Evaluating the link between environmental awareness and related behavioural anxiety with state and trait anxiety

A thesis submitted for the partial fulfilment of the requirement for the degree of

MASTER OF ARTS IN PSYCHOLOGY

Submitted By:

Surbhi Juneja (862102039)

Under the guidance of:

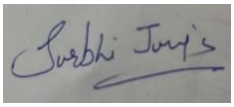
Dr Richa Nigam

Thapar School of Liberal Arts and Sciences

THAPAR UNIVERSITY, PATIALA- 147004

CERTIFICATE

This is to certify that the thesis entitled **"Evaluating the link between environmental awareness and related behavioural anxiety with state and trait anxiety"** being submitted in partial fulfilment of requirements for the award of the degree of **Master of Arts in Counseling Psychology, submitted in the Thapar School of Liberal arts and Sciences, Thapar Insititute of Engineering and Technology, Patiala** is a bonafide work carried out under the supervision of Dr Richa Nigam, Assistant Professor, Thapar School of Liberal Arts and Sciences, Thapar Institute of Engineering and Technology, Patiala and that no piece of this venture has been submitted for the honour of some other degree.



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(862102039)

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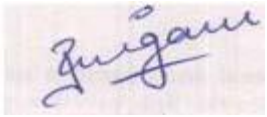

Dr Richa Nigam

Assistant Professor

Thapar School of Liberal Arts and Sciences

Thapar Institute of Engineering and Technology

Patiala

CANDIDATE'S DECLARATION

I hereby declare that the work presented in this thesis entitled **"Evaluating the link between environmental awareness and related behavioural anxiety with state and trait anxiety "** is submitted in partial fulfilment of requirements for the award of the degree of **Master of Arts in Counseling Psychology, submitted in the Thapar school of liberal arts and sciences, Thapar Institute of Engineering and Technology, Patiala** is an authentic record of my work carried out under the supervision and guidance of Dr Richa Nigam, Thapar School of Liberal Arts and Sciences, Thapar Institute of Engineering and Technology, Patiala and referred other researcher's work which is duly listed in the reference section.

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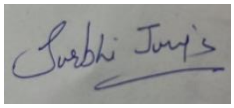

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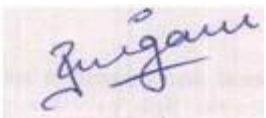

Dr Richa Nigam
School of Liberal Arts and Sciences,
Thapar Institute of Engineering and Technology,
Patiala.

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ABSTRACT

The true value of the environment is something we cannot comprehend. However, we may make some educated guesses about its significance that will aid in our comprehension of it. Humans cause environmental degradation, and have borne the effects of these causes. The most common impact of this degradation faced by individuals nowadays is Anxiety. Simply put, anxiety is, feelings of dread, worry, and unease that could develop in response to stress. In the current study, the research aimed to study the effect of anxiety and eco-anxiety using the New Ecological Paradigm as well as HOGG anxiety scale on individuals. The New Ecological Paradigm endorses a "pro-ecological" worldview. The Dominant Social Paradigm which is the contrasting part of the NEP Scale, comprises of the view that humans are superior to all other species, the Earth provides unlimited human resources, and that progress is an inherent part of human history. The individuals' State Anxiety- Trait anxiety, Eco-Anxiety, New Ecological Paradigm, and Dominant Social Paradigm were measured, and associations among these were explored. It was hypothesised that high levels of state-trait anxiety would modulate environmental concerns. The results reveal high correlation is seen among state- Trait Anxiety and HOGG and Trait Anxiety is correlated with NEP.

Keywords: Eco-anxiety, State Anxiety, Trait Anxiety, New ecological Paradigm, Dominant Social Paradigm

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Chapter 1

Introduction

A major component of climate change, global warming poses a substantial threat to existing ecosystems. It is linked to various adverse effects, including extreme weather, resource depletion, and declining biodiversity (e.g., IPCC, 2019). People may react to such occurrences in various ways, exhibiting denial, increased awareness, or distress (see, for instance, Reser & Swim, 2011; Smith & Leiserowitz, 2012). The concern is a vital component of most responses to global warming. Even though anxiety levels have fluctuated over time (e.g., Smith & Leiserowitz, 2012), significant percentages worldwide are incredibly concerned. 85% of Britons are 'worried' about climate change, with the majority (52%) expressing very worry,' according to a survey conducted in the UK in the summer of 2019 (Mori, 2020a). Environmental concerns can come in various shapes and sizes, varying between people, nations, and civilisations (e.g., Lee, Markowitz, Howe, Ko, & Leiserowitz, 2015; Milfont & Schultz, 2016). Concerns may centre on adverse effects of climate change, such as flooding, deforestation, protracted dryness and wind erosion. According to studies by Cianconi, Betr, and Janiri in 2020 and Hayes, Blashki, Wiseman, Burke, and Reifels in 2018, exposure to such experiences might result in strong reactions, including psychological distress. These concerns may also be related to broader attitudes and ideals about the environment, such as how people or groups identify with their ecosystem, their interactions with and reliance on the natural world, and their respective cultural and personal identities (Cunsolo & Ellis, 2018; Dunlap, Van Liere, Mertig, & Jones, 2000; Stern & Dietz, 2019). These beliefs influence these attitudes and behaviours, as well as assessments of the advantages or the necessity of activities (Bamberg & Möser, 2007; Fischhoff, Slovic, Lichtenstein, Read, & Combs, 2019; Gkargkavouzi, Halkos, & Matsiori, 2019; Klöckner, 2013; Milfont, 2012; Poortinga, Steg, & Vlek, 2002; Stern, 2000; van der Lind,2015a).

Concern about global warming can also take the form of certain emotions, like anxiety and terror (Doherty & Clayton, 2011). (e.g., Clayton & Karazsia, 2020; Leiserowitz, 2005). The increasingly common phrase eco-anxiety is frequently used to describe stress brought on by climate change. Unlike anxiety, which is typically linked to damaging or pathological psychological disorders, eco-anxiety and concern about global warming may not necessarily fall under this category; eco-anxiety is likely a powerful and effective response to the climate problem. The future of the Earth is in danger due to climate change. Some people may experience psychological effects from this, a condition known as eco-anxiety.

Anxiety

According to the American Psychiatric Association (2013), anxiety is the physiological, cognitive, and behavioural response to anticipating and preparing for a future threat, whether real or imagined. According to Barlow (2002), anxiety is an uncontrollable, diffuse, unpleasant, and persistent negative effect characterised by apprehensive anticipation of unforeseen and unavoidable future danger, physiological symptoms of tension, and a constant state of increased vigilance. In contrast to fear (and the related construct of panic), which is a more present-oriented emotion designed to cope with an immediate actual or perceived threat (Blanchard & Blanchard, 2017), anxiety is a future-oriented mood state in which a person is or becomes prepared to cope with actual or perceived impending adverse events. Usually, anxiety is thought of as either a trait or a state. Individual differences in the propensity to experience this emotional state, such as trait anxiety, are represented (Eysenck, 2018). The tendency to experience anxiety is known as trait anxiety, which is usually constant throughout time (Eysenck, 2018). State anxiety, which can either result from a person's primary trait of worry or a reaction to an anticipated future threat, refers to their current level of anxiety.

