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Research Article

Role Of Self-Efficacy And Locus Of Control In Intertemporal Choices

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ABSTRACT

The study aimed to understand the role of self-efficacy and locus of control in the intertemporal choices made by students and the working population. The objectives of the study were to explore the relationship between Self-efficacy, Locus of control, and Intertemporal choices and to compare these between studying and working individuals. The sample consisted of 114 participants with 59 participants studying and 55 participants working. To measure self-efficacy, the General self-efficacy scale was used. To measure Locus of control, Rotter's locus of control scale was used, and for intertemporal choices, Kirby's monetary questionnaire was used. The findings revealed a significantly positive relationship between self-efficacy and locus of control. Locus of control was found to be positively related to intertemporal choices supporting the previous research. There was no significant difference found between the working and student populations in Self-efficacy, Locus of control, and intertemporal choices. Age was found to be an influencing factor in Self-efficacy indicating a mild correlation. Additionally, the findings revealed that males and females exhibit a significant positive correlation in intertemporal choices, but they are significantly different, indicating that females have a greater proclivity to prefer delayed larger rewards than males. More research is required in this domain that examines all three constructs.

Key words: Self-efficacy, Locus of control, Intertemporal choices, students, working individuals

INTRODUCTION

In today's world, there is a growing demand for individuals who can make prompt and responsible decisions. Throughout our lives, we are constantly making choices about what to do now and what can be postponed for later. Our decisions are based on the expected outcomes, and often we find ourselves in situations where we have to select between different time frames. These decisions that involve choosing between outcomes available at different points in the future are called *Intertemporal choices*. This is an economic concept that was first introduced by John Rae in his book "Sociological Theory of Capital" in 1834. Later versions of the concept were developed by Eugen von Böhm-Bawerk in 1889 and Irving Fisher in 1930.

Almost every decision that we make has an intertemporal dimension, from something as simple as deciding whether to exercise right away or watch a movie and postpone the workout to something as important as deciding how much money to spend now and how much to save, mortgage choice and so on, which may have a significant impact on our quality of life now and in the future. The fact that intertemporal choice is viewed through the lens of an economic concept does not imply that it is a matter of financial gain. It encompasses a wide range of topics, including saving, education, food, exercise, and health care issues. In simpler terms, intertemporal choices are the distinction of choosing between rewards received earlier versus rewards received later.

Intertemporal decision-making is centered on time preference. When making a choice, it all comes down to a person's time preference while weighing utility flows (costs and benefits) that occur at different periods in time, which can be understood as measuring the benefits of a decision minus the costs associated with taking that action. According to classical economists, time preferences are influenced by several factors. The intensity of

the desire for immediate gratification varies from person to person, according to Von Bohm-Bawerk. He also believed that impatience manifests in different ways in different individuals, and even in the same person at different times. Moreover, the tendency to prioritize immediate rewards has been linked with impulsive behavior, which in turn can lead to substance abuse and addiction (Becker & Mulligan, 1997).

When making intertemporal decisions, we usually discount future outcomes and assign discounted values to each alternative separately. After that, we compare the discounted values of each alternative. Research has revealed that people generally prefer immediate rewards over those that are delayed (Scholten & Read, 2010). This tendency towards present-focused preferences leads individuals to choose actions that bring them instant gratification in the present, rather than selecting options that would be equally delayed in their outcome (Ericson & Laibson, n.d.).

Individuals exhibit varying personalities, and one such trait is the locus of control. The concept of *Locus of Control*, developed by Julian B. Rotter in 1954, explains how much control we feel we have over the events that affect our lives. It affects our response to events, as well as our motivation to act. Whether we have control over the outcome of our decisions or not, Locus of Control plays a significant role in influencing our behavior. Locus of control is a factor affecting self-control in hyperbolic discounting. Abay et al.'s 2018 study found that a lack of self-control is associated with an external locus of control. Their 2016 study found that people with an external locus of control are more likely to discount future payoffs hyperbolically. Locus of control and hyperbolic preferences affect demand for commitment devices and saving behavior. People with an internal locus of control are more inclined to save, believing that their present savings can affect future life events. Those who are inward-looking are more likely to fantasize about achievement than those who are outward-looking. Thus, it is important to consider self-efficacy, another significant behavioral construct that influences people's thinking, judgment, motivation, performance, and emotional arousal. This variable has been included in the study and appears to be a universal construct with meaningful relationships with other psychological constructs. (Mohammad & Malikeh, 2015).

