

A Comparative Study of Aggression between Males and Females

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Abstract: Buss is the most prolific writer and theorist in the psychology of temperament. Buss took upon the very basic temperament trait: aggression. The behavior relevant to personality can be analysed into their components. There are several ways of partitioning particulars, each offering its own enlightenment. Recall that the content are of aggression will be used to provide concrete examples of the various distinctions among behaviours. A.H. Buss and M. Perry (1992) gave four types of aggression – anger, hostility, physical aggression and verbal aggression. A total of 200 subjects (97 females, 103 males) were used in the study. The sample consisted of male/female postgraduate selected randomly from the cross-section of the society. The age of subjects and reported themselves to be in sound mental and physical condition. The objective of this study is to find out the gender differences in aggression. To achieve this objective the items of aggression of EPP (Eysenck personality profiler) were to be used. For measuring these differences MEAN, S.D & t – test were employed. T – test revealed that males are more aggressive in experimental aggressive behavior than females and there is no significant difference in anger, hostility, physical aggression and verbal aggression between males and females.

Key Words: Temperament, Anger, Hostility, Physical Aggression, Verbal Aggression.

I. Introduction

The variability in human behaviour is so immense that it has been a challenge to psychologists who study individual differences. Evolutionary theory points out that the humans are mammals, specially, primates and, as such, are biologically similar to the three great apes: orangutans, gorillas and chimpanzees. Although we obviously differ from the great apes in important ways – for instance, our language, imagery, and thought processes are far more advanced than theirs, we do share the same sense organs, many ways of perceiving and learning, many facial expressions, and various behaviours. Like other primates, we follow a circadian rhythm of activity, which typically reaches a low point at night and peaks during the day, especially before feeding; we also exhibit intense bursts of energy in aggressive, escape and sexual behaviour, or in rollicking play.

Aggressiveness trait has a genetic component. It evolved because it has adaptive value; that is, they help ensure survival and reproduction. A closer examination suggests that moderate levels of this traits are more likely to be adaptive than extreme levels (Zukerman, 1990), e.g. extreme fearfulness and a complete lack of activity obviously have severe negative consequences. In ordinary English usage, a temperamental person is someone who is high-strung, easily excitable, prone to quick changes in mood, or fickle. The most typical definition of temperament was proposed by Thomas and Chess (1986). Temperament by their definition, can be equated to the term behaviour style. Each refers to the ‘how’ rather than the ‘what’ or the ‘why’ of behavior by the definition.

“Temperament is a phenomenological terms in which the categorization of any individuals is derived from the constellation of behaviour at any one age period. These behaviours are the result of all the influences, past and present, which shape and modify these behaviours in a constantly evolving interactive process”. Temperaments are broad personality dispositions rather than specific personality traits. How general behavioural dispositions develop into specific traits depends on how these dispositions interact with the environment the person grow-up in finally. Individual differences in temperaments can usually be seen in the first year life and persist throughout a person and lifetime (Buss, 1991). Although researchers agree that temperaments are general behavioural patterns that can often be seen in newborns, they do not always agree on how to identify and classify the different kinds of temperaments they observe (Caspi, 1998; Shiner, 1998).

Buss and Perry (1992) gave four types of aggression – anger, hostility, physical aggression and verbal aggression.

1. Physical Aggression: Most aggressive acts are direct. A person attacks a victim. A major kind of direct aggression is physical aggression. In this, beat with fists, slap with hands, kick with feet, scratch with nails, or even bite with teeth. As tool users, we can escalate the hurt or harm with such weapons as knives, spears, axes, arrows, clubs and a variety of guns. Physical aggression is ordinarily accompanied or preceded by facial expressions and bodily preparations for attack. These accessory behaviours, though their link with

aggressive cuts, can come to signal forthcoming aggression. As such they constitute threat of physical aggression. Physical aggression is another category of attack, seen mainly in humans, is indirect aggression, in which the victim typically is not present but is harmed in a round about way. The aggression may leave behind a booby trap that explodes when the victim triggers it. The attacker may get at the victim by harming the latter's wife, husband, or child. Other options are setting fire to the car, spilling garbage on the town, knocking down a fence, or trashing the bedroom.

