

THE MEDIATING ROLE OF EMOTIONAL REGULATION IN RELATIONSHIP BETWEEN LIFE ORIENTATION AND SELF- CONTROL AMONG PATIENTS WITH DEPRESSION

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Abstract

This study intended to explore the association between life orientation, self-control, and depression, with a particular focus on the mediating role of emotional regulation among patients with depression. The study recruited 100 individuals through purposive sampling technique with 50 male and 50 female patients from various clinics and hospitals in Karachi, who had previously been diagnosed with mild, moderate and severe forms of depression. To comprehensively assess various aspects of their psychological well-being, three distinct scales were employed as measurement tools. These scales encompassed the evaluation of life orientation, focusing on optimistic and pessimistic behaviors, an assessment of emotional regulation, and the brief self-control scale to gauge self-control abilities of the sample. Findings of this study revealed several significant results. Firstly, it was observed that there exists a significant and positive correlation between an individual's life orientation and their emotional regulation. Additionally, a positive relationship was found between emotional regulation and self-control. Moreover, the study's results provided support for the proposed mediating role of emotional regulation in the relationship between life orientation and self-control. Furthermore, the study also explored demographic variations in the study variables.

Keywords: *Life orientation, emotional regulation, self-control.*

Introduction

The study of depression has been a highly intriguing research area around the world being one of the foremost menace to human health (Wang et al., 2021). According to WHO (2023a) depression impacts approximately 280 million

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individuals globally. Prolonged and moderate to severe depression, specifically, can result in significant difficulties, including impaired performance and substantial distress in various domains such as work, education, and family life (Kupferberg & Hasler, 2023). Tragically, suicide claims the lives of around 700,000 people annually, with individuals aged 15 to 29, facing it as the fourth leading cause of death (WHO, 2023b).

In our daily lives, we all encounter various stressors. However, the way we perceive and interpret these stressors can vary among individuals based on their thinking styles. These patterns of thoughts, known as response styles or life orientation, encompass traits such as optimism and pessimism. Optimism refers to a tendency to anticipate the most favourable outcomes for actions or events, while pessimism involves a disposition to expect the least favourable or worst outcomes (de Meza & Dawson, 2020). Our orientation towards life is one of the qualities that profoundly influences the journey and outcomes of our lives.

Almost every day, we encounter various temptations that can be challenging to resist. Whether it's the allure of appetizing food advertisements, the influence of drugs or the constant exposure to social media may often compel our environments to bring forward the desires that may conflict with our personal goals. Research indicates that a significant percentage of people, ranging from 64% to 73%, experience desires on a regular basis, and approximately 42% of the time, they make efforts to resist these temptations (Hofmann et al., 2012; Milyavskaya et al., 2021).

Life Orientation: Optimism vs. Pessimism

Life orientation encompasses the study of how individuals perceive and interact with themselves, others, and society. It involves the holistic development of personal, social, intellectual, emotional, and physical aspects, and explores the ways in which these dimensions intersect and manifest in everyday life. It considers an individual's perspective on society and their expectations from it. Furthermore, it delves into the spectrum of optimism and pessimism, examining how these outlooks shape one's worldview.

Optimism and pessimism have been a topic of debate among researchers since long. Some of the researchers believe that optimism-pessimism is a one-dimensional construct, with optimism on one side and pessimism on the other side. Whereas, some researchers suggest that optimism and pessimism are separate constructs (Kubzansky et al., 2004; Mayor, 2012; Scheier et al., 1994).

According to Scheier and Carver (1985) optimism can be labelled as a general tendency of a person to expect positive outcomes in the future. It encompasses a positive inclination and anticipation of better results. Dember et al. (1989) further expanded on these constructs, defining optimism as a positive outlook on life that encompasses both the present and the future. Optimistic individuals perceive their challenges as manageable, temporary, and specific to particular situations. In contrast, pessimists view their problems as unmanageable, enduring, and applicable across various situations. Optimism, therefore, reflects a positive expectation and belief in favourable outcomes, while

pessimism reflects a negative expectation and belief in unfavourable outcomes.