Self-efficacy is a belief system that determines a person's ability to execute a plan of action in different circumstances. According to Bandura's research in 1977, a person's expectations of their own effectiveness can impact their engagement in coping behavior, the amount of effort they will put in, and how long they will sustain the effort in the face of hurdles or adverse events. Individuals with high self-efficacy beliefs tend to be more adaptable to their environment and confident in their intuitive decision-making abilities. On the other hand, individuals with low self-efficacy views are more likely to miss opportunities or fail to put practical plans into action (Leslie & Moilanen, 2010).

REVIEW OF LITERATURE

SELF-EFFICACY

Self-efficacy is a belief that one can perform a specific task or achieve a specific goal. It's a belief in one's ability to succeed, and it refers to an individual's ideas about their ability to exert control over their surroundings with motivation, cognitive abilities, and potential courses of action. (Bandura, 1997). Self-efficacy has been the topic of numerous studies and is an accurate predictor of success in a variety of behaviors, including smoking cessation, athletic endeavors, and academic performance (Gwaltney et al., 2009; Sivrikaya, 2019; Meera & Jumana, 2015). Self-efficacy is linked to a wide range of results, including well-being, health behaviours, and coping. (Luszczynska et al., 2005)

Self-efficacy has a substantial impact on behavior. People who have high self-efficacy are aware of their strengths and weaknesses, set realistic goals, have realistic expectations, and have better physical and mental health. They are more likely to overcome hindrances, persevere, and have high confidence in their ability to succeed in the long run than those with lower levels (Bandura, 2010).

LOCUS OF CONTROL

Julian Rotter proposed in 1954 that our behavior is controlled by rewards and punishments. The concept of locus of control refers to the degree to which an individual believes they have control over the sources of reinforcement in their life. Research has shown that individuals' perceptions of what motivates their behavior can vary widely, depending on their locus of control. Locus of control is a widely researched variable in psychology and other social sciences, with the contrast between internal and external control of reinforcement. People with an internal locus of control are generally more active, responsible, hardworking, hopeful, and positive in their lives (Hans et al., 2017). Another study found that teachers have an internal locus of control and perceive themselves as experiencing more burnout due to insensitivity and emotional exhaustion (Akça & Yaman, 2010)

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RELATIONSHIP BETWEEN SELF-EFFICACY AND LOCUS OF CONTROL

Self-efficacy and locus of control are two significant social cognitive constructs that have an impact on an individual's behavior. They are closely linked, and their interplay can affect a person's thoughts, behaviors, and emotions. Researchers have carried out extensive studies to explore the relationship between these two constructs and have discovered a positive correlation between them. Self-efficacy is a cognitive-behavioral strategy that can potentially change an individual's locus of control (Fritson, 2008). Personality traits like locus

of control have a significant impact on self-efficacy. A study by Roddenberry & Renk (2010) found that ability, learning goal orientation, and locus of control positively relate to self-efficacy.

INTERTEMPORAL CHOICES

Intertemporal choices are decisions with long-term consequences that involve choosing between outcomes available at different times in the future. These choices are examined using the discounted utility (DU) model, which assumes that people evaluate the pleasures and pains associated with a decision similarly to financial markets. DU exponentially discounts the value of outcomes based on how far in time they are delayed and is used as a policy tool to describe how people make intertemporal decisions (Berns et al, 2007). Intertemporal decision-making involves hyperbolic discounting functions and is widely used in financial decision-making. Financial education has been found to increase an individual's preference for the future and improve decision-making quality in intertemporal trade-offs (Wang & Simons, 2005; Lührmann et al, 2018).