2. Verbal aggression: An alternative to physical attack is verbal aggression. We can curse, jeer, censure, retrieve, chide, deride, mock, ridicule, and taunt others, often causing psychological distress, anxiety, or loss of self-esteem. The verbal content of the attack is often accompanied by such stylistic – paralinguistic features as yelling and screaming. And threat can be delivered verbally, a promise to deliver bodily or psychological harm. A few years ago, a television evangelist publicly rebuked another television evangelist (direct verbal aggression). Verbal aggression's another category of attack is indirect aggression, include malicious gossip about someone or the deliberate spread of lies (Cheating, stealing, infidelity) that will ruin the victim's reputation. In political contests, such indirect aggression, especially in television advertisement, now seems as common as the more direct verbal aggression that occurs in political debates. There is also the threat of indirect verbal aggression. This is the ploy of the blackmailer who, unless paid off, promises to publicize facts of even fabrications that would dishonor the victim's family.

3. Anger: Anger, the emotion closely linked to aggressive acts. Anger involves physiological arousal. Heart rate and breathing accelerate, blood pressure rises, blood is directed away from the gut to the large skeletal muscles, and sugar is mobilized in the blood. These are the preparations for the massive muscular effort that occurs in physical aggression (Cannon, 1929). For anger is often a precursor to aggression. As an emergency reaction, physiological arousal cannot last long. It sets in motion homeostatic mechanisms that eventually restore the body to its resting state. Anger also has an expressive aspect. The brows are knitted, the nose is slightly flared, the mouth is grim or the teeth are bared, and the fists are clenched. The facial characteristics of anger are recognized in all the cultures in which it has been studied, which suggests that these features are universal (Ekman and Friesen, 1971). Aggression after occurs when a person is angry. Such aggression was originally called angry aggression (Buss, 1961). Aggression can occur in the absence of anger, thus with little or no physiological arousal.

4. Hostility: Hostility is the cognitive component of aggression. Cognition includes a wide range of mental activities: thoughts, attributions, memories, fantasies, and planning. We are sometimes aware of these covert processes, and at other times not. Hostility consists of dislike, ill-will and resentment towards others. Hostility also involves suspicion that others are lurking or that they mean harm. At first glance, it might not seem appropriate to place both resentment and suspicion under the heading of hostility but there is an empirical basis for doing so. Hostility may accompany anger as an immediate reaction to a current situation. The negative cognition of hostility, however is usually await later reflection. Hostility can occur even when there have been no prior attacks or flights, real or imagined. Others are disliked for no other reason, than that they are different, which of course is an example of prejudice, widespread hatred of others may occur simply because of their different nationality, religion, skin colour, others.

Chronology of Buss's aggression trait of Temperament

1957	Buss and Durkee	Published self report aggression questionnaire .
1961	A.H Buss	Construe the temperament trait of aggression. Such aggression was originally called angry aggression.
1961	A.H Buss	Tried an experimental and objective measure of aggression called 'Aggression machine'
1975	Buss and Plomin	The self – report questionnaire to tap all the three components is the EASI – 3 , and the items were assigned to scales a priori and not empirically.
1984,86	A.H Buss and Robert	They gave the emotionality scale of the EAS

	Plomin	temprament survey .
1992	A.H Buss and M.Perry	A self – report , recent aggression questionnaire that is revised and updated version of a widely used older one (Buss and Durkee , 1959).

Gaps, Contradiction, Fallacies In Buss’s Aggression Trait Of Temperament

Buss includes only one component of aggression i.e. anger, which he includes in the basic component of the emotionality. Buss published gave a self - report aggression questionnaire with Durkee in 1957, whereas aggression is taken to be one of the basic temperaments in his early theorization having four different components. These four types are – physical aggression, verbal aggression, anger and hostility. Buss also gave a measure/apparatus of aggression called “Aggression machine”. Even recently Buss and Perry (1992) gave an aggression questionnaire that includes physical aggression, verbal aggression, anger and hostility and is a revised and updated version of widely used older one of Buss and Durkee, 1957. Thus, it needs to find the correlation of aggression and its components with other components of emotionality. Here, the emotionality refers to –ve effect, specifically, being distressed or upset. He gave the EAS temperament survey for adult in 1984, 86 and gave three components of emotionality, anger, fear and, distress.