Cognitive reactions, physiological responses, and motivational or behavioural responses are the three main parts of the subjective experience of anxiety (Lang, 2019). Worry is a cognitive

reaction to fear in which cognitive resources are devoted to searching for, assessing, and responding to a possible threat. The goal of the cognitive reaction is to keep the person's attention on the anticipated or imminent threat rather than on unimportant ideas. For instance, someone worried about an upcoming exam is probably obsessed with anxieties about their study habits or fears about perhaps failing the exam. As a result, other cognitive tasks (like remembering a shopping list) may suffer a little. Physiological symptoms, including muscular tightness, restlessness, and sleep issues, are typically present along with mild levels of heightened alertness. The arousal's primary goal is to prepare the body in case a whole fight-flight-freeze reaction is called for. Last but not least, anxiety is typically accompanied by changes in motivation to help the person deal with the impending perceived danger; in the case of the example above, this may entail either an increased incentive to study or impulses to forgo the exam entirely (Norton, 2012). Another substantial impact is the financial burden, which includes occupational dysfunction, lost productivity, and days lost to impairment (Hoffman, Dukes, & Wittchen, 2008). According to Quilty, Ameringen, Mancini, Oakman, and Farvolden (2003), anxiety may make it more challenging to leave home and pursue rewarding employment. According to Wittchen et al. (2000), people who experience various degrees and types of anxiety suffer functioning impairments generally, decreased well-being, and reduced life satisfaction.

According to Revicki, Brandenburg, Matza, Hornbrook, and Feeny (2008), one of the most often described symptoms of anxiety disorders is a decline in role functioning, which includes significant impairments in roles related to family, social, occupational, physical, and emotional responsibilities. According to Hoffman et al. (2008), these restrictions are frequently brought on by physical and mental health issues, general health, pain and disability, socioeconomic position, and a loss of vitality and social functioning. The quality of life of anxiety sufferers is negatively impacted by the distress brought on by anxiety symptoms, avoidance behaviour,

and the stigma associated with mental illness (Schneier & Pantol, 2006). The causes of anxiety are numerous and complex due to the intricate interplay of possible biological, genetic, psychological, and environmental factors. According to Barlow (2002), the psychological risk factors that are most frequently mentioned are neuroticism, low self-efficacy, anxiety sensitivity, cognitive biases, perfectionism, and intolerance for ambiguity.

The environmental risk factors are anxiety related to climate change, deforestation, and habits affecting the environment. Childhood sexual abuse or neglect, early parent-child separation, a family history of anxiety, and acute and chronic stress are typically social and familial risk factors (Breslau, Chilcoat, Kessler, & Davis, 1999). However, documented resiliency factors include perceived control, social support, emotion regulation skills, optimism, and intelligence (Breslau, Lucia, & Alvarado, 2006). Our understanding of protective factors in the development of anxiety is less well understood and requires further empirical attention.

State Anxiety

State anxiety is a dispositional and relatively continuous state of anxiety, whereas state anxiety is an acute form of anxiety experienced in a specific and transient setting. Episodes are characterised by changes in emotion (such as sensations of anxiety), cognition (such as assessments of threat), and body (such as activation of the autonomic nervous system). According to Speilberger (1972), state anxiety is a fleeting fear and arousal triggered by either a genuine or potential threat to your safety. For example, a car rushes towards you as you cross the street. The triggers that cause anxiety and the frequency and intensity with which anxiety is experienced vary considerably. Similar variation is shown in how people handle anxiety-provoking situations. The emotional, cognitive, and physiological reactions that go along with states of anxiety are outlined here, along with a discussion of (mal)adaptive behaviours and

coping mechanisms used to deal with states of anxiety and an overview of typical methods for measuring state anxiety.

The complex reactions connected to state anxiety show how physiological, emotional, and cognitive processes combine to create the phenomenological experience of anxiety and guide how we react to dangerous situations. State anxiety is a different type of anxiety brought on by particular circumstances and stimuli and lasts briefly. Both cognitive and physiological processes that aid in coordinating actions (such as coping mechanisms) are linked to the condition. Their past influences an individual's reaction, and they may take valuable or useless steps to reduce worry. Several psychologists have created techniques to gauge state anxiety, including simple and reliable self-report questionnaires.

Trait Anxiety

The tendency to feel anxious about upcoming circumstances or occurrences, where the result is undetermined but potentially dangerous or destructive, is known as trait anxiety. Anxiety experiences include physical (such as feeling tense or on edge) and cognitive (such as concern) aspects. The maladaptive feature of trait anxiety is connected to the larger personality domain of neuroticism. People with high trait anxiety levels worry continuously about various circumstances or subjects.

People with high trait anxiety levels commonly feel anxious in various circumstances and may begin to avoid events that trigger anticipatory anxiety. (e.g., social situations). Because anxiety is a reaction to the fear of unpleasant future events, avoidance may not always be viable (a spouse leaving one, for example), especially if the threat is unclear, unpredictable, or uncontrollable. People with trait anxiety are overly attentive to prospective risks and frequently worry excessively about worst-case scenarios. Most of the time, such anxiety is accompanied by some physical symptoms. (e.g., muscle tension). According to Matthews and MacLeod

(2005), people with trait anxiety tend to focus on threatening information, interpret ambiguous information as threatening, and over-recall worrisome information. Trait anxiety is the persistent and pervasive experience of state anxiety across many situations. Trait anxiety is often associated with pathology, such as anxiety disorders.

State-Trait Anxiety Inventory

The State-Trait Anxiety Inventory is a 40-item, self-report psychological exam for adults that assesses both dispositional (trait anxiety) and acute anxiety that a person is currently experiencing.

When measuring anxiety, it is essential to distinguish between anxiety as an immediate emotional state and anxiety as a personality attribute. Charles Spielberger and his co-authors defined state anxiety as unpleasant, conscious feelings of jitteriness, tension, apprehension, and worry experienced in the present and are connected to the arousal of the autonomic nervous system (Spielberger et al., 1983). For instance, a driver whose automobile is stopped by the police for speeding is likely to feel very anxious at that moment in state anxiety. It was thought that stable individual differences in the likelihood of experiencing anxiety possessed a personality trait of anxiety. For instance, someone with a high level of trait anxiety would have anxious feelings more frequently than someone with a low degree, would be more likely to see a broader range of events as dangerous, and would feel apprehensive more frequently.

The STAI was developed as a quick, valid, and reliable self-report tool that could be used to gauge an individual's state of anxiety (state anxiety) and trait anxiety (trait anxiety), which refers to individual differences in susceptibility to anxiety. The STAI (Form X) was first released in its original form in 1970. A significant adjustment was made to Form X to increase its validity after ten years of research with the tool. The STAI Form Y, the most recent iteration of the measure, was released in 1983 (Spielberger et al., 1983). Two sum scores—one for state

anxiety and the other for trait anxiety—are computed to arrive at the results. The two combined raw scores are then transformed into a standardised score (T-score, percentile rank) for interpretation. To accomplish this, the participant's raw scores are compared to pertinent normative sample scores from the STAI Form Y manuals. Spielberger et al. (1983) state that more excellent scores correspond to higher anxiety levels.

New Ecological Paradigm

A "pro-ecological" worldview's level of support is measured using the New Ecological Paradigm scale. It is heavily utilised in outdoor recreation, environmental education, and other fields where differences in behaviour or attitudes are thought to be explained by underlying principles, a paradigm, or a worldview. The scale is created using each person's agreement or disagreement with fifteen propositions. The New Ecological Paradigm (NEP) scale, also known as the updated NEP, was developed by US environmental sociologist Riley Dunlap and colleagues and is based on survey data. It is intended to assess the level of environmental concern among various populations using a survey instrument of fifteen statements. The strength of the respondent's agreement or disagreement with each item is requested. After that, several statistical measures of environmental concern are built using responses to these fifteen assertions.

Dominant Social Paradigm

The phrase "dominant social paradigm" (DSP) was used initially by Pirages and Ehrlich in 1974, who defined it as the "collection of norms, beliefs, values, habits, and other things that comprise the world view most generally held within a community." This is expanded significantly by (Milbrath, 1984) to include the social lens people and groups use to understand

their social environment. (1984, Cotgrove), It can be seen as ideology or cultural institutions because the phrase was modified to the dominant social paradigm.

