HUMAN-NATURE DIVERSITY: AN INTELLECTUAL-EMOTIONAL-ECOLOGICAL PERSPECTIVE

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Abstract

Disengagement from the social and physical environment is a result of the increasing number of environmental catastrophes and resource-depleting upheavals. The purpose of the study was to investigate in human subjects the link among intelligence, emotion, and ecology. A random sample of 304 job seekers men in their 20s and 25s was taken. The variables eco-sensory intelligence, emotional intelligence, and general intelligence were measured using the psychological instruments environmental awareness ability measure, emotional intelligence scale, and test of general intelligence, in that order. The parametric test assumptions were tested using descriptive statistics. The study employed inferential statistics, specifically product-moment correlation, univariate ANOVA, and multivariate ANOVA, to assess the null hypothesis at the significance level of 0.05. The findings showed that general intelligence was adversely correlated with emotional intelligence and had no discernible relationship with ecological sensory intelligence. There was a significant positive association between emotional intelligence and eco-sensory intelligence

Keywords : Ecological-Sensory Intelligence, Emotional Intelligence, General Intelligence, ecological literacy

Introduction

There are resonances in contemporary perspectives with ways of seeing formulations of intelligence and self in the form of interconnectedness integration into the deepest levels. Ecopsychology at its core emphasizes that there is a synergistic relation between planetary and personal emotional well-being. One of the central tenets is the articulation and examination of psychological relationships with the natural world. There has been an observable disconnect between human and nature in various sphere. The issue of developing methods for forecasting ecosystem reactions to behavior in the new world of global change has undoubtedly been met by the research community. To secure sustained planetary and individual well-being, the ordered world requires attentive ecological-sensory global citizenship, human relation engagement in elliptical natural wholeness, and a serious scientific rethink of connected and disconnected intelligences. The dominating eco-psychological zeitgeist is hence the development of Natural Systems Thinking Processes and connected intelligences to reconnect, renew, and reinvigorate synergistic links between planetary and personal well-being. Most of humanity's intelligent solutions ended up being non-intelligent. Due to emotional attachment and rationale for delaying pain, denizens consistently showed the paradoxical rationality of delaying smaller present pains at the expense of larger unintended future difficulties. The most potent, resource-depleting, and environmentally

destructive culture in human history is modern civilization. Therefore, it is essential for both the long-term welfare of humans and the planet that we comprehend and rethink our relationship with the natural world. The necessity to investigate the ecological self-experience and how this experience affects mental health and environmental behavior is suggested by the nature connectivity research. Every disaster, nature or human-induced, leave psychological aftermath and personal emotional reflections on the individuals who experienced or witnessed the disaster become a pertinent emerging area of research for natural scientists and psychologists to address intelligence underlying ecological sensitivity and emotions.

All intelligences evolved in a reciprocal relationship with the natural world and all our thoughts were once connected to Nature in a sacred way. Nature is basically intelligent and the brilliance of human intelligences is dependent upon the brilliance of Nature. It's very difficult to exist independently from Nature. All are nested in the whole of Nature just as the body's individual cells are nested in their whole. Ecological sensory intelligence and emotional intelligence embrace an interdisciplinary collaboration and important theoretical concepts and include deeper understanding of well-being. With the advent of the idea of multiple intelligences (Gardner, 1983; Sternberg, 1985) research on emotion and ecopsychology started roughly the same period 1990s. Interest in both fields, ecological and emotional began to appear in scientific articles. Ecological consciousness involves both emotion and reason (Damasio, 1994a, 1999).Sustainable living is grounded in the integration of emotional, social and ecological intelligence (Goleman, 2009). Goleman describes ecological intelligence as an 'all-encompassing sensibility' that reveals the interconnections between human actions and their impacts on the planet, human health, and social systems. His concept of ecological intelligence was based on consumer decisions on knowing the life cycle assessment of various products. It was focused on more informed consumers obtaining information through various sources about the ecological impacts of different products on various natural systems which alert everybody for a deeper understanding of the nature of ecological intelligence in the contemporary thinking of how behavior impacts the self-renewing capacity of the natural system. Eco-sensory intelligence is a natural extension of the social and emotional learning methods to understand interconnections and sensibility between actions and their impacts on Nature. It takes account of relationships, contexts as well as the impacts of ideas and behavior on other members in the cultural and natural systems (Bateson, 1972)

Ecological – Sensory Intelligence (ESI)

Psychology as a field of study is constantly committed to raising human consciousness and educating people about the healthy connections between human conduct and nature, such as loving-kindness, friendliness, and compassion, which entails genuinely caring about another person's well-being. One field that focuses on perceiving connections between people and the natural world is ecopsychology. Natural resources are consumed quicker than they are being replenished since the main dangers to human existence and well-being are now predominantly produced by humans. As a result, humanity must live within the capacity of the Earth before the ecosystem worsens. Ecopsychology, according to Theodore Roszak (1995), is the scientific study of how psychological and ecological factors interact in order to comprehend and alter perception, values, and lifestyle in order to heal the human mind and restore the environment.