Numerous studies have reliably shown that there is a positive correlation between optimism and positive psychological outcomes, on the other hand, pessimism has been associated with greater negative psychological consequences (Scheier et al., 2021). People who show higher levels of optimism tend to experience several benefits. Optimistic individuals are more adept at problem-solving, experience lower levels of anxiety and encounter fewer everyday difficulties (Leahy et al., 2023). As a result, they are generally more effective in coping with challenges and exhibit fewer symptoms of depression (Chang, 1998; Kathryn R. Puskar, 1999). Multiple studies have also revealed a negative correlation between optimism and depressive symptoms (Arslan & Yildirim, 2021; D'Souza et al., 2020).

Emotional Regulation

The phenomenon of experiencing and articulating emotions constitutes a fundamental facet of the human condition. The complexity of this process is heightened by the differential levels of acceptability associated with distinct emotions across various contexts. As a result, individuals partake in the practice of regulating their emotions. Emotion regulation pertains to the cognitive and behavioural processes through which individuals engage in the initiation, inhibition, or alteration (Lincoln et al., 2022).

The topic of emotion regulation has been of considerable interest for a significant period of time. However, in the latter part of the 20th century, it started to receive recognition as a separate and independent field of scientific inquiry (Gross, 1998). The importance of emotional regulation has been known as a vital determinant in securing an individual's mental well-being as well as it empower individuals to develop and uphold positive relationships, resulting in enhanced social support (Billingsley et al., 1993; Boman & Yates, 2001; Rasmussen et al., 2006; Scheier & Carver, 1992; Strutton & Lumpkin, 1992).

The process model of emotion regulation proposed by Gross (1998) is largely acknowledged as the prevailing theoretical framework for examining strategies employed in the management of emotions. In the context of professional settings, there is a notable emphasis on two essential forms of emotion management techniques: cognitive reappraisal and expressive suppression. Gross and John (2003) regarded cognitive reappraisal as a more advantageous strategy as compared to repression due to its essential influence on both well-being and interpersonal relations. Individuals who experience difficulties in regulating their emotions exhibit a heightened susceptibility to a range of mental health conditions, such as alcohol abuse, anxiety disorders, and mood disorders (Stellern et al., 2023). In contrast, the implementation of emotional regulation techniques has demonstrated a dual effect of diminishing the probability of mental health disorders and augmenting the occurrence of happy emotional encounters, while concurrently diminishing the frequency of negative emotional encounters (Scheier & Carver, 2003).

Self-control

The phenomenon of self-control is extensively examined in a range of academic fields, such as social psychology, health psychology, personality psychology, developmental psychology, and neuroscience. Researchers from several academic disciplines contribute their studies to advance knowledge of the origins, effects, and basics of this vital human characteristic (Gillebaart, 2018). There is a broad range of terms used to refer to self-control, such as delay of gratification, deliberate control, willpower, self-discipline, and self-regulation (Moffitt et al., 2013). Everyday, individuals encounter the task of exerting self-control to refrain from participating in detrimental or prohibited actions, such as consuming unhealthy foods, engaging in procrastination instead of fulfilling responsibilities, or favoring immediate satisfaction over long-term objectives (Goschke & Job, 2023).

In certain scholarly discourses, the concepts of "self-control" and "self-regulation" are employed synonymously. Self-regulation encompasses a comprehensive array of regulations, concepts, protocols, and actions that steer persons towards favorable results (Carver & Scheier, 1998). Nevertheless, certain academics draw a differentiation between these two concepts, perceiving self-control as a deliberate, conscious, and strenuous component of self-regulation. Self-control refers to the cognitive and behavioral processes involved in resisting temptations or conflicting desires in order to prioritize and pursue a certain goal (Wenzel et al., 2023). Within this particular framework, any inclination that presents a difficulty due to its interference with a central objective can be seen as a temptation, irrespective of the fact that such inclination may not be problematic in an alternative scenario.

