

**SELF-PERCEIVED DEPRESSIVE REALISM, OPTIMISM BIAS AND SENSE OF
CONTROL OF WORKING INDIVIDUALS**



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**SELF-PERCEIVED DEPRESSIVE REALISM, OPTIMISM BIAS AND SENSE OF
CONTROL OF WORKING INDIVIDUALS**

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DEDICATION

This thesis is dedicated to my family and friends for their unconditional love, endless support, and constant encouragement throughout this journey.

ACKNOWLEDGMENT

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List of Abbreviations

Abbreviations	Full form
PHQ – 9	Patient Health Questionnaire
LOT – R	Life Orientation Test – Revised
SOC	Sense of Control

List of Symbols

Symbols	Definitions
α	Cronbach's index of internal consistency
k	No. of items
f	Frequency
N	Total sample
M	Mean
S.D	Standard Deviation
%	Percentage
p	Significance Value
ΔR^2	R square change value
β	Standardized Beta
S.E	Standard Error
LL	Lower Limit
UL	Upper Limit
CI	Confidence Interval
DV	Dependent Variable

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Abstract

This study was carried out to examine the relationship between self-perceived depressive realism, optimism bias, and sense of control of working individuals. A correlational study design was used to conduct the study. A sample of 300 working individuals, both men ($N=170$) and women ($N=130$), with an age range of 21 to 63 years were selected by using purposive convenient sampling. Patient Health Questionnaire (Kroenke et al, 2001), Life Orientation Test Revised (Scheier, 1994) and Sense of Control scale (Lachman & Weaver, 1998) was used to collect data from working individuals for this research. The results of Pearson product-moment correlation analysis showed self-perceived depressive realism was negatively significant with optimism bias of working individuals. Optimism bias was positively significant with sense of control of working individuals. Self-perceived depressive realism was negatively significant with perceived constraints subscale of sense of control of working individuals. The results of mediation analysis showed optimism bias acted as a significant mediator in the relationship between self-perceived depressive realism and sense of control of working individuals. Comparisons revealed that women employees had higher self-perceived depressive realism as compared with men. It was also found that working men had higher optimism bias and sense of control than working women. Moreover it was determined that unmarried working individuals had lower self-perceived depressive realism and lower sense of control than married working individuals, and married employees were observed as having higher optimism bias than unmarried employees. This study has implications for future research, the findings may contribute to the growing body of research literature in the field of psychology.

Chapter 1

Introduction

The concept of depressive realism is that “at times depressed people are ‘sadder but wiser’ than non-depressed people.” (Alloy & Abramson, 1979), which advocates that individuals who are diagnosed or have self-perceived depression make more accurate inferences than non-depressed individuals. It can be said, the manner in which depressed individuals (self-perceived and/or diagnosed) see themselves and/or view the world around them changes (Team, 2023). One can speculate as to whether a depressed individual is seeing a distorted image of the world or a heightened sense of reality. This thought process sits behind the well-known hypothesis of depressive realism (Team, 2023).

In accordance with depressive realism hypothesis, depressed individuals are more realistic and accurate in their perceptions and judgments than their non-depressed counterparts, whose judgments are more often biased or distorted (Ackerman & DeRubeis, 1991, p. 566). The depressive realism hypothesis insinuates that individuals with depression have more accurate perceptions and judgments than those who are not depressed in a variety of contexts (Yeh & Liu, 2007).

A meta-analysis of the phenomenon of depressive realism found that individuals without depression reported a positive bias (Moore & Fresco, 2012), it is to say that people without depression have an optimism bias in their thinking. People who are depressed view things correctly, rather than through a distorted lens, as opposed to non-depressed people who interpret negative things as temporary, insignificant or even positive which leads to an optimistic outlook and not as they are in true reality (Team, 2023). Individuals who are depressed i.e. have more depressive realism are less prone to optimistic bias as compared to individuals without depression (Bortolotti & Antrobus, 2015). The concept of depressive realism sits in contrast with optimism bias, which means people may see the world in a more positive sense even when it is not or when outcomes are unfavorable in reality.

Depressive realism predicts that individuals with higher level of depression make more realistic predictions than those who have lower levels (Bortolotti & Antrobus, 2015). For example, if individuals were inquired to assess their own performance beforehand in a novel task, those with depression are more likely to predict their performance accurately than the control group. It can

thus be said that depressive realism can be studied with an array of other variables to understand the length at which it relates with the constructs.

The construct of optimism bias appraises that assumptions made by individuals in a non-clinical sample are more optimistic than they are in if viewed objectively (Bortolotti & Antrobus, 2015). People with higher optimism bias tend to underplay negative future encounters and focus on more positive ones. For instance, if people with higher optimism bias think about the future, they underestimate their chances of acquiring cancer or getting a divorce. When someone exhibits "over-optimism," also known as the optimistic bias, they think they have a lower chance (than is realistically justified) of experiencing future negative events such as getting into a serious car accident or developing a serious illness (Bortolotti & Antrobus, 2015).

The optimistic illusions or optimism bias may inadvertently give individuals the "Illusion of Control" (Team, 2023). It could be simpler to carry on if you think bad things happen only temporarily or if you think your actions actually improve your life and the environment around you. The optimism bias may help boost self-esteem, keep us going through challenging times and promote our overall well-being. At times, individuals tend to overestimate the relation between their behaviors and the reinforcers. Langer (1975) coined this concept as Illusion of Control. It means people believe that they have personal control over events that are uncontrollable. They have a higher sense of control. Alloy and Abramson's (1992) highly influential paper discovered that college students with mild depression tended to exhibit less illusion of control than individuals without dysphoria. Thus, the theory of depressive realism includes perceptions of control.

Perceived control has been identified in existing literature in a numerous variety of ways, such as "personal control, locus of control, mastery, self-directedness, personal autonomy and sense of control" (Keeton et al., 2008). Control can be understood in two parts, subjective perception of a person versus external factors that happen to a person. Keeton et al. (2008) stated on one end of the spectrum, sense of control is a learned generalized belief regarding control to master or shape up one's own life. On the opposite end of the spectrum, it is the notion that one's life is shaped or affected by external events to which one is powerless to, a sense of perceived powerlessness. Sense of control is affected by a number of social, cultural, behavioral, biological and environmental processes, some of which mediate sense of control in individuals (Abeles, 1991).

To understand sense of control and depressive realism, Depressive Realism constitutes the idea that depression is linked with more accurate perceptions of person control (Dev et al., 2022). Many studies conducted to test hypothesis about depressive realism have often focused on determining whether or not depressed individuals perceive their situation with a more realistic and sound sense of what is within their control as compared to people who are not depressed. Alloy & Clements (1992) conducted a study which suggested that because depressed individuals (with higher depressive realism) often felt a lack of power or felt powerless, in their depressed state they believed they had no control. On the contrary, non-depressed people (with lower depressive realism) tend to have a greater sense of control because of their optimism bias or positive bias. Hence, in reality, people have an optimistic outlook towards life which causes them to have a higher sense of control. This results in lack of depressive realism present in the aforementioned individuals. If we combine the variables, we can understand how increased depressive realism can impact optimism bias and in turn sense of control. The current study aims to understand the relationship between these three variables namely self-perceived depressive realism, optimism bias and sense of control.

Literature Review

With relevance to above mentioned constructs, previous research i.e. discussed below has been carried out to explore these variables in a variety of ways. Depressive realism and the links between study variables has been studied in existing literature.

A research was conducted to compare the relationship between different levels of depression, everyday functioning, cognitive and functional capacity performance, and self-assessment of everyday functioning (Harvey et al., 2017). A large sample of schizophrenia outpatients was used. A skilled assessor conducted a structured diagnostic interview with each subject. Screening procedures used with Mini-Mental State Exam (MMSE) and Wide Range Achievement Test III (WRAT-III). Real-world functional performance, the Specific Levels of Functioning (SLOF27), Beck Depression Inventory-II (BDI-II), Positive and Negative Syndrome Scale (PANSS) and the brief version of the UCSD Performance-based Skills Assessment (UPSA-B) was used. Findings include those with extremely low levels of self-reported depression overestimated their everyday functioning. There was a significant correlation between depression

and self-assessment accuracy, but there was no evidence of how depression affected most areas of daily functioning and objective test performance.