Ecological-psychological consciousness is the experience of existence (Newman, 2012). Ecological psychology treats organisms in mutual relation to their environment which surrounds and supports the organism's way of life, perception, action, changes and development (Gibson & Pick, 2010).The evolutionary origin of general intelligence 'g' and cultural intelligence approach suggest evidence of intelligence in both human and non-human living beings (Burkart et al 2014; Flynn, 2016). The general intelligence underlying all species is an adaptation in the ecology. An adaptation is the estimate of the 'g' which exhibits predictive validity of the concept g. The general intelligence seems evolutionarily implausible because the mind is populated by a large number of adaptive specializations that are functionally organised to solve evolutionary typical and recurrent problems of survival and reproduction (Cosmides et al 2013; Wang, 1996). Ecological-sensory intelligence (ESI) is a link between the general intelligence of human and non-human living beings bridging the mutuality of the environment with organisms. It is relational which continually evolves interactively with other beings and entities in the natural world to converge perceptions, thoughts and feelings for mutual nurturance. It involves both emotion and reason which go hand in hand rather than disrupting each other (Lakoff & Johnson,

1999). Several studies illuminate that ecological-sensory consciousness is entwined, not only with thinking, but with feeling and action (Mayer & Frantz, 2004; Nisbet, Zelenski & Murphy, 2009; Hedlund-de Witt & Boersema, 2014; Kowal & Mangal, 2021).

Emotional Intelligence (EI)

Emotional Intelligence as a psychological construct was first introduced to the academic literature by Salovey and Mayer in 1990, almost the same time as the advent of the study of ecopsychology was developing parallels. It could be described as one's ability to perceive, comprehend and regulate emotions of self and also to deal effectively with others' emotions. The construct can broadly be explained by the trait EI model and ability EI model. The trait EI model suggests behavioural dispositional of an individual and perception of our emotional abilities and hence covers the emotional efficacy of an individual whereas the ability EI model indicates an arrangement of capacities to regulate and manage emotions which is associated more with the individual's cognitive-emotional ability. Goleman (1995) explains emotional intelligence that it is the capacity to identify one's own and other people's emotions, in addition to using feelings that promote control, motivation and proper management of social relationships. Mayer and Salovey (1997) redefined the concept of EI it is the ability to identify, understand and express one's own emotions, in addition to employing emotions that promote emotional and cognitive development. In 2016, Mayer, Caruso, and Salovey revisited their first model, defining emotional intelligence as a mental ability involved in processing information and positioning it among other contemporary intelligence such as personal, social and ecological intelligence. On the contrary, other theoretical proposals (Goleman, 1995; Bar-On, 1997, 2004; Petrides and Furnham, 2001; Petrides et al., 2007a) conceived EI as a combination of traits, competencies, and skills.

Method

Objectives of the Study

The study aims to analyse and explore the possibility of a correlation between these two variables, ecological-sensory intelligence and emotional intelligence. The study focuses to analyze the treatment effects of different levels of general intelligence 'g' GI with respect to means of ecological-sensory intelligence measured as environment awareness ability and emotional intelligence in order to carry out multiple comparisons of all possible simple and complex pairs of means among variables of the study.

Independent Variable: General intelligence (GI) measured in terms of IQ has been studied as independent variable to analyze its direct effect on the dependent variables.

Dependent Variable: Ecological sensory intelligence and emotional intelligence have been taken as dependent variables to look possible effects of different levels of GI.

Null hypotheses

1. There is no significant difference between General Intelligence (GI) and Emotional intelligence (EI).
2. There is no significant difference between General Intelligence (GI) and Eco-Sensory Intelligence (ESI).
3. There is no significant difference between Emotional Intelligence (EI) and Eco-Sensory Intelligence (ESI).
4. There is no significant difference between different levels of General Intelligence (GI) and Emotional intelligence (EI).
5. There is no significant difference between different levels of General Intelligence (GI) and Eco-Sensory Intelligence (ESI).