Significance of the Study

Previous researches have examined the impact of life orientation in conjunction with other relevant variables on overall well-being of general population. Furthermore, the examination of emotion regulation has not been conducted independently from self-control, under the assumption that these two forms of control have similarities due to their shared characteristic of overriding automatic responses in favour of regulated ones.

It is vital for psychologists who treat individuals suffering from depression to comprehend the intricate relationship among life orientation, emotional regulation, and self-control. The consequences of these findings are significant for community workers, as they can utilize preventive interventions to limit the adverse impact of pessimism on self-control. By engaging in this practice, valuable contributions can be made towards the development of more efficacious treatment strategies for individuals suffering from depression.

Objectives of the Study

- To explore the relationship between life orientation and self-control and mediating effect of emotional regulation among patients with depression.
- To enhance understanding of the development of life orientation, self-control and emotional regulation among patients with

depression.

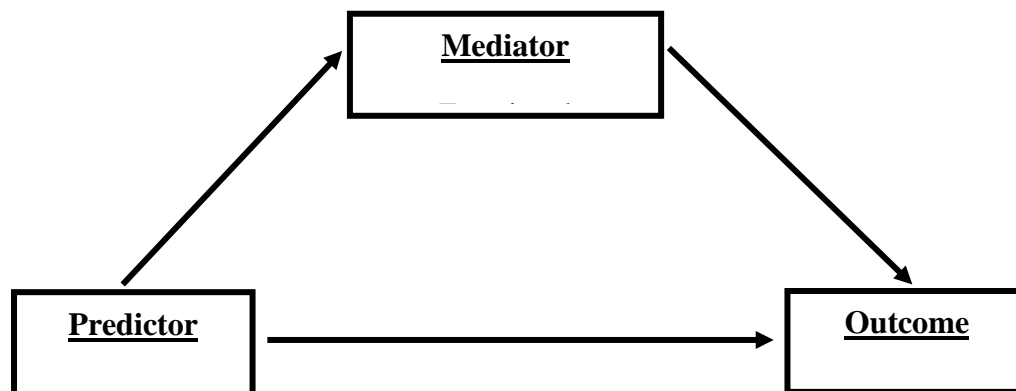
- To discover the demographic variable differences among study variables.

Hypothesis of the Study

- **H:1** - Life orientation would positively correlate with emotional regulation among patients with depression.
- **H:2** - Life orientation would positively correlate with self-control among patients with depression.
- **H:3** - Emotional regulation would positively correlate with self-control among patients with depression.
- **H:4** - Emotional regulation would mediate the relationship between life orientation and self-control among patients with depression.
- **H:5** - There would be significant demographic variable differences in life orientation, emotional regulation and self-control among patients with depression.

Conceptual Framework

The succeeding figure signifies the conceptual framework of the present study by indicating a mediation design, which is mainly focusing on direct and indirect association between life orientation and self-control alone and through emotional regulation.



Conceptual Model of the Study

Method

Design, Participants, and Procedure

The present study was based on cross-sectional research design. Sample of the study comprised of 100 clinically depressed patients with an equal number of 50 male participants and 50 female participants from the clinics and hospitals of Karachi, city of Pakistan. For recruiting the sample, purposive sampling technique was used. Permission letter for data collection was obtained from the Ethical Review Board, Institute for Clinical Psychology, Karachi University, Karachi. Afterwards, the invigilator personally approached the participants to

gather the required information. Nature, goal, and significance of the study was explained to participants along-with privacy and confidentiality. Participants were allowed 30 minutes to complete the instruments.

Instruments

Demographic Sheet

Demographic sheet included details of gender (male and female), age (young adults and middle adults), and level of depression (mild, moderate, and severe).