New Ecological Paradigm Scale

The New Ecological Paradigm (NEP) scale is one of the most widely used indicators of ecological worldview in research using theoretical models to predict environmental attitudes and behaviour (Dunlap, 2008). Environmental anxiety and worry are both referred to as environmental concerns. Concern is felt about how human activity affects the globe and the natural environment. The scale is a commonly used indicator of how people's worldviews change from one in which humans dominate nature to one in which they are seen as integral. The New Ecological Paradigm (NEP), which emphasises the disruption of ecosystems caused by modern industrial societies exceeding environmental limits, contrasts with the Dominant Social Paradigm (DSP), which holds that continuous progress, growth, abundance, and attitudes contribute to environmental degradation (Dunlap & Van Liere, 1978).

The New Ecological Paradigm scale assesses support for a "pro-ecological" worldview. It is often employed in fields including outdoor recreation, environmental education, and other areas where differences in behaviour or attitudes are thought to be explained by underlying principles, a paradigm, or a worldview. Individual responses to fifteen items that gauge agreement or disagreement are used to construct the scale.

The NEP scale originally had three dimensions: limits to growth, anthropocentrism, and the balance of nature (Dunlap & Van Liere, 1978). Later, more components were added to the scale, such as ecocrisis and human exemptionalism (Dunlap, 2008). The 15-item NEP scale included seven items assessing an anthropocentric—"humans as rulers over nature"—view and eight items assessing an ecological—"humans as part of nature"—view. For example, ‘humans are greatly mistreating the environment’ is an ecological item, and ‘humans will someday learn

enough about how nature works to control it' is an anthropocentric item. A wide range of national characteristics and national-level scores on several social-psychological factors acquired from earlier cross-national research was connected with the NEP scale when applied to standardised, national-level NEP scores for 36 nations (Hawcroft & Milfont, 2010). They discovered that national-level NEP scores were lower in nations that uphold conservative and materialist principles and higher in nations that emphasise harmony, collectivism, and intellectual and emotional autonomy. They discovered a favourable correlation between national-level NEP scores and countries ratifying international environmental treaties.

Anti-exemptionalism: It is one of the theoretical sub-dimensions that addresses the New Ecological Paradigm Scale items 9, 4, and 14. It is predicated on the notion that those who subscribe to the New Ecological Paradigm should reject the notion that humans are immune from nature and its laws.

Anti-anthropocentrism: It is the theoretical sub-dimension encompassing the belief that nature exists primarily to satisfy human wants (items 2 and 12) and the perspective that rejects this view (item 7).

Limits to growth: According to the New Ecological Paradigm, these limits are based on the finite nature of the world's resources. According to this point of view, item 1 emphasises population growth, while item 11 emphasises resource scarcity by comparing the planet to a spaceship. Based on this theoretical backdrop, item 6, a negative item, suggests that there are enough resources in the world.

Balance of nature: According to NEP, there is a law of nature that can be upset by people. The scale's items 3, 13, and 8 deal with the concept of the theoretical sub-dimension of natural equilibrium. Items 3 and 13 both assert that "The balance of nature is very delicate and easily upset" and that "When humans interfere with nature, it frequently produces disastrous consequences." The statement, "The balance of nature is strong enough to cope with the

impacts of modern industrial nations" (a dominant social paradigm perspective), received a negative rating.

Eco-crisis: According to NEP, human interference with nature may have unfavourable effects on a catastrophic scale that might be referred to as an eco-crisis. The theoretical underpinnings of the eco-crisis are covered in items 5, 10, and 15 of the scale. Item 5 states, 'Humans are severely abusing the environment' while the other statement is, 'The so-called 'ecological crisis' facing humankind has been greatly exaggerated'. The last statement is, 'If things continue on their present course, we will soon experience a major ecological catastrophe'.

Eco- Anxiety

The psychological issues brought on by anxiety about various environmental disasters, such as the extinction of entire animal and plant species, the loss of entire ecosystems and plant life, air and environmental pollution, deforestation, rising sea levels, and global warming, are called eco-anxiety. It is imperative to create instruments to assess people's and communities' degrees of eco-anxiety, especially those residing in disaster-prone areas, given the rise in the frequency and severity of natural catastrophes and extreme weather occurrences. It is crucial to research eco-anxiety as a global issue to pinpoint it, increase awareness of the importance of addressing climate change, and develop remedies.

Hogg Eco Anxiety Scale

Created in Australia and New Zealand, the Hogg Eco-Anxiety Scale (HEAS; Hogg et al., 2021) quantifies affective (e.g., feeling anxious), cognitive (e.g., persistent thoughts), and behavioural indicators of eco-anxiety (e.g., difficulties working), as well as anxiety about having a personal impact on the environment. In New Zealand (Hogg et al., 2021), Turkey (Uzun et al., 2022), and Portugal, the HEAS has shown an excellent model match. (Sampaio et al., 2023; under

review). Sampaio et al. (2023; under review) discovered that the HEAS' factor structure, factor loadings, and item means were comparable for men and women, indicating that it could be viable to compare and test differences in eco-anxiety in Portugal based on binary gender. The psychometric performance of the HEAS across nations has yet to be closely examined in the same way as the CAS. Cross-cultural evidence will help determine when, when, and how to employ the CAS and HEAS.

The Hogg Eco-Anxiety Scale (HEAS-13), sometimes known as the "Eco-Anxiety Scale," was created to gauge people's psychological reactions to ecological issues. There is a need for research on how the environmental catastrophe mentally impacts people because its repercussions can be seen throughout our nation. This scale measures behavioural anxiety. This scale has four (4) facets, Affective symptoms, Rumination, Behavioural symptoms and Personal Impact anxiety.

Affective Symptoms: It is the degree to which a person is affected by certain factors by thinking about environmental problems, degradation, pollution, etc.

Rumination: Rumination is the repetitive consideration of unpleasant emotions and distress and the reasons behind and effects of those emotions. Rumination's repetitious, detrimental nature can worsen pre-existing illnesses like sadness or anxiety and cause new ones. The statements in the Hogg scale of rumination were to measure the cognitive effects of environmental effects on an individual.

Behavioural Symptoms: This facet measures the behavioural changes like sleeping, studying, etc, a person faced while thinking about the adverse effects of environmental changes.

Personal Impact Anxiety: This factor measures how an individual is bothered by their personal behaviour that can bring a change in environment problems.

Chapter 2

Review of Literature

There is fast-growing body of literature on adults who suffer from eco-anxiety, but very little is known about how younger people and children feel when they become aware of climate change. Children worldwide are growing up in an uncertain world where the media and public conversation are frequently dominated by "doom and gloom" messages concerning climate change (Engelhaupt, 2017). A survey of 600 children aged 10 to 14 in Australia found that "one-quarter of children worry that the world will end before they get older" and that "44% of children are worried about the future impact of climate change" (Tucci et al., 2007). Learning about climate change without developing the coping mechanisms for the accompanying emotions might result in discouragement and denial. (Ojala, 2012b). However, despite their high levels of worry and concern, younger people appear to have little general awareness about climate change (Erkal et al., 2012; Corner et al., 2015). It is yet unclear what effects eco-anxiety has on children's mental health. However, the studies by some researchers (Erlingsson & Brysiewicz, 2017) claimed that children and teens who learn about climate change and its effects experience fear, rage, pessimism, and grief, according to the included publications. Numerous authors said that kids worry about things all the time. Children and individuals from other nations already feeling the effects of climate change may concern some people in this situation (Burke et al., 2018; Chalupka et al., 2020; Taylor & Murray, 2020). Others worried about the end of the earth in their lifetimes, a significant loss of biodiversity, a rise in pollution, or both (Huang & Yore, 2005; Nagel, 2005; Strife, 2007; Ojala, 2013; Burke et al., 2018; Chalupka et al., 2020; Plautz, 2020; Ratinen & Uusiautti, 2020; Hickman et al., 2021). This extensive stress over the fate of the planet and how the world will be the point at which they grow up can prompt sadness and negativity. This stress is likewise firmly connected to feelings of dread for their future (Huang & Yesteryear, 2005; Difficulty, 2012; Boggs et al., 2016; Burke

et al., 2018; Pinto & Woods White, 2020; Plautz, 2020; Zummo et al., 2020), outrage that their age should manage this issue (Huang & Yesteryear, 2005; Ojala, 2012a; Struggle, 2012; Boggs et al., 2016), general conditions of tension (Ojala, 2012b; Boggs et al., 2016; Stevenson & Peterson, 2016; Burke et al., 2018; Pinto & Woods White, 2020; Plautz, 2020; Ratinen & Uusiautti, 2020; Taylor & Murray, 2020) or even anxiety attacks (Plautz, 2020).

