

An Exploratory Study to Assess the Aggression and Loneliness amongst College Going Indian Youth

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ABSTRACT

The present study aims to assess aggression and loneliness amongst college going Indian youth. An ex-post facto design was employed. Data was collected from first year undergraduate college going students (n=103) which included both males (n1=42) and females (n2=61) from various regions of India. The participants' responses were recorded on two scales, Novaco Anger Scale and Provocation Inventory (Novaco, 2003) for assessing the cognitive, behavioral, physiological, regulatory aspects of aggression and situation-specific anger intensity, and Revised UCLA (Russel, Peplau and Cutrona, 1980) for estimating the level of loneliness using google forms. A correlational method was used to compute the degree and direction of relationship between the two variables of aggression and loneliness. A moderate, significant and inverse relationship was obtained for loneliness with anger, anger regulation and provocation for females. While, for males a moderate, significant and inverse relationship was estimated for loneliness with anger and provocation. A test for significance (t-test) was employed to assess the significance of the means obtained for females and males. The results obtained indicated a significant gender difference on the dimension of anger regulation. The results obtained also showed a significant difference in anger intensity on provocation for females and males. Substantiating the obtained results with researches, it was inferred that difference may be attributed to gender role orientation and prevailing culture-specific norms. The present study has numerous limitations such as lack of generalizability due to limited representativeness and small sample size. Future implications of the study may include initiating aggression management interventions for the participants who have scored high on aggression.

Keywords: Aggression, Loneliness, Anger, Gender-Role Orientation, Culture, Regulation, Provocation, Intervention

Aggression is defined as intentional behavior aimed at causing either physical or psychological pain (Aronson, 2004). Aggression at times has been classified as *affective* (or reactive) and instrumental aggression (Bushman and Anderson, 2001). Affective aggression is associated with negative affect (usually anger) and Instrumental aggression is goal driven relatively devoid of affect. Numerous theories have

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been proposed to study aggression and some of these theories include Frustration-aggression Theory, Bandura's Social Learning Theory, The Cognitive Neoassociationist Model and General Aggression Model.

Multitude of physiological factors also direct aggressive behavior. Research suggests that removal and lesioning of the amygdala of the hind brain from primates and humans respectively lead to reduction in aggressive behavior (Rosvold et al., 1954; Mark and Ervin, 1970). Psychoactive drugs play a major role in suppressing or aggravating aggression. Alcohol consumption has is often related to higher aggression levels in both males and females (Bushman and Cooper, 1990; Giancola et al., 2009). Benzodiazapenes and codeines have often been related to increased aggression levels (Berman et al., 1993). Moderators such as context and culture affect the expression and experience of aggressive behavior. The norms of aggressive behavior vary from culture to culture. The way an individual socializes also guides their aggressive behavior. Therefore, violence may be a product of social norms and aggressive behavior may be deemed desirable or undesirable with respect to the existing norms. There are evolutionary arguments that propose that aggression is inherently present in men for the purpose of defense and perpetuation of genes (Aronson, 2004).

There are numerous consequences of aggression. While, instrumental aggression can have a number of positive results and can lead to preservation, dominance and/or protection of the individual (Jiangong Liu, 2006), there can be negative aspects of aggression as well which can affect both the victim and the perpetrator.

Loneliness is defined as a distressing feeling that accompanies the perception that one's social needs are not being met by quantity or especially the quality of one's social relationships (Peplau and Pearlman, 1982). Loneliness is the distressing experience that occurs when a person's social relationships are perceived by that person to be less in quantity, and especially in quality, than desired (Louise Hawkey, 2015). Theoretical conceptualizations of loneliness can be divided as social-developmental approaches, social needs approach, behavioral-personality approach and cognitive approach.

