



Research Article

© 2022 Salah et al.

This is an open access article licensed under the Creative Commons Attribution-NonCommercial 4.0 International License (<https://creativecommons.org/licenses/by-nc/4.0/>)

Received: 15 July 2022 / Accepted: 27 August 2022 / Published: 2 September 2022

Optimism Predictive Ability and Psychological Flexibility among Students during COVID-19 Pandemic

Bilal M. Salah¹

Nayef F. Alhamad¹

Abedalnasser A. Alazzam¹

Mahdi M. Albadarneh¹

Hamzeh A. A. Alqiam²

Mahmoud A. Rababah^{1*}

¹Al-Balqa Applied University,
As-Salt, Jordan

²Jerash University,
Jerash, Jordan

* Corresponding Author

DOI: <https://doi.org/10.36941/jesr-2022-0134>

Abstract

This study investigated the optimism predictability and its relationship with psychological flexibility in a convenience sample of 487 Jordanian basic stage students who have faced a lot of psychological and sociological challenges during the outbreak of COVID-19 which has affected the formation of students' personality, social relationships, psychological and sociological psychology, academic achievement and more importantly their optimism and psychological flexibility. A descriptive analytical approach was used to analyze the data. The results showed that the levels of optimism and psychological flexibility were moderate among students, and there was a positive statistically significant correlation between them in favor of females. The study recommended parents and school teachers, social workers and decision-makers to develop the students' skills of optimism predictive ability and psychological flexibility among students as there is a strong positive relationship between optimism predictive ability and psychological flexibility among Students during COVID-19 Pandemic. It also recommended conducting similar studies on optimism and psychological flexibility through employing different qualitative tools such as observation and interviews to obtain thick and authentic information about the students' real behaviors and perspectives to understand the impact of Coronavirus pandemic on their optimism and psychological flexibility levels and sociological psychology.

Keywords: COVID-19, Jordan, Optimism Predictive Ability, Psychological Flexibility, Sociological Psychology

1. Introduction

Optimism and psychological flexibility greatly affect the formation of individuals' personality, their social relationships, psychological and physical health and their academic achievement as well. An optimistic person normally expects happiness and success. Commonly, he/she succeeds in achieving psychological and social compatibility, and looks at life with a positive perspective (Sakarneh, 2014a). Besides, he/she is more optimistic about the future and what is around it (De Meza & Dawson, 2021). Psychological flexibility is one of the main determinants of students' success or failure in various situations. It enables them, when it is high, to effectively perform the appropriate response that fits the situation. On the other hand, its weakness is the most obstacle in the way of the compatibility of individuals with others (Liu et al., 2014; Sakarneh, 2021; Rababah, 2019; Zaheer, 2015).

The pains and suffering that have prevailed in the educational environment because of the Coronavirus Pandemic (COVID-19) has left clear effects on students' psychological status, represented in the emergence of emotional and psychological effects, and grumbling about life due to the existing conditions. The ability to tolerate these situations is one of the indicators of low level of mental health and psychological optimism which is one of the most central factors that assist to advance students' educational achievement and psychological and mental stability (Marbah & Bilal, 20017). As a consequence, this requires a degree of optimism and psychological flexibility on the part of the students to enable them to pass this stage safely (Liu et al., 2014).

The outbreak of COVID-19 through the world has affected billions of people to be cramped in their family circles, particularly after the World Health Organization's announcement that the virus epidemic had risen to a pandemic level. COVID-19 has become currently a global health threat because of its negative impact on well-being and mental health of people worldwide (Arslan et al., 2020). As most sectors, education have panicked and worried about the outbreak of COVID-19 negative effects, as a vast number of schools worldwide have canceled or suspended most occasions and activities that used to take place on school sites. Schools have taken extensive measures to prevent the spread of this dangerous virus and protect students from this highly contagious disease. As a result, teaching staff members were forced to move to online teaching platforms (UNESCO, 2020). Thus, schools all around the world have faced various challenges due to the COVID-19 outbreak, most notably the shift from face-to-face teaching to online platforms although some schools have previously started preparing their plans for using online for students as it is not a new method in many schools (UNESCO, 2020).

The study of students' optimism and its relation with psychological flexibility has become of great importance due to their association with human mental health (Marbah & Bilal, 2017), and for their role in perseverance, achievement and positive outlook on life (Reed, 2016). Optimism means to have an optimistic outlook towards the future, which makes an individual expect the best, wait for the good to happen, and yearn for success (Marbah & Bilal, 2017). Psychological optimism is important in the psychological life of students, their behavior and their relations with others (Brissette et al., 2002, Sakarneh, 2014b), and it has an effective impact on the students' good mood and plans for the near and far future (Tan, 2010). Psychological optimism is a voluntary psychological process that can generate feelings of contentment, endurance and confidence, and can drive away thoughts of hopelessness, pessimism and powerlessness (De Meza & Dawson, 2021). An optimistic person often understands crises well, and instills in himself security and reassurance to deal with obstacles. Psychological optimism also activates the psychological and physical immune systems, and this makes psychological optimism a path to health and happiness in life (Emad, 2019; Liu et al., 2014). Optimism is a generalized emotional and cognitive readiness and tendency to believe or respond emotionally to others. It is the attitudes of thinking in a positive and promising way and the expectation of good and beneficial results of the future (Hassan, 2019). An optimist individual is more inclined to believe that good things may occur and he/she tends to be cheerful and pleasant (Liu & Bates, 2014).