Further, the item pool can also be validated for some of the trait with other psychometric measures, for example, EPP (Eysenck and Wilson, 2000) – Eysenck Personality Profiler that also measures similar traits.

II. Methodology

EASI measure is used to assess the factorial validity of temperament. EASI stands for emotionality, activity, sociability and impulsivity.

Sample:

Researchers used a total of 200 subjects in the present study. Sample area was Maharshi Dayanand University situated in Rohtak city of Haryana. The sample consisted of male/female postgraduate selected randomly from the cross section of the society. The age of subjects ranged between 18 to 29 years. All of subjects belonged to the same culture/society and reported themselves to be in sound mental and physical condition.

Design:

On the basis of different researches conducted in this field a battery of various experimental, physiological and observational psychometric measures were selected and modulated as per our own requirements. Each subject was repeated on these measures one by one.

Total nine tasks were selected. The sequence and order of measures was controlled by independently randomizing for each subjects. The following fourteen measures were used in the present investigation.

Physiological Measures

1. Blood Pressure (BP)
2. Pulse Rate (PR)
3. Galvanic Skin Response (GSR)

Experimental Measures or Laboratory Measures

4. Aggression Machine.
5. A word 'Zdravstvuyite' - As a measure of Anger.
6. Aversion therapy apparatus – an instrument to induce

Psychometric Measure

7. Buss's items of Emotionality (anger).
8. EPP's (anger).
9. Aggression questionnaire as given by Arnold H. Buss and Mark Perry.

Final Study

Each subject was tested individually on all the measures which took approximately one hour. The whole session consisted of three physiological, three experimental tasks and three psychometric tasks. The three questionnaires were administered separately sometimes before and sometimes after the experimental session.

Apparatus/material for the tasks were arranged on different tables in a neat and clean room. For a few experimental tasks, temporary arrangements were done each time. All the tasks were administered on each subject one by one in an experimental lab. Inter task interval was about 2-3 minutes. So that experimenter can make necessary arrangements for the next task and subjects takes rest before participating in the next experiment.

When subject was brought to the lab. First of all rapport was established with subject. General information regarding his/her name, age, education and address was collected. Then a set of general instructions was given to subject. "You are welcome to the laboratory of the psychology department. You are here to participate in a number of experimental tasks with some rest pauses to avoid fatigue. These are related to ability/skills, temperament and psychological and other physiological mechanisms. Before starting each task. You will be given information about the tasks familiarity of the apparatus etc. and some instructions. You have to follow these instructions. There is nothing to worry about. All the information collected from you will be kept secret and will used for research purpose only. Each tasks is different from another. So you won't get bored, ... rather you will enjoy doing these tasks. You are here to co-operate in a scientific endeavour and the success of the study heavily depends on you." I'm sure you will bear with us. Materials, procedure and scoring for each measures has been described separately. A description of the measures used and procedures followed is as follows:

III. Physiological Measures

1. Blood Pressure

Measuring material BP involves two independent measurement: a measurement of the peak pressure during the period of heart contraction, the systole and a measurement of the minimum pressure during the periods of relaxation, the diastoles. Blood pressure is usually expressed as a ratio of systolic over diastolic blood pressure in millimeter of mercury (mm Hg). The normal resting pressure for an adult is about 120/80 mm Hg.

The effect of activation is an increased sympathetic nervous system outflow which leads to elevations of systolic and possibly also diastolic blood pressure.

2. Pulse Rate

One of the defense reactions (cardiovascular component) of the body consists of increased heart rate. Whereas, the normal pulse rate of an adult is 72 beats/min; under state of arousal this value is likely to shoot up.

Setting and Apparatus

Omron compact digital wrist blood pressure and pulse rate monitor with fuzzy logic was used. It has an automatic pump actuated pressure and an automatic pressure release valve and uses two types LR03 (AAA) batteries.