Studies on delay discounting have examined how the relative value of rewards changes over time by comparing their valuations at different points in time. Studies indicate that immediate rewards hold more value compared to future benefits. As time passes, rewards lose their value. The tendency to prioritize immediate gratification over delayed rewards is known as delay discounting and is often seen in addictions such as nicotine (Weidberg et al., 2017).

SELF-EFFICACY AND INTERTEMPORAL CHOICES

In his social cognitive theory, Albert Bandura (1997) explains how individual judgements affect decisions with Self-efficacy being one of the central constructs. Individuals who have high self-efficacy beliefs are more adaptable in different situations and have more confidence in their intuitive decision-making (Leslie & Moilanen, n.d.).

Previous research has confirmed that self-efficacy is directly related to financial well-being. In a recent study conducted by Sabri et al. (2020), the impact of money attitudes, financial practices, self-efficacy, and emotional coping on the financial well-being of employees was investigated. The results of the study indicate a positive correlation between general self-efficacy and financial well-being, which is consistent with previous research. Hadar et al. (2013) also found that self-efficacy can lead to a reduction in financial anxiety and negative financial behaviors.

LOCUS OF CONTROL AND INTERTEMPORAL CHOICES

The relationship between an individual's Economic Locus of Control and their discount rates for future monetary outcomes has been studied by researchers. Cobb-Clark et al., (2016) examined people's locus of control and their savings behaviors, such as wealth accumulation, savings rates, and investment portfolio selection. The intertemporal choice model was found to be the foundation for most economic analyses of consumption and savings decisions, so the study focused on consumer behavior models. The findings revealed that households with an internal locus of control tend to save more than those with an external locus of control in analogous situations.

Platt & Eisenman (1968) discovered that adults with an internal locus of control have a more future-oriented perspective than those with an external locus of control when it comes to financial choices. Moreover, Duxbury et al. (1996) found that informal investors, who are more likely to plan financially for the future, tend to have an internal locus of control compared to non-investors.

METHODOLOGY

OBJECTIVES

The study aimed to investigate the influence of self-efficacy and locus of control on intertemporal decision-making. Specifically, the objectives were -

- Understand the relationship between self-efficacy and intertemporal choices.
- Explore the relationship between locus of control and intertemporal choices.
- Examine how self-efficacy and locus of control affect intertemporal choices among students.
- Investigate how self-efficacy and locus of control influence intertemporal choices among working individuals.
- Compare the intertemporal choices of students and working individuals about self-efficacy and locus of control.

RESEARCH DESIGN

The research was non-experimental and quantitative. It was a comparative research study. Within the study, no variable was manipulated. The scales used to measure the variables in the study have been standardized and have good validity and reliability as they have been used in multiple studies.

SAMPLE DESCRIPTION

The sample size for the study was 114 participants ranging in age from 18 to 35 years (mean age 23 years), with 55 participants working and 59 participants as students. Purposive and Snowball sampling was used to collect

the data.

HYPOTHESES

H1 – There would be a significant relationship between Self-efficacy and Intertemporal choices.
H2 – There would be a significant relationship between Locus of Control and Intertemporal choices.
H3 – There would be a significant relationship between Self-efficacy and Locus of control on intertemporal choices in *Students*.
H4 –There would be a significant relationship between self-efficacy and Locus of control on intertemporal choices in *Working individuals*.
H5 – There would be a significant difference between the working and student population in self- efficacy, locus of control and intertemporal choices.

TOOLS

1. *Internal-External Locus of Control Scale (Rotter, 1966)*
   The Scale has excellent psychometric properties supporting a good average internal reliability of Cronbach's alpha of 0.70 (Ng et al. 2006) and has convergent and discriminant validity. (DeVellis 2003; Netemeyer et al. 2003)
2. *General Self-efficacy Scale (Ralf Schwarzer and Matthias Jerusalem, 1995)*
   It has a reliability of Cronbach's alphas ranging from 0.76 to 0.90 and has good validity. Responses were made on a 4-point scale.
3. *Kirby Monetary Choice Questionnaire (Kirby, Petry & Bickel, 1999)*
   This questionnaire meets psychometric standards for reliability and stability.