Another study was initiated (Zetsche et al., 2019) which evaluated the expectations of depressed individuals regarding their future mood and investigated if these expectations are accurate or negatively biased. A sample of undergraduate students was employed in the study to compare participants' perceived levels of happiness and sadness over the course of four days with their actual experiences. The findings showed that those with clinically diagnosed depression had negatively biased expectations about how they would feel in the future; they expected to feel less cheerful and more melancholy than they actually did. It was also noted that depressed individuals also demonstrated a negative mood recall bias.

Depressive Realism and Optimism Bias

A study was conducted on the long-run effects of psychotherapy on depression, beliefs, and economic outcomes (Bhat et al., 2022). Two clinical trial having depressed adults in India were randomly assigned to either the control condition or to the brief course of psychotherapy condition. The findings concluded that therapy changed three things. Firstly, it lessened their likelihood that they would think of themselves poorly, see themselves as a failure or feel bad about self. Secondly, most relevant to the current hypothesis, therapy decreased overly optimistic belief updating in response to feedback when presented with a novel work opportunity, which in turn lowered overconfidence. Third, self-assessed levels of patience and altruism were increased.

The first meta-analysis of literature on depressive realism (Moore & Fresco, 2012) was conducted, 75 studies were utilized, with a total of 7305 subjects combined from across US, Canada, England, Israel and Spain. Overall, the results showed a small depressive realism effect. Nonetheless, a significant positive bias was shown by both dysphoric/depressed people and non-dysphoric/non-depressed people, with the bias in the latter group being greater. Studies using self-report measures rather than formal interviews to assess depression symptoms and studies lacking an objective standard of reality were more likely to find depressive realism effects (Moore & Fresco, 2012).

A research study explored costs and benefits of optimism and realism. (Bortolotti & Antrobus, 2015). It was hypothesized when it comes to judgements about oneself, accurate thinking patterns are maladaptive psychologically speaking and inaccurate cognitions are

psychologically adaptive. The findings of their study showed that recent investigations suggest dysphoric individuals are more accurate in time based tasks and estimates of personal circumstances, but not in other tasks. Unrealistic optimism remains a robust phenomenon across a variety of tasks and domains, but the real concern is to what extent is the optimism beneficial to an individual. The idea that realistic thinking is not psychologically adaptable whereas optimistic thinking is should be reconsidered. A healthy and functional mindset can benefit from realistic expectations and beliefs, whereas extreme optimism has significant psychological setbacks.

Research was conducted (Korn et al., 2014) with the aim of examining if there is a presence of an optimistically biased information processing pattern that can be found in healthy people and is absent in Major Depressive Disorder (MDD) patients. MDD patients and healthy controls were asked to estimate their personal probability of experiencing 70 adverse life events. The participants were then shown the likelihood of that event to occur in their sociocultural environment and a second estimation was attained after. Healthy controls were indicative of an optimistic bias, where they had changed their responses to more desirable. This optimistic bias was found to be overall absent in MDD patients.

Depressive Realism and Sense of Control

A research study was carried out to explain the relationship between depressive realism and control (Dev et al., 2022). A number of innovations were used, including improved measures of bias in perceived control and performance to be more realistic in assessing said variables. Sample was undergraduate students and Amazon MTurk workers. They were asked to complete a contingency task and an overconfidence task along with measures of anxiety and depression. Perceived control was measured alongside throughout the contingency task. No evidence was found linking overconfidence or illusory control to depressive symptoms.

A study aimed to test for depressive realism in a clinically depressed sample, as recent evidence sheds light that the hypothesis of depressive realism i.e. “depressed individuals have more accurate perceptions” is weaker than expected (Venkatesh & Mitchell, 2018). A sample of individuals with clinical depression who underwent a rumination induction were examined against a control group. The participants finished a contingency task in which they had to judge how much control they had over an outcome, with no correlation between their answers and the outcome itself. The results concluded no difference in judgements of control.

Correlations between depressed individuals and perceived control have been found to be significant, a research study was conducted (Blanco et. al, 2009) with the objective to explore if depressive realism consists of lower perceived control of events in depressed individuals as compared to their non-depressed counterparts. Sample used in the research was college students. It was hypothesized that the assumed realism of depressed subjects is not because of increased accuracy in perception, rather it was due to their greater exposure to the actual environmental contingencies, which is a result of their response style being more passive. In this study, both depressed and non-depressed were exposed to an uncontrollable task. The findings revealed levels of higher depression have negative correlation with probability of responding and illusion of control.

Optimism Bias and Sense of Control

A research was conducted (Jansen, 2016) identified the negative relationship existing between the variables of optimism bias and illusion of control. The research was based on a sample of cancer patients, where optimism bias decreased after a bad consequence of failure. Optimism bias was studied was studied in light of perceived control. A significant correlation was found between participant's optimism bias and their perception of control. The study concluded people tend to exhibit optimism bias when there is high perceived control and lower optimism bias when they believe the occurrence of any event is out of their control.

To evaluate model of emotional distress with positive outcomes such as optimism bias, self-esteem and sense of control as potential mediators, a research study was conducted (Jiménez et al., 2017). Cross-sectional study design was used. A sample of adults was obtained, between the ages of 18 to 87 years. Results concluded that older participants had greater optimism and external control, and lower internal control. Moreover, it was found that optimism and self-esteem acted as mediators in the relationship between internal control and emotional distress.

A research study examined the correlation of AIDS knowledge, self-esteem, sense of control and optimism bias towards AIDS, and condom use in Chinese male college students (Kwon & Lee, 2018). A cross-sectional study design was utilized. Significant positive correlations were found between self-esteem, sense of control, and optimistic bias toward AIDS. Furthermore, no correlations were found between AIDS knowledge, optimistic bias, and condom use.

A study was initiated (Rhee et al., 2005) to investigate the relationship between optimism bias and perceived controllability. It was hypothesized that there would be a negative relationship between risk perception and perceived controllability. A survey was used on a sample of working graduate students majoring in business to demonstrate presence of optimism bias in their risk perception related with information security. Results concluded people feel less vulnerable to threat i.e. higher optimism bias when they have higher control in protecting their information.

Based upon the evidence, it can be observed there have been various studies indicative of the construct of depressive realism. Depressive realism has been studied in contrast with optimism on numerous occasions. Illusion of control or perceived control has also been incorporated in multiple studies. There is a lack of a single comprehensive model of the variables. The literature also indicates that experimental research designs have been used so far. It can also be pointed out in the above mentioned literature, numerous age groups have been studied in the past research e.g. research has been conducted on samples of old age, college students, undergraduate students etc. The results provided the need to study depressive realism, optimism bias and sense of control on working individuals. Furthermore, limited ethnicities are catered to, no published researches in Pakistani context have been found.

Theoretical Framework

The study variables and structure of the current research can further be understood and supported with the help of two theories, as follows.

Theory of Learned Helplessness

Overmier and Seligman discovered that dogs that were subjected to electric shocks in a condition where escape was not feasible later failed to learn how to avoid the shock in a different situation where escape was possible. Thus, he concluded the theory of learned helplessness (Seligman & Maier, 1967). To elaborate, this means not trying to get out of a negative situation or circumstance because the past has taught you that you are helpless. In accordance with the theory of depressive realism, people who are depressed tend to evaluate their control or performance more realistically because they are less likely to exhibit optimistic bias (Dev et al., 2022).

This model of learned helplessness has important implications for depression and the theory of depressive realism. It posits when it seems that the highly desired outcome is not probable

and/or the highly aversive outcome is probable, along with the person having no expectation that anything she does will change the outcome, depression results (Courtney & Ackerman, 2023). The learned helplessness theory, to put it briefly, holds that people who are depressed generally expect that their actions will not control outcome or affect the course of events. Their sense of control would be affected. So depressed individuals would less likely feel like they are in control. Moreover, according to Seligman (1967) there is an optimistic explanatory style which means describing failure as something temporary. This optimistic explanatory style is present in some people and absent in others. Hence, it is safe to assume when people view the world differently, less optimistically perhaps, they might feel less in control. This relationship will further be explored in the current study with a sample of working individuals.