Participants

A random sample comprised 304 literate unemployed job seeker male subjects aged ranging from 20-25 years from various walks of the country, India.

Instruments

1.   ***The Environment Awareness Ability Measure (EAAM)*** developed by Praveen Kumar Jha (1998) was used to measure Eco-Sensory Intelligence. The fifty-one-item bilingual (Hindi and English) scale measures environmental sensitivity under five dimensions of environmental awareness namely, cause of pollution, conservation of soil forest, air etc., energy conservation, conservation of human health, conservation of wild-life and animal husbandry. The respondents have to choose between an agree or disagree response for each item by marking a tick in one of the response categories which will reflect the level of awareness and sensitivity about the environment one live in. Each agreed item carries the value of 1 (one) mark and each disagreed item of zero mark but the negative items were scored inversely. Three indices of reliability were determined for the development of the scale namely, K-R method (0.84), Test-retest method (0.74 & 0.71) and Split-half reliability (0.61). The validity of the EAAM coefficient of correlation between the scores of the EAAM scale and Environment Awareness Scale was found to be .83. The scale also possesses face and content validity since experts judged each item.

2. The bilingual (Hindi and English) 34-item ***emotional intelligence scale*** developed by Dhar, Pethe & Hyde (2002) has been used to measure emotional intelligence. The instructions given to the group were as "You are provided with self-awareness statements on which you have to give a response on five categories namely: strongly agree, agree, neutral, disagree, and strongly disagree. For every statement, you have to express your views by marking a tick on any one cell of the five alternatives. There is no right or wrong answer, so please give your response on all the items. There is no time limit for completing the task. However, most of the respondent takes about 10 minutes. Your responses will be kept confidential. Each item is scored 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree, and 1 for strongly disagree. The reliability of the scale was determined by calculating reliability coefficient on a sample of 200 subjects. The split-half reliability coefficient was found to be .88.and 0.93 validity.

3. ***Test of General Intelligence (TGI)*** for college students was developed by Mishra & Pal (1991). It is a verbal bilingual (Hindi and English) test for measuring general intelligence under six subtests namely word meaning, number series, analogy, code transformation, classification and syllogism for measuring verbal facility ability, analytical thinking ability, classification ability, numerical reasoning ability, symbolic transformation ability and syllogistic reasoning ability respectively. It consists of 10 items for each sub-test making a total 60-item test. The difficulty value ranged from 20 to 73 and the discrimination index ranged from 20 to 85 were found in item analysis. The respondents were required to solve each sub-test in four minutes. It was told that it was not expected from them to answer all questions correctly. Scoring was carried out with the help of the answer key. The raw scores obtained were converted into normalized standard scores as per the manual. The split-half reliability of the total test was 0.95 and Test-retest reliability was found 0.81. The product-moment coefficient of correlation was found 0.68 for Criterion validity calculated between scores on TGI and scores on Cattell's Culture Fair Test of Intelligence, Scale 3 Form A.

Procedure

The random sample was collected from the 304 male unemployed subjects who were job seekers. The job seekers were selected as a sample of the population because of their typical characteristics of awareness, knowledge, attitudes, skills and willingness to participate. The job seekers are required to update themselves regarding general awareness of local, regional, national and international environmental management, programs and persisting issues studied during their school and college education. They show more willingness to participate in research, frank in responding and seek change to improve their quality of life. The questionnaires were administered to them after the completion of their employment interviews.

Data analyses

A type I error rate of 0.05 was set for all statistical analyses. The Statistical Package for Social Sciences for Windows (version 16; SPSS Inc., Chicago IL, USA) was used for all calculations. Test of homogeneity of variances was employed to find out variances within group were equal or not. Group differences were analyzed using multivariate and univariate analyses of variance (MANOVA/ANOVA), Scheffe tests were employed for

post-hoc analyses. Correlation of descriptive variables among the study groups was performed using product-moment correlation. Graphical representation of the spread of normal probability curve and means for descriptive variables were drawn