Numerous national surveys show that there are unfavourable feelings about climate change. In the 2018 "Stress in America" poll by the American Psychological Association, 51% of participants named climate change as "a somewhat or significant source of stress" (American Psychological Association, 2018; Bethune, 2018). According to a more recent survey by the Yale Programme on Climate Change Communication, nearly half (49%) of Americans believe they will personally suffer from climate change, and 69% of Americans are at least "somewhat worried" about it. The Yale Programme on Climate Change Communication has tracked emotional reactions to climate change for years. In 2015, Berry and Peel found that 56% of Australians living in rural areas were concerned about climate change. In 2016, 24% of Europeans reached a little higher cutoff for being "very worried" (Steentjes et al., 2017). In a nationally representative 2018 study, 38% of Greenlanders said they felt fear "moderately" or "very strongly," 19% said they felt sadness "moderately" or "strongly," and 18% said they felt hopelessness "moderately" or "strongly." There was also a lot of rage and guilt. (Interestingly, 43% expressed solid or moderate hope.) Tschakert, Ellis, Anderson, Kelly, and Obeng (2019) evaluate the literature on non-economic values vulnerable to intangible harm from climate change and include mental and emotional well-being.

Three sorts of climate change effects on mental health are suggested: direct, indirect, and vicarious (Berry et al., 2010). Most of the study has been on the immediate effects of climate change on mental health, which occur after exposure to an extreme weather event such as a flood, earthquake, or hurricane. These significant life changes can potentially cause

posttraumatic stress disorder (PTSD), depression, anxiety, substance use disorders, and suicide ideation (Berry et al., 2010; Hayes et al., 2018; Cianconi et al., 2020). According to research (Akresh, 2016; Hayes et al., 2018), stress, grief, anxiety, and depression have all been linked to indirect effects of climate change, including consequences for the economy, migration, damage to physical and social infrastructure, food and water shortages, and conflict. However, many people experience discomfort just from being aware of the environmental catastrophe on a worldwide scale, regardless of whether they are directly or indirectly affected by climate change (Pihkala, 2018).

The first exception to this restriction to affective symptoms was recently made by Clayton and Karazsia's (2020) empirical study, which supported the multidimensionality of climate change worry. They identified four distinct dimensions in their scale, with the first two subscales making up the "true climate change anxiety response" (Clayton and Karazsia, 2020, p.16). These included cognitive-emotional impairment (e.g., rumination), functional impairment (e.g., interference with work and/or study capacity), pro-environmental behaviour (PEB), and experience of climate change. In particular, because they are congruent with research on (sub)clinical types of anxiety, such as Generalised Anxiety Disorder, their findings on the cognitive-emotional and functional deficits of climate change anxiety are appealing (APA, 2013). We sought to increase the evidence for eco-anxiety using a mixed-methods approach to create a comprehensive measure of eco-anxiety, considering the significant contributions Clayton and Karazsia's research contributes to the literature on climate change anxiety and eco-anxiety.

Using items that capture a person's critical evaluation of their distress in relation to climate change and of their reaction to the distress (for example, the item "I think "why can't I handle climate change better"), Clayton and Karazsia (2020) came to the conclusion that rumination was an important aspect of climate change anxiety. On top of this, we investigate a novel type

of eco-anxiety-driven rumination that involves a proactive process of thinking repeatedly about environmental harm and climate change, which in turn drives more eco-anxiety (and thus, more rumination) (Rusting & Nolen-Hoeksema, 1998). According to study (Olatunji et al., 2013), emotion-driven rumination is more significantly linked to anxiety symptoms than other sub-types of rumination, such as contemplative and brooding rumination.

Much research on anxiety distinguishes between "trait anxiety" and "state anxiety." The former refers to anxiety inclinations, whereas the latter refers to actual anxiety states (Barlow,2004; Grupe et al., 2013; Spielberger, 2009). These concepts have not been discussed much in eco-anxiety research. However, (Materia, 2016) proposed the idea of "climate state anxiety" and examined the role of trait anxiety in it. Further study is required to understand how anxiety sensitivity or "trait anxiety" relates to eco-anxiety. The subject is delicate due to its connection to social and political discussions regarding environmental action and eco-anxiety. A "mixed methods" technique consisting of two primary stages of data collecting was used to perform the research in two phases. Stage One investigates the link between anxiety over the state of the environment and connection to nature. Four psychological tests—Spielberger's (Climate) State Anxiety and Trait Anxiety Inventories (STAI), the Connectedness to Nature Scale (CNS), and the Nature Relatedness Scale (NRS were completed by 178 self-nominated participants. In rural Tasmania, this stage served three purposes: to assess the associations between a sense of connection to nature and climate state anxiety, to deepen understanding of the associations between a sense of connection to nature and both trait and climate anxiety and to select participants (Climate Witnesses) who both have a strong sense of connection to nature and are experiencing climate state anxiety for follow-up interviews during the second qualitative stage of the research. According to Materia, the conceptual model indicates that due to the perceptible changes in nature, weather, and climate, Climate Witnesses feel their well-being and health are being jeopardised. The goal of the model is to make it easier to comprehend how

closeness to nature, weather, climate, and anxiety interact in complex ways. Understanding this intricate relationship is a crucial first step towards minimising the adverse effects of climate change on psychological health and well-being

Searle, (2010) conducted a study on 275 participants that responded to a questionnaire that evaluated personality traits, environmental attitudes, and religiosity. It suggests that higher severity of the experience of melancholy, anxiety, and stress is related to greater eco-anxiety, eco-depression, and eco-anger. Additionally, all eco-emotions indicate a rise in individual and societal pro-climate behaviour. However, each emotion's experiences have a significant beneficial relationship (i.e., the more one experiences any of these negative emotions about climate change, the more one experience the other emotions). In order to separate these impacts, we conducted several structural equation models. With no correlation to depression, people who were more eco-anxious reported increased anxiety and stress in their daily lives (moderate impacts). According to these correlations, eco-depression and eco-anxiety may be causes of, or at the very least co-occur with, poorer mental health. However, eco-anger was associated with less anxiety, despair, and stress, suggesting that it may be a remarkably adaptive response to the climate problem (moderate effects). This study found a correlation between the population's increasing concern over climate change and symptoms of depression, anxiety, and stress. According to the research, people who are pro-environment, female, under 35, and have high levels of future anxiety are more likely to be troubled by climate change.

Chapter 3

Research Gap, Motivation of the study, Objective of the study, Hypotheses

The Motivation of the study

The study examined the relationship between state anxiety, Trait Anxiety, and Eco-Anxiety with the New Ecological Paradigm and Dominant Social Paradigm. The majority of the literature focuses on analysing each of these factors separately. There is, particularly, a dearth of literature on the New Ecological Paradigm. There is an indication that the New Ecological Paradigm predisposes people to depression and affects their well-being; however, very few studies pertain directly to it. Relationships of anxiety with other variables have mainly been studied extensively, but the Dominant Social Paradigm has not yielded as many significant results. There is a need for more studies that intend to analyse the relationship between variables because there is a dearth of evidence showing the relationship between environmental concerns and anxiety.