Theory of Hopelessness

According to Martin Seligman hopelessness theory (Seligman, 1972), the most important precipitating factor of depression is hopelessness. This can be defined as an expectation that (1) desirable outcomes will not occur and that (2) the person has no responses available to change this situation. The depressed individual lacks an optimistic outlook, or desirable outcomes not occurring, and he or she also believes they have no control to change the current circumstance.

This theory can be used to understand the dynamics between the study variables, how depressive realism can be tied with optimism bias and sense of control. Adhering to the first expectation, people with higher level of depression and/or higher depressive realism will not anticipate positive outcomes. Conversely, people who are not depressed and/or have lower depressive realism, will have more positive bias which pertains to an opposite thinking pattern that desirable outcomes may occur. The second expectation explains sense of control, where a depressed individuals who has higher depressive realism is less likely to believe they have perceived control in any given situation. On the contrary, non-depressed individuals with higher optimism bias will believe that they have at least some level of control. This conceptualization of the study variables brings forth the proposed conceptual framework of the study.

Conceptual Framework

The proposed conceptual framework of the present study is shown below.

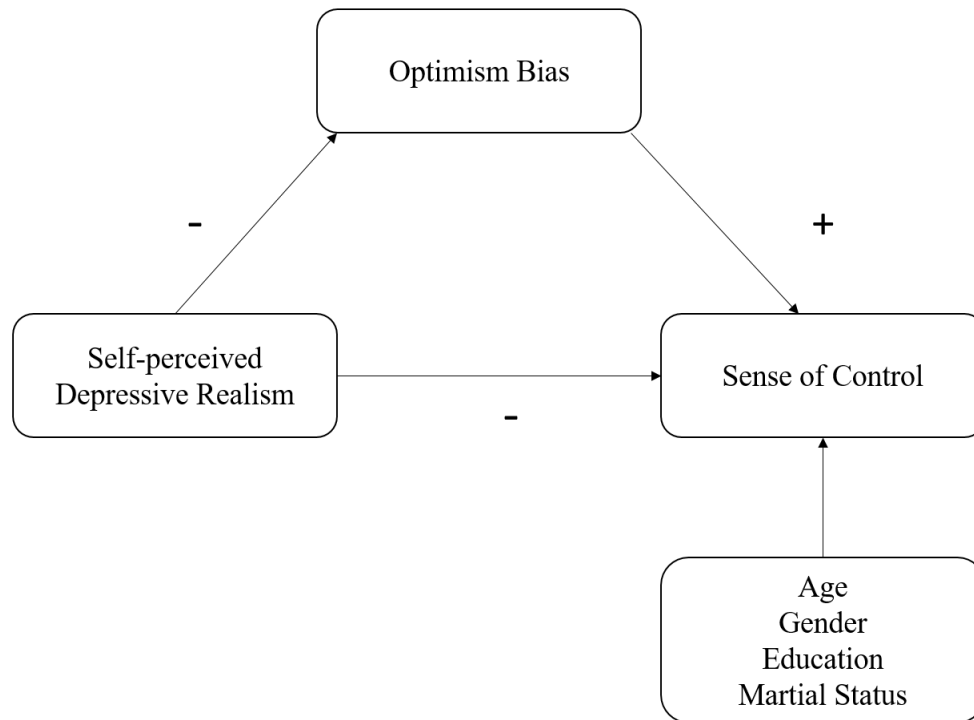


Figure 1. Mediation effect of optimism bias on relationship of self-perceived depressive realism and sense of control

Rationale of the study

Depressive realism is a well-known concept that has been researched with an abundant number of correlates e.g. illusion of control, kinds of judgments etc. (Alloy & Abramson, 1979; Moore & Fresco, 2012). Understanding the relationship of depressive realism with optimism bias and sense of control will lead to an understanding of the processes of sense of control in a working individual. The association between these variables have not been demonstrated in a single proposed model hence the framework of this study is aimed to understand the mediating role of optimism bias in the relationship between self-perceived depressive realism and sense of control of working individuals.

The study variables have not been researched in Pakistan, this well-known phenomenon is yet to be explored with an indigenous sample. In context of the current study, Dev et al. (2022)

suggested extending research to participants with different racial and ethnic identities, income or socioeconomic status could add valuable insight into generalizability of the findings. It becomes essential that indigenous research on the matter is conducted. This current study aims to target this gap in research.

There is limited knowledge and/or research on a diverse sample, the study variables have been investigated more in college and university students, and other samples have not been entertained to a large degree. Many existing studies have emphasized that further research is needed where different population samples are used, other than college and university students (Blanco et al., 2009; Bortolotti & Antrobus, 2015; Soderstrom, 2011). The current study aims to address this research gap and to focus on exploring the aforementioned relationship in working individuals at managerial and/or administrative positions, thus catering to a larger age group, a different sample.

Thus, the current research will provide valuable insights about the relationship between self-perceived depressive realism, optimism bias, and sense of control of working individuals. The extent to which self-perceived depression is serving or hindering judgments can be made useful. Testing the theory of depressive realism with new correlates i.e. the study variables is significant because of its decades-long influx into research, society, and even possible mental health guidelines for social and organizational context from Asian perspective.

Chapter 2

Method

Research Design

A cross-sectional research design i.e. correlational research strategy was used in this research to study correlation between self-perceived depressive realism, optimism bias, and sense of control of working individuals.

Objectives

1. To identify the relationship between self-perceived depressive realism, optimism bias, and sense of control among working individuals.
2. To identify mediating effect of optimism bias in the relationship between self-perceived depressive realism and sense of control of working individuals.
3. To study the role of demographic characteristics (gender, age, marital status, work experience, level of education) in relation to self-perceived depressive realism, optimism bias, and sense of control of working individuals.

Hypotheses

1. There will be a negative relationship between self-perceived depressive realism and optimism bias of working individuals.
2. There will be a positive relationship between optimism bias and sense of control of working individuals.
3. There will be a negative relationship between self-perceived depressive realism and sense of control of working individuals.
4. Optimism bias will mediate the relationship between self-perceived depressive realism and sense of control of working individuals.
5. Working women will have higher self-perceived depressive realism as compared to working men.
6. Working men will have higher optimism bias and sense of control as compared to working women.

7. Unmarried working individuals will have higher self-perceived depressive realism than married working individuals.
8. Married working individuals will have higher optimism bias and sense of control than unmarried working individuals.

Sample

The sample consists of working individuals ($N=300$) working men ($N=170$) and working women ($N=130$), currently working at managerial or administrative positions in various organizations located in Islamabad and Rawalpindi between the ages of 21 to 63 years. Participants were required to have the ability to understand and write in English language and be willing to participate in the research. Convenient sampling technique was used in this research.

Inclusion criteria: Individuals who are currently employed at managerial or administrative positions and reside in Islamabad and Rawalpindi.

Exclusion criteria: Individuals with less than one year of work experience in current organization were excluded in the sample.

Operational Definition

Self-perceived Depressive Realism

Self-perceived depressive realism operationally defined as the concept that depressed people's perceptions and assessments are frequently more accurate than non-depressed people's in a variety of circumstances and it can be explained in terms of a self-report measure of Patient Health Questionnaire – 9 by obtaining a total score where higher scores are indicative of higher self-perceived depressive realism (Kroenke et al, 2001).

Optimism Bias

Optimism Bias is operationally defined as the tendency to underplay negative future encounters and focus on more positive ones (Bortolotti & Antrobus, 2015). It will be scored by attaining composite score of Life Orientation Test – Revised (Scheier, 1994).

Sense of Control

Sense of control is operationally defined as an individual's sense of control over her or his life, and it is determined on two parameters i.e. personal mastery and perceived constraints (Lachman & Weaver, 1998).

Measures

Demographic Sheet

The demographic sheet included demographic variables of the respondents, such as age, gender, education, work experience, personal income, marital status and family system (see appendix D).