Life Orientation Test - Revised (LOT-R)

LOT-R (Scheier et al., 1994) is a revised form of the original LOT and was developed to gauge optimism versus pessimism. There are total 10 items in this scale. Among them, three assess optimism, three measure pessimism, and remaining four are fillers. Each response is rated on a 5-point Likert scale by the respondents: from 0 (“strongly disagree”) to 4 (“strongly agree”). Responses are totalled to compute a total score which can range from 0 to 24. Range of item-scale correlations was from .43 to .63 and scale's overall Cronbach's alpha was .78. Furthermore, test-retest correlations were .68 after 4 months duration (N = 96), .60 after 12 months duration (N = 96), .56 after 24 months duration (N = 52), and .79 after 28 months duration (N = 21), all concluded that the LOT-R was by and large stable over time (Scheier et al., 1994).

Emotional Regulation Questionnaire (ERQ)

The ERQ (Gross & John, 2003) was created to assess respondents' tendency for emotion regulation. There are total 10 items and each response is rated on a 7-point Likert scale by the respondents: from 1 (“strongly disagree”) to 7 (“strongly agree”). There is no usage of cutoff scores in the construct and all of the items are positively worded. High results, thus, show a strong sense of emotional regulation, whereas, low scores show a weak sense of emotional regulation. The alpha reliability was .79 and test–retest reliability over a period of three months was .69 (Gross & John, 2003).

Brief Self-Control Scale (BSCS)

The BSCS (Tangney et al., 2004) is one of the most commonly used tools for assessing self-control in psychological studies. The 13-item BSCS is a brief version of the Self Control Scale. It consists of four statements with positive wordings and nine with negative wordings. Items are rated on a 5-point Likert scale: from 1 (“not at all”) to 5 (“very much”). After reverse coding, total score is calculated, of which, high value indicates stronger self-control, whereas, low value indicates lower self-control. The BSCS was shown to be extremely reliable in the original study by Tangney et al. (2004), with good test-retest reliability at .89 for the SCS and .87 for the BSCS.

Results

The data was examined by IBM SPSS software (Version 26). Frequencies, percentages and mean values were used as descriptive statistics for

organizing and summarizing data. While in contrast, correlation, independent-sample t-test, one-way analysis of variance, simple linear regression and mediation analysis were applied as inferential statistics to analyse the data and draw conclusions.

Table 1. Frequencies and Percentages of Demographic Variables (N=100)

Variables	Category	<i>F</i>	%
Gender			
	Male	50	50.0
	Female	50	50.0
Age			
	Young adult	56	56.0
	Middle adult	44	44.0
Depression Level			
	Mild	28	28.0
	Moderate	62	62.0
	Severe	10	10.0

Table 1 offers a comprehensive overview of the demographic composition of the study conducted with equal number of male participants (n = 50, 50%) and female participants (n = 50, 50%). On the other hand, slightly higher number of young-adults (n = 56, 56%) participated in the study as compared to middle-adult (n = 44, 44%) participants. Moreover, patients with moderate level of depression were higher (n = 62, 62%) as compare to patients with mild level of depression (n = 28, 28%) and patients with severe level of depression (n = 10, 10%).

Table 2. Psychometric Properties of Scales (N=100)

Variables	<i>K</i>	<i>A</i>	<i>M (SD)</i>	Range		Skewness	Kurtosis
				Potential	Actual		
LOT-R	10	.71	5.64 (2.30)	0-40	0-11	-0.25	-0.48
ERQ	10	.87	35.43 (7.06)	10-70	22-48	-0.47	-0.80

BSCS	13	.88	25.73 (6.59)	13-65	13-37	-0.54	-0.72
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Note. LOT-R = Life Orientation Test – Revised; ERQ = Emotional Regulation Questionnaire; BSCS = Brief Self Control Scale

Table 2 illustrates psychometric properties of the scales utilized in current study. The value of Cronbach's α for the LOT-R was .71 ($>.70$) which specified acceptable internal consistency. On contrary, value of Cronbach's α for the ERQ and BSCS were .87 ($>.80$) and .88 ($>.80$) subsequently, which indicated good internal consistency of the scales used in this study.

