

Research Paper

Does happiness affect decision making in goal setting, risk taking, and profitability situations?

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ABSTRACT

This study aimed to investigate whether happiness affects decision making in different situations- goal setting, risk-taking, and profitability situations. Eighty University students age ranging from 18 to 28 of both gender (44 males & 36 females) took part in an experiment with experimental and control conditions. Three video clips have been made depicting goal setting, risk-taking, and profitability conditions. The state of happiness was induced by showing a comedy video clip in the experimental group but not in the control group. Chi-square test (non-parametric test) has been used for quantitative data analysis and MAXQDA (software for qualitative data analysis) for qualitative data analysis. The results suggested that significant effects of happiness on all three decision-making conditions are not found. However, it is found that there is likely to be a significant difference in the risk-taking condition. Further, the participants were asked to explain the reason for choosing the selected alternatives with an open-ended question. It was observed that happiness (positive emotion) affects the decision-maker while choosing decision alternatives related to goal setting, risk-taking, and profitability situations.

Keywords: *Happiness, Risk-Taking, Decision Making, Goal Setting, Profitability.*

Happiness is a state characterized by feeling satisfied with life and having a good quality of life. Happiness is not a new construct. It is used scenes of ancient times with some culturally different and synonymies names such as Ananda, Eudaimonia, so on. In ancient times, it was defined as good luck fortune, but in modern times, it can be defined as something which is under control and gives satisfaction. Decision making is the capacity of the individual to prefer one option over other/s. Decision making helps individuals to filter the information and make moves towards their goal/s. Decision making can be of many types and in many situations. Goal setting and risk-taking are situations where it is essential to make decisions carefully. Every human being consciously or

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unconsciously driven by profitability. All these three conditions (risk-taking, goal-setting, profitability) are essential to the satisfaction of the individuals' life and well-being and ultimately to happiness. It was found worthwhile to the researchers that these three conditions (risk-taking, goal-setting, profitability) should be investigated concerning decision-making. As per the researchers' view, there is a lack of research investigating the relationship among these conditions of the variables, especially in the Indian context.

Happiness is a state characterized by feeling satisfied with life and having a good quality of life. A continuous decrease in India's ranking in the global happiness index (GHI) has led to an increasing interest in happiness research, but a relatively smaller number of studies have been conducted mainly in the Indian context. The Indian government has initiated various steps; these can be seen as a department of happiness in the state Madhya Pradesh, Happiness classes in government schools in Delhi. However, there is still some scope to investigate happiness concerning various variables like profitability, risk-taking, and decision-making.

Research questions

The relationship between happiness and different decision-making conditions (goal setting, risk-taking, and profitability) has not been studied and examined together in the experiment previously. This study will try to understand the effect of happiness on different decision-making conditions while comparing data from control and experimental groups.

RQ1: Whether happiness affects the decision-making process in risk-taking conditions.

RQ2: Whether happiness affects the decision-making process in goal setting conditions.

RQ3: Whether happiness affects the decision-making process in profitability conditions.

RQ4: Is there any relationship between happiness & decision-making regarding goal setting, risk-taking, and profitability conditions?

Hypotheses of the study

1. H0.1 - There would be no effect of happiness on the decision making of the individual.
2. H1.1 - There would be an effect of happiness on goal-setting conditions of the decision making.
3. H1.2 - There would be an effect of happiness on the risk-taking condition of decision making.
4. H1.3 - There would be the effect of happiness on the profitability condition of decision making.

METHODOLOGY

Sample

Eighty graduate students (38 females and 42 males) from the Central University of South Bihar, India, were randomly selected. The age was ranging from 18 to 28 years. Visions or corrected visions of all participants were usual. It has been assured that no participants were involved in a similar experiment before.

Experimental Instruments and Materials

The questionnaire of decision making - This questionnaire consisted of three close-ended questions and three supportive open-ended questions, i.e., "why you have chosen this alternative." Questions are related to three different situations, like goal setting, risk-taking, and profitability condition. Where each item was made up of three options within which one represented a relatively small, high, and moderate level gain/reaction with specific

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outcomes. The original questionnaire items included goal setting, risk-taking, and profitability decisions tendency of the subjects. Time limitation was subjected.

