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Psychological Flow and Academic Self-Efficacy in Coping with Online Learning during COVID-19 Pandemic

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Abstract: This study aimed to identify psychological flow level and its relationship to student's academic self-efficacy toward online learning in Jordanian universities during the COVID-19 outbreak. Psychological flow is achieved when students dissolve in the tasks with a state of euphoria and forget themselves while engaging in mental processes. It affects academic self-efficacy and beliefs about their competence in academic performance situations. A questionnaire consisting of a psychological flow scale and an academic self-efficacy scale was used to collect data. The means, standard deviations, and analysis of variance (T) were used to determine the statistical significance of the apparent differences. The Z-Fisher test was used to detect the statistical significance of the difference in Pearson's correlation coefficient. The study sample consisted of 652 students at Al-Balqa Applied University. The results showed that students enjoy a high level of psychological flow and academic self-efficacy. They showed no differences in the psychological flow and academic self-efficacy due to "gender" and "academic level" variables. The results indicated that the relationship between psychological flow and academic self-efficacy was strong and favored males. Moreover, there was a positive relationship between the psychological flow and academic self-efficacy. The study recommends university lecturers to educate students about the importance of psychological flow and academic self-efficacy. This can be done by creating certain conditions that can help students have a stable state of psychological flow to help them study, learn, and prepare for exams more effectively.

Keywords: academic self-efficacy, COVID-19 pandemic, Jordanian University students, online learning, psychological flow.

新冠肺炎大流行期间应对在线学习的心理流动和学业自我效能感

摘要：本研究旨在确定新冠肺炎爆发期间约旦大学学生的心理流动水平及其与学生对在线学习的学术自我效能感的关系。当学生以欣快的状态沉浸在任务中并在进行心理过程时忘记自己时，就会实现心理流动。它会影响学业自我效能感和对他们在学业成绩情况下的能力的信念。使用由心理流动量表和学业自我效能量表组成的问卷来收集数据。均值、标准差和方差分析(吨)用于确定表观差异的统计显着性。Z-费舍尔检验用于检测皮尔逊相关系数差异的统计显着性。研究样本由巴尔卡应用大学的652名学生组成。结果表明，学生享有高水平的心理流动和学业自我效能感。由于“性别”和“学术水平”变量，他们在心理流动和学业自我效能感方面没有表现出差异。结果表明，心理流动与学业自我效能感之间的相关性很强，且偏向于男性。此外，心理流动与学业自我效能感之间存在正相关关系。该研究建议大学讲师教育学生心理流动和学业自我效能的重要性。这可以通过创造一定的条件来帮助学生拥有稳定的心理流动状态，从而帮助他们更有效地学习、学习和备考。

Received: July 24, 2021 / Revised: September 14, 2021 / Accepted: October 11, 2021 / Published: November 30, 2021

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关键词：学术自我效能，新冠肺炎流行病，约旦大学生，在线学习，心理流动。

1. Introduction

Today, the world is exposed to many changes and transformations imposed by the Covid-19 pandemic, which has greatly affected many people's psychological aspects and personal characteristics, particularly university students. The latter needs to develop the positive aspects of their personalities and expand their awareness in their ways or with the assistance from others who care to face the difficulties of life as they proceed with the studies virtually. This requires the development of some positive aspects such as psychological flow and academic self-efficacy to meet these challenges as they represent strong motives that push students to make an effort and perseverance to face the events of daily university life courageously [1]-[4].

The disclosure of psychological flow and academic self-efficacy among undergraduate students help to provide them the opportunity to develop and enhance psychological flow among themselves. Flow is a state of extreme pleasure, energy, high focus, and creative focus that has become the basis for a highly creative approach to life by challenging oneself with tasks that require a high degree of skill and commitment [3], [4]. Improving the quality of everyday life can be through three main scopes, namely, work, leisure, and interpersonal relationships [5].

What gives the current research its justifications and importance is that it is a serious attempt to reveal the level of psychological flow among Al-Balqa Applied University (BAU) students and its strong relationship to academic self-efficacy, making it a small yet significant contribution in this field. It may contribute to supporting efforts aimed at upgrading the process of building new individuals according to studied scientific foundations and reshaping their values in scientific development to serve modern society [2], [5], [7].

