limitation is that this research was part of a larger study in which other concepts were assessed that do not relate to the topic of climate change. This might have led to distraction and confusion for the respondents. The next limitation pertains the sampling strategy. In order to reach a sufficient participant number for the study, it was necessary to invite individuals who are acquainted with the researchers. Hence the participants formed for the most part a convenience sample. Consequently, the characteristics of the sample were rather homogenous in that most people had a high education and age group 16-35 was overrepresented. This might have led to biased results for climate distress, as there is some evidence stating that young people seem to be more concerned with global warming (Lewis et al., 2019). Further, climate change denial is likely to be higher in a sample with more equal representation of age groups as risk perception appears to slightly decrease with age (Hornsey, et al., 2016).

### **Future Research**

In the future, experimental and longitudinal studies need to be conducted in order to find out more about the causal relation between climate distress and news exposure. It is not clear to what extent people experienced distress before reading climate news and how this emotional reaction changes from reading news and from coping in different ways. Hence future studies could test climate distress before and after presenting climate news to see how levels of distress change. Further, the participants could be given options to cope, such as talking to other people about the article (problem-focussed coping) and it could be tested how distress changes from different ways of coping. Furthermore, climate news exposure only partly explained levels of distress. Hence research into other determinants, such as experience of extreme weather events, environmental values, etc. as contributing factors is necessary. Additionally, it is recommended to further investigate the role of meaning-focussed coping for global environmental problems, as scholars highlight its role for coping with stressors that are not controllable and its relevance for coping with long-term problems (e.g. Folkman, 2008; Ojala, 2013). In particular, future studies should examine its role in promoting positive emotions.

### **Conclusion**

The present study advances our understanding of the impact of climate news on climate distress and the mediating role of ways of coping. It was found that exposure to climate news is significantly associated with increased climate distress, a more problem-focussed coping style and less climate change denial. A problem-focussed coping style with climate news was associated with increased distress, whereas denial decreased distress. Further, this research showed that women appear to be more exposed to climate news and show a more active, problem-focussed coping style compared to men. Additionally, in line with previous research, denial of climate change increased with age. However, these socio-demographic differences have only been marginal, and other factors, such as motivations, values or worldviews seem to be more crucial determinants. Due to the correlational nature of this study, experimental and longitudinal studies are recommended for future research to examine the causal relation between climate distress and climate news, as well as the mediating role of coping strategies. Further, it is suggested to examine the function of meaning-focussed coping and its effect on psychological resources.



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## Appendix

### Appendix A: Invitation Mail

#### Invitation Mail English Version

Hey,

I would like to ask you whether you would participate in my study. Currently, I am writing my bachelor's thesis at the University of Twente in Enschede and I would be happy about every participant. The topic of my paper is news and media exposure and whether/how it affects our wellbeing. Several studies have shown that negative news seem to be much more prevalent than positive news. This negative bias in the news can trigger negative feelings such as fear and hopelessness and also negatively affect our mental health.

As a research group of five students, we want to look further into that topic and are thankful for every participant. The survey takes about 20 minutes, and every data collected will be treated confidential and anonymous.

This is the link for participating in our study:

Thank you very much for your time and effort!

#### Invitation Mail German Version

Hey,

Ich wollte fragen ob du Lust hast an meiner Studie teilzunehmen. Ich schreibe derzeit meine Bachelorarbeit an der Universität Twente in Enschede und freue mich über jeden Teilnehmer. Das Thema meiner Arbeit sind Nachrichten und ob/wie sie sich auf unser Wohlbefinden auswirken können. Einige Studien haben gezeigt, dass negative Nachrichten deutlich präsenter sind als positive Nachrichten. Dies kann Gefühle der Angst und Hoffnungslosigkeit auslösen, sowie unsere mentale Gesundheit negativ beeinflussen.

Zusammen mit vier Kommilitonen bilden wir eine Forschungsgruppe und möchten das genauer herausfinden, daher sind wir für jede Teilnahme dankbar. Die Umfrage dauert ungefähr 20 Minuten, und jegliche Daten die wir sammeln behandeln wir vertraulich und anonym.

Hier ist der Link, um an der Studie teilzunehmen:

Vielen Dank für deine Zeit und deinen Aufwand!