Emotion-inducing materials - The video-clip was used to induce targeted emotions in the current study (happiness). The video-clip from the comedy video acted by "Mr. bean in hall" exam time situation. The period of positive emotion video-clip was 08:51 min. The video-clip did not disclose any subsequent information about the experiment. The video-clip editing was conducted with the help of 'Androvid' editing software and played with the software 'windows video player.' Only for the experimental group.

Experiment materials –Researchers made three different stories related to goal setting, risk-taking, and profitability situations, video-clips were made (06:49 min) for each story separately and shown to the participants. The video-clips' editing was conducted with the help of 'VivaVideo' video editing software and played with the 'windows video player' software.

Research Design

This experiment employed a between-subject design (experimental and control). The dependent variable was the level of the participants' risk-taking behavior, goal setting, and profitability conditions of decision making, and the independent variable was induced positive emotion (happiness). The research concerned the participant's conformity by being together while answering the questionnaire, so it was decided to give them an individual questionnaire.

Data Analysis

SPSS 25.00 and Excel 2008 were used to do quantitative statistical analyses and MAXQDA 2020 for qualitative analyses.

Instructions

We are going to experiment with decision making. Three video clip has been made in which there are three different stories, which are based on our day to day life. After some time, we will be shown a video clip with the help of the projector screen, and just after that, you will have to fill a questionnaire, and also, you have to write a short description of your answer. No option is good or bad; the answer provided by you is the best. Please observe the video-clips.

Procedure

The experiment was administered to 80 subjects. All participants independently completed the questionnaires in limited time.

RESULTS

This study is based on an experiment, and the responses were drawn from the students of an educational institution. Researchers tried to investigate whether happiness (positive emotion) affects decision making in different dilemma conditions (goal setting, risk-taking, and profitability). In this experiment, an independent sample chi-square test was performed to examine whether the two groups (experimental and control) differ statistically (Table 1.4). There are separate data tables for each condition- goal setting, risk-taking, and profitability. These tables (Table 1.1, Table 1.2, & Table 1.3) present the number of choices distributed in each condition's levels for both experimental and control groups. And table-1.4 and figure-1.1 displays an overall statistical summary of the study.

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Table 1.1: Number of participants' choice responses in the condition of Goal setting.

Groups	Levels of goal setting			Total
	Low	Moderate	High	
Experimental	12	15	11	38
Control	12	16	14	42
Total	24	31	25	80

Table 1.1 shows the number of choice responses in the goal-setting condition of decision making (Story 1). This table shows that almost 31 participants (experimental & control) have chosen moderate-level alternatives to the goal-setting condition. Further, it observed that participants of the experimental group scored (11) while the control group's participants scored (14) in a high level of goal setting condition, additionally moderate level of the experimental group keep score (15) and control group scored (16). At the low level, there was the same chosen score (12) in both groups.

Table 1.2: Number of participants' choice responses in the on Risk-taking condition.

Groups	Levels			Total
	Low	Moderate	High	
Experimental	5	27	6	38
Control	12	19	11	42
Total	17	46	17	80

Table 1.2 shows the number of choice responses in the risk-taking condition of decision making (Story 2). The table shows that most of the participants have chosen moderate-level alternatives for the risk-taking state's decision-making. Further, we observed that the experimental group's score is higher (27), comparatively, to the control group's score (19) on a moderate level. We can differentiate the difference between both groups in low-level experimental group scores is (5), and the control group's score is (12). Also, the experimental group score was very less (6), and the control group's keep score (11) was at a high risk-taking condition.

Table 1.3: Number of participants' choice responses in the experiment on Profitability condition.

Groups	Levels			Total
	Low	Moderate	High	
Experimental	13	9	16	38
Control	10	9	23	42
Total	23	18	39	80

Table 1.3 represents the number of choice responses in the profitability condition of decision making (Story 3). The table shows that most participants (39) in experimental & control groups have chosen a high-profit alternative in profitability conditions. Furthermore, it observed that participants scored (16) in the experimental group or scored (23) in the control group at a high level. In contrast, some participants scored (13) in the experimental group or (10) in the control group at the low level of profitability condition.