Research Gap

Since the terms were coined, a dearth of literature has been available on the nature and impact of Inventory (STAI). The individual groups formed in this study are not often found in the existing literature. Most of the studies undertaken on the New Ecological Paradigm (NEP) and Hogg were in foreign countries. There are not enough studies previously that can prove the credibility of the relationships between these variables, especially in the Indian context. However, this study is the first to assess the relationship between New Ecological Paradigm (NEP), State and Trait Inventory (STAI) and Hogg Eco-Anxiety Scale (HEAS-13). Therefore, this study attempts to extend the existing amount of research on the New Ecological Paradigm. This study is a modest attempt to examine the correlations between the aforementioned factors

and analyse each subscale separately. This study also tries to fill the gap in Indian literature that currently exists.

Theoretical Framework

The new environmental paradigm (Dunlap & Van Liere, 1978), which was later renamed the new ecological paradigm (NEP) (Dunlap et al., 2000), and the dominant social paradigm (DSP), is said to be the two paradigms that influence people's views and behaviour. The DSP, which is founded on libertarian ideals and faith in science, technology, and the abundance of resources, is what causes environmental deterioration (Catton & Dunlap, 1978; Dunlap & Van Liere, 1984; Dunlap & Jones, 2002). On the other hand, the NEP expressly acknowledges society's reliance on natural resources and the environmental effects of pollution and excessive resource consumption, which gives rise to pro-environmental behaviour. The Hogg Eco anxiety is four faceted scale focusing on cognition, behaviour and personal impact on the environment. State and Trait Inventory is used to compute individuals' Anxiety. Both scales differ as one focuses on concern and idealism, and the other focuses on a person's anxiety because of the environment. The scales used in the research are highly reliable and valid.

The Objective of the Study

The study aims to find the relationship between anxiety and environmental concerns using the New Ecological Paradigm (NEP) scale and the effect of anxiety on the Dominant Social Paradigm (DSP). It also aims to provide the effect of anxiety on individuals' environmental concerns. The Hogg Eco-Anxiety Scale (HEAS-13) establishes the relationship between the aforementioned variables.

Hypotheses

H1. There is a positive relationship between State-Trait Anxiety and New Ecological Paradigm (NEP). This relationship will be positive for only one of the subscales of NEP.

H2 There is a positive relationship between State-Trait Anxiety and Hogg Eco-Anxiety and its subscales.

H3 There is a positive relationship between New Ecological Paradigm (NEP) and Hogg Eco-Anxiety and their respective subscales.

Chapter 4

Methodology

Sample

The sample comprised of 230 participants (Mean age: 20yrs, 115 females) belonging to the city of Patiala and Ludhiana.. The participants were selected using convenient, non-probability sampling involving a sample drawn from a part of the population close to hand.

Design

The study followed a correlational design. This study's criterion variable is the New Ecological Paradigm and Eco-Anxiety. The predictor variable is State anxiety and Trait anxiety.

Measures

The study used 3 Questionnaires, each of which are described below:

The New Ecological Paradigm (NEP)

This study used the revised version of the scale developed by Riley Dunlap in 1978, containing 15 statements. This is one of the most popular and closely scrutinised techniques for assessing environmental orientation, attitudes, and behaviour. These 15 items were constructed to achieve the 5-faceted scale- Limits to Growth, Anti Anthropocentrism, Anti-Exemptionalism, Balance of Nature and Eco-Crisis. The agreement with 8 odd numbers and disagreement with 7 even numbers show pro-ecological responses.

Scoring: The response criterion was based on a 5-point Likert scale from Strongly Disagree to Strongly Agree. Subjects had to choose the option they felt best suited them. The odd-numbered statements were scored positively, i.e. Strongly Disagree (1) to Strongly Agree (5) and even-numbered statements were reversely scored. Strongly Agree was given 1, and

Strongly Disagree was scored 5. The total of both even and odd statements was done separately to compute the results.

State-Trait Anxiety Inventory (STAI)

Speilberger et al developed the STAI form in 1970. This form contained two forms, Form Y-1 (State Anxiety) and Form Y-2 (Trait Anxiety), containing 20 statements each. State anxiety measures anxiety at the present moment, and Trait anxiety measures general Anxiety. State anxiety items include: "I am tense" and "I feel secure." Trait anxiety items include: "I worry too much over something that really doesn't matter" and "I am content.''

Scoring: Responses were given on a 4-point scale. Options for both differ. In the state anxiety scale (Form Y-1), options are Not at all, Somewhat, Moderately So, and Very much so. Items 1, 2, 5, 8, 10, 11, 15, 16, 19 and 20 were reversely scored, i.e. Not at all (4) and Very much so (1). The Other items were scored Not at All (1) and Very Much So (4). In form Y-2, options are Almost Never, Sometimes, Often, and Almost Always. This scale also showed some of the items were reversed- 1, 3, 6, 7, 10, 13, 14, 16, and 19 where Almost Never was scored 4 and Almost Always was scored 1, and the rest were positively scored. The total of both forms was separately done, and the percentile score was computed with the help of the manual.

Hogg Eco-Anxiety Scale (HEAS)

This scale is a 13-item scale developed by Teaghan Hogg (2021) with four unique dimensions, i.e. Affective Symptoms, Rumination, Behavioral Symptoms and Personal Impact Anxiety. The first four items belong to Affective symptoms, and the following 9 items were grouped into three and belonged to Rumination, Behavioral Symptoms and personal Impact Anxiety, respectively.

Scoring: As far as scoring is concerned, it is stated that the higher the score a subject obtained higher the eco-anxiety. The items are responded to on a Likert scale ranging from Not at All to Nearly Every Day, where 0 corresponds to Not at All, and 3 corresponds to Nearly every day.

Procedure

Informed consent was obtained from all participants before administering the three questionnaires. They were informed about the study protocols. The data was collected by circulating the forms containing three questionnaires to the population, who were asked to complete the questionnaire with full concentration. Instructions on responding to the questions were stated clearly before each set of questionnaires. The subjects were made to sit comfortably. There was no time limit for filling out the questionnaire. But it took hardly 10 minutes to fill out the questionnaire. All their queries were entertained they face while filling out the form. The subjects were told beforehand to mark the very first response that came to their mind. The subject had to respond by putting a tick mark on the answer they felt best described them. The instructions were given before each set of questions.

CHAPTER 5

RESULTS

Table 1 Pearson Correlation Between State and Trait Percentile and NEP, DSP and Total NEP Score.

	State Percentile	Trait Percentile	NEP	DSP	NEP Total
State Percentile	1				
Trait Percentile	.726**	1			
NEP	0.080	.137*	1		
DSP	-0.008	-0.099	-0.078	1	
NEP Total	0.061	0.053	.785**	.556**	1

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

In Table 1, the Trait Percentile for the New Ecological paradigm (NEP) was r =.137 at p = 0.05 level, which is positively correlated. The state and trait percentile for the Dominant Social Paradigm (DSP) is negatively correlated (r = -0.008 and r = -0.099), respectively. Thus, no significant relationship exists between the variables.

Table 2 Linear Regression Analysis for NEP with Trait Percentile and Personal Impact Anxiety.

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Adjusted R Square
	B	Std. Error	Beta			
(Constant)	25.692	1.717		14.966	0.000	
Trait Percentile	0.043	0.020	0.137	2.084	0.038	0.014
(Constant)	27.562	0.669		41.168	0.000	
Personal Impact Anxiety	0.490	0.167	0.191	2.931	0.004	0.032

Dependent Variable: NEP

In the above regression table, the value of Adjusted R Square is .014 showing a 1.4% variance in Trait Percentile can be attributed to NEP. The beta value computed is .043 showing that one unit increase in NEP will result in .043 units in Trait Percentile. The value of Adjusted R Square is .032 showing a variance of 3.2% in Personal Impact Anxiety which is attributed to NEP. The beta value obtained is .490 showing that one unit increase in NEP will result in .490 units in Personal Impact Anxiety.

There is a positive significant correlation between Trait Anxiety and NEP.