Procedures

The recording of blood pressure was not continuous, but time sampled. Before beginning recordings, the following instructions were given to the subject" sit comfortably and calmly. Breathe deeply 5-6 times, relax your shoulders and arms and entire body. Align the wrist on which I will put the cuff with the level of your heart, while gently supporting the left hand with the right hand. Don't make any movements. After that the wrist cuff was strapped on to the left wrist of subject. As this card could be a cause of error in measurement." Care was taken to keep the cuff on bare skin and it also kept in mind that clothing on the arm was not tight, so as not to exert any kind of undue pressure. Once the preparation was completed, the measurement was begun. Then instrument was switched on by pressing the start / stop button. This button is released when the display lights up. All display symbols appear for about 2 sec. This is the initial LCD test. The display symbols disappear and measurement begins when pressure starts. When measuring was over, the blood pressure readings and pulse rate were displayed alternately. After measurement was completed start/stop button pressed to switch the instrument off.

After each recording, the subject was given a rest pause of 3-4 min. before taking the next measurement.

Response Scaling

When the OMRON COMPACT DIGITAL WRIST blood pressure and the pulse rate was off and showed the value of the BP and the PR. that it was noted down.

3. GSR (Galvanic Skin Response)

Whenever there is discrepancy between current and previous input: orienting response (OR) is evoked. Any continued action of a stimulus results in inhibition of the non-specific reticular formation responsible for the generalized OR. This process is known as OR- Habit -uation probably the best known OR is the skin

resistance response or SRR. SRR is considered as an indicator of emotional arousal. It is due to an increase in sweat gland activity in the skin, causing a fall in the electrical resistance of the skin that begins from 1.5 to 4.00 sec.

Setting and Apparatus

The skin resistance was recorded by attaching 2 silver disk electrodes with electrode jelly to the palmer surface of the first finger of subjects left hand. For taking measurement of skin resistance. Automatic digital multi meter PP 9007 was used. PP 9007 is microprocessor controlled 4½ digit multi meter and is standardized by PHILIPS. Electrodes were attached to subject for 5 minutes. prior the expert in order to allow time after the electrode jelly to hydrate the skin. Subject was seated in a chair. Apparatus were placed behind his/her to keep subject unaware about the procedure. The instrument was made ready for use after connecting function was selected. Auto range mode was selected from auto/manual button. Other ends of electrodes were connected to O and v ^ mA terminals.

Procedure

When subject was resting, apparatus was set in the required fashion. The subject was instructed, “to sit comfortably and calmly and not to make any movement by your left hand. Except this, you have to do nothing.” Then instrument was switched on by pressing push button switch power on/off. After switching on, the display shows CAL for about 15 seconds. In this period the PP. 9007 carries out internal calibration procedure. After the calibration procedure PP. 9007 jumps to the selected function. Then display showed the skin resistance in K or m-[^]. The readings were taken till the resistance reach at a base level i.e. when there is no fluctuation. After that the instrument was switched off and electrodes were removed from subjects finger and that were cleaned by cotton.

Scaling

When the automatic digital multi meter PP 9007 showed a fix value of skin response then, it was noted down.

IV. Experimental Measure

4. Aggression Machine

It is used for measuring physical aggression of the subject. It is a laboratory instrument physical aggression presents a particular challenge to researchers. There is ethical problem of not allowing anyone to suffer hurt or harms, and the practical problem of quantifying physical aggression. And when subject know that aggression is being investigated they may alter their typical behaviour. One solution to these various problems is an apparatus / procedure called “Aggression Machine” (Buss, 1961). For measuring aggression by this aggression machine the concept formation task used which was constructed and standardized by Dr. M.C. Joshi, Reader in Psychology, Banaras Hindus University.

In this studying the effect of the sex and personality of the experimenter on speed of learning. One potential disadvantage of the aggression machine indeed of any laboratory procedure ,is artificially, for no uses electric shock as a means of aggression in everyday situation. However, the procedure does square with the definition of aggressive acts as those that hurt other or attempts to do so.

Setting and Apparatus

The aggression machine was used. The apparatus has two sides. The experimenter’s side (the real subject) and the victim’s side. And the third one who noted down the intensity of the current given by the experimenter (the real subjects) to the victims.