Psychological flexibility is one of the psychological phenomena that has good and positive

effects on individuals, (Mohammed, 2019) despite of some threatening factors that may hinder adaptation or advance that a person may go through during the stages of his life (Zaheer, 2015). It is an essential aspect of health. Achieving mental healthy life is one of the most vital goals of human existence (Fredrickson & Losada, 2005) and this reflects the variances between individuals in response to the factors of threat and stress. As such, some individuals respond in a positive way to their difficult circumstances. On the other hand, there are some individuals who are touched by these situations, and consequently they negatively reflect on their life (Zautra et al., 2010).

Psychological flexibility refers to the idea of the individual's inclination to remain stable and sustain his calm and self-balance when being exposed to stress or uneasy situations (Zautra et al., 2010) along with his ability to effectively adapt and positively confront pressures and upsetting situations (Wendling, 2012). This tendency requires an individual to be able to positively conform these pressures and inconveniences. Thus, this may speed his recovery and quickly overcome stressful situations, return to the normal purposeful state and make him consider disturbing or a stressful situation as an opportunity to strengthen oneself and immunize it against pressures and stressful situations in the future (Liu et al., 2014).

Psychological flexibility is the person's ability to efficiently face different situations and respond rationally (Reich et al., 2012). It establishes good relations with others based on friendliness, mutual respect and acceptance of others (Marshall & Brockman, 2016). It is the process of good adjustment and positive response to difficulties, shocks, calamities or normal psychological pressures that human beings face, such as family problems, problems with relationships with others, health problems, and work pressures (Zautra et al., 2010). It is a critical component in determining the way in which individuals react and deal with stress. There is a wide range of traits associated with flexibility which are related to positive manifestations and strengths of an individual's mental state (Ciarrochi et al., 2010).

Basic stage students in Jordan have faced a lot of challenges during the outbreak of COVID-19 which has affected the formation of their personality, their social relationships, psychological and physical health, their academic achievement and more importantly their optimism and psychological flexibility (Sakarneh, 2021). Studying optimism and psychological flexibility is of a great importance due to their relationship to human mental health (Ruthig et al., 2009). They have a role in the positive outlook on life among school students. School students suffer from developments and mood swings that may make them in a state of turmoil and confusion or a change in their perception. They may form misperceptions that make them focus on the negative aspects of everything surrounding them (Allam, 2021). Hence, there is a need to study both optimism and psychological flexibility as positive concepts.

The results of previous relevant literature study indicated that stress caused by COVID-19 had significant negative predictive effects on optimism, pessimism and persons' low flexibility (e.g., Arslan et al., 2020). It also revealed a positive correlation between personality factors and psychological optimism, extroversion, openness to experience and dedication (e.g., Ibrahim, 2020). As such, they found that flexibility and optimism are closely related and the interaction between them is significant (e.g., Reed, 2016). In order to pass this stage successfully, they must exert effort and perseverance and bear the stage requirements. And they should be ready to face the pressures of life. They should have appropriate levels of optimism and psychological flexibility that enable them to cross this stage and overcome the obstacles that stand in the way of their studies under the great challenges that people face due to the spread of COVID-19.

The study poses these questions:

1. What is the level of optimism and psychological flexibility among basic education stage students during COVID-19 outbreak?
2. Does the degree of psychological optimism and psychological flexibility among students of the basic education stage differ due to gender?

Is there a statistically significant relationship between optimism and psychological flexibility due to gender among basic education students?

2. Literature Review

Numerous studies have attempted to examine the relation between optimism and psychological flexibility. A study carried out by Genç and Arslan (2021) examined the mediating role of optimism on the connection between coronavirus stress and subjective wellbeing among the Turkish youths. The study found that COVID-19 had negative affect on college's students in terms of hope, optimism and well-being. Asanjarani et al., (2021) examined the effect of optimism and pessimism on the relations between the stress caused COVID-19 and Iranian youth problems. The results showed that the stress of COVID-19 was a substantial positive forecaster of internalizing complications and pessimism, and a negative forecaster of optimism. Nu'man (2020) investigated the relationship between optimism and orientation towards life among university students in Iraq. He found that there was a significant correlation between optimism and orientation towards life and that the level of optimism as well as the level of orientation towards life were average. The results also revealed that there were no differences in optimism level with regard to the variables "gender" and "specialization".

Arslan et al. (2020) examined the correlation of optimism, pessimism, low psychological flexibility with stress caused by COVID-19 and psychological problemist incurred. The results indicated that stress caused by COVID-19 had a significant predictive effect on optimism, pessimism, low psychological flexibility, and psychological problems. Ibrahim (2020) examined optimism and pessimism and their relationship to five personality factors, namely, psychological optimism, extroversion, and openness to experience, dedication and gentleness of a sample of secondary school students in Baghdad in Iraq. The results revealed a positive statistically significant correlation between the degrees of these personality factors. Huda (2020) examined the level of optimism and its relation to psychological flexibility among school students in Mosul in Iraq and its relation to the five influences of personality. The results revealed a positive correlation between optimism and psychological flexibility, and between degrees of personality factors and extroversion factors, openness to experience, dedication, gentleness, optimism and flexibility.