There are numerous consequences and correlates of aggression. There is increasing evidence that suggests loneliness is a predictor of morbidity and mortality (Caspi et al., 2006). Loneliness is one factors that gradually lead to accelerated physiological ageing (Hawkey et al., 2007). Loneliness increases the risk of cardiovascular anomalies in young adults (Caspi et al., 2006) and it also leads to increased systolic blood pressure in middle aged adults (Hawkey et al., 2006). Loneliness has also been associated with an increased experience of depressive symptoms and cardiovascular mortality (Oslen et al, 1991). Loneliness has been associated with personality disorders and psychoses (DeNiro, 1995), suicide (Goldsmith et al., 2002), disrupted cognitive functioning and performance (Gow et al., 2007) and decreased executive control (Caccioppo et al., 2000). Loneliness also has physiological consequences such as increased blood pressure levels (Caspi et al., 2006). Loneliness has been linked to increased systolic blood pressure amongst middle aged and young adults. Elevated systolic blood pressure has often been linked to cardiovascular diseases which may lead to more sinister health issues (Caspi et al., 2006; Hawkey et al., 2010).

The objective of the present study is to assess aggression and loneliness among college going students. The following were the research hypothesis:

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1. The cognitive, behavioral, physiological, regulatory dimensions of aggression and situation specific anger intensity of college going Indian youth will have a significant gender-difference.
2. There will be a significant gender-difference in the subjective feeling of loneliness amongst college going Indian youth.
3. There will be a significant relation of aggression with loneliness

METHODOLOGY

Design

An ex-post facto design was employed as the research question was answered in retrospect.

Sample

- **Inclusion Criteria:** Individuals pursuing their under-graduate studies (approximately 18 years of age) in different colleges of India.
- **Exclusion Criteria:** Non-residents of India who have graduated or are in their senior year of college.
- **Participant Characteristics:** The sample size was 103 consisting of 62 females and 41 males. The age range of the participants varied from 17 to 26 years. The average age of the participants was 19. The participants were residents of different regions of India including Delhi, Haryana, Punjab, Uttarakhand, Uttar Pradesh and Maharashtra.
- **Sampling:** Purposive Sampling was used to gather data. Purposive Sampling is also known as judgmental sampling. It is a non-probability method where sample selection is based on the features of the population and objective of the study.

Measures

Two scales were primarily used to collect data:

1. Novaco Anger Scale and Provocation Inventory (NAS-PI)

NAS-PI is a two-part, self-report questionnaire that yields the six scores on cognitive, arousal and behavioural dimensions. These three-combined helps in calculating the total scores of angers on Novaco Aggression Scale. Further, it also yields the scores on anger regulations and provocation across a range of situations. The scale was initially developed together with violence risk project of Mac Arthur Foundation on Mental Health and Law (Monahan & Steadman, 1994). The Novaco Anger Scale (NAS) contains sixty items that can be usually finished in approximately fifteen minutes. NAS items focus on how an individual experiences anger. The NAS can be used to obtain 5 scores – Cognitive (COG), Arousal (ARO), behavioural (BEH) and Anger Regulation (REG) subscale scores and the NAS total score. The provocation inventory (PI) contains 25 items that can be completed in 10minutes or less. PI items focus on the specific anger evoking of situations that lead to anger in 5 areas- disrespectful treatment, unfairness, frustration, annoying traits of others and irritations- to produce a single total PI score.

The scale has the following dimensions: Cognitive Dimension- It assesses the role of cognition in perception and experience of aggression. Responses to anger engendering thoughts are measured across five categories justification, suspiciousness, rumination and hostile attitudes.

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Arousal Dimension: This dimension measures the physiological correlates of the experience and perception of anger. The responses are measured across four categories that include intensity, duration, somatic tension and irritability.

Behavioural Dimension: This dimension measures the overt expression and perception of anger across four dimensions including impulsive reactions, verbal aggression, physical confrontation and indirect expression.

NAS: This dimension measures the cumulative scores of the three above mentioned dimensions and assesses the experience and perception of anger.

Anger Regulation: This dimension measures an individual's ability to regulate the frequency, intensity, duration and expression of anger.

Provocation Inventory: It provides a measure for anger intensity and generality across a wide array of provocations.