Results

Table 1 reveals the descriptive statistics of the sample of the study (N=304). The independent variable general intelligence measured in terms of IQ has been categorized into five levels 1 to 5 ranging from above average to below average based on obtained scores. IQ level 1 indicates above average, 2 – just above average, 3- average, 4- just below average and 5 is below average. The means, standard deviations and errors of two dependent variables Emotional Intelligence (EI) and Ecological Sensory Intelligence (ESI) have been calculated for five levels of IQ. The total mean EI of the sample was found 144.63 (SD=12.83). Mean EI of above average IQ level 1 was found highest 147.24 (lowest SD =10.36) while mean EI of below average IQ level 5 was found lowest 134.58 (highest SD=17.27). The total mean ESI of the sample was found 44.51 (SD=3.54). ESI Means of IQ level 1 to 4 were more or less same, mean ESI of just below average IQ level 4 was found highest 44.78 (SD=4.45) while mean ESI of below average was lowest 41.66 (highest SD=4.84).

Table 1: Descriptive Statistic									
Dependent Variable	Independent Variable (IQ)	N	Mean	SD	SE	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Emotional Intelligence	1	37	147.24	10.36	1.70	143.78	150.69	129	170
	2	111	146.33	14.27	1.35	143.64	149.01	113	192
	3	111	144.29	11.12	1.05	142.19	146.38	117	170
	4	33	140.76	11.73	2.04	136.59	144.91	118	168
	5	12	134.58	17.27	4.98	123.60	145.55	118	169
	Total	304	144.63	12.83	0.73	143.18	146.07	113	192
Ecological Sensory Intelligence	1	37	44.35	4.21	0.69	42.94	45.75	31.00	52.00
	2	111	44.72	3.13	0.29	44.14	45.31	36.00	51.00
	3	111	44.57	3.13	0.29	43.98	45.16	37.00	53.00
	4	33	44.78	4.45	0.77	43.20	46.36	39.00	55.00
	5	12	41.66	4.84	1.39	38.58	44.74	37.00	51.00
	Total	304	44.51	3.54	0.20	44.11	44.91	31.00	55.00

Normal probability curves have been depicted below for the variables of the sample. Graphical representation of means of EI and ESI with respect to IQ has also been depicted below.
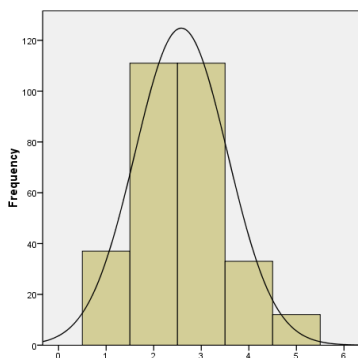
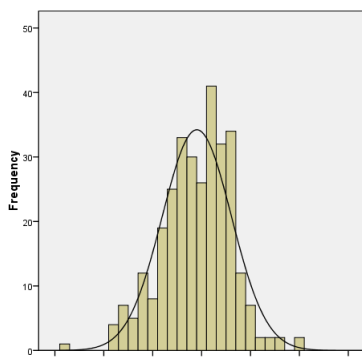**Fig 1: Normal Probability Curve (NPC) for IQ M=2.58; SD=0.97**

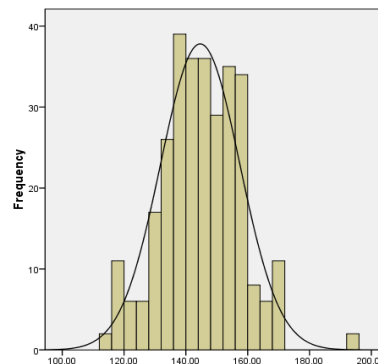**Fig 2: Normal Probability Curve (NPC) for ESI M=44.518; SD=3.54**

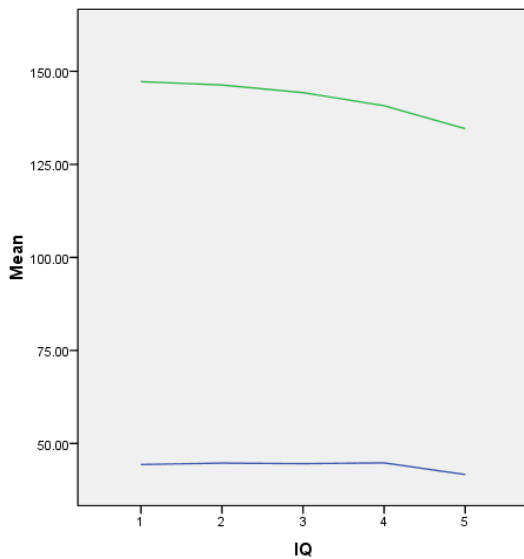**Fig 3: Normal Probability Curve (NPC) for EI M=144.63; SD=12.83**