Pearson's chi-square test conducted to examine the relationship between the used variables. The following table-1.4 and figure-1.1 demonstrate an overall summary of the dependent variable and each condition: groups, values, df (degree of freedom), and significant level.

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Table 1.4: Descriptive summary of chi-square analysis of three conditions of decision making

Conditions	Groups	Values	Df	assume. Sig.
Goal setting	Experimental	0.193	2	.908
	Control			
Risk-taking	Experimental	5.558	2	.062
	Control			
Profitability	Experimental	1.451	2	.484
	Control			

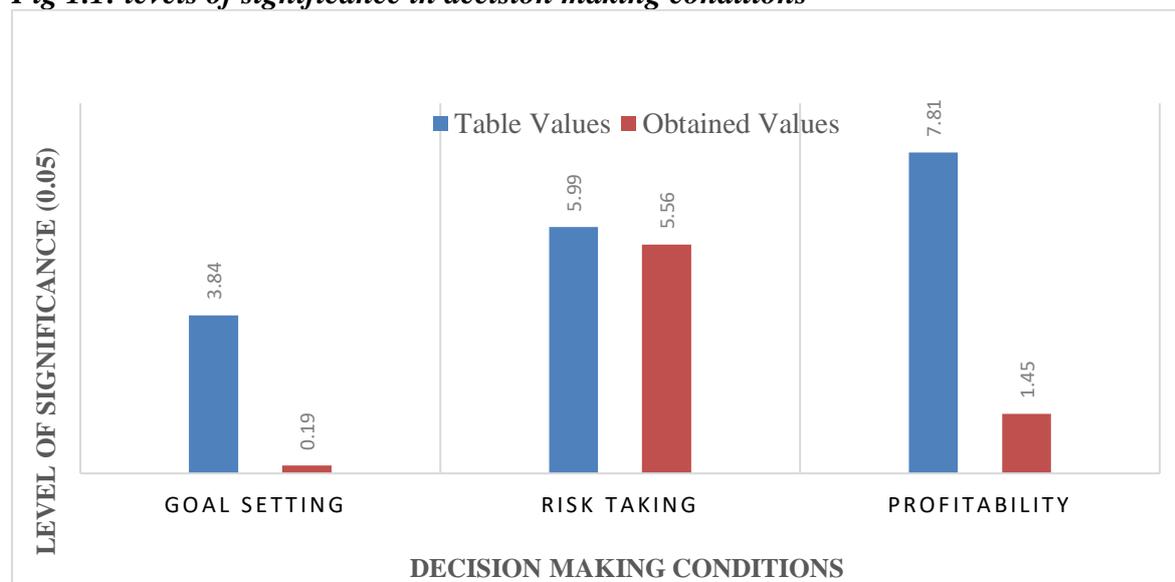
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Pearson's chi-square test of independence was performed to examine the relationship between the independent and dependent variables in **Goal setting conditions**. The relation between this variable was not significant, $X^2 (2, N=80) = 0.193, p = .908$. Happiness did not affect the level of decision making in Goal setting conditions.

Pearson's chi-square test of independence was performed to examine the relationship between the independent and dependent variables in the **Risk-taking condition**. The relation between this variable was not significant, $X^2 (2, N=80) = 5.558, p = .062$. Happiness did not affect the level of decision making in Risk-taking conditions.

Pearson's chi-square test of independence was performed to examine the relationship between the independent and dependent variables in **the profitability condition**. The relation between this variable was not significant, $X^2 (2, N=80) = 1.451, p = 0.484$. happiness did not affect the level of decision making in Profitability conditions.

Fig 1.1: levels of significance in decision making conditions



The statistical analyses suggested that there was a statistically no significant difference found between the experimental group and the control group. All value was less than the table value in the level of significance (0.05) of Pearson's chi-square table. Hence, the null hypothesis accepted, and alternate hypotheses rejected (Figure 1.1). Furthermore, figure 1.1 displayed that the values of goal setting, risk-taking, and profitability condition's obtained values of participants have checked from the table value of Pearson's chi-square test.