Emad (2019) investigated optimism and pessimism among students in Aleppo in Syria. He found that nearly two-thirds of the total sample of the participants were moderately pessimistic. The statistical results did not show the existence of statistically significant differences between the averages of males and females in the trait of psychological optimism-pessimism. Hassan (2019) studied the relationship between optimism and psychological hardness among secondary school students in Mansoura in Egypt. The results of the study showed that the level of optimism was high while there were no differences between students' responses in the concepts of optimism and pessimism depending on the academic level. The results also revealed a positive correlation between optimism and psychological toughness.

Omar's (2019) study looked at the relationship between psychological stress and optimism and pessimism experienced by secondary school students in Iraq. The study concluded that secondary school students have an average level of psychological stress, and there was a negative correlation between psychological stress and psychological optimism while there was a positive correlation with statistical significance between psychological stress and pessimism. Reed (2016) explored the relationship between flexibility in dealing with optimism and mental health, which was measured by perceived stress and life satisfaction. The study found that flexibility and optimism were closely related, and the interaction between them was large. And it found that optimism affect the relationship between flexibility with stress and life satisfaction.

The increasing demands of life as a result of scientific and technological development and the urgent psychological impulse to meet and go along with them have made students live in a state of positive and negative conflict at the same time. The positive aspect, which is psychological optimism, is considered a motivating factor to continue work and effort to look forward to a better future and a better life through the optimistic outlook that it should be in the framework of an individual's perception, and it is the motivating factor towards achieving someone's goals.

3. Methods

3.1 Population and Sample of the Study

The study employed the descriptive analytical correlative approach to achieve its objectives. The study population consisted of all students of the basic education stage in Irbid city schools. The sample of the study consisted of (487) students (291 females and 196 males). The study was conducted during the first semester 2020/2021.

3.2 Study Tools

Two tools were used in the current study to measure the levels of optimism and psychological flexibility among the study sample members:

3.2.1 Optimism Scale

The study adopted Scheier and Carver's (1985) and Scheier et al.'s (1994) optimism scale. The scale was translated into Arabic by Al-Ansari (2003). In its final form, the scale consisted of (10) items. It was designed according to Likert Scale of evaluative estimates with five alternatives for each item (never, rarely, sometimes, often and always) which were graded (1, 2, 3, 4, and 5) respectively. The scale was applied to an exploratory sample of (61) male and female students. The reliability of the scale was estimated in two ways: (i) internal consistency through using Cronbach's Alpha equation, and its value was (0.89); and (ii) retesting through calculating Pearson's correlation coefficient, and its value was (0.83). Both of the values were acceptable for the purposes of the study. The construct validity of the scale was also verified by estimating the corrected items total correlation coefficient for the correlation of each item of the scale with the total score of the scale. Their values ranged between (0.44) and (0.71), and all of them were acceptable.

3.2.2 Psychological Flexibility Scale

This scale was developed by referring to previous studies (e.g., Al-Sheikh, 2017; Huda, 2020; and Shaqoura, 2012). The scale was first applied to an exploratory sample of (61) male and female students. And the stability of the internal consistency was estimated using Cronbach Alpha equation and its value was (0.95). The test was re-tested by calculating Pearson's correlation coefficient and its value was (0.87). These values were acceptable for the purpose of the study. The construct validity of the scale was also verified by estimating the corrected items total correlation coefficient for the correlation of each item of the scale with the total score of the scale, the values of which ranged between (0.27) and (0.77). All of them were acceptable values.

3.3 Statistical Analysis

To find out the level of optimism and psychological flexibility among the study sample members, the following statistical criterion was used: individuals whose means of responses was between (1-less than 2.34) were considered to have a low level of optimism and psychological flexibility; and individuals whose means of responses were between (2.34-less than 3.67) were considered to have a medium level of optimism and psychological flexibility. And individuals whose means of responses lied between (3.67-5) were considered to have a high level of optimism and psychological flexibility. The means, standard deviations, t-test for independent samples, Pearson's correlation coefficient, and Cronbach's alpha (internal consistency) were calculated.

4. Results

The results were presented and discussed according to the research questions:

4.1 The Level of Optimism and Psychological Flexibility

RQ1. What is the level of optimism and psychological flexibility among basic education stage students during COVID-19 outbreak?

To answer the first question, the means and standard deviations (SD) of the responses of the sample were calculated on each item of the optimism scale and on them together. The T-test was also used. It was found that the calculated T value was higher than the tabular value at the significance level (0.05) as shown in Table 1.

Table 1: Students' Responses on Each Item of the Optimism Scale and the Psychological Flexibility Scale

Item	Mean	SD.	T-value	t- value	Sig.
Optimism	3.32	1.24	2.85	1.98	0.000
Psychological Flexibility	3.62	0.48	4.39	1.96	0.000

As shown in Table 1. It is noted from Table 1 that the level of optimism between students of the basic education stage in Corona virus pandemic was average with a mean of (3.32), where the means of students' responses ranged between (4.13) for item (2), which states "I am always optimistic about my future" at a high level, and between (2.26) for item (9) which states "I never expected things to go in my favor" at a low level.