Patient Health Questionnaire (PHQ-9)

The PHQ-9 developed by Kroenke et al. (2001) is used by scoring each of the 9 DSM criteria (see appendix E). It consists of nine items and the score ranges from 0 to 27, each of the nine items are scored on a four-point Likert-type rating *scale* (0 = *not at all*, 1 = *several days*, 2 = *more than half the days*, 3 = *nearly every day*). The scoring includes sum of all responses. The total score is then interpreted to assess depression severity, according to given ranges. Higher scores are indicative of higher levels of depression. This measure has been used in many recent studies to measure depression of depressive realism (Costantini, 2021; Darimont, 2020). PHQ-9 has very good reliability, with Cronbach α of .86. (Kroenke et al, 2001). This measure has been proved to have good reliability in later studies as well, it yielded a reliability of .84 in a recent research (Sun et al., 2022).

Revised Life Orientation Test (LOT-R)

LOT-R is a 10-item scale developed by Scheier (1994) that measures how optimistic or pessimistic people feel about the future (see appendix E). Each of the items were assessed on a 5-point scale (0 = strongly disagree, 1 = disagree, 2 = neutral, 3 = agree, 4 = strongly agree). Items 2, 5, 6 and 8 are filler questions and should not be used to calculate a final score. Items 3, 7 and 9 should be reverse-scored. To obtain a total score for each participant, sum all responses, except the filler questions, for a score ranging from 0 to 24. Scores between 1 and 4 indicate low level of optimism (tendency of pessimism), 5 to 6 indicate average level of optimism and 7 to 10 show

high level of optimism. The LOT-R has been used by numerous researches (Uchmanowicz, 2019; Contreras et al., 2017) in near retrospect. It has good reliability, with Cronbach's α of .82. (Scheier, 1994). This measure has been used in many recent studies (Fasano et al., 2020; Skandsen et al., 2021; Yuan. et al., 2020; Pagini et al., 2020).

Sense of Control Scale

This scale is a 12 item self-report measure (Lachman & Weaver, 1998) that measures an individual's sense of control over her or his life (see appendix E). It has two subscales. The Personal Mastery scale contains four items (items 1, 2, 3 and 4) and Perceived Constraint subscale contains eight items (items 5, 6, 7, 8, 9, 10, 11 and 12). A 7 point Likert rating scale (1 = strongly agree, 2 = somewhat agree, 3 = a little agree, 4 = neither agree nor disagree, 5 = a little disagree, 6 = somewhat disagree, 7 = strongly disagree). To calculate scores for each subscale, reverse-score each item and calculate the average of all items. Higher scores on the mastery subscale will be indicative of higher levels of perceived mastery, and higher scores on the constraints subscale will indicate higher levels of perceived constraints. To calculate participants' overall sense of control, items in the personal mastery subscale will be reverse-scored so that higher scores mean more control. This measure has been used by Korn et al.. (2014) and other such researches in the last decade. This measure has good reliability, with Cronbach's α of .86 and .70 for perceived constraint subscale and personal mastery subscale respectively (Lachman & Weaver, 1998). In a recent study (Yu et al., 2018) reliability was found to be .79 (personal mastery) and .73 (perceived constraints).

Procedure

A sample of working individuals, who are currently employed in Islamabad and Rawalpindi, were asked to participate in the research. Participants were educated regarding the aim of the study and the questionnaire were provided to them. To measure depression, Patient Health Questionnaire (PHQ-9) was used, for Optimism; Revised Life Orientation Test (LOT-R) was used and Sense of Control scale measured sense of control (see appendix E). Permission was taken from the respective authors to use these scales in the research (see appendix A). Ethical considerations were strictly followed and informed consent was obtained from the participants,

after which questionnaires were provided to be filled out (see appendix C). Participants were guided about the intent of the study and were given a brief description about the research. Participants were given the right to withdraw from the study at any point. Problems in understanding the questionnaire and the purpose of the research were addressed and the participants were encouraged to provide accurate responses. It was ensured that the participant's privacy and response confidentiality was maintained. This research has been conducted under supervision of an assigned supervisor, and was in alignment with the ethical guidelines of the university ethical review committee.

Results

The current research study aimed to investigate the relationship between self-perceived depressive realism, optimism bias and sense of control among working individuals. The Statistical Package for Social Sciences (SPSS) was used to analyze data collected from the participants. Descriptive statistics were determined for demographic variables of the study, Reliability analysis was conducted for the variables of Depressive Realism, Optimism Bias and Sense of Control. Pearson Product Moment Correlation was carried out to examine the nature of relationship between Depressive Realism, Optimism Bias and Sense of Control. Independent sample t-test and one-way independent measure ANOVA were carried out to compare demographics of age, gender, education, work experience, marital status and family system. Mediation analysis was done to understand the mediating effect of Optimism Bias on the relationship between Depressive Realism and Sense of Control, using PROCESS by Hayes.

Table 1

Descriptive statistics of the sample (N=300)

Characteristics of Participant		<i>f</i>	(%)
Gender	Men	170	56.7
	Women	130	43.3
Age	21 to 30 years	135	45
	31 to 40 years	90	30
	41 to 63 years	75	25
Education	Undergraduate	113	37.7
	Graduate	173	57.7
	Postgraduate	14	4.7
Work Experience	1 to 5 years	133	44.3
	6 to 10 years	50	16.7
	11 to 15 years	32	10.7
	16 to 25 years	46	15.3
	26 to 40 years	39	13

Marital Status	Unmarried	117	39
	Married	183	61
Family System	Nuclear	205	68.3
	Joint	95	31.7

Table 1 represents demographic characteristics of participants, which consists of a data of a total of 300 working individuals. Based on gender, there was a total of 170 (56.7%) male participants and 130 (43.3%) female participants. The sample consists of participants of ages 21 to 63 years, where there were 135 participants in the age range of 21 to 30 years (45%), 90 participants in the age range of 31 to 40 years (30%) and 75 participants in the age range of 41 to 63 years (25%). Separating participants based on education, we can identify there were 113 (37.7%) working individuals who have undergraduate level of education, 173 (57.7%) had graduate level of education and 14 (4.7%) working individuals with postgraduate level of education. Data on work experience was found in five slabs. The first one shows there are a total of 133 (44.3%) participants having work experience of 1 to 5 years. 50 participants (16.7%) have a work experience of 6 to 10 years, 32 participants (10.7%) have a work experience of 11 to 15 years, 46 participants (15.3%) have a work experience of 16 to 25 years and 39 participants (13%) have a work experience of 26 to 40 years. When we segregate on the basis of marital status, 117 participants (39%) were unmarried and 183 participants (61%) were married. Whereas, when we look into family system, 205 participants (68.3%) are living in nuclear set-up and 95 participants (31.7%) are living in joint set-ups.

Table 2*Alpha Reliability for all the scores on Scales (N=300)*

Variables	<i>k</i>	<i>α</i>	<i>M</i>	<i>S.D</i>	Range		Skewness	Kurtosis
					Potential	Actual		
PHQ – 9	9	.83	7	5.322	0-27	0-24	0.90	0.54
LOT – R	5	.56	12.63	3.366	0-20	1-19	- 0.37	0.30
Personal Mastery	4	.60	22.26	3.676	4-28	7-21	- 0.69	0.52
Perceived Constraints	8	.86	29.77	10.386	8-56	9-46	0.19	- 0.71

Note. PHQ-9 = Patient Health Questionnaire – 9, LOT-R = Life Orientation Test – Revised

Table 2 shows the descriptive statistics and alpha reliability coefficient for the variables of the study. The alpha reliability of the Patient Health Questionnaire – 9 (PHQ-9) is .83. On the Life Orientation Test – Revised (LOT-R), alpha reliability was found to be .56. For the Sense of Control scale, alpha reliability was .60 for subscale of Personal Mastery and .86 for subscale Perceived Constraints. The data is normally distributed as skewness and kurtosis fall within their respective ranges.