## Appendix B: Informed Consent

### Informed consent English

Dear Participant,

Welcome to this study! Various studies have shown that the focus of news nowadays is more on negative topics and avoids positive subjects. This can trigger feelings of fear, pessimism and hopelessness. Therefore, this study deals with news consumption and its influence on the mental health of individuals. A particular focus lies on dealing with news on crime and climate change. It also examines whether positive psychological resources, such as optimism and hope, can be helpful in dealing with news.

A prerequisite for participation in the study is the minimum age of 16 years. The study consists of a set of questionnaires that take approximately 20 minutes to answer. The questionnaire is available in English and German (see top right corner). There are **no correct or incorrect answers** to the questions, so we ask you to answer the questions according to your personal opinion.

Participation will have no consequences for you in the short or long term. Yet, if you wish to withdraw from the study, you can do so at any point in time without consequences and reasoning. Your data will be treated confidentially and anonymously, meaning nobody including the researchers can match any of the data to individual participants. This research was approved by the Ethics Committee of the University of Twente, Drienerlolaan 5, 7522 NB in Enschede. If you experience any problems or questions coming up, please do not hesitate to contact us via mail: [n.schmitt@student.utwente.nl](mailto:n.schmitt@student.utwente.nl). Please indicate whether or not you agree to the specifics below.

Thank you for your time and participation!

Laura Borgelt, [l.r.e.borgelt@student.utwente.nl](mailto:l.r.e.borgelt@student.utwente.nl)

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Alex Navasartian Hevani, [a.h.navasartianhevani@student.utwente.nl](mailto:a.h.navasartianhevani@student.utwente.nl)

By clicking continue, I confirm that I have been informed about the content of this study, I acknowledge that my participation is entirely voluntary and I am at least 16 years old.

## **Informed consent German**

Lieber Teilnehmer,

Willkommen zu dieser Studie! Verschiedene Studien haben gezeigt, dass der Fokus der Nachrichten heutzutage eher auf negativen Themen liegt und meist positive Neuigkeiten auslöst. Dies kann Gefühle der Angst, Pessimismus und Hoffnungslosigkeit auslösen.

Daher beschäftigt sich diese Studie mit Nachrichtenkonsum und dessen Einfluss auf unsere mentale Gesundheit. Ein besonderer Fokus liegt auf dem Umgang mit Nachrichten zu Kriminalität und Klimawandel. Des Weiteren wird untersucht, ob positive psychologische Ressourcen, wie zum Beispiel Optimismus und Hoffnung, im Umgang mit Nachrichten hilfreich sein können.

Eine Voraussetzung für die Teilnahme an der Studie ist ein Mindestalter von 16 Jahren. Die Studie besteht aus verschiedenen Fragebögen, die insgesamt ungefähr 20 Minuten zum Ausfüllen dauern. Die Umfrage ist auf Deutsch, sowie auf Englisch vorhanden (siehe oben rechts). Bei den Fragen gibt es **keine richtigen oder falschen Antworten**, daher bitten wir Sie die Fragen nach Ihrer persönlichen Einschätzung zu beantworten.

Ihre Teilnahme an dieser Studie wird keinerlei kurz- oder langzeit Folgen für Sie haben. Sollten Sie sich dennoch entscheiden Ihre Teilnahme abubrechen, können Sie dies zu jedem Zeitpunkt ohne Konsequenzen oder Angabe Ihrer Gründe tun. Ihre Daten werden vertraulich und anonym behandelt, sodass niemand, einschließlich der Forscher, Daten zu einzelnen Teilnehmern zuordnen kann. Dieses Forschungsprojekt wurde vom Komitee für Ethik der Universität Twente, Drienerlolaan 5, 7522 NB in Enschede genehmigt. Sollten Probleme auftreten oder Sie Fragen jeglicher Art haben, zögern Sie nicht uns eine Email zu schreiben: [n.schmitt@student.utwente.nl](mailto:n.schmitt@student.utwente.nl). Bitte geben Sie unten an ob Sie den Einzelheiten zustimmen oder nicht.

Vielen Dank für Ihre Zeit und Teilnahme!