Table 3. Pearson Product Moment Correlation Analysis of Study Variables ($N=100$)

Variables	1	2	3
1. Life orientation	1	-	-
2. Emotion Regulation	.69**	1	-
3. Self-control	.56**	.57**	1

Note. ** $p < .01$

Table 3 is the explanation of the Pearson product moment correlations between the study variables. The scores of correlations fell between ranges of -1.00 to +1.00 (Warner, 2013). Results showed that Life orientation had a significant and positive correlation with emotion regulation ($r = .69$, $p < .01$) along-with a significant and positive correlation with self-control ($r = .56$, $p < .01$). Conversely, emotion regulation also had a significant and positive correlation with self-control ($r = .57$, $p < .01$).

Table 4. Mean, Standard Deviations and t -values along Gender on Study Variables ($N=100$)

Variable	Male	Female	t	p	95% CI		Cohen's d
	($n = 100$)	($n = 100$)			LL	UL	
LOT-R	4.46 (1.90)	6.82 (2.05)	5.98	.000	-3.14	-1.58	1.19
ERQ	33.70 (7.37)	37.16 (6.33)	2.52	.013	-6.19	-0.73	.50
BSCS	24.30 (6.78)	27.16 (6.13)	2.21	.029	-5.42	-0.30	.44

Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit; LOT-R = Life Orientation Test – Revised; ERQ = Emotional Regulation Questionnaire; BSCS = Brief Self Control Scale

Table 4 reveal significant mean differences between male and female patients on life orientation with $t(98) = 5.98, p < .001$. Female patients exhibited higher scores on life orientation ($M = 6.82, SD = 2.05$) as compared to male patients ($M = 4.46, SD = 1.90$). Value of Cohen’s d 1.19 (> 1.10) indicated very large effect size. Mean differences between male and female patients on emotional regulation were also significant with $t(98) = 2.52, p < .05$. Female patients exhibited higher scores on emotional regulation ($M = 37.16, SD = 6.33$) as compared to male patients ($M = 33.70, SD = 7.37$). Value of Cohen’s d 0.50 ($= .50$) indicated medium effect size. Mean differences between male and female patients on self-control were significant as well with $t(98) = 2.21, p < .05$. Female patients exhibited higher scores on emotional regulation ($M = 27.16, SD = 6.13$) as compared to male patients ($M = 24.30, SD = 6.78$). Value of Cohen’s d 0.40 ($< .50$) indicated medium effect size.

Table 5. Means, Standard Deviations and t -values along Age on Study Variables ($n=100$)

Variable	Young Adults ($n = 100$)	Middle Adults ($n = 100$)	T	p	95% CI		Cohen’s d
	$M (SD)$	$M (SD)$			LL	UL	
LOT-R	5.30 (2.11)	6.07 (2.47)	1.67	.098	-1.67	0.14	.33
ERQ	36.05 (7.72)	34.64 (6.10)	1.00	.321	-1.40	4.24	.20
BSCS	25.60 (6.67)	25.90 (6.55)	.24	.811	-2.95	2.33	.05

Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit; LOT-R = Life Orientation Test – Revised; ERQ = Emotional Regulation Questionnaire; BSCS = Brief Self Control Scale

Table 5 revealed non-significant mean differences between young-adults and middle-adults on life orientation with $t(98) = 1.67, p > .05$ and Cohen’s d value 0.33 ($< .50$), which indicated medium effect size. Whereas, mean differences between young-adult and middle-adult patients on emotional regulation were also non-significant with $t(98) = 1.00, p > .05$ and Cohen’s d value 0.20 ($= .20$), which indicated medium effect size. Lastly, Mean differences between young-adult and middle-adult patients on self-control were non-significant as well with $t(98) = 0.81, p > .05$ and Cohen’s d value 0.05 ($< .20$), which indicated small effect size.