Table 3

Pearson Product Moment Correlation between the variables of Self-perceived Depressive Realism, Optimism Bias and Sense of Control (N=300)

	Variables	1	2	3	4
1	Self-perceived depressive realism	-	-.302**	-.092	.424**
2	Optimism bias		-	.169**	-.402**
3	Personal Mastery			-	-.066
4	Perceived Constraints				-

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3 shows correlation analysis on study variables. The results indicate significant correlations between the variables. Negative correlation is found between self-perceived

depressive realism and optimism bias ($p < .001$). Self-perceived depressive realism displayed a negative correlation with personal mastery. Self-perceived depressive realism and perceived constraints exhibited a positive correlation between each other ($p < .001$). Optimism bias has positive correlation with personal mastery ($p < .001$) and negative correlation with perceived constraints ($p < .001$). Correlation between personal mastery and perceived constraints is found to be negative.

Table 4

Direct Effect of Mediation Analysis between Self-perceived Depressive Realism and Personal Mastery (category of sense of control) through Optimism Bias (N=300)

Predictors	Optimism Bias		Personal Mastery	
	β	S.E	β	S.E
Self-perceived Depressive Realism	-.25***	0.04	-.09	0.43
Optimism Bias	-	-	-.17**	0.07
R ²	.11		0.7	
F	7.51***		3.67***	

Note. ** $p < .01$, *** $p < .001$. Gender, age, education and marital status were used as covariates.

The results of direct effect show that self-perceived depressive realism is found to be a significant negative predictor of optimism bias and personal mastery. Similarly, optimism bias was found to be a significant positive predictor of personal mastery. Direct effect of self-perceived depressive realism on personal mastery was not significant.

When self-perceived depressive realism was entered as a predictor, the emerged model proved to be significant, $R^2 = .11$, $F = 5.71$, $p < .00$. It predicted 11% variance in optimism bias. When self-perceived depressive realism and optimism bias were entered as a predictors, the emerged model proved to be significant, $R^2 = .07$, $F = 3.67$, $p < .00$. This model produced 7% variance in personal mastery. Effect size was found to be small (0.04).

Table 5

Indirect Effect of Mediation Analysis between Self-perceived Depressive Realism and Personal Mastery (category of sense of control) through Optimism Bias (N=300)

Mediator	β	Boot S.E	95% Boot CI	
			LL	UL
Optimism Bias	-.42***	.198	-0.0859	-0.0086

Note. *** $p < .001$. Gender, age, education and marital status were used as covariates.

The results of the indirect effect showed that optimism bias was found to be a significant mediator between the relationship of self-perceived depressive realism and personal mastery which indicated that increase in self-perceived depressive realism tends to decrease optimism bias which tends to decrease sense of personal mastery (subcategory of sense of control). Indirect effect was found to be significant whereas direct effect was insignificant.

Table 6

Direct effect of Mediation Analysis between Self-perceived Depressive Realism and Perceived Constraints (category of sense of control) through Optimism Bias (N=300)

Predictors	Optimism Bias		Perceived Constraints	
	β	S.E	β	S.E
Self-perceived Depressive Realism	-.25***	0.04	.31***	0.11
Optimism Bias	-	-	-.29***	0.16
R ²	.11		.28	
F	7.51***		F = 18.83***	

Note. *** $p < .001$. Gender, age, education and marital status were used as covariates.

The results of direct effect show that self-perceived depressive realism is found to be a significant negative predictor of optimism bias and personal mastery subscale of sense of control. Similarly, optimism bias was found to be a significant positive predictor of personal mastery subscale of sense of control. Direct effect of self-perceived depressive realism on personal mastery was significant.

When self-perceived depressive realism was entered as a predictor, the emerged model proved to be significant, $R^2 = .11$, $F = 7.51$, $p < .00$. It is indicated that 11% variance was predicted in optimism bias. When self-perceived depressive realism and optimism bias were entered as a predictors, the emerged model proved to be significant, $R^2 = .28$, $F = 3.67$, $p < .00$. The model produced 28% variance in perceived constraints. Effect size was found to be small (0.07).

Table 7

Indirect effect of Mediation Analysis between Self-perceived Depressive Realism and Perceived Constraints (category of sense of control) through Optimism Bias (N=300)

Mediator	β	Boot S.E	95% Boot CI	
			LL	UL
Optimism Bias	.072***	.022	0.033	0.119

Note. *** $p < .001$. Gender, age, education and marital status were used as covariates.

The indirect effect showed that optimism bias was found to be a significant mediator between the relationship of self-perceived depressive realism and perceived constraints which indicated that increase in depressive realism tends to decrease optimism bias which tends to increase sense of perceived constraints (subcategory of sense of control). Both, direct and indirect effects, were found to be significant.

Table 8

Independent Sample t-test showing gender difference on Self-perceived Depressive realism, Optimism Bias and Sense of Control (N=300)

Variable	Male (n=170)		Female (n=130)		t	p	95% Confidence Interval		Cohen's d
	M	S.D	M	S.D			LL	UL	
SPDR	5.77	4.75	8.62	5.61	-4.75	.000	-4.023	-1.666	-.550
OB	12.99	2.91	12.17	3.84	2.025	.044	.022	1.616	.265
PM	22.11	3.73	22.45	3.61	-0.784	.434	-1.174	.506	-
PC	27.89	9.85	32.22	10.59	-3.62	.000	-6.692	-1.977	-.443

Note: SPDR = Self-perceived depressive realism, OB = Optimism bias, PM = Personal Mastery, PC = Perceived Constraints, LL = Lower Limit, UL = Upper Limit.

Table 8 represents independent sample t-test that was run in order to check gender differences of the study variables among working individuals. The results showed that there were significant differences between self-perceived depressive realism ($p < .00$), optimism bias ($p < .05$) and perceived constraints ($p < .00$) of both genders. The mean depicted that female working individuals have higher self-perceived depressive realism and perceived constraints (subscale of sense of control) than male individuals, with moderate effect size. Optimism bias is found to be higher in men than in women, in accordance to their mean values, with small effect size. Personal mastery (subscale of sense of control) was not significant across gender.

Table 9

Independent Sample t-test showing difference in marital status on Self-perceived Depressive Realism, Optimism Bias and Sense of Control (N=300)

Variable	Unmarried Employees (n=117)		Married Employees (n=183)		t	p	95% Confidence Interval		Cohen's d
	M	S.D	M	S.D			LL	UL	
SPDR	9.12	5.56	5.65	4.70	5.80	.000	2.292	4.647	.671
OB	11.68	3.90	13.24	2.83	-3.74	.000	-2.378	-.735	-.538
PM	22.08	3.23	22.37	3.94	-0.71	.481	-1.116	.527	-
PC	33.01	9.46	27.69	10.45	4.46	.000	2.968	7.661	.516

Note: SPDR = Self-perceived depressive realism, OB = Optimism bias, PM = Personal Mastery, PC = Perceived Constraints, LL = Lower Limit, UL = Upper Limit.

Table 9 represents independent sample t-test that was run to compare differences across marital status on the study variables among working individuals. The results showed that there were significant differences between self-perceived depressive realism, optimism bias and perceived constraints of married and unmarried working individuals. The mean values depicted that unmarried working individuals have higher self-perceived depressive realism and perceived constraints (subscale of sense of control) than married ones, with moderate effect size. Optimism bias is found to be higher in married than unmarried working individuals, in accordance to their mean values, with moderate effect size. Personal mastery (subscale of sense of control) was not significant across marital status.

Table 10

Independent Sample t-test showing difference in work experience on Self-perceived Depressive Realism, Optimism Bias and Sense of Control (N=300)

Variable	1 to 10 years (n=183)		11 to 40 years (n=117)		t	p	95% Confidence Interval		Cohen's d
	M	S.D	M	S.D			LL	UL	
SPDR	8.38	5.45	4.85	4.33	5.90	.000	2.35	4.70	.68
OB	12.22	3.64	13.28	2.79	-2.70	.007	-1.84	-2.87	-.31
PM	22.41	3.52	22.02	3.92	.88	.379	-.49	1.27	-
PC	31.26	10.09	27.43	10.45	3.14	.002	1.22	1.43	.40

Note: SPDR = Self-perceived depressive realism, OB = Optimism bias, PM = Personal Mastery, PC = Perceived Constraints, LL = Lower Limit, UL = Upper Limit.