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**Indem ich auf "Weiter" klicke bestätige ich, dass ich über den Inhalt dieser Studie informiert wurde, ich bestätige, dass meine Teilnahme freiwillig geschieht und ich mindestens 16 Jahre alt bin.**



## Appendix C : English Version of Questionnaires

### Selected Questions of the Digital News Report Questionnaire

#### Climate News Exposure

[Q1b\_NEW] Typically, how often do you access \_news\_? By news we mean national, international, regional/local news and other topical events accessed via any platform (radio, TV, newspaper or online)?

- More than 10 times a day
- Between 6 and 10 times a day
- Between 2 and 5 times a day
- Once a day
- 4-6 days a week
- 2-3 days a week
- Once a week
- Less often than once a week
- Less often than once a month
- Never
- Don't know

#### Climate News Interest

[Q1c] How interested, if at all, would you say you are in news?

- Extremely interested
- Very interested
- Somewhat interested
- Not very interested
- Not at all interested
- Don't know

#### Main Source of News

[Q3/4] Which, if any, of the following have you used in the last week as a main source of news? Please select one.

- Newspaper
- Radio
- TV
- Social media (e.g. Facebook, Twitter, YouTube)
- Websites
- other: \_\_\_\_\_
- Don't know

#### Questionnaire Ecological Coping

Reading news about climate change can trigger various emotional reactions and thoughts. Everyone deals with these messages differently. For the following statements please indicate how much they apply to what you think or feel when you are reminded of climate change. Evaluate the statements as they best apply to you personally. There are no right or wrong answers.

Answer options: 1 “strongly disagree”, 2 “disagree”, 3 “neither agree nor disagree”, 4 “agree”, 5 “strongly agree”

Meaning focussed coping:

1. More and more people have started to take climate change seriously.
2. I have faith in humanity; we can fix all problems
3. I trust scientists to come up with a solution in the future.
4. I have faith in people engaged in environmental organizations
5. I trust the politicians.
6. Even though it is a big problem, one has to have hope.

De-emphasizing

1. I think that the problem is exaggerated.
2. I don't care since I don't know much about climate change.
3. Climate change is something positive because summers will get warmer.
4. I can't be bothered to care about climate change.
5. Nothing serious will happen during my lifetime.
6. Climate change does not concern those of us living in the Netherlands.

Problem-focused coping

1. I think about what I myself can do.
2. I search for information about what I can do.
3. I talk with my family and friends about what one can do to help.

### **Distress composite Scale**

Some people may be finding this global threat to be particularly distressing. This may not be the case for you and it is important that you respond in the context of your own personal experience and feelings. Please indicate the extent to which each of the following statements reflects your own response to the threat of climate change.

1. I experience some distress each time I see or read media coverage of the likely impacts and consequences of climate change
2. At times I find myself thinking about and worrying about what the world will really be like for future generations because of climate change
3. I experience some guilt over the fact that my family and friends' lifestyles and consumption patterns are in part responsible for the unfolding impacts of climate change
4. It upsets me that there seems to be so little that I can do to address environmental problems such as climate change
5. At times I feel some personal responsibility for the problems and unfolding impacts of climate change
6. The threat of climate change is affecting my quality of life and my assessment of environmental quality more generally

7. I feel some sense of loss because of climate change impacts that are becoming apparent in my local area

## Appendix D: German Translation of Questionnaires

### German Translation Questions News Exposure

#### Question Climate News Exposure

Wie oft rufen Sie typischerweise Nachrichten über den Klimawandel ab (zufällig oder bewusst)? Mit Nachrichten meinen wir nationale, internationale, regionale/lokale Nachrichten und andere aktuelle Vorkommnisse über die Sie sich über jegliche Plattform informieren (Radio, Tv, Zeitungen, Internet).

Mehr als 10 mal am Tag

Zwischen 6 und 10 mal am Tag

Zwischen 2 und 5 mal am Tag

Einmal am Tag

4-6 Tage in der Woche

2-3 Tage in der Woche

Einmal in der Woche

Seltener als einmal in der Woche

Seltener als einmal im Monat

Nie

(Weiß nicht)

#### Question Climate News Interest

Welche, falls überhaupt irgendeine, der folgenden Möglichkeiten haben Sie in der letzten Woche als Hauptquelle für Nachrichten über den Klimawandel benutzt (sowohl zufällig als auch bewusst)? Bitte geben sie eine an.

Zeitungen

Radio

Fernsehen

Soziale Medien wie Facebook, Twitter, Youtube

Websites

Andere, und zwar:

#### Question Main Source of Climate News

Wie interessiert, wenn überhaupt, würden Sie sagen sind Sie an Nachrichten über den Klimawandel?