**Fig 4: Graphical Representation of Means
of EI and ESI with respect to IQ
Upper Line – Mean of EI
Lower Line – Mean of ESI**

Table 2 reveals that homogeneity of variances in EI and ESI in all five groups of General Intelligence (IQ). The null hypotheses for Levene's test for equality of variances says as the variance in EI and ESI of five groups of IQ are equal. Since the $F=4.15$; $p<0.01$ significant for EI, hence null hypothesis is rejected thus variance in EI of five groups of IQ were unequal. While the $F=1.92$; $p>0.05$ not significant for ESI, hence null hypothesis is accepted thus ESI of five groups of IQ were equal.

Table 2 : Test of Homogeneity of Variances					
Variables	Levene Statistic	df1	df2	Sig. Level	Remarks
Emotional Intelligence	4.15	4	299	0.003	Variances were unequal for all five groups.
Ecological Sensory Intelligence	1.92	4	299	0.106	Variances were equal for all five groups.

Table 3 reveals an analysis of variance in total, between and within subjects. There was a significant difference found between General Intelligence (IQ) and EI ($F=3.60$; $p<.01$), hence null hypothesis stated there will be no significant difference between General Intelligence (IQ) and EI was rejected, which means there is a significant difference between two intelligences. There was no significant difference found between General Intelligence (IQ) and ESI ($F=2.15$; $p>.05$), hence null hypothesis stated that there will be no difference between General Intelligence (IQ) and ESI was accepted. Thus, both intelligences, general and eco-sensory have a commonality between them.

Table 3: Analysis of Variance (ANOVA)

Variables	Interaction	Sum of Squares	df	Mean Square	F	Sig.	Result
Emotional Intelligence	Between Groups	2293.76	4	573.44	3.60	.007	H_0 Rejected
	Within Groups	47587.23	299	159.15			
	Total	49880.99	303				
Eco-Sensory Intelligence	Between Groups	106.34	4	26.58	2.15	.075	H_0 Accepted
	Within Groups	3697.60	299	12.36			
	Total	3803.94	303				

Tables 4(a) & 4(b) reveal pairwise multiple comparisons of levels of general intelligence (IQ) with respect to EI and ESI to find out the exact significant differences within the variable. As stated above there was a significant difference found between IQ and EI. The significant mean differences were found only between pairs of just above average IQ (level 2) and below average IQ (level 5) with mean difference = 11.75, SE=3.83 (p<.05). There was no significant difference in EI found between any pair of IQ except the one stated above. Hence, no significant difference was found between the pair of above average IQ (level 1) with any other levels of IQ (2, 3, 4 and 5), similarly the pair of average IQ (level 3) with other levels of IQ (1, 2, 4 and 5).

Table 4(a) : Scheffe Pairwise Multiple Comparisons & Contrasts

Dependent Variable	IQ (I)	IQ (J)	Mean Difference (I-J)	SE	Sig.	Lower Bound	Upper Bound	Null Hypothesis (H_0)
Emotional Intelligence	1	2	0.90	2.39	0.99	-6.51	8.33	Accepted
		3	2.95	2.39	0.82	-4.46	10.37	Accepted
		4	6.48	3.02	0.33	-2.87	15.84	Accepted
		5	12.65	4.19	0.06	-0.33	25.65	Accepted
	2	1	-0.90	2.39	0.99	-8.33	6.51	Accepted
		3	2.04	1.69	0.83	-3.20	7.29	Accepted
		4	5.57	2.50	0.29	-2.17	13.32	Accepted
		5	11.75	3.83	**0.05**	-0.13	23.63	**H_0 Rejected**
	3	1	-2.95	2.39	0.82	-10.37	4.46	Accepted
		2	-2.04	1.69	0.83	-7.29	3.20	Accepted
		4	3.53	2.50	0.73	-4.22	11.28	Accepted
		5	9.70	3.83	0.17	-2.17	21.58	Accepted
	4	1	-6.48	3.02	0.33	-15.84	2.87	Accepted
		2	-5.57	2.50	0.29	-13.32	2.17	Accepted
		3	-3.53	2.50	0.73	-11.28	4.22	Accepted
		5	6.17	4.25	0.71	-7.00	19.35	Accepted
	5	1	-12.65	4.19	0.06	-25.65	0.33	Accepted
		2	-11.75	3.83	**0.05**	-23.63	0.13	**H_0 Rejected**
		3	-9.70	3.83	0.17	-21.58	2.17	Accepted
		4	-6.17	4.25	0.71	-19.35	7.00	Accepted

No significant difference found between IQ and ESI. Moreover, there was no pair wise significant difference found within ESI among five levels of IQ.