Both the subjects in which one is experimenter and one is victim were seated on the chair and the instrument was placed on a table in front of the subject. Instrument was adjusted for convenient viewing and also give a concept formation task to the experimenter, by which he asked the answer of the items to the victim. Incorrect responses were to be followed by the electric shock. The intensity chosen by the subject i.e. the experimenter. Two wires of the instrument, were bind on both of the wrist of the subject i.e. victim.

Procedure

Both the subjects were given rest interval. In that times arrangement was done for the experiment. The following instructions were given to the experimenter. “It is an instrument. It has two sides: experimenter’s side and the victim’s side. There are ten shock buttons which are arranged in order of increasing amperage of electric shock, which is delivered to on finger (attaching the electrode to a finger avoids any possible danger in the use of electric shock which is well within safe level in any event). You use concept formation task and instruction are given on this.

In the concept formation task, the experimenter ask to the victim, that which options is different in the given options of the items. Incorrect responses are followed by electric shock. The intensity chosen by the experimenter.

After giving instructions, to the experimenter. Some instructions were given to the victim about the concept formation task, that you tell him/her right answer of the given options of the items.

After giving the instruction to both of the subjects the experimenter asked the right answer of the items to the victim. If the answer is wrong, then experimenter gave the electric shock to the victim by pushing red button of their own choice. The same procedure was repeated for ten items.

Response Sealing

After completing the task, the current intensities, which were given by the experimenter to the victim were noted down by the third one. (experimenter.)

5. Anger

Anger is an immediate negative reaction to a current situation. For measuring anger a word “Zdravstuyitye” was used. It is a Russian word which means ‘Namastae’. It was taken or selected because it was difficult to pronounce and subject get easily irritate or easily showing anger during pronounce again and again. When he/she leave the word to pronounce, then the card on which Zdravstuyitye word written was taken from him/her and stop the stop watch.

Setting

For producing the anger of emotionality. A word ‘Zdravstuyitye,’ was used. It was self made task and standardized on 10 subjects, before using as on an experimental measure. ‘Zdravstuyitye’ word was written on a card and also the stopwatch re-set to 0000 Mscs by pressing re-set switch.

Procedure

Subject was given 2 minute to relax and then setting for the task was completed. A card on which ‘Zdravstuyitye’ word was written given to the subject and following instruction’s were given to the subject. It is very interesting task and you enjoy doing this. You will have to read this word correctly only. If you will not read this word correctly then you read this again and again. Before completion of this task when you want to leave this task you may leave this.

After giving instructions, the subject started to read the word ‘Zdravstuyitye’, then also started the stop watch to record the time taken by the subject. When subject read the word he/she stopped and said that he/she was not reading correctly and try again.

Response Scaling

After leaving the word by the subject then the stop watch was stop and noted down the time taken by the subject during completion of the task. At a time subjects BP, PR, GSR, reading was also noted down.

6. Eysenck Personality Profiler (EPP V₆)

The Eysenck Personality profiler is a direct development of the Eysenck personality questionnaire. The EPP is based on a solid line of questionnaire development. The EPQ is itself a development of various earlier personality questionnaire, it differs from the latest of these (the EPI, or Eysenck Personality Inventory) by including an additional scale, and by having made improvements in other scales. It measures three important personality dimension: extraversion, neuroticism and psychoticism. It also includes a lie scale. The EPP consists of total 440 items. Answers are to be given is yes/no/cannot say from. Many psychologists have used EPP in studying relationship among personality and temperament traits. But in the topic “factorial validity of the EASI measure of temperament” only activity, sociability, aggression, anxiety and impulsiveness traits are to be used. Thus, the EPP’s total 100 items are to be used.

Setting and Materials

EPP V₆ items of activity, sociability, aggression, anxiety and impulsivity was used. Subject was provided the questionnaire to fulfill and was asked to answer freely without any pressure.

Procedure

EPP was administered on the subject. Then the instructions were given to the subject. “The Eysenck Personality Profiler asks you as number of questions about how you see yourself, your habits and experiences.