Extrem interessiert

Sehr interessiert

Etwas interessiert

Nicht sehr interessiert

Überhaupt nicht interessiert

(Weiß nicht)

### German Translation Questionnaire Ecological Coping

Nachrichten über den Klimawandel zu lesen kann verschiedene emotionale Reaktionen und Gedanken hervorrufen. Jeder Mensch geht anders mit diesen Nachrichten um. Im Folgenden finden Sie mehrere Aussagen, zu denen Sie angeben können, inwiefern sie beschreiben was

Sie tun oder denken, wenn Sie an den Klimawandel erinnert werden. Bewerten Sie die Aussagen so, wie sie am besten auf Sie persönlich zutreffen. Es gibt keine richtigen, oder falschen Antworten.

Die Antwortalternativen sind: 1 "trifft eindeutig nicht zu", 2 "trifft eher nicht zu", 3 "trifft ein wenig zu", 4 "trifft zu" und 5 "trifft eindeutig zu".

#### Meaning-Focussed Coping Questions

1. Immer mehr Menschen nehmen den Klimawandel ernst.
2. Ich habe Vertrauen in die Menschheit; wir können alle Probleme beheben
3. Ich vertraue darauf, dass Wissenschaftler in Zukunft eine Lösung finden.
4. Ich habe Vertrauen in Menschen, die sich in Umweltorganisationen engagieren
5. Ich vertraue den Politikern.
6. Auch wenn es ein großes Problem ist, muss man Hoffnung haben.

#### Denial Questions

1. Ich halte das Problem für übertrieben.
2. Mir ist das egal, da ich nicht viel über den Klimawandel weiß.
3. Der Klimawandel ist etwas Positives, weil die Sommer wärmer werden.
4. Ich mache mir keine Sorgen um den Klimawandel.
5. Zu meinen Lebzeiten wird nichts Ernstes passieren.
6. Der Klimawandel betrifft nicht diejenigen von uns, die in Deutschland leben.

#### Problem-Focussed Coping Questions

1. Ich denke darüber nach, was ich selbst tun kann.
2. Ich suche nach Informationen darüber, was ich tun kann.
3. Ich spreche mit meiner Familie und Freunden darüber, was man tun kann, um zu helfen.

#### **German Translation Distress Composite Scale**

Einige Menschen mögen diese globale Bedrohung als besonders besorgniserregend ansehen. Dies ist möglicherweise nicht der Fall für Sie und es ist wichtig, dass Sie im Kontext Ihrer persönlichen Erfahrungen und Gefühle reagieren. Bitte geben Sie an, inwieweit jede der folgenden Aussagen Ihre eigene Reaktion auf die Bedrohung durch den Klimawandel widerspiegelt.

Die Antwortalternativen sind: 1 "trifft eindeutig nicht zu", 2 "trifft eher nicht zu", 3 "trifft ein wenig zu", 4 "trifft zu" und 5 "trifft eindeutig zu".

1. Ich erlebe jedes Mal eine gewisse Bestürzung, wenn ich die Berichterstattung in den Medien über die wahrscheinlichen Auswirkungen und Folgen des Klimawandels sehe oder lese.
2. Manchmal denke ich darüber nach und mache mir Sorgen darüber, wie die Welt für künftige Generationen aufgrund des Klimawandels wirklich aussehen wird.

3. Ich erlebe eine gewisse Schuld an der Tatsache, dass die Lebensweisen und Konsummuster meiner Familie und Freunde zum Teil für die sich voranschreitenden Auswirkungen des Klimawandels verantwortlich sind.
4. Es ärgert mich, dass es so wenig zu geben scheint, was ich tun kann, um Umweltprobleme wie den Klimawandel anzugehen.
5. Manchmal fühle ich eine gewisse persönliche Verantwortung für die Probleme und die sich voranschreitenden Auswirkungen des Klimawandels.
6. Die Bedrohung durch den Klimawandel beeinträchtigt meine Lebensqualität und meine Bewertung der Umweltqualität im Allgemeinen.
7. Ich spüre ein Gefühl des Verlustes aufgrund der Auswirkungen des Klimawandels, die in meinem lokalen Gebiet sichtbar werden.