Table 6. Mean, Standard Deviations and F -value along levels of depression on Variables ($N=100$)

	Mild	Moderate	Severe
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	(<i>n</i> =100)	(<i>n</i> =100)	(<i>n</i> =100)				
Variable	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>F</i>	<i>P</i>	η^2	Post hoc
LOT-R	7.97 (1.07)	5.00 (1.43)	1.60 (.70)	114.15*	.000	.70	1>2>3
ERQ	40.18 (4.84)	34.91 (5.66)	22.70 (.82)	45.33*	.000	.48	1>2>3
BSCS	27.61 (5.36)	26.79 (5.50)	13.50 (.71)	31.02*	.000	.39	1>2>3

Note. LOT-R = Life Orientation Test – Revised; ERQ = Emotional Regulation Questionnaire; BSCS = Brief Self Control Scale

Table 6 showed values of mean and standard deviation along-with F-Values for life orientation, emotion regulation and self-control across levels of depression groups. Results illustrated significant mean differences across levels of depression groups on life orientation with $F(2, 97) = 114.15, p < .001$. Patients with mild depression exhibited higher level of life orientation as contrast to patients with moderate and severe level of depression. The value of eta squared .70 ($> .50$) indicated large effect size. Comparisons of the post-hoc analysis revealed significant group mean differences of each group with other two groups. In addition, results also displayed significant mean differences across levels of depression groups on emotion regulation with $F(2, 97) = 45.33, p < .001$. Patients with mild depression shown higher level of life orientation as contrast to patients with moderate and severe depression. Value of eta squared .48 ($< .50$) unveiled medium effect size. The post-hoc comparisons showed significant group mean differences of each group with other two groups. Moreover, results also specified significant mean differences across levels of depression groups on self-control with $F(2, 97) = 31.02, p < .001$. Patients with mild depression displayed higher level of life orientation in comparison to patients with moderate and severe depression. Value of eta squared .39 ($< .50$) directed medium effect size. The post-hoc comparisons designated significant group mean differences of each group with other two groups.

Table 7. Simple Linear Regression showing X (Life Orientation) as Predictor of Y (Self Control) (*N*=100)

	<i>B</i>	<i>SEB</i>	<i>B</i>	<i>T</i>	<i>P</i>
Constant	16.6	1.46		11.39	.000
X	1.61	.24	.56	6.71	.000
R^2	.31				

Table 7 shows the effect of life orientation on self-control. The R^2 value of .31 discovered that the predictor variable proposed 31% variance in the outcome variable with $F(1, 98) = 45.01, p < .001$. The findings discovered life orientation as positive predictor of self-control ($\beta = .56, p < .001$).

Table 8. Mediation of Emotional Regulation between Life Orientation and Self-Control ($N=100$)

Relationship	Total Effect	Direct Effect	Indirect Effect	Confidence Interval		t-Statistic	Conclusion
				LLCI	ULCI		
IV → M → DV	1.61***	0.93**	0.69	.2302	1.1355	2.90	Partial Mediation

Note. ** $p < .01$; *** $p < .001$; IV = Life Orientation; M = Emotional Regulation; DV = Self Control; LLCI = Lower Limit Confidence Interval; ULCC = Upper Limit Confidence Interval.

Simple mediation analysis was performed using ordinary least squares path analysis (Hayes, 2017). Support was found for the hypothesis that emotional regulation significantly mediated the relationship between life orientation and self-control. As can be seen in Table 8, the results discovered a significant indirect impact of life orientation on self-control ($b = 0.69, t = 2.90$), supporting H1. Furthermore, the direct impact of life orientation on self-control in existence of the mediator also stood significant ($b = 0.93, p < .01$). Hence, emotional regulation partially mediated the relationship between life orientation on self-control.

Discussion

The initial phase involved ensuring the reliability of the scales. The internal consistency of all the measures (LOT-R, ERQ, and BSCS) was confirmed to be satisfactory through the reliability study. The values of skewness and kurtosis for all scales suggested that the data followed a normal distribution.