Table 3 Pearson Correlation between Hogg subscales and total Hogg Eco-Anxiety Score and State and Trait Percentile

	Affective Symptoms	Rumination	Behavioural Symptoms	Personal Impact Anxiety	Hogg Eco-Anxiety	State Percentile	Trait Anxiety
Affective Symptoms	1						
Rumination	.361**	1					
Behavioural Symptoms	.439**	.200**	1				
Personal Impact Anxiety	.413**	.575**	.254**	1			
Hogg Eco-Anxiety	.810**	.694**	.649**	.749**	1		
State Percentile	.339**	.203**	.402**	.189**	.395**	1	
Trait Percentile	.300**	.169*	.371**	.169*	.351**	.726**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

In Table 3, the subscales of Hogg eco-anxiety i.e. Affective Symptoms, Rumination, Behavioural Symptoms and Personal Impact Anxiety, correlated with State and Trait Percentile, and Pearson correlation was done. Affective symptoms are positively correlated with state and Trait Percentile, the value, when computed with the state, is (r = .339, p = 0.01), and the trait percentile is (r = .300, p < 0.01). Rumination is positively correlated with

state percentile and trait percentile (r = .203, p <0.01) and (r = .169, p < 0.05), respectively. Behavioural symptoms are positively correlated with state percentile and trait percentile and came out to be (r = .402, p <0.01) and r =.371, p < 0.01), respectively. Personal impact anxiety positively correlates with state and trait anxiety where r = .189, p < 0.01 and .169, p < 0.05, respectively. The total Hogg eco-anxiety positively correlates with both state and trait anxiety, with r = .395 and r = .351, respectively and p < 0.01 in both state and trait percentile.

Table 4 Linear Regression Analysis for Affective Symptoms and State and Trait Percentile

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Adjusted R square
	B	Std. Error	Beta			
(Constant)	0.790	0.628		1.257	0.210	
State Percentile	0.044	0.008	0.339	5.433	0.000	0.111
(Constant)	0.069	0.860		0.081	0.936	
Trait Percentile	0.049	0.010	0.300	4.735	0.000	0.086

Dependent Variable: Affective Symptoms

In order to understand the direction of the relationships found significant by correlation results, regression analysis was conducted, the results for which are presented in Table 4. The Adjusted R Square value of the variable is .111 and .086, showing an 11.1% variance in State Percentile can be attributed to Affective Symptoms (scale of Hogg eco-anxiety) and an 8.6% variance in the Trait Percentile is attributed to Affective symptoms. The beta value obtained for State Percentile is .044, which shows one-unit increase in Affective Symptoms will increase .044

units increase in State Percentile. The beta value obtained for Trait Percentile is .049, which shows one unit increase in Affective Symptoms will increase .049 units increase in Trait Percentile.

Table 5 Linear Regression Analysis for Rumination with State and Trait Percentile

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Adjusted R Square
	B	Std. Error	Beta			
(Constant)	1.130	0.437		2.586	0.010	
State Percentile	0.018	0.006	0.203	3.136	0.002	0.037
(Constant)	0.935	0.588		1.591	0.113	
Trait Percentile	0.018	0.007	0.169	2.581	0.010	0.024

Dependent Variable: Rumination

In the above table, Linear Regression was computed. The Adjusted R Square of State and Trait Percentile came out to be .037 and .024, which shows a 3.7% variance in State Percentile, and a 2.4% variance in Trait Percentile can be attributed to Rumination. The beta value of the State and Trait Percentile is .018 showing that one unit increase in Rumination will increase .018 units in State and Trait Percentile.

Table 6 Linear Regression Analysis for Behavioural Symptoms and State and Trait Percentile

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Adjusted R Square
	B	Std. Error	Beta			
(Constant)	0.001	0.453		0.003	0.998	
State Percentile	0.039	0.006	0.402	6.633	0.000	0.158
(Constant)	-0.755	0.618		-1.222	0.223	
Trait Percentile	0.044	0.007	0.371	6.023	0.000	0.134

Dependent Variable: Behavioural Symptoms

Table 6 shows the regression analysis for Behavioural Symptoms with State and Trait Percentile. The adjusted R Square value of the variables is .158 and .134, which means a 15.8% variation in State Percentile can be attributed to Behavioural Symptoms, and a 13.4% variance in Trait Percentile can attribute to Behavioural Symptoms. The Beta value obtained for State Percentile is .039, which shows that one unit increase in Behavioural Symptoms will result in a .039 unit increase in State Percentile. Likewise, the beta value obtained for Trait Percentile is .044, showing that one unit increase in Behavioural Symptoms will increase .044 units of the Trait Percentile.

Table 7 Linear Regression Analysis for Personal Impact Anxiety and State and Trait Percentile

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Adjusted R Square
	B	Std. Error	Beta			
(Constant)	1.87	0.491		3.81	<.001	
State Percentile	0.018	0.006	0.189	2.912	0.004	0.032
(Constant)	1.551	0.662		2.344	0.020	
Trait Percentile	0.020	0.008	0.169	2.578	0.011	0.024

Dependent Variable: Personal Impact Anxiety

The above table shows the regression analysis computed for Personal Impact Anxiety and State and Trait Percentile. The Adjusted R Square value computed for State and Trait Percentile is .032 and .024, respectively, showing a 3.2% variance in State Percentile, and a 2.4% variance can be attributed to State and Trait Percentile, respectively. The beta value computed is .018 and .020 for State Percentile and Trait Percentile, respectively, showing one unit increase in Personal Impact Anxiety will increase .018 units increase in State Percentile and one unit increase in Personal Impact Anxiety will lead to an increase of .020 units in Trait Percentile.

Table 8 Linear Regression Analysis for Hogg Eco-Anxiety and State and Trait Percentile

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Adjusted R Square
	B	Std. Error	Beta			
(Constant)	3.79	1.421		2.668	0.008	
State Percentile	0.119	0.018	0.395	6.486	<.001	0.152
(Constant)	1.800	1.953		0.922	0.358	
Trait Percentile	0.131	0.023	0.351	5.641	0.000	0.119

Dependent Variable: Hogg Eco- Anxiety

Table 8 shows the regression analysis for Hogg's total score of Eco-Anxiety with State and Trait Percentile. The adjusted R Square value of the variables is .152 and .119, which means a 15.2% variation in State Percentile can be attributed to Hogg Eco-Anxiety and an 11.9% variance in Trait Percentile can attribute to Hogg Eco-Anxiety. The Beta value obtained for State Percentile is .119, which shows that one unit increase in Hogg Eco Anxiety will result in a .119 unit increase in State Percentile. Likewise, the beta value obtained for Trait Percentile is .131, showing that one unit increase in Hogg Eco Anxiety will increase .131 units of the Trait Percentile.

State-Trait Anxiety positively correlates with all subscales, i.e., Affective Symptoms, Rumination, Behavioural Symptoms and Personal Impact Anxiety. of Hogg and total Hogg Eco-Anxiety score.

Table 9 Pearson Correlation Between NEP, DSP, Total score of NEP and subscales and a total of Hogg Eco-Anxiety

	NEP	DSP	NEP Total	Affective Symptoms	Rumination	Behavioural Symptoms	Personal Impact Anxiety	Hogg Eco-Anxiety
NEP	1							
DSP	-0.078	1						
NEP Total	.785**	.556**	1					
Affective Symptoms	0.099	-0.105	0.019	1				
Rumination	0.102	-0.077	0.040	.361**	1			
Behavioural Symptoms	0.088	-0.032	0.054	.439**	.200**	1		
Personal Impact Anxiety	.191**	-0.097	0.100	.413**	.575**	.254**	1	
Hogg Eco-Anxiety	.162*	-0.109	0.069	.810**	.694**	.649**	.749**	1

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

In Table 9, the New Ecological Paradigm (NEP) is negatively correlated with the Dominant Social Paradigm (DSP), and there is no significant relationship between both variables (r = -0.078). The Affective Symptoms, Rumination, Behavioural Symptoms, Personal Impact Anxiety and Hogg Eco-Anxiety are negatively correlated with the Dominant Social Paradigm

(DSP) and show no significant relationship in which r = -0.105, r = -0.077, r = -0.032, r = -0.097 and r = -0.109, respectively.

