IMPACT OF MOOD ON DETECTION OF DECEPTION

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Abstract: Does mood can cause inability to detect deception? Are the different states of mood can influence our tendency to believe or disbelieve another person? Based on past and recent work on deceptive communication mood and social cognition, in our research we predicted and found that negative mood increased and positive mood decreased our skepticism ability to detect deception. After inducing various mood conditions by showing positive, neutral or negative films, participants were instructed to view deceptive or truthful interviews with of actors who denied about committing a theft. The participants were told to make Judgments of the target person in video is guilty of the theft and choose "guilty" or "not guilty if they believe the person is not lying take their denial as truth as "not guilty". As predicted, negative mood condition increased judges' skepticism towards the targets, on the other hand judges in positive mood condition were found to be more trusting and gullible. The importance of findings in everyday judgments of trust and the detection of deception are mentioned, and their practical implications are discussed.

Keywords: Deception Detection, Social cognition, mood, Skepticism, Gullibility.

INTRODUCTION

Deception is defined as "the act of deliberately instilling a belief in another individual that the sender knows to be false" (Ekman & O'Sullivan, 1991; Vrij, 2008). As this formulation suggests that lie is classified as such only if the sender is well aware of that the belief not human but animals also use deception. Deception detection research has mainly focused on the skill of humans to detect deception in other humans in real-time without the help of specialist equipment (Bond & DePaulo, 2008). Research on the deception detection, focused on various methods of improving the accuracy by the uses of nonverbal cues of emotions, the area where many, of the researchers and laypersons same, considered as most promising (Levine, Serota, & Shulman, 2010). However, the findings from the research were not much optimistic.

In recent years, in the area of deception detection the emotion based approach gathered the most of the attention than to its empirical support based research. This approach signifies the role of emotions in the act of deception. The foundation of the emotion-based approach is to detect deception with the assumption that comparing the individuals being truthful and deceptive and also what emotion they are experiencing. Suggests that liars will show various emotional behavior when producing reactions and statements to being questioned than would truthful, known as emotional cues. Telling a lie is more arousing as compared to making a truthful statement as suggested by initial on deception detection and emotions (DeTurck & Miller, 1985; Ekman, 2009b).

The very first proponent of this approach is Paul Ekman (1988/2009), who suggested that fear, guilt and duping delight are the three major emotions linked with the experience of sender during lying (Ekman, 2009b; Knapp, Hart, & Dennis, 1974; Köhnken, 1989; Riggio & Friedman, 1983).These emotions and their linked behaviors are subject to some additional factors than their presence, type, or intensity; relevant factors are the particular situation in which the lying occur, or the stakes involved in telling the lie, the type of lie told (Ekman, 1989; Ekman & Frank, 1993).

Aim of Present research

Based on the above evidence, According to expectations that by priming mood-congruent information, negative mood conditions should produce more skeptical, doubtful judgments and positive mood conditions promote a more gullibility in participants' judgments (an informational effect). Negative mood should also cause a more aiding and attentive information processing style that influence detection sensitivity and also reduces positivity biases. The effect of negative mood improved detection deception (but not truthfulness) compared to judges in positive mood.

Hypothesis

Ha 1: Positive, negative and neutral mood conditions differ significantly on judgments of guilt and innocence

Method

RESEARCH METHODOLOGY
For mood induction various videos used by researcher in previous researches were used for each mood state (positive, neutral, negative) was selected. The average duration of these videos was 8 minutes. Next, the participants viewed 2 video clips of male and female who were either honest or deceptive, denying a theft during an inquiry in taped interview. Participants made their judgments about the truthfulness of the actors in the videos either they are guilty or not guilty. The design here was three by two mixed designs with mood conditions (positive, neutral and negative) independent variable and deception of detection (guilty, not guilty) as dependent variable. For the experiment participants were 150 students (30 men and 120 women).

Measures

Creation of the target tapes
During the creation of interview video great attention was paid on making complex and realistic target videotapes which showed people in genuine acts of denying of an alleged crime (theft). For some questions targets were honest in their denials, and the rest were deceitful (having committed the theft). Target videos were prepared of 12 male and female students from Kurukshetra University, Kuruksehtra aged between the age group of 18–22 years who volunteered for an experiment about detection detection. Participants were told to ''enter a room alone, there you will find a pen pencil or diary. You can choose any one of them. However, they have to deny taking any of the material when subsequently questioned''. For the better performance they were allowed to keep the items with them during the interview without showing it to camera. In interview participants try to convince their denial is truthful not deceptive. Out 12 video tapes 2 contain actors of both genders were finalized by an expert for the experiment.

Mood induction

For inducing mood conditions (positive, negative, neutral) videos used in previous researches were included. For positive mood induction videos with title name "Hakuna Matata" and "Continental drift" (Ice age) animation movies clips were used. Neutral mood condition was induced by showing a documentary on "King Tutankhamne" similarly, for inducing sad mood condition a video of person dying from cancer was used. These films were highly successful in inducing mood conditions and used before to induce strong and reliable mood states (Forgas, 2002) and (Marcusson-Clavertz D, 2019)

Judgments of guilt and innocence

Judges were told to watch ''two brief interviews of students those were accused of stealing different materials, some of them may be deceitful in denying the theft''. It was also possible all targets could potentially be guilty of stealing. During each interview, judges were given time to record their judgments about the targets either "guilty" or "not guilty" (1 for each response) of stealing materials, and record the response on a given answer sheet.