Table 4(b) : Scheffe Pairwise Multiple Comparisons & Contrasts

Dependent Variable	IQ (I)	IQ (J)	Mean Difference (I-J)	SE	Sig.	Lower Bound	Upper Bound	Null Hypothesis (H_0)
Eco - Sensory Intelligence	1	2	-0.37	0.66	0.98	-2.44	1.69	Accepted
		3	-0.22	0.66	0.99	-2.29	1.84	Accepted
		4	-0.43	0.84	0.99	-3.04	2.17	Accepted
		5	2.68	1.16	0.26	-0.93	6.30	Accepted
	2	1	0.37	0.66	0.98	-1.69	2.44	Accepted
		3	0.15	0.47	0.99	-1.31	1.61	Accepted
		4	-0.05	0.69	1.00	-2.21	2.10	Accepted
		5	3.06	1.06	0.08	-0.24	6.37	Accepted
	3	1	0.22	0.66	0.99	-1.84	2.29	Accepted
		2	-0.15	0.47	0.99	-1.61	1.31	Accepted
		4	-0.21	0.69	0.99	-2.37	1.94	Accepted
		5	2.90	1.06	0.11	-0.40	6.22	Accepted
	4	1	0.43	0.84	0.99	-2.17	3.04	Accepted
		2	0.05	0.69	1.00	-2.10	2.21	Accepted
		3	0.21	0.69	0.99	-1.94	2.37	Accepted
		5	3.12	1.18	0.14	-0.55	6.79	Accepted
	5	1	-2.68	1.16	0.26	-6.30	0.93	Accepted
		2	-3.06	1.06	0.08	-6.37	0.24	Accepted
		3	-2.90	1.06	0.11	-6.22	0.40	Accepted
		4	-3.12	1.18	0.14	-6.79	0.55	Accepted

Tables 5(a) & 5(b) reveal means of IQ at five levels for EI and ESI arranged from least to greatest in homogeneous subsets along with graphical representation in figs 5 & 6 respectively.

Table 5(a): Scheffe Homogeneous Subsets for Emotional Intelligence

IQ	N	Subset for alpha = 0.05 (Means arranged from least to greatest)	
		1	2
5	12	1.3458	
4	33	1.4076	1.4076
3	111	1.4429	1.4429
2	111		1.4633
1	37		1.4724
Sig.		0.056	0.386

Means for groups in homogeneous subsets are displayed.
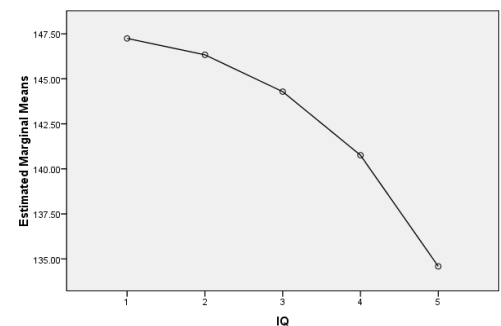
Fig 5: Homogeneous subset for EI and IQ

Table 5(b) : Scheffe Homogeneous Subsets for Eco-Sensory Intelligence			
IQ	N	Subset for alpha = 0.05 (Means arranged from least to greatest)	
		1	2
5	12	41.6667	
1	37	44.3514	44.3514
3	111		44.5766
2	111		44.7297
4	33		44.7879
Sig.		.059	.993
Means for groups in homogeneous subsets are displayed.			
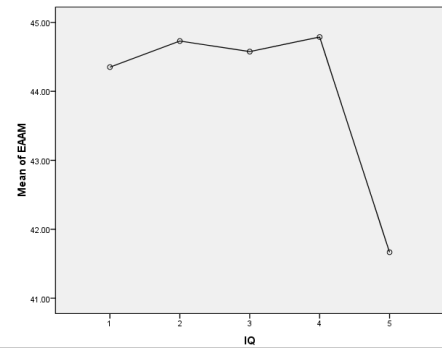
Fig 6: Homogeneous subset for ESI and IQ

Table 6 reveals the Pearson correlation among the variables under study. IQ was negatively correlated with a significant relationship found between EI (r = -0.199; p<0.01) and negatively correlated with no significant relationship found between ESI (r = -0.068) while EI and ESI were found positively correlated with a significant relationship (r = 0.294; p<0.01).