Table 10 Linear Regression Analysis for NEP with Hogg Eco-Anxiety. Model	Unstandardised Coefficients		Standardised Coefficients			
	B	Std. Error	Beta	t	Sig.	Adjusted R Square
(Constant)	6.861	2.339		2.933	0.004	
NEP	0.195	0.079	0.162	2.479	0.014	0.022

Dependent Variable: Hogg Eco-Anxiety

The above table shows the regression analysis for New Ecological Paradigm and Hogg Eco-Anxiety. The adjusted R square of NEP is .022, meaning a 2.2% variation in NEP can be attributed to Hogg Eco- Anxiety. The beta value obtained for NEP is .195, showing one unit increase in Hogg Eco-Anxiety will increase.195 units in NEP.

CHAPTER 6

DISCUSSION

The study aimed to find the effects of anxiety on Environmental concerns on individuals. There were 230 participants, 115 each male and female, of the age range 18-30 years. The study was conducted to provide the relationship between variables, i.e. State and Trait Anxiety, New Ecological Paradigm (NEP) and Dominant Social Paradigm (DSP), and Eco-Anxiety.

The hypothesis was formed, i.e., a positive relationship exists between State Anxiety and Hogg Eco-Anxiety. It is believed that for individuals struggle with Eco-anxiety, their general anxiety will also be high. A significant relationship is found between the variables and all the sub-scales of Hogg Eco-Anxiety, Affective Symptoms, Rumination, Behavioural Symptoms and Personal Impact Anxiety. The same hypothesis was formed regarding Trait Anxiety, stating that there is a positive correlation between Trait Anxiety and Hogg Eco-Anxiety. The hypothesis was developed to say that if Eco-Anxiety is high, the effects will also be seen in Trait Anxiety. The studies supporting the viewpoint, According to Hoggs, eco-anxiety is worry about various environmental crises. People are concerned about the adverse effects of their activity on the environment, according to the Hoggs scale on eco-anxiety. Concerns about environmental issues like pollution, environmental deterioration, and climate change are shared by many people. Consistent with Clayton and Karazsia's (2020) climate change anxiety measure, we identified affective and behavioural symptoms as essential characteristics of eco-anxiety. Although Clayton and Karazsia's cognitive-emotional impairment facet blended negative emotionality, cognitive disturbance and some physical manifestations, such as crying and difficulty sleeping, these symptoms are disentangled into different subfactors of the HEAS-13; assessing negative emotionality within a distinct affective subscale, and showing this dimension relates to experiences of mental ill-health in specific ways to the behavioural extent. Similar to Clayton and Karazsia, we found that rumination (in the HEAS-13, in the form of

eco-anxiety-driven rumination) was an essential aspect of eco-anxiety, with meaningful patterns of associations. Our research contributes new findings to the climate change anxiety and eco-anxiety literature by showing that concern about one's impact is a unique dimension of eco-anxiety with distinct correlates. We identified affective and behavioural symptoms as critical elements of eco-anxiety, consistent with Clayton and Karazsia's (2020) climate change anxiety assessment. The correlation between state anxiety and Affective symptoms is .339 and is .402 with trait anxiety. Even though Clayton and Karazsia's cognitive-emotional impairment facet combined negative emotionality, cognitive disturbance, and some physical manifestations, like crying and trouble sleeping, these symptoms are disentangled into different subfactors of the HEAS-13; assessing negative emotionality within a distinct affective subscale, and demonstrating this dimension relates to experiences of mental ill-health in specific ways to the behavioural dimension. We discovered, in line with Clayton and Karazsia, that rumination—in the HEAS-13, this takes the form of eco-anxiety-driven rumination—was a significant component of eco-anxiety; the state and Trait percentile when correlated with rumination is (r=.203 and .169) respectively with substantial patterns of connections. By demonstrating that concern about one's influence is a different component of eco-anxiety with specific associations, our research adds new results to the literature on eco-anxiety. They have not found any significant relationship with Personal Impact Anxiety. The total Hogg Score found also has an essential role in state and trait anxiety. Thus, our two hypotheses were accepted, stating that a positive correlation exists between Hogg Eco-Anxiety and State and Trait Anxiety.

Another study evidenced that considering anxiety concerning a wide range of environmental challenges from a broad perspective has several advantages. Our research shows that eco-anxiety is a quantifiable phenomenon and a significant component of people's experiences. This is supported by media reports, case studies, and current literature (e.g., Dockett, 2019;

Hickman, 2020; Pihkala, 2020). As a result, it is appropriate to take into account when attempting to comprehend environmental anxiety, either independently of or in connection with (sub) clinical kinds of stress an individual may experience. Conceptually, eco-anxiety is at a higher level of abstraction, and it may complement other high-level human anxiety in the study context. Pro-Environmental Behaviours (PEBs) are one type of behaviour. However, suppose a researcher is interested in a particular human activity, such as low-carbon behaviours. In that case, assessing anxiety concerning that certainly warranted environmental factors like climate change. While Clayton and Karazsia's (2020) Climate Change Anxiety Scale is a helpful tool, we also provide guidelines for modifying the instructions and items of the HEAS-13 to measure anxiety related to particular environmental problems (such as climate change, global warming, ecological degradation, pollution, and deforestation; refer to Supplementary Materials). Adherence to these recommendations will make it easier to measure outcomes consistently across studies, and using modified versions of the HEAS-13 for validation is a desirable next step for future research.

This study intended to probe the relationship between New Ecological Paradigm and Hogg Eco Anxiety. This study found that Personal Impact Anxiety majorly impacts environmental behaviour or concerns using the New Ecological Paradigm (NEP) scale; a significant correlation was found between the abovementioned variables. The correlation between Personal Impact Anxiety and New Ecological Paradigm (NEP) is (r=.191). It was hypothesised that a positive relationship exists between New Ecological Paradigm and State Anxiety. The older definition, frequently mentioned, emphasises the autonomy of actors and lessens harm to the environment by defining it as behaviour that reduces the adverse effects of one's behaviour on the environment [Kollmuss et al., 2002]. Additionally, pro-environmental behaviour is expanded to minimise environmental harm and benefit it [Steg & Vlek, 2008] based on how behaviour affects the environment. This definition emphasises enhancing environmental

conditions while minimising adverse environmental effects, such as greenhouse gas emissions, the wasting of natural resources, and so forth. Pro-environmental behaviour also refers to actions that enhance environmental sustainability from a sustainability perspective [Viswesvaran et al., 2012]. Overall, this essay makes the case that environmentally friendly behaviour refers to actions that consciously safeguard the environment and increase sustainability.

This study purported to analyse the relationship between State and Trait Anxiety and New Ecological Paradigm (NEP). It was hypothesised that there is a positive relationship between New Ecological Paradigm and State and Trait Anxiety. One hypothesis is rejected; no significant relationship between State Anxiety and New Ecological Paradigm was found. However, there exists a positive relation between the variables. Another hypothesis was accepted as a significant positive correlation exists between Trait Anxiety and New Ecological Paradigm. According to research the pro-environmental values and concerns showed climate actions that were strongly associated with trait anxiety showed a relationship such that individuals were higher in both environmental values and trait anxiety were more likely to engage in pro-environmental actions. (Pickering & Dale, 2023). The study's findings imply that while participants follow some DSP components, no one consistently identifies with them. Nevertheless, this study does not prove that the DSP doesn't exist. The attitudes and ideals of those directly involved in the purposeful exploitation of nature would need to be investigated in further research.