SCORING PROCEDURE

General self-efficacy is a one-dimensional self-report measure consisting of a 10-item questionnaire that assesses individuals' optimistic self-beliefs in their ability to cope with a variety of severe life circumstances. For each item, the response alternatives are offered on a 4-point Likert-type scale, with the highest score being the best. It is possible to calculate a total score on a scale ranging from 10 to 40 points or a mean scale score on a scale ranging from 1 to 4. Higher scores indicate greater perceived general self-efficacy, whereas lower scores suggest a lower perceived general self-efficacy.
Locus of control scale is a forced choice instrument that comprises 29 pairs of statements, 23 of which are scored, with each alternative key as to a belief in either internal or external control of a reinforcing event, depending on the participant's beliefs. The filler items are intended to lessen the amount of bias in the data. The participant is instructed to select one of the two statements that best describes his or her personal beliefs. There is no time limit. A high score suggests that the participant believes in an external locus of control (luck, chance, others). Every question that is directed towards the external locus of control is scored as 1. A high score indicates external locus of control and a low score indicates internal locus of control.
Kirby's monetary questionnaire contains brief dichotomous choice tasks that assess respondents' preference for small immediate monetary outcomes versus larger delayed monetary outcomes. The scoring procedures for the Monetary Choice Questionnaires are rather complicated, which may serve as a deterrent to the widespread use of these questionnaires in practice. As a result, an automated scorer has been developed that uses both traditional and advanced methods. One of the most important aspects of delay discounting analyses is the determination of the subject's unique rate of discounting. It is the slope of a hyperbolic or hyperbolic-like function that passes through the subject's subjective value of delayed rewards that determines this rate of discounting (k). Larger k values, on the other hand, represent relatively steep discounting, in which small amounts of delay have a significant impact on the reward value. Predicting the choice with greater precision requires a smaller k value. Overall, the probability of the choice made by participants is represented by the number k, which varies depending on the number of days that have passed between them. The 27 items are divided into three groups of nine items each, with each group representing a different magnitude (small, medium, and large). Furthermore, the 27 items are also ranked from 1-9 based on the increment in the reward with a specific time delay for the same reward. Depending on the difference in days to receive a small vs. large reward and the short vs. delayed reward, they are factored as small, medium and large k choices. The individual item k values were interpreted directly from the scale while the mean overall k values and group mean values were computed using the automatic calculator provided specific to this tool. These individual mean values were taken for further statistical analysis. As a result, they are denoted by the letters small k, medium k, and large k. However, when it comes to interpretation, the overall K is the most important factor. 0.0060 is set as the significant cutoff point for the participants' scores, and if the participants' scores fall below this cutoff point, it is assumed that the person has chosen to receive a delayed reward.

DATA PROCESSING AND ANALYSIS

Depending on the normality of the data, Pearson's Correlation and Spearman's Rho coefficients were used to examine the relationship between self-efficacy and intertemporal choices, self- efficacy and locus of control, and locus of control and intertemporal choices. To compare the mean scores of self-efficacy and locus of control

between working and student samples, independent sample t-test was utilized, while the comparisons were carried out using Mann-Whitney U test for intertemporal choices as the data did not present a normal distribution.

RESULTS AND ANALYSIS

This study aimed to investigate the impact of self-efficacy and locus of control on intertemporal choices made by students and working individuals. The study had two main objectives - to explore the relationship between locus of control, self-efficacy, and intertemporal choices, and to compare these factors between working and studying samples. The data was collected using Google Forms and compiled into an MS Excel spreadsheet. SPSS was used for data coding and analysis, with a significance level set at 0.05. Descriptive statistics such as frequency and percentages were used to analyze discrete data, while means and standard deviation were used for continuous data. Pearson's Correlation and Spearman's Rho coefficients examined the relationships between self-efficacy and intertemporal choices, self-efficacy and locus of control, and locus of control and intertemporal choices. To compare the mean scores of self-efficacy and locus of control between working and student samples, an independent sample t-test was utilized. The comparisons for intertemporal choices were carried out using the Mann-Whitney U test, as the data did not present a normal distribution.