Table 6: Pearson Correlation among Variables (N=304)			
Variables	IQ	EI	ESI
IQ	1	-0.199**	-0.068
EI	-0.199**	1	0.294**
ESI	-0.068	0.294**	1
** Correlation significant at the 0.01 level			

Discussion

Summary of Findings

Intelligence has been variedly defined because of its nature and diversity found in a wide range of environments. There exists a simple, common and elegant underlying principle of evolutionary adaptation in all living beings to understand intelligence as a synergy of biological and ecological phenomenon. Thus intelligence becomes requisite component of all forms of life. The underlying intelligence found in all species is *eco-sensory intelligence*. This paper defines it as, *'uniting quanta of general intelligence among all living beings'*. The test of homogeneity of variance indicates that variances in ESI of five groups of IQ are equal. The results of the study reveal that there was no significant difference found between general intelligence IQ and ESI (F=2.15; p>.075) which suggests that both intelligences have some commonalities in them. However, the correlation found (r = -0.068; p>0.05) between two was found negative though not significant. The negative relationship of IQ and ESI reflects ruthless exploitation of natural resources by human as a part of industrial and other human-centered development, forgetting the simple fact that human species is only one among the multifarious member of the cosmos, has already wrecked havoc in the environment (Sundareswaran, 2017). The disconnection with the natural world is 'pathological alienation', which raises ecologically and emotionally disastrous (Metzner, 1995). Lifestyle changes in urban environments due to heavy concentrations of human population disconnect humans mentally and physically from the natural environment (Louv, 2008a; Schweitzer et al., 2018; Williams, 2017). In a society filled with electronic and digital devices, endless entertainment, and stress, suffer from 'inattention nature blindness' that reinforces people's experience of being separated from Nature (Zylstra et al., 2014). There has been an increase in the number of studies of connectedness to the natural environment in recent decades (Restall & Conard, 2015).

ESI is a function of an embodied integration of disposition, habits, feelings and assumptions that orient the way one perceives, understands and lives in the world. It is critically reflected in the basic premises of thoughts, feelings and actions fostering personal, social and ecological values such as connection, generosity, partnership and celebration by the individuals (Morrell & O'Connor, 2002). It can be marked by vital environmental

awareness of relationships, processes, and practices leading to the nurturance and sustainability of both human and non-human living beings. Kowal & Mangal (2021) defined ecological-sensory intelligence as *''the uniting quanta of general intelligence among all living beings''*. The results of the study reveal that there was no significant difference found between general intelligence IQ and ESI (F=2.15; p>.075) which suggests that both intelligences have some commonalities (Kowal & Mangal, 2021). In order to explain how humans relate to other living systems as a living, communicative, and creative totality within a constrained earthly framework, Bateson (1973) introduced the notion of "ecology of mind" (Martusewicz et al., 2011). According to Bateson, human embodiment in larger natural systems not only had a physical component, but it also served as the catalyst for the development of human intelligence. According to Martusewicz et al. (2011), human intelligence is an integrated component of a broader ecological mind, a complex dynamic system of communication and transformation where information is created and exchanged as various elements interact with one another.

The test of homogeneity of variance indicates that variances in EI of five groups of IQ are unequal. The results of the study reveal that there was significant difference found between general intelligence IQ and EI (F=3.60; p<.01) which suggests that both intelligences are different in nature. The correlation found (r = -0.199; p>0.01) between two was found negative and significant. Intelligence is a combination of specialized and general mental capacities, as well as hierarchical, perceptual, and information processing that pertains to the handling of and reasoning about information for diverse problem-solving activities (Carroll, 1993; Spearman, 1927, Sternberg & Detterman, 1986). Basic, discrete mental skills are at the bottom of the hierarchy, followed by wider, cohesive collections of skills at the intermediate level, and abstract thinking at the top. Since emotion and intellect are present in the majority of one's mental processes i.e., because mental functions are closely connected, virtually all mental actions have the capacity to involve both (Hilgard 1980; LeDoux 2000). The ability to reason accurately about emotions and the capacity to use emotions and emotional knowledge to strengthen thought distinguishes emotional intelligence from other types of intelligence. The bulk of emotional intelligence measures have correlations with intelligence tests of reasoning ability only of r = 0.20 or less (Barchard, 2003; Ciarrochi et al., 2000; Mayer et al., 1999; Roberts et al., 2001).