The present study provides support for the first hypothesis “**Life orientation would positively correlate with emotional regulation among patients with depression**” and is proved in present investigation. Findings of a prior empirical investigation indicate that persons with an optimistic outlook employ certain tactics for emotional regulation, enabling them to effectively navigate and surmount challenges (Kozubal et al., 2023).

The second hypothesis “**Life orientation would positively correlate with self-control among patients with depression**” was also supported by the findings. Previous research has indicated that there are several advantages associated with elevated levels of optimism and self-control (Carver et al., 2010; de Ridder et al., 2012; Nes & Segerstrom, 2006).

The **third hypothesis “Emotional regulation would positively correlate with self-control among patients with depression”** is not only supported in this research but is also proven by several other explanations. Firstly, it is important to note that there exists a significant degree of conceptual overlap between emotion regulation and self-control. Emotion regulation is commonly regarded as a kind of self-control, as suggested by previous studies (Gross, 1998; Muraven et al., 1998). Secondly, a connection between both forms of control is also shown by their link with similar outcome variables, including academic achievement (Graziano et al., 2007; Tangney et al., 2004), improved health (Kreutz et al., 2009) and enhanced well-being (Hofer et al., 2011).

The fourth hypothesis **“Emotional regulation would mediate the relationship between life orientation and self-control among patients with depression”** is also proven by this research. According to Song et al. (2020), there are advantages associated with the utilization of additional emotional regulation tactics by individuals in order to modify their attitudes and opinions towards adverse occurrences, particularly among those who are prone to experiencing negative emotions. The current study demonstrates that emotional regulation significantly predicts self-control, aligning with previous research performed by Forkmann et al. (2014) and McLafferty et al. (2020).

The fifth and last hypothesis **“There would be significant variable differences in life orientation, emotional regulation and self-control among patients with depression”** also received substantial support from the results. Each variable difference is being discussed in succeeding paragraphs.

This study reveals that female patients diagnosed with depression have better levels of life orientation, emotional regulation, and self-control in comparison to their male counterparts. There exists empirical evidence supporting the notion that hormonal disparities between males and females contribute to variations between the sexes. Specifically, the elevated levels of testosterone in males have been found to enhance aggression and diminish self-control (Asaoka & Goto, 2023; Sanchis-Sanchis et al., 2020).

No statistically significant differences were observed in terms of life orientation, emotional regulation, and self-control between young adult and middle adult patients with depression. Prior research has indicated that age disparities exist in these dimensions across the broader population (Sanchis-Sanchis et al., 2020). However, these differences do not appear to be notably evident among those diagnosed with depression (Butterworth et al., 2022).

Conclusions

The current study has successfully identified a positive relationship between life orientation, emotional regulation and self-control, while also uncovering the mediating role of emotional regulation. Furthermore, the study explored the differences in terms of demographic factors (gender, age, and participants' level of depression) where the female patients with depression not only display better level of life orientation but subsequently are also good in emotion regulation and self-control. Finally, the study has discovered that the levels of

depression (mild, moderate, and severe) itself determine the life orientation, emotional regulation and self-control of a person.

Limitations and Suggestions

Notwithstanding the notable discoveries, it is imperative to acknowledge the existence of specific restrictions that needs consideration in future study endeavors. One primary constraint of this study pertains to the exclusive acquisition of data from a singular urban centre (Karachi) within Pakistan and encompass limited demographic variations within a global environment, attributable to temporal constraints and restricted resources. Moreover, one further constraint of this research is the comparatively small size of sample, thereby, low generalizability of the findings may be attributed to this issue.

Implications of the Study

Previous studies were performed with normal population under an individualistic cultural context; however, the current study is conducted with clinical population inside a collectivistic cultural context. Findings of the current study can be employed by psychologists in clinic settings by making valuable contributions towards the development of more efficacious treatment strategies for individuals suffering with depression. Moreover, the consequences of these findings are significant for community workers, who can apply precautionary measures to limit the adverse impacts of pessimism on self-control.

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