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Moreover, the table value shows that the gain values were not significant. Because in the goal-setting condition, the table value is higher than the obtained value, and similarly, profitability conditions have the same situation (figure 1.1). The risk-taking condition participants' keep score (figure 1.1) highlights that the situated scores of table values and obtained value difference were very less; it seems that statistically significant difference not found. However, it observed that it was very close to the table value. Therefore, it will be a chance for another time and situation to replicated for better results. The analyses conducted with the help of statistical package for social sciences (SPSS) version 25, and all the reports read at an alpha level of 0.05 unless otherwise specified.

The present study also inquired about the reason to choose a particular alternative/choice by the participants. Using the qualitative method for the objective was achieved—a question "why you have chosen this option. Give a short description." was presented to subjects to provide their responses.

The content analysis research technique was used for analyzing the views shared by the subjects. The themes identified through the technique of content analysis is as follows:

Story 1 - Goal setting condition: Practical and reality-based decisions, more calculative & logical, focus mainly on the quality of the production. Less calculative, more focus on the profit work in the low-pressure environment.

Story 2 - Risk Taking condition: More permission-taking behavior, authoritative support, self-defense mechanism, and low to moderate risk in critical and abstract situations. There are fewer concerns about authority, uncertainty in decision-making, over-calculating time, immediate reaction, confidence, and morality.

Story 3 – Profitability condition: The cost-benefit analysis takes a moderate-level risk for money, more profit comparative, and more patience for profit.

Additionally, the qualitative data analysis results showed a positive association between happiness and decision-making in different study conditions/scenarios.

DISCUSSION

This experimental research aimed to examine the effect of happiness (positive emotion) on different decision-making conditions (goal setting, risk-taking, and profitability conditions). Results indicated that happiness does not affect decision making (in all the three conditions). However, scores on the risk-taking condition showed that the statistical value is close to being significant.

As per research ethics, participants willingly participated in the experiment; however, they may have been calculating the time involved and the research benefits unknowingly or unconsciously. Therefore, the participants' selection of the choices (judgments) may have been affected by the time pressure and benefit calculation (Finucane et al., 2000).

Emotions play an essential role in many decisions (G. Loewenstein & Lerner, 2003; Mellers & McGraw, 2001; Mather, 2006), such as in money issues, risky situations, the goal of life, bargaining in the market, relationship-related, and so on. In the present study, during the decision-making process, the feeling of happiness may have triggered intuitive decisions rather than rational decisions.

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Nature (Capaldi A. et al., 2014) and culture (Biswas-Diener et al., 2012) determine the specific responses to the situations. In the present study, both groups- experimental and control group participants have chosen approximately similar responses in the experiment, so there can be a leading role in culture and nature in determining participant's responses.

The effect of happiness on decision making in the goal-setting condition

Results suggest that two groups were statistically not significant in the effect of happiness on goal-setting decision-making conditions. We hypothesized that there would be an effect of happiness on goal-setting conditions of decision making. However, the null hypothesis (H₀) was accepted. Most of the participants of the experiment were in the pressure of the upcoming examination. The profit-loss analysis by the participants and time urgency related to examination would have affected the study results.

People judge risk related profit not only through what they think about it but also their feelings about the risk. If their feelings toward an activity are favorable, they judge high risk as low. Moreover, when their feelings toward the situation are unfavorable, they tend to make the opposite judgment (Finucane et al., 2000, (Slovic & Peters, 2006).

An emotion of happiness may have failed to raise favorable feelings towards high beneficial risky goal judgment. Therefore, most of the participants have chosen a moderate level goal. The participants may have avoided a low-level goal-related risk choice due to the social desirability effect.

The effect of happiness on decision making in risk-taking condition

Results also suggested that the two groups do not differ statistically in risk-taking conditions. We hypothesized that there would be an effect of happiness on goal-setting decision-making conditions. However, the null hypothesis (H₀) was accepted.