The validation research using Structural Equation Modelling showed that overall EQ and IQ are negatively related however the study also showed that there are persistent positive and negative correlations between EQ and IQ in some of the facets (Treglown & Furnham, 2023). The General Adult Mental Ability Scale (GAMA) and Bar-On's Emotional Quotient Inventory (Bar-On EQ-i) measure different constructs and are psychometrically independent of one another, according to research done on a Dutch sample (n=873) to assess the divergent validity of the Bar-On EQ-i. (Derksen, Kramer & Katzko, 2002). The results of a study using a British sample showed a negative association between EI and IQ, meaning that those with higher IQs had lower EIs (Furnham, 2016). A study on 50 medical interns in India found a negative association between EQ and IQ (Nath, Ghosh & Das, 2015).

According to the conceptions of the classic theoretical and current disciplinary references of EI, some reflections deciphered that are oriented by social awareness, organizational awareness, relationship management, communication skills, positive psychology, emotional facilitators, time management, attitude change, success, happiness and much more appropriate behavior of people in the organization. Trait EI was found to be significantly positively correlated with nature-relatedness wherein nature-relatedness could be understood in terms of our connection with nature (Gerofsky & Gerofsky, 2016). The beneficial association is explained by the biophilia hypothesis which suggests the innate need of humans to connect with nature and the positive effects of nature on well-being (Kellert & Wilson, 1993). Physical exercises such as running in natural spaces have been shown to positively impact men's emotional intelligence, psychological well-being and physical activities whereas with respect to women, it has been associated with lower emotional intelligence(Campos-Uscanga, et al 2022).

Emotional intelligence entails five key elements viz a viz self-awareness, self-regulation, motivation, empathy, and social skills. Exposure to a natural setting increases connectedness to nature and has greater psychological benefits and it significantly made participants of the study more privately self-aware and also considerably more aware of their immediate environment as compared to the participants exposed to virtual-natural conditions (Mayer, et al 2009). For students, outdoor learning or learning in a natural environment significantly

facilitated social learning and showed improvements in social skills. Further, the natural environment provided greater opportunities for interpersonal engagements which thereby enhanced social skills, self-awareness, and self-regulation hence, facilitating improvement of students' ability to EI. Although connectedness to nature exhibits a significant relationship with psychological well-being and self-awareness, however, the availability of research which exclusively provides evidence on the impact of the natural environment on emotional intelligence is scant and needs to be further explored (Mirrahimi, et al 2011). In the concept of 'Ecological Mind' by Bateson (1973, 1979) promulgates human intelligence, or mind is an integrated part of a larger ecological mind. It is a complex interactive system of communication and transformation where information is created and exchanged as various elements enter into relationship with each other (Martusewicz et. al., 2011).

Daniel Goleman is one of the people who played the role of both psychologist and science journalist, mainly working in the field of emotional intelligence and ecological intelligence. He has combined emotional intelligence with ecology by stating that ecological intelligence extends its capacity to all natural systems. The interaction between both fields grew dramatically with the excitement surrounding the identification of a potential new intelligence termed by Kowal & Mangal (2021) as ecological-sensory intelligence, which involves both emotion and reason (Damasio, 1994a, 1999).In order to increase eco-sensory intelligence and emotional intelligence in life, it is crucial to teach ecological literacy and it should be ingrained from a young age. In line with Bateson's advice, ecological sensory intelligence should be developed in order to have both systematic knowledge and emotional intelligence. In order to improve human well-being, it is also important to encourage ecological literacy, which is the capacity to perceive and comprehend the various interconnected relationships among Earth's living and non-living systems (Orr,1992). Ecological sensitivity, awareness, knowledge, and literacy are comprehensive understandings of life's interpretations that begin with the understanding that humans are only a small portion of the larger picture and that our prosperity and well-being are dependent on the health of the entire system (Capra, 2002, 2005).

Limitations and Future Research

The sample for the study was exclusively made up of men who were job seekers. The study may have included female participants to examine gender differences, particularly in eco-sensory intelligence. To include more people from the working class and older people, the sample's nature may have been made more diverse. Although environment awareness ability has been used to evaluate ESI, the concept can be extensively explored in order to be operationally defined and a new test can be devised to measure the concept.

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