1. Sample Description

Table 1: Socio-demographic characteristics of participants

Characteristics	Studying	Working	Total
N	59	55	114
Age			
(18-23)	47	19	66
(24-29)	12	27	39
(30-35)	0	9	9
Male	19	28	47
Female	40	27	67

As per Table 1, the study included 114 participants, out of which 59 were students and 55 were employed. The average age of the sample was 23 years, with 47 males (19 students and 28 employed) and 67 females (40 students and 27 employed). The majority of participants were between 18-23 years old (66 in total, with 47 students and 19 employed). Additionally, 39 participants were between 24-29 years old, with 12 students and 27 employed. There were no students between the ages of 30-35, and 9 participants were employed.

Table 2: Summary statistics of participants

Outcome measures	Current status	Mean	Std. Deviation	Min-Max score
Self-Efficacy	Studying	31.07	4.54	10-40
	Working	32.09	4.91	10-40
Locus of Control	Studying	11.03	3.75	0-23
	Working	10.65	3.58	0-23
Overall k	Studying	.032	.063	0.00016-0.25
	Working	.072	.098	0.00016-0.25

As illustrated in Table 2, the mean of Self-efficacy was higher (31.07) in the working sample than in the student sample (32.09), though the differences were not statistically significant. The mean score for Locus of control was 11.03 for students and 10.65 for the working sample, indicating that both groups have internal Locus of control. Intertemporal choices are measured by the discounting rate, which is determined by the Overall k value, where a higher k value indicates a greater likelihood of choosing a smaller immediate reward. Overall k represents the probability of the participants' choice, which varies according to the number of days between them. Overall k had a mean of 0.032 in students and 0.072 in the working sample, indicating that both groups prefer immediate, smaller rewards.

Table 3.1: Relationship between Age, Self-efficacy, and Locus of Control

Variables	Age	Self-efficacy	Locus of control
Age	1	.261**	-.171
Self-Efficacy		1	-.207*
Locus of Control			1

*Significant at p<0.05, **Significant at p<0.01.

Table 3.1 illustrates the relationship between Age, Self-efficacy, and Locus of Control which was examined by Pearson's correlation test. As shown in the table, Age and Self-efficacy have a very little significant positive correlation ($r=.26$, $p<0.01$) that suggests a mild correlation, whereas there was no significant correlation between age and Locus of control. Self-efficacy and Locus of control presented a significant negative correlation ($r=-.21$, $p<0.05$).

Table 3.2: Relationship between Overall k, Age, self-efficacy, and Locus of Control

Variables	Overall K
Age	.118
Self-Efficacy	.129
Locus of Control	.189*

*Significant at $p<0.05$

As the data did not present the normal data for Overall k, spearman's rho correlation was used to examine the correlation of Overall k with age, Self-Efficacy, and Locus of Control. Table 3.2 illustrates Spearman's rho correlation of Overall k, the rate of discounting with the variables Age, Self-efficacy, and Locus of Control. As shown in the table, Age and Overall k show no significant correlation. Self-efficacy and Overall K also show no significant positive correlation whereas Locus of Control and Overall k presented a significant positive correlation ($rho(\rho)=.19$, $p<0.05$).

Table 3.3: Relationship between self-efficacy and locus of control in the student population

Variables	Age	Self-efficacy	Locus of control
Age	1	.183	-.215
Self-efficacy		1	.009
Locus of control			1

Table 3.3 represents the correlation between self-efficacy and locus of control in the student population. The relationship was examined by using Pearson's Correlation coefficient. The findings indicated that there was a significant correlation between self-efficacy and locus of control in students, whereas age was found to have no significant correlations with self-efficacy and locus of control in students as $p\geq0.05$.