Table 1 showed that the level of psychological flexibility between students of the basic education stage under the Corona virus pandemic was (medium) with a mean (3.62), where the means of their responses ranged between (2.38) which was for item (25) which states "whatever the obstacles are, I strive to achieve my goals". And it was (4.42) and item (13) which states "When I solve a problem, I find pleasure in moving to another problem" at a high level.

4.2 Degree of Optimism and Psychological Flexibility Due to Gender

RQ2. Does the degree of psychological optimism and psychological flexibility among students of the basic education stage differ according to gender?

To answer the second question, T (Two Independent Sample t-test) was applied on the means of the responses of the sample on the scale of optimism as a whole, and psychological flexibility as a whole according to the gender variables illustrated in Table 2.

Table 2: Students' Responses on the Scale of Optimism and Psychological Flexibility as a Whole due to the Gender

Gender	N	Mean	SD	T	DF	Sig. (2-tailed)	
Optimism	Male	196	3.27	-1.712	485	0.088	
	Female	291	3.35				
Psychological Flexibility	Male	196	3.65	1.365		485	0.173
	Female	291	3.59				

Table 2 showed that the responses of the study sample on the optimism scale amounted to (t = -1.712) with a statistical significance of (0.088), which is greater than ($\alpha=0.05$). This showed that there was no statistically significant difference in the optimism of the sample members study due to their

gender. With regard to the responses of the sample on the psychological flexibility scale, the results showed that it had the value of ($t = 3.365$) which was statistically significant ($Sig. = 0.173$). It was greater than ($\alpha = 0.05$) which showed that there was no statistically significant difference in the psychological flexibility of the study sample members according to their social type. Pearson's correlation coefficient was calculated between the estimates of the study sample on the scale of optimism as a whole, and their estimates on the items of the scale of psychological flexibility as a whole, which amounted to ($r = 0.511$) with statistical significance ($Sig. = 0.000$), which is less than ($\alpha = 0.05$). This indicated that there is a positive statistically significant relationship between optimism and psychological flexibility among basic education students. In this sense, with the increase of optimism level among students of the basic education stage, their psychological flexibility will increase.

4.3 Difference between Optimism and Psychological Flexibility Relationship Due to Gender

RQ3. Is there a statistically significant relationship between optimism and psychological flexibility due to gender among basic education students?

To answer the third question, Z-Fisher's test (Cohen, & Cohen, 1983; Eid, Gollwitzer & Schmidt, 2011; Lenhard & Lenhard, 2014) was used to detect the statistical significance of the difference in Pearson correlation coefficient between the estimates of the sample on the scale optimism as a whole, and their estimates on the items of the psychological flexibility scale as a whole, according to gender as shown in Table 3.

Table 3: Students' Estimates on Optimism Scale and Psychological Flexibility Scale as a Whole, According to Gender

Optimism	Psychological Flexibility				
	Gender	N	Pearson correlation	z-value	Sig.
	Male	196	0.44	-2.045	0.040
Female	291	0.58			

Table 3 displays that the value (2.045) was statistically significant at (0.040), which was less than ($\alpha=0.05$). This indicated the difference in Pearson's correlation coefficient between the sample's estimates on the scale of optimism as a whole, and their estimates on items that measure psychological flexibility as a whole according to gender, which was in favor of females. This means that females have a stronger relationship between optimism and psychological flexibility than males.

5. Discussion

The results of the study showed that the level of optimism among students of the basic education stage in the shadow of the Corona virus pandemic came to a medium degree, with a total mean of (3.32). They showed that the level of psychological flexibility among students came to a medium degree as well, and with a total mean of (3.62).

In light of this result, it could be interpreted as reasonable and commensurate with the age stage that basic education students go through. It is the beginning of the adolescence stage that extends between childhood and adulthood. This stage is characterized by physical changes, psychological, social and moral developments, a feeling of the need for independence and self-formation, and a weak emotional connection of the adolescents with their parents. Hamdawi (2015) stated that adolescents constantly seek to obtain their personal independence, as well as work on their own uniqueness in building their independent personality. Also, this stage is characterized by disparity in the speed of physical changes and increase in feelings of anxiety and insecurity.

The general atmosphere of the students' environment is normally responsible for their

personality and self-confidence, along with the compatibility between their ambition level and abilities and competencies levels. Al-Ansari (2003) pointed out that psychological optimism is a positive outlook and appetite for life and it is the belief that good side of things, rather than the bad side, is likely to happen. Psychological optimism is an eagerness that lies within an individual, centered in the general expectancy that positive things will occur, that is, the expectation of positive outcomes for upcoming events. Perhaps, this is because of the availability of factors that are expected to help students feel optimistic, such as social and family circumstances, which make them feel as important individuals, strengthen them, raise their morale, and enable them to face the psychological effects of difficulties they may experience during their study (Ruthig et al., 2009). As such, this may refer to some of the positive personality traits among students which enable them to assess situations, and make good use of the available psychological and social resources, especially the students' reach to the stage of basic education is considered a qualitative leap in their life. This often helps them to assess and confront potential threatening problems due to their psychological compatibility and mental health. Al-Zoubi (2007) revealed that adolescents become much moody and exaggerated in their ways of expressing feelings of sadness and distress, and they often suffer at this stage from the psychological incompatibility problem that is reflected in their behavior and manners.