You should work quickly giving your most truthfully reply. There are no right or wrong answers, we are only interested in your personal responses, change and adopt this part according to which scales are actually

being administered. Then say, to begin. We ask you to give a few basic personal details following which you will start the questionnaire.” After giving questionnaire to the subject then subject begin to complete the answer sheet of the questionnaire. Administration of the questionnaire is not limited.

After the profiler had been completed thank the subject for attending and check that all questions have been answered correctly. Subjects should have their attention drawn to any omissions or unclear answers.

Scoring

The score for each subject on each trait within the EPP, is simply calculated. Add up the scores of the questions, separately for the yes, no, can't say for each trait. A 'yes' answer scores 1 points, a 'No' answer scores 1 point and a can't say response is allocated 0 points. Use the following formula to compute the trait scores:

$$W + (X - G)$$

V. Psychometric Measure Of Emotionality

7. Buss's fear measure of temperament

It was a self-report questionnaire that assess anger tend to be global. A recent questionnaire has these items. Which cluster together on being factor analyzed. It was given by Buss and Plomin (1984).

Setting and Material

A self-report questionnaire was used. Subject was given the questionnaire to fill, sometimes before and sometimes after the experimental session.

Procedure

Self report was given to subject for administration and was asked to answer freely and honestly. Instructions were provided on the questionnaire itself. Filled questionnaire was taken from the subject.

Scoring

Scoring was done by using 5-point scale, rate each of the items using the following scale.

1. Not at all characteristic of me.
2. Somewhat uncharacteristic of me.
3. Neither characteristic nor characteristic of me.
4. Somewhat characteristic of me.
5. Very characteristic of me.

8. Buss's Distress and Anger Measure of Temperament

Buss's items of anger were given in EAS temperament model (Buss's Plomin, 1984, 1986).

Setting and Materials

Anger item was given in EAS temperament model. Subject was given the questionnaire to fill after the experimental session.

Procedure

Distress's items in the EASI scale were given to subject for administration and was asked to answer freely and honestly. Instructions were provided on the questionnaire itself. Filled questionnaire was taken from the subject.

Scoring

Scoring was done by using 5 point scale.

9. The Aggression Questionnaire

A new questionnaire on aggression was constructed by Arnold H. Bus and Mark Perry in the university to texas at Austin. It measure four type of aggression: physical aggression, verbal aggression, anger and hostility. The aggression questionnaire consists of 29 items. In the aggression questionnaire physical aggression consists of a 9 items, verbal aggression consists of 5 items, anger consists of 7 items and the hostility consists of 8 items. The scales showed internal consistency and stability over time. Men scored slightly higher on verbal aggression and hostility and much higher on physical aggression. There was no sex difference for anger. The various scales correlated differently with various personality traits. Scales scores correlated with peer nomination of the various kinds of aggression. These finding suggests the need to assess not only overall aggression but also its individual component.

Setting and Material: The aggression questionnaire of English version was used.

Procedure: The aggression questionnaire was given to the subject to fill. Instructions were given on the questionnaire. Filled questionnaire was taken from subject.

Scoring: In this using 5-points scale to scoring which indicate how uncharacteristic or characteristic each of the following statement is in describing. In which:

1. Is showing extremely uncharacteristic of me.
2. Is showing somewhat uncharacteristic of me.
3. Is neither uncharacteristic nor characteristic of me.
4. Is somewhat characteristic of me.
5. Extremely characteristic of me.

VI. Results And Discussion

The present study was aimed to study the aggression level on males and females. For achieving this objective mean, S.D and t-test were employed. Firstly, descriptive statistics (Mean and Standard deviation) for data of both sexes were computed. Owing to diversity and heterogeneity of scaling of measures, the whole data were therefore converted into T – score for the purpose of the normalization of the data, so that, the multivariate analysis could be possible. T – score are standard score with its mean as 50 and standard deviation as 10 (Guilford and Fruchter, 1981). Scale transformation was monotonic for all the variables, hence the variance remained same. Significance of differences between means were verified on original scores.