Table 3.4: Relationship between self-efficacy and locus of control on intertemporal choices in students

Variables	Overall k
Age	.062
Self-efficacy	.204
Locus of control	.289*

*Significant at $p<0.05$

Table 3.4 shows the relationship between self-efficacy and locus of control on Overall k in students. The findings revealed that there was no significant positive correlation between age and self-efficacy with intertemporal choices. Spearman's Rho indicates a low significant positive correlation between locus of control and intertemporal choices in students ($\rho=.29$, $p<0.05$)

Table 3.5: Relationship between self-efficacy and locus of control in working participants

Variables	Age	Self-efficacy	Locus of control
Age	1	.284*	-.145
Self-efficacy		1	-.424**
Locus of control			1

*Significant at $p<0.05$, **Significant at $p<0.01$

Table 3.5 shows the relationship between self-efficacy and locus of control in working participants. Pearson's correlation was used to examine the relationship between these variables. The results indicated a significant positive correlation between age and self-efficacy ($r=.028$, $p<0.05$). A significant negative correlation was observed between self-efficacy and locus of control ($r=-.42$, $p<0.001$).

Table 3.6: Relationship between self-efficacy and locus of control on intertemporal choices in working participants

Variables	Overall k
Age	.024
Self-efficacy	.025
Locus of control	.124

Table 3.6 shows the relationship between self-efficacy and locus of control on Overall k in working participants. Spearman's Rho correlation was used to examine the relationship between these variables. The results indicate that there was no significant correlation between age, self-efficacy, and locus of control with intertemporal choices in working individuals.

Comparison of gender and current status with intertemporal choices

Table 4.1: Variability as per Gender in Self-efficacy and Locus of Control

Males			Females		p
	Mean	**S. D**	**Mean**	**S. D**	
Self-efficacy	31.68	5.263	31.48	4.357	.822
Locus of control	10.45	3.838	11.13	3.537	.326

Table 4.1 shows the comparison of males and females on self-efficacy and locus of control. The results from the independent-sample t-test indicate that there was no difference between males and females for both self-efficacy and locus of control.

Table 4.2: Variability as per gender in Self-efficacy and Locus of control with intertemporal choices

	Mann-Whitney U	**p**
Overall k	1173.500	.021

*Significant at p<0.05.

Table 4.2 shows the gender differences in intertemporal choices (overall k). Mann- Whitney U test shows that there is a significant difference between males and females with females having a lower overall k value. The statistics show that there is a significant positive correlation between males and females in intertemporal choices, but they are significantly different.

Table 4.3: Variability as per current status in Self-efficacy and Locus of control

Variables	Studying		Working		p
	Mean	**S. D**	**Mean**	**S. D**	
Self-efficacy	31.07	4.540	32.09	4.911	.250
Locus of control	11.03	3.755	10.65	3.586	.583

Table 4.3 shows the comparison of studying and working on self-efficacy and locus of control. The results from an independent-sample t-test indicate that there was no difference between studying and working for both self-efficacy and locus of control.

Table 4.4: Variability as per current status in Self-efficacy and Locus of control with intertemporal choices

	Mann-Whitney U	**p**
Overall k	1349.500	.121

*Significant at p<0.05.

As the data did not present the normal distribution for Overall k, the Mann-Whitney U test was used to examine the comparison between the studying and working samples. Above table 4.4 shows the studying and working population's differences in intertemporal choices (overall k). Mann- Whitney U test shows that there is no significant difference between studying and working on the overall k value.

Conclusion

To summarize, the study found a significant correlation between Locus of control and Intertemporal choices. The results obtained from the study also found that age has an influence on self-efficacy indicating that self-efficacy increases with age. Supporting the previously cited literature, our study revealed a significant positive correlation between self-efficacy and locus of control. There was no significant positive correlation between Self-efficacy, Locus of control, and intertemporal choices in the working and student population. Results showed that the working population has higher self-efficacy compared to students.

DISCUSSION

The findings obtained from the study indicated a significant positive correlation between self-efficacy and locus of control in students. There is no significant positive correlation between self-efficacy and intertemporal

choices made by students, but there is a correlation between locus of control and intertemporal choices made by students (rho = .29, p=0.05).