Psychometric Properties

Reliability: It refers to the replicability and consistency of presently obtained scores across space and time. Internal Consistency has been measured using Cronbach's alpha. The NAS-PI has been found to have high internal consistency in several different samples. The alpha coefficients of reliability were .82 for cognitive (COG) score, .84 for arousal (ARO) score, .89 for behaviour (BEH) score, .76 for the regulation (REG) score, and 0.94 for the total NAS score. Test-retest reliability is used to measure consistency when tests are given to participants on two separate occasions. The test-retest reliability was .82, .84, .89, .76, .94 and .95 for COG, ARO, BEH, NAS and PI dimensions respectively.

Validity: It basically assess whether the test measures what it claims to measure. The validity data for NAS-PI scale was obtained from 3 principle sources which are construct validity studies, predictive validity studies and inter-scale correlations of a clinical setting.

Norms: T scores provide information about the individual's scores relative to the scores of the participants in the normative sample. The NAS-PI standardization sample was a group of 1,546 individuals ages 9 to 84, from non-clinical settings. The respondents belonged various religious, educational and/or cultural backgrounds. But there was underrepresentation of ethnic minorities.

2.Revised UCLA Loneliness Scale

A 20-item scale designed to assess one's subjective feelings of loneliness and social isolation. Participants rate each item on a continuum from 1 (Never) to 4 (Often). The revised version of the scale has been developed by D. Russell, L.A. Peplau and C.E. Cutrona (1980). This measure is a revised version of the original UCLA loneliness scale. The main objective for the revision was to include reverse scoring in 10 of the 20 items of the original scale.

Psychometric Properties

Reliability: The scale is highly reliable on both internal consistency (alpha ranging from .89 to .94) and test-retest reliability for a period of 1 year ($r = .73$).

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Validity: Validity data has been derived from various sources. Convergent validity for the scale was visible in its strong correlation with other measures of loneliness. Construct Validity was supported with significant associations with measures of interpersonal relationships and correlations between mental health and well-being.

PROCEDURE

The procedure began with construction of google forms that is NAS-PI and Revised UCLA. Once the scales were tested, the prospective participants were contacted via e-mail and various other social media platforms. Once the participants were informed about the aim of the research they were asked if they would voluntarily contribute for the research. Once they agreed they were asked to fill the form. The participants filled the form and the completed form was mailed back to the researcher. For the purpose of assessing aggression and loneliness among college going students, data was collected via google forms from a total of 103 participants which included males (N=41) and females (N=62). The obtained forms were scored according to the manual and later subjected to analysis.

Data Analysis

The present research is an ex-post facto, exploratory and correlational study with a quantitative paradigm. Quantitative data analysis was done using the following parametric techniques:

- Means and Standard Deviations for all the dimensions of NAS-PI and revised UCLA scale were calculated for both females and males. The obtained means and standard deviations were then interpreted.
- Pearson's r was calculated to assess the relationship between different dimensions of aggression and loneliness
- To further test the significance of the obtained means across the two genders (males and females) t-test was employed. The results were further interpreted, and a critical analysis of its generalizability was done by substantiating it with the existing researches. Finally, a conclusion was drawn for the present research and its future implications were discussed.