Table I
Mean, SD and t – values for six variables, where females exceed (df = 198)

	Sr. no.	Variables Name	Sex	Mean	s.d	't' value	Sig.
20	1.	Pulse rate, in normal condition	1	79.7282	12.0759	-2.406	0.017
			2	84.2165	14.2670		
26	2.	Time, to induce anger	1	192.1068	87.4352	-2.929	0.004
			2	231.3402	101.8105		
29	3.	Pulse rate, after producing anger	1	80.3689	10.3998	-2.716	.007
			2	84.5155	11.1898		

Mean differences were tested through t – test between male and female subjects. It revealed significant difference with less than .05 level of probability for three variable where females were significantly high in basal pulse rate in normal state than males (84/minute v/s 79/minute), they too had significantly higher pulse rate after inducing anger. Females took more time to express anger than males. Females took more time to be angry and expree through higher heart rate (pulse rate).

Table II
Mean, SD and t – values for variables where males were significantly higher (df = 198)

	Sr. no.	Variables Name	Sex	Mean	S.D	't' value	Sig.
4	1.	Agg., items of EPP	1	16.0971	6.4542	2.561	0.011
			2	13.9588	5.2518		
18	2.	B.P (systolic), in normal condition	1	132.4175	16.2490	5.398	.000
			2	120.5670	14.6983		
19	3.	B.P (diastolic) in normal condition	1	94.6505	11.6001	3.501	0.001
			2	87.4021	17.2836		
27	4.	B.P (systolic), after producing anger	1	141.0388	17.5247	7.909	.000
			2	123.4639	13.5070		
28	5.	B.P (diastolic), after producing anger	1	94.9417	12.3430	5.881	.000
			2	84.8454	11.9097		
43	6.	Experimental aggressive behavior	1	.4417	.6097	2.8108	.005
			2	.2599	.1893		

For 6 variables males were found to be significantly higher than females. The t – test revealed that males were high on aggression (EPP) than females. Given the situation, they too produced greater instrumental aggression (when in an uninformed mock electric shock delivery to a person – Buss machine) in comparison to females. Their heightened sympathetic arousal was confirmed by higher basal blood pressure (132/94) than females (120/87) in normal state. Males too maintained this heightened blood pressure pattern when they were put in situations of (induced) anger in comparison to females. However diastolic blood pressure significantly higher than females (140 v/s 126 and 95 v/s 85 Hg/mm).

So males were not only high on traits of aggression, they too experienced an associated physiological pattern and even express it instrumentally.

Table III
Non – significant Mean differences in Variables between Males and Females along with t – values and SD (df = 198)

	Sr. no.	Variables Name	Sex	Mean	S.D	't' value	Sig.
7	1.	Aggression questionnaire given by A.H.Buss & M.Perry	1	70.9320	14.8147	-0.83	0.408
			2	72.6392	14.2414		
21	2.	G.S.R, in normal condition	1	1.2438	1.3876	-1.231	.22
			2	3.0525	14.8425		
30	3.	G.S.R, after producing anger	1	4.7440	22.9708	-0.035	.972
			2	4.8596	23.8320		
47	4.	Anger, items of Agg.Ques.	1	17.4466	3.9574	-0.835	.404
			2	17.9175	4.0121		
48	5.	Physical aggression, in agg. Ques.	1	20.9223	4.8319	0.399	.69
			2	20.6598	4.4438		
49	6.	Hostility, in agg. Ques.	1	19.1845	5.7339	1.396	.164
			2	20.3505	6.0760		
50	7.	Verbal aggression, in agg.Ques.	1	13.5534	3.7904	-0.481	.631
			2	13.8144	3.8819		
8.	8.	Anger,items of EPP	1	12.0291	1.8066	-0.133	0.894
			2	12.0691	1.6634		

For rest of the variables significant sex differences did not emerge. These include mainly aggression measures of Buss and Perry, G.S.R under normal state (basal).

By and large, profound sex differences were observed which attest to the significant source of variance in six variables. Hence it was deemed fit to analyze the observations separately both sexes.

VII. Conclusion

This study measure the aggression level as Physical aggression, Verbal aggression, Anger and Hostility of males and females. It also shows the difference between males and females on physiological measure. As t-test shows that females took more time to express anger than males, hence they took more time to be angry, expressed through higher heart rate (pulse rate). On the other hand, males produced greater instrumental aggression in comparison to females and they too experienced an associated physiological pattern and even express it instrumentally.

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