Among the many family factors that affect student's feeling of optimism are the methods of upbringing, including parent-student relations, sibling relations, achieving psychological needs, developing abilities, teaching social interaction and psychological adjustment, social roles, forming attitudes, standards of behavior and sound behavioral habits. Al-Fifi (2017) pointed out that adolescents believe that they are the focus of attention of others, whether to those who are close to them or those who are far from them. They have the lack of thinking about the future while their focus on moral and ethical thinking is great.

Furthermore, the role of society affects optimism. The society in which the students live, with its various institutions, affect their mental health, as it functions well when all the institutions of society work hard to achieve mental health of individuals by creating a safe social environment dominated by sound relations and social justice. School also has the greatest role in taking care of students in various aspects, including psychological and social aspects in order to achieve their mental health.

Consequently, optimism means to have an optimistic look towards the future that makes students expect the best, and it is a trait that makes the students' expectations and attitudes towards life more positive in general, and be optimistic about the future. It makes them enjoy the present, and have hope for a brighter and better future. Optimism leads to a feeling of mental health and happiness, a positive outlook on life and the preferred interpretation of its actions, and supports physical health. Simultaneously, good psychological health leads to the expectation of the best in life. That is, there is an interaction between health and psychological optimism. And that individuals who have an optimistic outlook on life in general tend to be happier, more successful and healthier ones (Tan, 2010).

Likewise, environmental and cultural factors have a major role in determining optimism and mental health across gender (i.e., between males and females), and thus in expressing one's opinions and trends. Undeniably, this creates a kind of hope and optimism for the future. Students would enjoy more opportunities and choices because they have the decision to decide their own fate, whether in terms of continuing education or even in various aspects of their lives.

Optimism and psychological flexibility are considered important orientations towards life amongst students of the basic education stage. Psychological health is a necessity that has to be achieved in all aspects of students' basic stage because it is a distinct stage in their lives, in which their ideas get mature and opens their mind for the future. It has the tools of development, progress, change and advancement. This stage is one of the stages in which adolescents are habitually exposed to psychological problems and conflicts which affect the building of their personalities and maintaining their balance. As a result, paying attention to problems students challenge in this critical stage is recommended to eradicate obstacles in the face of development and progress of a civilization.

Psychological flexibility is often positively connected with some normal variables, such as physical and mental health, effective confrontation, contentment and life satisfaction (Fresco et al., 2006), fruitful problem solving, respectable job and academic performance, self-control and extroversion. As well, it has a great impact on the development of adolescents' personalities and future plans for their development and growth, especially at this critical stage during the current circumstances in the world (Kashdan & Rottenberg, 2011). Kapikiran (2012) stated that students who enjoy psychological flexibility and optimism often have a sense of self-worth, efficiency and happiness, and they tend to evaluate their performance in a positive way, and they often have strong feelings of joy, and have a good sense of self-satisfaction, and happiness about life in general.

Psychological flexibility plays a significant role in determining student's ability to adapt to difficulties and stressful situations they face in their life (Copeland, 2007). It helps them to consciously challenge the various conditions and crises in their life. Psychological flexibility is habitually linked to a number of features of students' positive personality, including orientation towards life due to optimism, hope and openness to life in a positive and effective manner. Al-Sheikh's (2017) study revealed a positive correlation between psychological flexibility and life satisfaction. Zaheer (2015) also found an important role of psychological flexibility in the mental health and schoolwork of adolescents who had social, passionate, and behavioral difficulties. Thus, the results of the aforementioned studies indicated that students who enjoy a high level of flexibility do not leave a room for negative events and life pressures to defeat them and crush the elements of their psychological flexibility when they face crises. Psychological flexibility increases their optimism and hardness in the face of life pressures. According to Marshall and Brockman (2016), there is a significant positive relationship between empathy, self-esteem and various aspects of psychological flexibility. In consequence, psychological flexibility helps students to improve genuine plans and ability to take the necessary steps to follow, to improve confidence in strengths and abilities, to expand communication and skills of problem-solving, and to raise the skill to achieve strong impulses and emotions. This contributes in general to optimism and orientation towards life (Zautra et al., 2010).

Significantly, the relationship between optimism and psychological flexibility amongst students of the basic education stage varies according to gender, and it was in favor of females as the results indicated. In this sense, the relationship between optimism and psychological flexibility in females is stronger than in males due to the psychological characteristics of females. There are biological, psychological and behavioral differences between males and females which refer to the biological law that governs the actions of each of them in the simplest and most valuable things (Leslie et al., 2015). The female's brain grows and develops in a balanced manner. It can use both halves of the brain well and it works all the time which gives her more versatility to do several things at once (Colom et al., 2002). And the female's brain secretes a greater amount of Serotonin Hormone which is a neurotransmitter that curbs aggression, unlike the boy's brain, which secretes the Testosterone Hormone that controls nervousness and releases it (Feng et al., 2007). As a consequence, females are seen to have doing their needs much more quickly, and they can perform activities that generate tension and pressure in better ways than males can do (Frederick, 2005). Thus, the contrast in the characteristics of the male and female's personalities has been also reflected in the field of social interaction (Stoet & Geary, 2015).