RESULTS AND CONCLUSIONS

Figure 1: The Figure Illustrates the Means of Males and Females on Nas-Pi

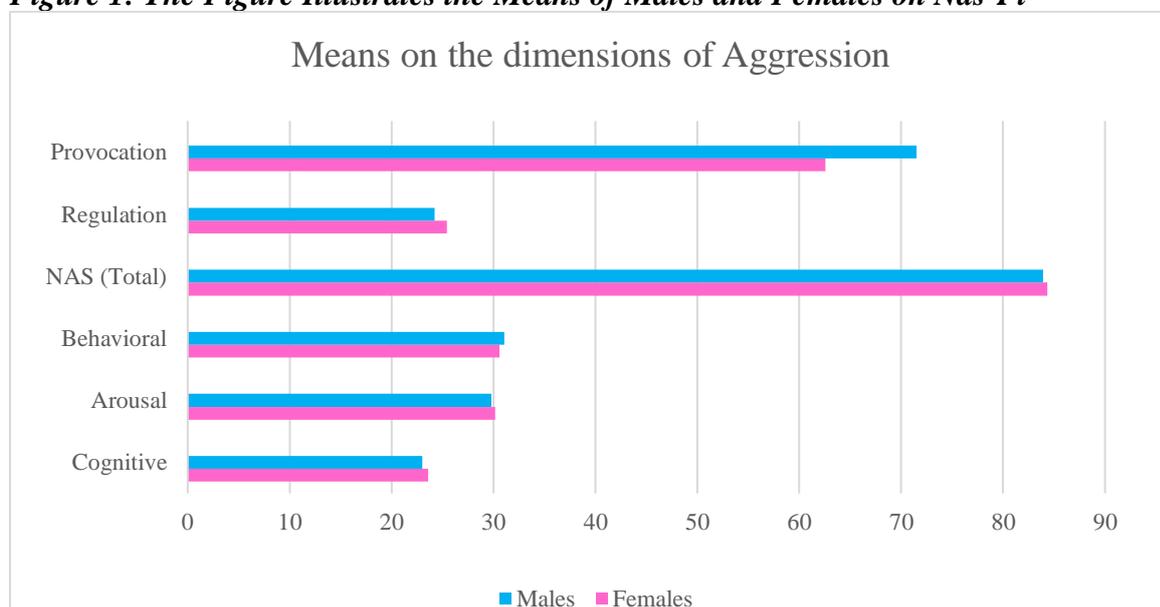


Table-1: t-value between dimensions of aggression in females and males

Dimension	t-obtained	t-crit (alpha=0.05)	t-crit (alpha=0.01)	p-value	Ho (Accepted/Rejected)
COG	0.75	1.994	2.648	0.45789	Accepted
ARO	0.54	1.984	2.626	0.591764	Accepted
BEH	-0.9	1.984	2.626	0.370261	Accepted
NAS	+0.35	1.984	2.626	0.727068	Accepted
REG	2.72	1.994	2.648	0.008347	Rejected**
PI	-3.23	1.984	2.626	0.001671	Rejected**

** - significant at both 0.05 and 0.01 levels of significance

Table-2: t-value of loneliness between females and males

Dimension	t-obtained	t-crit (alpha=0.05)	t-crit (alpha=0.01)	p-value	Ho (Accepted/Rejected)
Loneliness	-1.04	1.984	2.626	0.300823	Accepted

Table-3: Correlation between aggression and loneliness in Males and Females.

Aggression	Loneliness (Males)	Loneliness (Females)
COG	0.054	0.096
ARO	0.288	0.18
BEH	-0.093	0.08
NAS	-0.307*	-0.332**
REG	-0.032	-0.305*
PI	-0.305*	-0.299*

*Significant at 0.05 level of significance, ** 0.01 levels of significance.

Aggression is a behavior characterized by verbal or physical attack, yet it may be appropriate and self-protective or destructive and violent (Perry, 2007). NAS-PI is a two-part; self-report questionnaire was used to assess the same. The average mean on the cognitive dimension of NAS-PI points towards low levels of anger-engendering cognitions. Cognitions are the connecting link between intrinsic perception and physiological or overt expression of anger. The cognition score is analyzed across four categories which include *justification, suspiciousness, rumination and hostile attitude* (Novaco, 2003). In the present study there was no significant difference between males and females with respect to anger-engendering cognitions.

The average mean on the arousal dimension of NAS-PI points towards average levels of anger-arousal. Anger arousal is marked by physiological activation of various bodily systems such as the cardiovascular, limbic or the endocrine system. Arousal at times can exacerbate the response to a provocation and it can further intensify the experience of anger (Novaco, 2013). This dimension analyses aggression based on four categories which include *intensity, anger duration, somatic tension and irritability*. In the present study there was no significant difference between males and females with respect to anger arousal.