Table 10 represents independent sample t-test that was run to compare differences across work experience on the study variables among working individuals. The results showed that there were significant differences between self-perceived depressive realism, optimism bias and perceived constraints among different work experiences of participants. The mean values depicted that working individuals with work experience of 1 to 10 years have higher self-perceived depressive realism and perceived constraints (subscale of sense of control) than working individuals with work experience of 11 to 40 years, with moderate and small effect size respectively. Optimism bias is found to be higher in working individuals who had a work experience of 11 to 40 years than those with less work experience, in accordance to their mean values, with small effect size. Personal mastery (subscale of sense of control) was not significant across work experience.

Table 11

Independent Sample t-test showing difference in levels of education on Self-perceived Depressive Realism, Optimism Bias and Sense of Control (N=300)

Variable	Undergraduate (n=113)		Graduate (n=173)		<i>t</i>	<i>p</i>	95% Confidence Interval		<i>Cohen's d</i>
	<i>M</i>	<i>S.D</i>	<i>M</i>	<i>S.D</i>			<i>LL</i>	<i>UL</i>	
SPDR	8.69	5.12	6.13	5.31	4.09	.000	1.33	3.80	.49
OB	12.19	3.69	12.79	3.15	-1.42	.156	-1.43	.23	-
PM	22.09	3.48	22.53	3.65	-1.03	.303	-1.29	.40	-
PC	30.81	9.47	29.18	10.93	1.34	.183	-.77	4.03	-

Note: SPDR = Self-perceived depressive realism, OB = Optimism bias, PM = Personal Mastery, PC = Perceived Constraints, LL = Lower Limit, UL = Upper Limit.

Table 11 represents independent sample t-test that was run to compare differences across level of education on the study variables among working individuals. The results showed that there were significant differences in self-perceived depressive realism between different levels of education of working individuals. The mean values depicted that working individuals with undergraduate level of education have higher self-perceived depressive realism than working individuals with an education level of graduate, with moderate effect size. Optimism bias, personal mastery and perceived constraints were not significant across levels of education.

Table 12

Mean, Standard Deviation, and One-Way Analysis of Variance of Self-perceived Depressive Realism, Optimism Bias and Sense of Control across different age groups (N=300)

Variables	21 to 30 years (n=135)		31 to 40 years (n=90)		41 to 63 years (n=75)		F (2, 297)	η^2	Post hoc
	<i>M</i>	<i>S.D</i>	<i>M</i>	<i>S.D</i>	<i>M</i>	<i>S.D</i>			
SPDR	8.96	5.317	6.12	5.136	4.55	4.186	20.721***	0.374	1>2, 1>3
OB	11.89	3.737	13.03	3.000	13.49	2.777	6.625**	0.211	1<2, 1<3
PM	22.52	3.368	22.44	3.763	21.56	4.048	1.816	0.110	-
PC	32.67	9.745	28.23	10.143	26.37	10.497	10.958**	3.310	1>2, 2>3

Note. **p<.01, ***p<.001. SPDR = Self-perceived depressive realism, OB = Optimism bias, PM = Personal Mastery, PC = Perceived Constraints.

The results of one-way independent measure ANOVA depicted that there were significant differences among self-perceived depressive realism of working individuals across different age groups, the mean depicted that individuals in age range 21 to 30 years have higher self-perceived depressive realism than individuals in the other two groups, with a small effect size. For further pair-wise comparisons, a Post Hoc test (Gabriel) showed age range 21 to 30 years (1) has higher self-perceived depressive realism than the other two age groups. Between 31 to 40 years (2) age range and 41 to 63 years (3) age range, it is also observed that self-perceived depressive realism is significantly higher in age group of 31 to 40 years (2).

For optimism bias, the results show significant differences with regard to ages, that age range 41 through 63 years has the highest optimism bias when compared with the other two groups, with small effect size. For further pair-wise comparisons, a Post Hoc test (Gabriel) showed ages 41 to 63 years (3) has higher optimism bias than ages 21 to 30 years (1). It is also found that ages 31 to 40 years (2) have significantly higher optimism bias present than ages 21 to 30 years (1).

The results for personal mastery category of sense of control do not show significant differences with respect to age. For perceived constraints, the results depicted significant differences among ages, ages 21 to 30 years have higher perceived constraints than ages 31 to 40 years and ages 40 to 63 years, effect size is large. For further pair-wise comparisons, a Post Hoc test (Gabriel) showed 21 to 30 years (1) age range to have higher sense of perceived constraints

than 31 to 40 years age group (2). When comparing 31 to 40 years (2) and ages 40 to 63 years (3), the former has significantly higher perceived constraints present.

Discussion

The purpose of this study was to examine the relationship between self-perceived depressive realism, optimism bias and sense of control of working individuals. Data was collected from individuals working in different organizations, and multiple statistical analyses were conducted using SPSS, including descriptive statistics, reliability analysis, correlation analysis, independent sample T-tests, ANOVA, and regression analysis. The results provide a comprehensive understanding of the relationship between the study variables.

Reliability coefficients for the scales of self-perceived depressive realism, optimism bias and sense of control were determined. The measures used in the study have been used in many recent researches and have proved to have good reliabilities (Sun et al., 2022; Yu et al., 2018). The results in Table 2 indicates satisfactory levels of reliability for all scales and subscales, with the exception of optimism bias which has relatively low but suggesting that these instruments are reliable for measuring the respective constructs. Perceived Constraints (subscale of sense of control) has the highest reliability followed by depression realism. Personal Mastery subscale of sense of control has good alpha reliability. The lower reliability of optimism bias could be a result of the scale consisting of less number of items or it is likely due to cultural differences i.e. the scale may be interpreted differently by individuals in Pakistan as compared to ones in western context. By increasing sample size will enhance the reliability.

After reliability analysis, hypotheses testing was carried out. Hypothesis 1 suggested that there will be a negative relationship between self-perceived depressive realism and optimism bias of working individuals. According to this hypothesis, table 3 illustrates there is a significant negative relationship, which means hypothesis 1 is accepted. The findings of the current study are similar to a study done by Garcia-Retamero (2015) where the subjects with depression were asked to read some scenarios after which they made predictions and results showed that they were less prone to optimistic bias than the subjects who did not have depression. Thus the depressive realism was evident, that depressed individuals were more prone to a negative bias and less prone to an optimistic bias in their cognitive functioning. Similarly the current study results are backed up with the findings of Korn (2014) where it was noted that optimistic bias was absent in patients with Major Depressive Disorder (MDD). Results of the study showed a lack of optimism bias in

depressed individuals, which correlate with the current research hypothesis that as self-perceived depressive realism increase, optimism bias will decrease in an individual. Multiple researches are indicative of non-depressed individuals i.e. absence of depressive realism have an optimism bias present (Alloy & Abramson, 1988, Greenwald 1980, Taylor & brown, 1988). The original theory of depressive realism insinuates that individuals are less likely to have optimism bias (Dev et al., 2022) which is consistent with the findings of the current study.

Investigating the proposed hypothesis 2, that there will be a positive relationship between optimism bias and sense of control, it can be observed in table 3 that optimism bias has a significant positive relationship with personal mastery subscale of sense of control and a significant negative relationship with perceived constraints subscale of sense of control which means hypothesis 2 is also accepted. Personal mastery subscale is indicative of higher sense of control whereas perceived constraints subscale is associated with lower sense of control. In reference to current findings, many previous researches (Jansen, 2016; Klein & Helweg-Larsen, 2002) concluded that the greater their optimistic bias, the greater the perceived control in people. Moreover, the outcome of the current research study is corresponding to the Seligman's theory of learned helplessness (1967) which focuses on presence or absence of an optimistic explanatory style in individuals. People who exhibit an optimistic explanatory style overestimate their control whereas people who lack optimistic explanatory style will submit to their perceived lack of control and/or the perceived environmental constraints i.e. the learned helplessness phenomenon. Similarly Martin Seligman's hopelessness theory (1972) also suggest that when there is a lack of optimistic outlook in an individual, he or she believes they have no responses available to change this situation, their sense of control is low. Recent research has identified significant positive correlations between sense of control and optimistic bias (Kwon & Lee, 2018) which is supportive with the findings of this study.