CHAPTER 7

CONCLUSION

Conclusion

The present research aimed to find the relationship between environmental concerns and eco-anxiety with State and Trait Anxiety. Eco-Anxiety was correlated with State and Trait Anxiety in the age range of 18-30 years. The hypotheses were formed that high state and Trait anxiety will show high eco-anxiety. The findings were also lined with the research as these variables have a positive correlation. Another hypothesis formed was that State and Trait Anxiety were correlated with NEP, but only a significant correlation was found between Trait Anxiety and NEP.

Implications

The current study demonstrates connections between state anxiety, Trait Anxiety, the Dominant Social Paradigm, and the New Ecological Paradigm and Eco-Anxiety. These factors are significant because people—not just researchers—constantly acknowledge them. Whether a person is functioning or has, some psychopathology depends on several factors. Their interdependence is much more critical because modifying one will affect the other. Changing one component may help lessen the other, but studying their interaction can be pretty therapeutic. Since it is evident that there is a lack of literature, the study also contributes to the shortage of material already in existence. The study's findings imply that while participants follow some DSP components, no one consistently identifies with them. Nevertheless, this study does not prove that the DSP doesn't exist. The attitudes and ideals of those directly involved in the purposeful exploitation of nature would need to be investigated in further research.

Limitations

There are some limitations to the current investigation. The first is that gender disparities were not taken into account. In contrast to previous studies, several of the associations were not found to be statistically significant, which can be attributed to gender differences. A convenient sample was taken. Even though great attempts were made to produce honest replies, the study is limited by its reliance on self-report measures. The sample size is the other restriction. A larger sample size would have made better findings.

Future Research

Different future study directions can be considered in the results and constraints. To begin with, a long-term study might be conducted to comprehend the anxiety and its influences. Analysing pre-morbid personality and case studies of individuals with eco-anxiety can be beneficial. Second, various ecological issues might be researched separately. Thirdly, different assessments of eco-anxiety might be examined independently. Fourth, the facets of the New Ecological Paradigm Scale can be considered as they can give comprehensive details on which factors are influencing more or less; to comprehend how each collection of variables functions and interacts, a complete study can be carried out.

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Appendix A

Consent Form

CONSENT FORM

In this research form, you will be given a set of questions. You have to choose an appropriate option you feel is right according to the instructions given before each set.

The complete experiment will require approximately 10 minutes of your time. All information you provide will remain confidential and not be associated with your name.

The results of this experiment may be presented at professional meetings or published in the scientific literature. Your name will not be used in the reporting of the results. Only group data will be used. However, your scores and name will be coded for a possible follow-up study or re-analysis of the data. All personal details will be kept confidential.

If you wish to withdraw from the experiment, you may do so at any time without penalty. Following the experiment, I will discuss the results of the experiment with you if needed.

If you have any questions, please feel free to ask me or the advisor of the research, *Dr. Richa Nigam, TSLAS, Thapar Institute of Engineering and Technology, Patiala.*

Thank you for participating in the experiment.

I, _____ _____, understand that my participation in

(First Name) *(Last Name)*

this experiment is voluntary, and I may refuse to participate or withdraw from the experiment at any point in time without penalty.

*Date*_____

Signature of Participant

_____

Signature of Experimenter

_____

Appendix B

The Hogg Eco-Anxiety Scale (HEAS-13) instructions:
"*Over the last 2 weeks, how often have you been bothered by the following problems, when thinking about climate change and other global environmental conditions (e.g., global warming, ecological degradation, resource depletion, species extinction, ozone hole, pollution of the oceans, deforestation)?*"

1. Feeling nervous, anxious or on edge
2. Not being able to stop or control worrying
3. Worrying too much
4. Feeling afraid
5. Unable to stop thinking about future climate change and other global environmental problems
6. Unable to stop thinking about past events related to climate change
7. Unable to stop thinking about losses to the environment
8. Difficulty sleeping
9. Difficulty enjoying social situations with family and friends
10. Difficulty working and/or studying
11. Feeling anxious about the impact of your personal behaviours on the earth
12. Feeling anxious about your personal responsibility to help address environmental problems
13. Feeling anxious that your personal behaviours will do little to help fix the problem

Response scale: 0 = *not at all*, 1 = *several of the days*, 2 = *over half the days*, 3 = *nearly every day*.

Appendix C

State Trait Anxiety Inventory

Self-evaluation questionnaire	STAI Form Y-1			
	1	2	3	4
1. I feel calm	□	□	□	□
2. I feel secure	□	□	□	□
3. I am tense	□	□	□	□
4. I feel strained	□	□	□	□
5. I feel at ease	□	□	□	□
6. I feel upset	□	□	□	□
7. I am presently worrying over possible misfortunes	□	□	□	□
8. I feel satisfied	□	□	□	□
9. I feel frightened	□	□	□	□
10. I feel comfortable	□	□	□	□
11. I feel self-confident	□	□	□	□
12. I feel nervous	□	□	□	□
13. I am jittery	□	□	□	□
14. I feel indecisive	□	□	□	□
15. I am relaxed	□	□	□	□
16. I feel content	□	□	□	□
17. I am worried	□	□	□	□
18. I feel confused	□	□	□	□
19. I feel steady	□	□	□	□
20. I feel pleasant	□	□	□	□

1: Not at all, 2: Somewhat, 3: Moderately so, 4: Very much so

Self-evaluation questionnaire	STAI Form Y-2			
	1	2	3	4
21. I feel pleasant	□	□	□	□
22. I feel nervous and restless	□	□	□	□
23. I feel satisfied with myself	□	□	□	□
24. I wish I could be as happy as others seem to be	□	□	□	□
25. I feel like a failure	□	□	□	□
26. I feel rested	□	□	□	□
27. I am "calm, cool, and collected"	□	□	□	□
28. I feel that difficulties are piling up so that I cannot overcome them	□	□	□	□
29. I worry too much over something that really doesn't matter	□	□	□	□
30. I am happy	□	□	□	□
31. I have disturbing thoughts	□	□	□	□
32. I lack self-confidence	□	□	□	□
33. I feel secure	□	□	□	□
34. I make decisions easily	□	□	□	□
35. I feel inadequate	□	□	□	□
36. I am content	□	□	□	□
37. Some unimportant thought runs through my mind and bothers me	□	□	□	□
38. I take disappointments so keenly that I can't put them out of my mind	□	□	□	□
39. I am a steady person	□	□	□	□
40. I get in a state of tension or turmoil as I think over my recent concerns and interests	□	□	□	□

1: Almost never, 2: Sometimes, 3: Often, 4: Almost always

Appendix E

New Ecological Paradigm (NEP)

Q-19 Listed below are statements about the relationship between humans and the environment. For each one, please indicate whether you STRONGLY AGREE, MILDLY AGREE, are UNSURE, MILDLY DISAGREE or STRONGLY DISAGREE with it.

Do you agree or disagree that:	Please circle your answer for each statement.				
1. We are approaching the limit of the number of people the earth can support . .	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
2. Humans have the right to modify the natural environment to suit their needs . .	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
3. When humans interfere with nature it often produces disastrous consequences . .	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
4. Human ingenuity will insure that we do NOT make the earth unlivable	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
5. Humans are severely abusing the environment	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
6. The earth has plenty of natural resources if we just learn how to develop them	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
7. Plants and animals have as much right as humans to exist	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
8. The balance of nature is strong enough to cope with the impacts of modern industrial nations	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
9. Despite our special abilities humans are still subject to the laws of nature	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
10. The so-called "ecological crisis" facing humankind has been greatly exaggerated .	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
11. The earth is like a spaceship with very limited room and resources	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
12. Humans were meant to rule over the rest of nature	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
13. The balance of nature is very delicate and easily upset	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
14. Humans will eventually learn enough about how nature works to be able to control it	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE
15. If things continue on their present course, we will soon experience a major ecological catastrophe	STRONGLY AGREE	MILDLY AGREE	UNSURE	MILDLY DISAGREE	STRONGLY DISAGREE