Furthermore, the results of the risk-taking condition $X^2(2, N=80) = 5.558, p = .062$ indicate that the value is close to being significant. Previous studies show that risk-taking behavior responses tendency might be depended upon socially desirable (LTKIN et al., 1993), social desirability and happiness are interrelated (Kozma & Stones, 1988). The present study (Table 1.2) demonstrates that the happiness group (experimental group) participants are more likely to choose moderate-level risk. As compared to non-happiness (control group) participants who are more likely to take the low-level risk, it indicates that less happy people need more social desirability than happy people.

In this experiment, happiness did not affect decision making in risk-taking conditions. A possible explanation would be that participants worry about the future of the victim in the story, and the situation is vague and abstract. Therefore, participants could not understand that what is the best decision for them? The experimental group's participants were more likely to choose the moderate risk relative to the control group participants. It indicates that control group participants were either more permissive or do the immediate reaction in a threatening situation. Additionally, the study done by economists and social scientists, find that the least happy people are less careful to take action to preserve ourselves or others life (Goudie et al., 2014).

It is quite noticeable that the results were close to significant differences between the experimental and control groups in risk-taking conditions.

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The effect of happiness on decision making in profitability condition

Both groups were statistically not significant in the effect of happiness on decision-making's profitability condition. However, the null hypothesis (H₀) was accepted. Because participants have an uncertain profitable situation in the study, they worry about future benefits. In general, when people choose the low risk, they gain less profit and just vice versa.

In contrast, happiness group participants have chosen low profit-risk as compare to the non-happiness group. It shows that happiness groups participants more risk aversion because they have chosen low-risk profit. While non-happiness groups participant more risk lovers because they selected higher-risk profit rather than happiness group.

The data were slightly different to shows that happiness groups participants choose calculative and present focus risk related to profit management. When they try to use rational and mathematical calculative mind, they select low-level alternative & less risk in instant profit. The general observation is that when people are happy, they have less rational decision-making capability and select low to moderate risk because of instant profit rather than low (Bergsma, 2010).

Due to the academic pressure in the competitive world, the students cannot spend quality time with family and friends. Earning lots of money as achieving their goals can also lead to unhappiness. People who selected money first preference are less happy than time first preferred people (Mogilner, 2010). A different study found that Indian college and university students' income plays an unimportant role in happiness (Chakraborty et al., 2019).

CONCLUSION

The purpose of this experimental study to investigate the relationship between well-known but abstract concept happiness and cognitive science's great concept decision making. For understanding the role of happiness on students' precious and valuable decisions in an ambiguous situation.

Although several studies favor the effect of positive emotions on general decision making, there is a possibility that these positive emotions do not affect the individuals' decisions in specific conditions. Experiment results defined that positive emotion is not substantially involved in the determination of humans' goal-setting, risk-taking, and profitability conditions. Study evidence determines that the relationship between money and happiness is relatively weak. (Franklin, 2009).

Nevertheless, one aspect of the effects of happiness on the decision-making process in risk-taking was likely to be significant. However, several future studies have to be conducted in the Indian scenario to approach more precise and convincing conclusions. It is clearly defined, there is a need for more research in non-Western contexts (G. F. Loewenstein et al., 2001), (Hafen et al., 2011).

Implications

The study findings indicated that the person's tendency to be oriented towards the future and consider the expected consequences of current actions positively correlated with orientations to meaning and engagement. Future studies should adopt this methodology to a diverse population for experimental purposes.

Limitations

A possible limitation of the study is using a purposive sample of university students. Furthermore, to the sample size and even within the sample, participants have different education levels, life expectations, residence (e.g., rural versus urban population); therefore, this experiment's results were different from previous studies. Furthermore, the researcher consciously controls the extraneous variable but some types of variables like experiences of post-traumatic events, threatening conditions, and any adverse effects of drug and alcohol, tobacco uses, and overthinking on past bad memories, decreases happiness the students (Chakraborty et al., 2019).

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Conflict of Interest

The author declared no conflict of interest.

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