There was no significant correlation between self-efficacy, locus of control, and intertemporal choices discovered in working individuals. There was no significant difference found between working and student populations in self-efficacy, locus of control, and intertemporal choices as hypothesized.

A study conducted by Magdalin in 2019 found that both locus of control and self-efficacy are significant behavioral components that are closely related. The study's findings reinforced previous research on the subject, revealing a strong correlation between self-efficacy and locus of control. Personality factors such as locus of control are known to have a considerable impact on an individual's self-efficacy, as suggested by Roddenberry and Renk in 2010. The study's results also supported the literature's assertion that locus of control and self-efficacy are positively related. The findings showed that as self-efficacy increases, the locus of control decreases, indicating that internalization of the locus of control occurs with an increase in self-efficacy. There was no significant correlation found between self-efficacy and intertemporal choices. The study also found a significant positive correlation between locus of control and overall k, signifying that a person's locus of control affects the intertemporal choices he/she makes.

Research has shown that age and gender have an impact on the locus of control, but there is no significant difference in self-efficacy or locus of control between males and females. However, the study found that females have a lower overall k value, indicating that they have a greater tendency to prefer delayed larger rewards than males. Age was also found to have an impact on self-efficacy and locus of control. Although the correlation between age and self-efficacy was mild, it was statistically significant with a p-value of 0.05. This is consistent with previous studies that have found a positive correlation between self-efficacy and age. The study also found different correlations between self-efficacy and locus of control in students and working individuals. While there was a significant positive correlation between age and self-efficacy in students, there was a significant negative correlation between self-efficacy and locus of control in working individuals. Contrary to previous research, age was not found to affect overall k, indicating that age does not impact discounting behavior. Instead, this behavior is influenced by a variety of other factors, as suggested by Becker & Mulligan (1997). The study found that the working sample had a higher level of self-efficacy than the student sample, and both groups exhibited an internal locus of control. Overall k results showed that both groups preferred immediate smaller rewards over delayed larger rewards, which aligns with previous research on the preference for immediate, smaller rewards. However, the study's findings contradict Platt and Eisenman's (1968) hypothesis that adults with an internal locus of control have more future-oriented perspectives than adults with an external locus of control regarding financial choices. While both groups exhibited an internal locus of control, their preference for immediate smaller rewards was high.

LIMITATIONS AND IMPLICATIONS

The aforementioned findings may differ from the predicted outcomes due to several limitations. The major limitation of our study is that it is an internet-based study. There might be a possibility that scales were lengthy for the participants which might have altered the accuracy of their responses due to less patience. One of the limitations is the smaller sample size (114 participants) which could have been avoided by choosing larger samples to generalize and for accurate results. The age range is also a limitation, as a different sample size may have produced statistically significant results, as young adults are shown to have less patience, which is consistent with previous research findings. In the same vein, previous research indicates that older adults (mean age = 75) are the most patient age group when only a one-year delay is involved. However, when delay horizons were between three and ten years, older persons were shown to be the least patient category.

Improving self-efficacy through some measures could lead to better intertemporal choices and a possible change of locus of control. As intertemporal choices play a vital role in the long-term sustainability of the individuals, there could be awareness conducted in different age or criteria-based sample groups to enhance their financial decision-making skills.

SCOPE OF RESEARCH

Specific job-related Self-efficacy, Locus of control, and intertemporal choices can be studied further to break down psycho-social aspects involved between the variables. A study involving variables such as personality, decision-making skills, and assertiveness could be instrumental in widening the knowledge concerning intertemporal choices, and the association with Self-efficacy and Locus of control. A situation-based exploratory study can be crucial to identifying the factors involved beneath the specific choices and delayed or immediate reward selection in different sets of sample groups.

RECOMMENDATIONS FOR FUTURE RESEARCH

After examining this study, it is recommended that further research be conducted in this area that is relevant to young adulthood. Such research can help to gain a more complete understanding of the topic and facilitate the development of effective interventions. Additionally, future studies should focus on addressing the limitations of this study to yield more generalizable results.

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