Hypothesis 3 suggested that there is a negative relationship between self-perceived depressive realism and sense of control with results in Table 3 being showing the variables are correlated to each other and showing an inverse relation i.e. if self-perceived depressive realism increases, personal mastery decreases and vice versa, and if self-perceived depressive realism increases, perceived constraints also increases and vice versa. The positive correlation between self-perceived depressive realism and perceived constraints is significant. Higher perceived constraints is an indication of lower sense of control. And as per the findings of the current study,

it can be noted that higher self-perceived depressive realism is indicative of higher perceived constraints which means lower sense of control. Hence the results support the hypothesis as identified in the previous literature by Evan et al. (2015) who proposed that individuals with lack a lack of depressive realism will overestimate the amount of control and vice versa i.e. illusion of control or sense of control is negatively related with depressive realism. Numerous other researches (Msetfi et al., 2015; Blanco et al., 2009) have validated the findings of this study that self-perceived depressive realism consists of lower sense of personal control.

Hypothesis 4 stated that optimism bias will mediate the relationship between self-perceived depressive realism and optimism bias of working individuals. Tables 4 and 5 show mediation effect of optimism bias on the relationship between self-perceived realism and personal mastery subscale of sense of control where indirect effect was found to be significant and direct effect was insignificant. Tables 6 and 7 show mediation effect of optimism bias on the relationship between self-perceived realism and perceived constraints subscale of sense of control where both, direct and indirect effects, were found to be significant. The findings are conclusive of results that optimism bias is a significant mediator between the relationship of self-perceived depressive realism and sense of control. Hypothesis 4 has thus been accepted. The hypothesis sits parallel to previous literature, optimism bias is said to be a useful positive tool in mediation (Skills et al., 2020). Previous researches (Black & Reynolds, 2013; Chen et al., 2022; Jiménez et al., 2017) have taken optimism bias as a mediator to understand its effect on various other study variables such as emotional distress, and age, emotional intelligence and decision making, perfectionism and depression etc. and their respective relationships. Optimism bias has played a mediating role in various studies.

The proposed hypothesis 5 suggested that women employees will have higher self-perceived depressive realism when compared with men. The results in table 8 supported the hypothesis by proving presence of significant differences in self-perceived depressive realism amongst both genders. Women had higher self-perceived depressive realism thus hypothesis 5 was accepted. There are significant gender differences in depression (by extension in depressive realism) explored in previous researches such as by Salk et al. (2017), where women experience more than men. Zhao et al. (2020) also suggests that females have higher levels as compared to men. Hypothesis 6 proposed that working men have higher optimism bias, which can be observed

from the results in table 8, where it can be observed that working men have higher optimism bias than working women as predicted which means the hypothesis was proved to be correct. Previous authors have found similar findings that males were found to be more optimistically biased than females (Dricu et al., 2022). Hypothesis 6 further stated that working men have higher sense of control than working women. The results in table 8 revealed that females have significantly higher perceived constraints i.e. lower overall sense of control as compared to males hence, the proposed hypothesis was accepted. Compared to men, women experience more disadvantages in health, education, employment which could act as contributing factors as to why women have a lower sense of control (Ross & Mirowsky, 2002).

Hypothesis number 7 proposed that unmarried working individuals to have higher self-perceived depressive realism than married working individuals. The analysis in table 9 revealed significant differences in self-perceived depressive realism of married and unmarried employees. It was found that unmarried employees have higher self-perceived depressive realism than married ones which means hypothesis 8 has been accepted. A possible reason why married individuals choose to marry is due to their lack of depressive realism (Burton, 2020). He stated “After all, how many people would get married if they had any real sense of what awaited them?” hence indicating a deprivation and/or a lesser degree of depressive realism in married individuals. According to this notion, married individuals have less depressive realism and unmarried have more depressive realism, when the two groups are compared, which is consistent with the findings of the current study as it was found that married working individuals had higher self-perceived depressive realism than unmarried working individuals.

Hypothesis 8 stated that there will be higher optimism bias in married working individuals than unmarried employees. According to table 9, optimism bias was found to be higher in married than unmarried employees. The findings of Croft et al.. (2014) are similar to the results of the current study where the effect of marital status on optimism on a different sample was studied, and it was found that married individuals have higher optimism scores than their unmarried counterparts. Gakhar (2019) has also stated that optimism bias is affected by marital status. The results of the current study reflect these findings, as there were differences in optimism bias between married and unmarried working individuals, where married employees were found to have higher optimism bias. Hypothesis 8 further suggested that married employees will have

higher sense of control when compared with unmarried employees. Sense of control in married individuals as found to be higher compared to unmarried individuals, as per the findings of the current study, as demonstrated in table 9. Thus the findings show that hypothesis 10 was accepted. Ross (1991) stated that being a married individual increases one's social and economic resources which can result in an increase in perceived control which could be a possible reason as to why sense of control is higher in married individuals over unmarried ones. This could be a plausible reason why the results of the current study are conclusive of higher sense of control in married employees as compared to unmarried employees. A study (Muhaisen & Al-Hamdani, 2022) revealed that a sample of married female teachers had a high degree of perceived control where it was found to be higher in more than 10 years when compared to 10 years or less. The findings of the current study are also indicative of sense of control being higher in married working individuals than in unmarried working individuals.

Conclusion

The findings of this study show that there was significant relationship among the variables of self-perceived depressive realism, optimism bias, and sense of control in working individuals. Results are indicative of significant correlations; negative relationship between self-perceived depressive realism and optimism bias, positive relationship between optimism bias and sense of control, negative relationship between self-perceived depressive realism and perceived constraints subscale of sense of control. The analysis also highlights the mediating effect of optimism bias on the relationship between self-perceived depressive realism and sense of control in working individuals. Further, the results of this study suggested that gender, age, education and marital status of the working individuals were significant covariates of the study variables i.e. self-perceived depressive realism, optimism bias and sense of control. Therefore, differences were suggested on the study variables across the demographics of working individuals.

Limitations and Suggestions

Since data was collected using self-report measures, participants' responses might have been influenced by bias such as social desirability. Use of more ambiguous scales is suggested.

Not all of the scales used are adapted to Pakistani context. It is suggested to use indigenous translated scales to attain better reliability to validate cultural differences, because the participants might have found it difficult to understand some of the question statements.

Data was collected from individuals working in different kinds of organizations. The sample was not limited to a particular group or field of work i.e. participants included working individuals in education sector, running a business, online pursuits, serving in armed forces etc. The variability in nature of job of the participants could have acted as a confounding variable and could have affected the results. It is recommended to reduce variability in nature of job of participants. Limiting data intake to one particular field of work e.g. participants obtained from educational sector only etc. might lead to different results which can be explored in the future.

For increased generalizability, this research can be replicated on a large sample. Additionally, sample can be obtained from different cities in Pakistan.

Implications

The implications of this study are in organizational and social contexts in the field of psychology. It contributes to a greater understanding of the relationship between self-perceived depressive realism, optimism bias and sense of control of working individuals.

This study also provides a kind of newly established evidence of the mediating effect of optimism bias on the relationship between self-perceived depressive realism and sense of control of working individuals, and highlights how optimism bias can be used in understanding change in sense of control for working individuals. It helps to understand that maintaining optimism bias in working individuals will lead to a greater sense of control which will in turn help working individuals at managerial and administrative positions to function better in their work environment.

The findings of the study can be utilized to incorporate useful strategies to maintain optimism bias. Moreover, it leads to understanding that lower sense of control is found in younger age groups, and thus it becomes vital to work on strategies to improve their sense of control so that they can excel in their respective positions of control. The findings of this study are potentially

significant and will contribute towards the growing body of literature on self-perceived depressive realism, optimism bias, and sense of control of working individuals.