6. Conclusions, Recommendations and Limitations

Optimism and psychological flexibility are among the important aspects of student's personality, social relationships, psychological and physical health. They are important in achieving their psychological and academic compatibility, and being more optimistic about the future. The results of the study showed that the level of optimism and the psychological flexibility level among students of the basic education stage in the shadow of Corona virus pandemic came to a medium degree. The results also revealed that there were no differences between males and females in the level of

optimism and psychological flexibility. Nonetheless, the relationship between optimism and psychological flexibility in females was stronger than in males.

The study recommended parents and school teachers to improve their students' positive psychological aspects that can enhance their optimism and psychological flexibility levels. Educators and decision-makers should try to develop psychological flow and academic self-efficacy skills among students through beneficial and psychotherapy training programs because there is a solid positive relation between the effect of psychological flow and academic self-efficacy.

It also recommended conducting similar studies on optimism and psychological flexibility on different samples from different school stages and employing different qualitative methods such as observation and structured interviews to obtain thick and authentic information about the students' real behaviors and perspectives to understand the relationship between optimism and psychological flexibility with various psychological disorders regarding the impact of Corona virus pandemic on their psychological flexibility .

The limitations have been determined in light of the concepts and terms used which were optimism and psychological flexibility among students of the basic education stage in light of COVID-19. And the study was determined by the tools it used and its psychometric properties. Also, in terms of spatial boundaries as they are defined in the schools of basic education stage in the city of Irbid. The results of the present study are limited to the methods in terms of the sample, data collection and analysis and the results cannot be generalized unless the same conditions are applied.

References

- Acun-Kapikiran, N., Körükcü, Ö., & Kapikiran, S. (2014). The relation of parental attitudes to life satisfaction and depression in early adolescents: The mediating role of self-esteem. *Educational Sciences: Theory and Practice*, 14(4), 1246-1252. <https://eric.ed.gov/?id=EJ1045071>
- Al-Ansari, B. (2003). Measuring optimism and pessimism and their relationship to some personality variables among Kuwait University students. *Annals of the College of Arts and Social Sciences*, 23, 3-42.
- Alazzam A. A, Alhamad N. F., Alhassan A. A., Rababah M. A. (2021). Psychological flow and academic self-efficacy in coping with online learning during COVID-19 pandemic *Journal of Hunan University Natural Sciences*, 48 (11), 1-11. Available from: <http://jonuns.com/index.php/journal/article/view/847>
- Al-Fifi, I. (2017). *Adolescence stage from 12-21 years for boys*. Open Arabic Electronic Library: Noor Library.
- Allam, G. (2021). Optimism, happiness and psychological flexibility in predicting self-pity in adolescents. *Journal of College of Education -Sadat City University* 17(3), 331-356. https://jsep.journals.ekb.eg/article_14100_6_1a8fb130ac1751d_7d9e64bba20bb9aed.pdf
- Al-Zoubi. A. (2007). *Human growth in childhood and adolescence*. Damascus: Dar Al-Fikr.
- Arslan, G., Yıldırım, M., Tanhan, A., Buluş, M., & Allen, K. A. (2020). Corona virus stress, optimism-pessimism, psychological inflexibility, and psychological health: Psychometric properties of the Corona virus Stress Measure. *International Journal of Mental Health and Addiction*, 1-17. <https://link.springer.com/content/pdf/10.1007/s11469-020-00337-6.pdf>
- Asanjarani, F., Arslan, G., Alqashan, H. F., & Sadeghi, P. (2021). Coronavirus stress and adolescents' internalizing problems: exploring the effect of optimism and pessimism. *Vulnerable Children and Youth Studies*, 1-8. <https://doi.org/10.1080/17450128.2021.2020386>
- Brissette, I., Scheier, M. F., & Carver, C. S. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology*, 82(1), 102-125. <https://psycnet.apa.org/record/2001-05824-009>
- Ciarrochi, J., Bilich, L., & Godsell, C. (2010). Psychological flexibility as a mechanism of change in acceptance and commitment therapy. Oakland, CA: Context Press/New Harbinger. <https://books.google.com/books?hl=en&lr=&id=DlnH>
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Colom, R., García, L. F., Juan-Espinosa, M., & Abad, F. J. (2002). Null sex differences in general intelligence: Evidence from the WAIS-III. *The Spanish Journal of Psychology*, 5(1), 29-35. https://www.academia.edu/download/45855906/Null_sex_differences_in_general_intellig20160522-20195-okcloq.pdf