The average mean on the behavioral dimension of NAS-PI points towards average levels of angry behaviors. In the cognitive perception of anger there is an indirect tendency of the individual to act in a confrontational manner towards the object of provocation. Therefore, it is necessary to assess the behavioral manifestation of anger (Novaco, 2013). This dimension is analyzed across four dimensions which include *impulsive reactions, verbal aggression*

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and physical confrontation. In the present study there was no significant difference between males and females with respect to angry behaviors.

The average mean on the cumulative Novaco Aggression Scale dimension (combination of cognitive dimension, arousal dimension and behavioral dimension which points towards average levels of cumulative anger. In the present study there was no significant difference between males and females with respect to the cumulative anger.

The average mean on the anger regulation dimension points towards average levels of anger regulatory behavior. This subscale, basically measures the adaptive aspects of anger. A person's capacity to regulate the frequency, intensity, duration and experience of anger is reflective of self-control and personal efficacy (Novaco, 2013). In the present study there was significant difference between males and females with respect to anger regulatory behavior.

The average mean points towards average levels of anger intensity and generality across a range of provocations. This scale provides a situation specific account of anger (Novaco, 2013). This is analyzed across various categories of provocations such as *disrespectful treatment, unfairness, frustration, annoying traits of others and irritations.* In the present study there is a significant difference between males and females with respect to anger intensity and generality across a range of provocations.

Loneliness is the distressing experience that occurs when a person's social relationships are perceived by that person to be less in quantity, and especially in quality, than desired (Hawkey, 2015). Revised UCLA scale was used to assess the same. The average mean of females indicate that they feel moderately lonely as these scores fall in the range of 30-70 which pertain to moderate feelings of loneliness on the Revised-UCLA Scale. A recent study investigating loneliness among Taiwanese undergraduate students revealed that males experience more global and social loneliness than females (Chen and Chung, 2007). Contrary to the existing research the aggregate of scores obtained (44.853) for males in the present study is indicative of moderate feelings of loneliness as it falls in the range of 30-70. The obtained means point towards a pattern of similar subjective experience of loneliness in both the genders. In the present study there was no significant difference between males and females with respect to subjective feelings of loneliness.

The correlation between different dimensions of aggression and loneliness have been analyzed, significant and inverse correlations exist between loneliness and the combined scores of aggressions (NAS) (at both 0.05 and 0.01 levels of significance), anger regulation (REG) and provocation (PI). However, in males a moderate, significant and inverse correlation exists only between loneliness and two dimensions of the NAS-PI (NAS and PI) at 0.05 levels of significance. While there is no significant correlation in any of the genders on various dimensions such as cognitive, arousal and behavioral. A negative correlation between total anger and loneliness is indicative of the fact that loneliness and aggression have an inverse relationship for both males and females.

The present study has several limitations which include absence of a representative sample due to time and economic constraints. The questionnaire was employed through digital means; hence it leads to exclusion of individuals who lack an access to the internet. The data is limited in terms of it being limited to urban and semi-urban spaces and in terms of gender. This further leads to generalizability of the obtained results to only a miniscule fraction of

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the population. Since, the data was collected digitally there are possibilities of social desirability on the part of the participants. The distribution of the present data is also skewed as the number of males and females were unequal by a statistically negligible margin. But this skewed distribution may have led to different results while testing of the significance.

These loopholes can be mended in the future by carrying this study forward and administering the same measures to a more inclusive sample. Further, the present study can have many implications of the future. Interventions for aggression management can be developed for the participants who have higher levels of the same. Another important implication of the present research could be to educate and create awareness about the gendered nature of prevailing norms of the traditional cultures and how it inhibits, exaggerates and/or filters expression of anger across the gender spectrum. Additionally, the research can be used to further study the diverse ways in which anger is expressed through aggression. Covert expression has not been studied in substantial amounts. Hence, its effects on well-being and mental health could be studied. A meta-analysis of the existing literature on loneliness could be done. Its relationship with other variables such as relational aggression, physiological health etc. could be analyzed and reviewed. A cross-cultural study assessing the relationship between loneliness and aggression amongst youth could help view the subject at matter from different perspectives.

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Conflict of Interest

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