Debriefing and mood validation

For the validation of various mood conditions PANAS (positive negative affect scale) 20 item scale was given to judges before and after showing mood inducing videos to record their state of mood (average feeling at present time). For measurement of blood Pressure a digital sphygmomanometer was used to measure the blood pressure of the participants.

RESULTS AND DISCUSSION

Mood manipulation was successfully done by comparing the average state of mood before and after showing the videos. For deception detection analysis average responses of participants were calculated and further analysed. A one way ANOVA was run between independent variable mood conditions and dependent variable as deception deception (Guilty, Not Guilty). Results of one way ANOVA showed a significant difference between mood states (Positive, Neutral, Negative) on deception detection; $F(2,147) = 10.56$, $p<.001$. Tukey's test revealed that participants in negative mood ($n = 50$, $M = 2.70$, $SD = 1.75$) made more guilty judgements than participants in neutral ($n = 50$, $M = 2.88$, $SD = 0.94$) and Positive mood ($n = 50$, $M = 3.88$, $SD = 1.4$) conditions.

Table 1.1 shows the N and descriptive values for guilty and not guilty judgments under different mood conditions

Sl NO.	Variable (Judgment)	Mood Condition	Mean N(50)	S.D. (50)
1	Not guilty(innocence)	Positive	3.26	1.747
2	Not guilty(innocence)	Neutral	3.24	.981
3	Not guilty(innocence)	Negative	2.24	1.318
4	Guilty(innocence)	Positive	1.70	1.753
5	Guilty(innocence)	Neutral	2.88	.940
6	Guilty(innocence)	Negative	3.88	1.335

Table 1.2 shows the F and significance values for the judgments of innocence and guilt in different mood conditions

ANOVA						
Variable	Sum of Squares between the Group	Sum of squares within the group	Df	Mean Square between the Group	Mean Square within the Group	F
Judgments of Innocence (Not guilty)	34.013	281.860	2 147	17.007	1.917	8.870
Judgments of guilt	40.413	281.060	2 147	20.207	1.912	10.568

Table 1.3 shows values of mean difference and level of significance for the judgments of guilt and innocence in different mood conditions

Tukey's HSD
Multiple Comparisons

Variable	Mood Condition (Induced)	Mood Condition (Compared)	Mean Difference	Sig.
Judgment of innocence	Positive	Neutral	.20	.997
		Negative	1.020***	.001
Judgment of innocence	Neutral	Positive	-.020	.997
		Negative	1.000***	.001
Judgment of innocence	Negative	Positive	-1.020***	.001
		Neutral	1.000***	.001
Judgment of guilt	Positive	Neutral	-1.80	.792
		Negative	-1.180***	.000
Judgment of guilt	Neutral	Positive	.180	.792
		Negative	-1.000**	.001
Judgment of guilt	Negative	Positive	1.180***	.000
		Neutral	1.000***	.001

*** p<0.001; Very Highly Significant
**p<0.01; Highly Significant
*p<0.05; Significant

As expected the significant difference was also found between various mood conditions and not guilty judgements (Honest) F (2, 147) = 8.87, p<.001. Post Hock analysis Tukey's test revealed participants with positive mood condition (n = 50, M = 3.26, SD = 1.74) made more Not Guilty judgements (Honest) as compared to participants in Neutral (n = 50, M = 3.24, SD = 0.98) and Negative mood (n = 50, M = 2.24, SD = 1.31) conditions.

Discussions

The outcomes of the research provide more insight about the importance of mood conditions on judgments during the process of deception detection. The results provided by research are evident enough to prove that mood can influence gullibility and skepticism in people during making judgments about deception detection. It is very hard to decide when to trust and when we need to be skeptical towards because it is a carries high cognitive demand in our everyday life. The outcomes support our hypothesis that positive mood significantly increases people's ability to trust others in deceptive communications. We also found that sad people made more guilty as compared to Positive and neutral mood conditions. These results can have interesting theoretical and practical implications for the better understanding about the influence of mood states on interpersonal skepticism. The outcomes of the research provide more insight about the importance of mood conditions on judgments during the process of deception detection. Present study mainly describe to an extent state of positive mood is not appropriate in the process of deception detection. Furthermore, it suggests negative mood can be a very effective tool against being deceived in deceptive communication.

Theoretical and practical implications

Above research can be very helpful in many applied settings such as jurors, judges, police officers, and psychologists and layers in daily work. The research can be also helpful and carries importance when to friends and romantic partners. Findings demonstrated effect of mood on the judgments has some interesting implications. When people realize that positive mood condition increases and negative mood decreases the tendency to accept communications as truthful in everyday interpersonal encounters (Ciarrochi, Forgas, & Mayer, 2006).

Limitations and further discussions

Every research has its own limitations for the current study the main limitation is the type of deception used, the present study involves only on type of deception detection, specifically, denials of wrongdoing. It is also clear that the different kind of cues people use partly depend on the nature of the deceptive communication itself in the process of detection of deception (Vrij & Baxter, 1999).further research might explore more mood effects on qualitatively different kinds of deceptive communications, like ingratiation, dishonest claims of personal achievements and attributes etc. (Jones, 1964).

In addition study of non-specific mood effects, future research can include more   emotions, such as disgust, fear and anger on skepticism and gullibility (e.g., Lerner & Keltner, 2001). As we fear and disgust are well associated with avoidant behaviors, whereas emotion such as anger tends to elicit aggression.

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