- Copeland, P. L. (2006). *Factors related to resilience in teachers and adolescents exposed to the Oklahoma City bombing*. California, CA: Pepperdine University. <https://search.proquest.com/openview/72eedd18639df6a0a295a5f40b23842a/1?pq-origsite=gscholar&cbl=18750&diss=y>
- Danaa H. M., Al-mzary M. M., Halasa W. N., Obeidat L. M., Rababah M. A., Al-Alawneh M. K. (2022). University students' ambition levels and vocational tendencies associated with common culture. *The Education and Science Journal*, 24 (6), 153-176. DOI: 10.17853/1994-5639-2022-6-153-176
- De Meza, D., & Dawson, C. (2021). Neither an optimist nor a pessimist Be: mistaken expectations lower well-being. *Personality and Social Psychology Bulletin*, 47(4), 540-550. <https://journals.sagepub.com/doi/abs/10.1177/0146167220934577>
- Eid, M., Gollwitzer, M., & Schmitt, M. (2011). *Statistics and research methods textbook*. Weinheim: Beltz.
- Emad, E. (2019). Optimism and pessimism among university students. *Aleppo University Journal for Studies and Research*, 15(3), 232-251.
- Feng, J., Spence, I., & Pratt, J. (2007). Playing an action video game reduces gender differences in spatial cognition. *Psychological Science*, 18(10), 850-855. <https://journals.sagepub.com/doi/abs/10.1111/j.1467-9280.2007.01990.x>
- Frederick, S. (2005). Cognitive reflection and decision making. *Journal of Economic Perspectives*, 19(4), 25-42. <https://www.aeaweb.org/articles?id=10.1257/089533005775196732>
- Fredrickson, B. L., & Losada, M. F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist*, 60(7), 678. <https://psycnet.apa.org/doiLanding?doi=10.1037/0003-066X.60.7.678>
- Fresco, D. M., Williams, N. L., & Nugent, N. R. (2006). Flexibility and negative affect: Examining the associations of explanatory flexibility and coping flexibility to each other and to depression and anxiety. *Cognitive Therapy and Research*, 30(2), 201-210. <https://link.springer.com/article/10.1007/s10608-006-9019-8>
- Genç, E., & Arslan, G. (2021). Optimism and dispositional hope to promote college students' subjective well-being in the context of the COVID-19 pandemic. *Journal of Positive School Psychology*, 5(2), 87-96. <https://doi.org/10.47602/jpsp.v5i2.255>
- Hamdawi, J. (2015). *Adolescent personality and how to deal with it*. open Arabic Electronic Library: Noor Library.
- Hassan, M. (2019). The relationship of optimism and pessimism to psychological hardness among secondary school students. *Mansoura University Journal of Education*, 12(9), 96-113.
- Huda, A. (2020). The level of optimism and its relationship to psychological resilience among school students and its relationship to the five factors of personality. *Journal of Human Studies of University of Mosul*, 31(11), 147-162.
- Ibrahim, M. (2020). Optimism and pessimism and their relationship to the five factors of personality among secondary school students. *Journal of Educational Sciences in University of Baghdad*, 12(11), 114-130.
- Kapikiran, S. (2012). Validity and reliability of the academic resilience scale in Turkish high school. *Education*, 132(3), 474-484. <https://go.gale.com/ps/i.do?id=GALE>
- Kashdan, T. B., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. *Clinical Psychology Review*, 30(7), 865-878. <https://www.sciencedirect.com/science/article/pii/S0272735810000413>
- Lenhard, W. & Lenhard, A. (2014). *Hypothesis tests for comparing correlations*. <https://www.psychometrica.de/correlation.html>.
- Leslie, S. J., Cimpian, A., Meyer, M., & Freeland, E. (2015). Expectations of brilliance underlie gender distributions across academic disciplines. *Science*, 347(6219), 262-265. <https://science.sciencemag.org/content/347/6219/262.abstract>
- Liu, C., & Bates, T. C. (2014). The structure of attributional style: Cognitive styles and optimism-pessimism bias in the Attribution Style Questionnaire. *Personality and Individual Differences*, 66, 79-85. <https://www.sciencedirect.com/science/article/pii/S0191886914001810>
- Malkawi, N. A. A., & Rababah, M. A. (2012). Men's and women's language: inquiries about health in Jordanian Arabic. *European Scientific Journal*, 8(10). <https://www.researchgate.net/profile/Mahmoud-Rababah/publication/333204280>
- Marbah T. & Bilal N. (2017). Traits of optimism/pessimism and their relationship to life satisfaction among a sample of university female students: A field study on University of Mouloud Mammeri Tizi Ouzou. *Universte Amar Telidji- Laghouat Studies Journal*, 51, 35-48.
- Marshall, E. J., & Brockman, R. N. (2016). The relationships between psychological flexibility, self-compassion, and emotional well-being. *Journal of Cognitive Psychotherapy*, 30(1), 60-72. <https://connect.springerpub.com/content/sgrjcp/30/1/60.abstract>