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APPENDICES

APPENDIX A

Questionnaire Permission

Permission for PHQ – 9 measure

PHQ-9 Inbox x



Becraft, Steve <stebecra@regenrief.org>
to me ▾

Fri, Feb 16, 7:38 PM ☆ 😊 ↶ ⋮

(Writing on behalf of Dr. Kurt Kroenke)

The PHQ is now in public domain and freely available for use. Copies of the PHQ family of measures, including the GAD-7 are available at the website: www.phqscreeners.com. Translations, a bibliography, and other information are also provided on the website. Attached please find useful translations and an instruction manual with scoring information that you may find helpful.

Best regards,
Steve Becraft

Steve Becraft (he/him)

Program Assistant, The William M. Tierney Center for Health Services Research

Regenrief Institute

1101 West Tenth Street, 2nd floor

Indianapolis, IN, 46202

Tel 317-274-9171 | Fax 317-274-9304

<http://www.regenrief.org>

Permission for LOT – R measure

Permission to use LOT-R Scale Inbox x



Manaal Babur

Thu, Feb 15, 2:52 AM ☆

Respected Sir, Hope you are doing well. I am a student of MS Clinical Psychology (4th Semester) at Bahria University Islamabad Campus. As part of my dissertatio

Michael Scheier <scheier@andrew.cmu.edu>
to me ▾

Thu, Feb 15, 9:54 AM ☆ 😊 ↶ ⋮

I apologize for this automated reply. Thank you for your interest in our work. You have my permission to use any of the scales that I have helped to develop for your research and/or teaching purposes. I do not charge for the use of these scales. I only ask that you reference the scales you use appropriately in all publications. Note that I only send permission approval electronically, so I will not be sending a follow-up letter authorizing the use of a scale through regular mail.

If you wish to use a measure for a purpose other than teaching or research (in the traditional sense in which these terms are used), you need to contact the copyright holder (the publisher of the journal in which the measure was published) and obtain that entity's permission. There might be fees associated with use of the scale or selected items.

Information concerning the measure you are asking about can be found at the website below. Questions about reliability, validity, norms, and other aspects of psychometric properties can be answered there. The website also contains information about administration and scoring procedures for the scales.

I do not track attempts to translate the scales into different languages, so I have no information to offer about that. You are free to develop your own translation if you would like to do that. Again, just be sure to cite the original scale appropriately in publications.

Please do not ask for a manual. There is no manual. Read the articles on the website for the information that you need.

If questions remain, do not hesitate to contact me. Good luck in your work.

<https://www.cmu.edu/dietrich/psychology/directory/emeritus/scheier-michael.html>

Permission for LOT – R measure

Permission to use Sense of Control Scale Inbox x**Manaal Babur**

Thu, Feb 15, 3:00 AM ☆

Respected Madam, Hope you are doing well. I am a student of MS Clinical Psychology (4th Semester) at Bahria University Islamabad Campus. As part of my diss...

Margie Lachman <lachman@brandeis.edu>

Thu, Feb 15, 5:55 AM ☆ 😊 ↶ ⋮

to me ▾

I give you permission to use the Sense of Control scale in your research . I wish you the best for your research.

<https://www.brandeis.edu/psychology/lachman/pdfs/midicontrolsensescales.pdf>

Margie Lachman



--

Margie E. Lachman, Ph.D.

Minnie and Harold Fierman Professor of Psychology

<https://www.brandeis.edu/psychology/lachman/index.html>

APPENDIX B

Data Collection Permission



February 16, 2024

TO WHOM IT MAY CONCERN

REQUEST FOR DATA COLLECTION

It is stated that **Syeda Manaal Babur** Enrollment No. 01-275222-020 is a student of MS Clinical Psychology Bahria University Islamabad Campus conducting research on "**Relationship between Depressive Realism, Optimism Bias and Sense of Control of working individuals**" under supervision of undersigned. It is requested that kindly allow her to collect the data from your esteemed institution.

Regards,

Dr. Saima Kalsoom
Principal BSPP / HOD PP
Bahria School of Professional Psychology
Bahria University
E-8 Islamabad

Bahria School of Professional Psychology Shangrilla Road E-8 Islamabad
Tel: 051-9260002 Ext. No. 1406 Fax: 051-9260889

APPENDIX C

Informed Consent Form

Informed Consent

I, Syeda Manaal Babur, student of MS Clinical Psychology, Bahria University, am conducting my dissertation (a research study) under the supervision of Dr. Saima Kalsoom. My topic is “Self-perceived Depressive Realism, Optimism Bias, and Sense of Control of working individuals”.

I shall be thankful of your kind cooperation.

Undertaking:

I have been informed about the purpose of the study.

I am willing to participate in this research.

I am assured that my confidentiality will be maintained.

I have the right to withdraw at any given moment.

I am ensured that the data will be used for research and academic purposes only.

I am assured that my data will be kept safe at every stage during research

Date: _____

Signature: _____

Researcher:

Syeda Manaal Babur

Students of MS Clinical Psychology

Department of Professional Psychology

Bahria University Islamabad Campus

Supervisor:

Dr. Saima Kalsoom

Principal of School of Professional Psychology

Bahria University Islamabad Campus

If you wish to inquire further, you can contact me at

manaalbabur@gmail.com

APPENDIX D

Demographic Sheet

Demographic sheet

Indicate your gender

- (a) Male (b) Female (c) Other

State your age _____

Education:

- a) Bachelors
b) Masters
c) PhD
d) Other: _____

Major of degree:

- a) Humanities and Social Sciences
b) Management Sciences
c) Engineering
d) Medical
e) Other: _____

Current Job title

Work experience

Personal Income

What is your current marital status?

- a) Unmarried
b) Married
c) Divorced
d) Widowed/Widower

Family system

- a) Nuclear
b) Joint

APPENDIX E

Sample copy of Questionnaire

PHQ-9

Over the last **2 weeks**, how often have you been bothered by any of the following:

		Not at all	Several days	More than half the days	Nearly every day
1	Little interest or pleasure in doing things	0	1	2	3
2	Feeling down, depressed, or hopeless	0	1	2	3
3	Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4	Feeling tired or having little energy	0	1	2	3
5	Poor appetite or overeating	0	1	2	3
6	Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7	Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8	Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9	Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

LOT-R

Please respond as accurately and honestly as you can. There are no right or wrong answers.
Please circle your answer below

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	In uncertain times, I usually expect the best	0	1	2	3	4
2	It's easy for me to relax	0	1	2	3	4
3	If something can go wrong for me, it will	0	1	2	3	4
4	I'm always optimistic about my future	0	1	2	3	4
5	I enjoy my friends a lot.	0	1	2	3	4
6	It's important for me to keep busy	0	1	2	3	4
7	I hardly ever expect things to go my way	0	1	2	3	4
8	I don't get upset too easily	0	1	2	3	4
9	I rarely count on good things happening to me	0	1	2	3	4
10	Overall, I expect more good things to happen to me than bad	0	1	2	3	4

SOC

For each statement please check the box corresponding to the answer that best represents your level of agreement with each statement as it applies to you.

		Strongly agree	Somewhat agree	A little agree	Neither agree or disagree	A little disagree	Somewhat disagree	Strongly disagree
1	I can do just about anything I really set my mind to	1	2	3	4	5	6	7
2	When I really want to do something, I usually find a way to succeed at it	1	2	3	4	5	6	7
3	Whether or not I am able to get what I want is in my own hands	1	2	3	4	5	6	7
4	What happens to me in the future mostly depends on me	1	2	3	4	5	6	7
5	There is little I can do to change many of the important things in my life	1	2	3	4	5	6	7
6	I often feel helpless in dealing with the problems of life	1	2	3	4	5	6	7
7	Other people determine most of what I can and cannot do	1	2	3	4	5	6	7

8	What happens in my life is often beyond my control	1	2	3	4	5	6	7
9	There are many things that interfere with what I want to do	1	2	3	4	5	6	7
10	I have little control over the things that happen to me	1	2	3	4	5	6	7
11	There is really no way I can solve the problems I have	1	2	3	4	5	6	7
12	I sometimes feel I am being pushed around in my life	1	2	3	4	5	6	7

APPENDIX F

Plagiarism Report

2024_MS_S_Manaal_babur

ORIGINALITY REPORT

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