- Mohamed, I. (2019). Psychological flexibility and its relationship to some psychological aspects among students of the Faculty of Physical Education. *Assiut Journal of Physical Education Sciences and Arts of Minia University*, 1(48), 214-233.
- Nu'man, A. (2020). Optimism and its relationship to life orientation among university students. *Journal of Educational and Psychological Research of University of Mosul*, 15(3), 98-115.
- Obeidat, L. M., Momani, H. I., Ammari, T. T., & Rababah, M. A. (2022). Athletic identity and its relationship to moral values among physical education university students. *Образование И Наука = Education and Science*, 24(3), 41-77. <https://doi.org/10.17853/1994-5639-2022-3-41-77>.
- Obeidat, L. M., Momani, H. I., Hayajneh, W. S., Ammari, T. T., Al-mzary, M. M., & Rababah, M. A. (2022). Values system relationship to leadership behavior of practicing and non-sports-practicing university students. *International Journal of Instruction*, 15(3), 869-894.
- Omar, A. (2019). Psychological stress and its relationship to optimism and pessimism among students of the stage. *Journal of Educational Studies and Research*, 11(3), 222-241.
- Rababa'h, M. A. (2000). Visitors' linguistic etiquette. [Master's thesis]. Yarmouk University. <http://repository.yu.edu.jo/bitstream/123456789/5363/1/457611.pdf>
- Rababah, M., Harun, M., & Shapii, A. (2019). Making sense of the hotel trainees' internal request modification in Jordanian host-guest interaction. *European Journal of Applied Linguistics Studies*, 2(1), 88-112. <https://oapub.org/lit/index.php/EJALS/article/view/128>
- Rababah, M., Harun, M., & Shapii, A. (2019). Imperatives in hotel service encounters: The case of Jordanian learners of English. *European Journal of Applied Linguistics Studies*, 2(1), 114-139. <https://oapub.org/lit/index.php/EJALS/article/view/129>
- Rababah, M., Al Zoubi, S., Al Masri, M., & Al-Abdulrazaq, M. (2021). Politeness Strategies in Hotel Service Encounters in Jordan: Giving Directives. *The Arab Journal for Arts Vol*, 18(1), 319-340. <https://aauja.yu.edu.jo/images/docs/v18n1/v18n1r12.pdf>
- Reed, D. J. (2016). Coping with occupational stress: The role of optimism and coping flexibility. *Psychology Research and Behavior Management*, 9, 71. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4847602/>
- Reich, J. W., Zautra, A. J., & Hall, J. S. (Eds.). (2010). *Handbook of adult resilience*. Guilford Press. <https://books.google.com/books?hl=en&lr=&id=I4nB8DkSq>
- Ruthig, J. C., Haynes, T. L., Stupnisky, R. H., & Perry, R. P. (2009). Perceived academic control: Mediating the effects of optimism and social support on college students' psychological health. *Social Psychology of Education*, 12(2), 233-249. <https://link.springer.com/article/10.1007/s11218-008-9079-6>
- Sakarneh, M. (2014a). Quality teaching: The perspectives of the Jordanian inclusive primary school stakeholders and the ministry of education. *International Journal of Psychological Studies*, Vol. 6, No. 4, 26-40. <https://doi.org/10.5539/ijps.v6n4p26>
- Sakarneh, M. (2014b). Quality teaching practices in the Jordanian inclusive primary classrooms. *Asian Social Science*, Vol. 10, No. 19, 113-123. <https://doi.org/10.5539/ass.v10n19p113>
- Sakarneh, M. A. (2021). The impact of COVID-19 and lockdown on families of students with special education needs. *Cypriot Journal of Educational Sciences*, 16 (3), 1010-1020. <https://doi.org/10.18844/cjes.v16i3.5787>
- Salah, B. M., Alhamad, N. F., Melhem, M. A., Sakarneh, M. A., Hayajneh, W. S., & Rababah, M. A. (2021). Kindergarten children' possession of life skills from teachers' viewpoints. *Review of International Geographical Education Online*, 11(8), 143-156. doi: 10.48047/rigeo.11.08.14
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health Psychology*, 4(3), 219. <https://psycnet.apa.org/journals/hea/4/3/219/>
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): a reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063. <https://psycnet.apa.org/buy/1995-07978-001>
- Shaqoura, Y. (2012). *Psychological flexibility and its relationship to life satisfaction among Palestinian university students in Gaza Strip*. [Unpublished master's thesis]. Al-Azhar University, Gaza.
- Sheikh, K. (2017). Psychological flexibility and its relationship to life satisfaction, a field study on a sample of Damascus University students. *Tishreen University Journal of Research and Studies. Arts and Humanities Series*, 39(2), 271-392.
- Stoet, G., & Geary, D. C. (2015). Sex differences in academic achievement are not related to political, economic, or social equality. *Intelligence*, 48, 137-151. <https://www.sciencedirect.com/science/article/pii/S0160289614001688>
- Tan, C. T. Y. (2010). *A study on the relationship of dispositional optimism and perception of academic stress in high-ability students*. [Unpublished doctoral dissertation]. National Institute of Education, Nanyang Technological University, Singapore. <https://repository.nie.edu.sg/bitstream/10497/4032/4/TanChristopherTzyYung-MED.html>

- UNESCO. (2020). Distance education concept, tools and strategies: A guide for policy makers in academic, vocational and technical education. <https://en.unesco.org/sites/default/files/policy-breif-distance-learning-f-1.pdf>
- Wendling, H. M. (2012). *The relation between psychological flexibility and the Buddhist practices of meditation, nonattachment, and self-compassion*. [Unpublished doctoral dissertation]. University of Akron, Ohio. https://rave.ohiolink.edu/etdc/view?acc_num=akron1332773514
- Yıldırım, M., & Solmaz, F. (2020). COVID-19 burnout, COVID-19 stress and resilience: Initial psychometric properties of COVID-19 Burnout Scale. *Death Studies*, 1-9. <https://www.tandfonline.com/doi/abs/10.1080/07481187.2020.1818885>
- Zaheer, I. (2015). *The role of psychological flexibility on mental health and school functioning of adolescents with social, emotional and behavioral problems*. (Unpublished doctoral dissertation, School Psychology Lehigh University, Pennsylvania). <https://core.ac.uk/download/pdf/228656964.pdf>
- Zautra, A. J., Hall, J. S., & Murray, K. E. (2010). Resilience: a new definition of health for people and communities. in J. W. Reich, A. J. Zautra & J. S. Hall (Eds.) (pp. 3 – 34), *Handbook of adult resilience*. New York: Guilford.