Like the rest of the world, Jordan was exposed to the Corona pandemic, forcing it to move to online learning. Among the factors that affect the academic achievement and the educational level of students are psychological flow and academic self-efficacy. Student's achievements and grades in exams are one of the main goals of educators. Academic achievement is the cornerstone of education evaluation which determines the individual's scientific and practical future. Psychological flow and academic self-efficacy are important factors to academic achievement among students. They affect the reception, storage, and retrieval of information because of their effects on memory processes, and it is not easy to separate them from each other [6]. The high level of psychological flow positively affects most students and academic

self-efficacy. The present study aimed to identify the level of psychological flow and its relationship to the academic self-efficacy of university students doing online learning during the Covid-19 pandemic. It can be beneficial in psychological counseling and psychological health for students in the university environment.

The study aimed to answer the following questions:

1. What is the level of psychological flow and academic self-efficacy among students of Al-Balqa Applied University during online education in light of the Corona pandemic (COVID-19)?
2. Is there a statistically significant relationship between psychological flow and academic self-efficacy among students of Al-Balqa Applied University?
3. Are there statistically significant differences at the level of statistical significance ($\alpha = 0.05$) between the means of the study sample member's estimates on the items of the psychological flow scale and academic self-efficacy due to the following variables "gender and "study level"?"
4. What is the strength of the relationship between psychological flow and academic self-efficacy according to gender?

2. Literature Review

2.1. Psychological Flow Concept

The psychological flow is an experience of a sublime type, and the hallmark of flow is a feeling of spontaneous pleasure to the level of ecstasy or euphoria. As the flow makes the individual feel pleasure, it is considered a reward to support it [6], [7]. The concept of psychological flow is one of the psychological concepts which has positive connotations. As described in the positive psychology literature, the state of flow represents the sense in which the optimal human experience is embodied in the highest manifestations of positive mental health and quality of life in general [8].

Psychological flow is a state that means the complete integration of the individual in the tasks and actions he/she performs, by which he/she forgets him/herself, the social environment, and time to reach a state of absence of awareness of everything [9], [10]. Moreover, all of this is coupled with euphoria, joy, mental clarity, and motivation towards determination and perseverance to eventually reach unique human creativity in which suffering is welcomed without waiting for any reinforcement of any kind [11]. The psychological flow represents the complete integration into the activity due to several subjective traits and environmental orientations [12]. It aims to enhance the

positive aspects of the individual's personality [13]. It represents a positive phenomenon as a subjective experience achieved when the individual forgets himself during the reflection process thinking to solve some problems [14]. As a result, an individual will dissolve in carrying out the tasks and actions associated with these problems accompanied by a state of ecstasy and joy.

The psychological flow is an internal psychological state that makes the learner preoccupied with the activity he is doing with a sense of success in dealing with such activity. Accordingly, the individual's psychological flow reaches the highest degree in employing their psychological energies, and they will have a state of satisfaction and happiness accompanying it [12]. Psychological flow is also the individual's immersion in a task until it reaches its peak. It represents the maximum degree of positive performance full of energy that protects the individual from getting bored, depressed, stressed, or anxious [3], [15]. The flow is such an important force in the success of the individuals in the actions and activities that they practice as they provide them with energy and the ability to self-awareness. The distinguishing feature of psychological flow is the feeling of spontaneous enjoyment during the performance of a task [13]. It is a psychological state of deep concentration that occurs when a person engages in tasks that require intense focus, perseverance, continuity, and effort to reach the optimal experience, which includes the highest levels of enjoyment, self-confidence, focus, sense of control, and complete loss of self-awareness [5], the flow of ideas and the mechanism of performance with the ability to manage time and complete internal integration into the work [15].

2.2. Academic Self-Efficacy Concept

Several studies have confirmed that academic self-efficacy has an important role in directing behaviors towards completing tasks. It was found, for instance, that academic self-efficacy is essential to university students in the process of completing academic tasks [16]. It was also revealed that academic self-efficacy is one of the forms and images of self-efficacy that determines student's academic self-efficacy level [17]. The more the students enjoy a high level of self-efficacy, the more capable they will complete the assigned academic tasks. Meanwhile, a positive correlation was found between self-management and academic self-efficacy [18].

Academic self-efficacy is one of the most important personal power mechanisms, and it represents an important center in student's motivation to do any work or study activities [19]. It helps students face various academic pressures and raises their level of self-efficacy through practice and continuous training on some academic activity skills. Generally, a strong sense of academic self-efficacy in students improves feelings

of achievement and subjective well-being. This makes them deal with difficult tasks as challenges that they can handle. Also, suppose the students perceive themselves as having high academic self-efficacy. In that case, they will be ready to face difficult situations or tasks, and they may show defensive efforts and persevere in the face of obstacles. Thus, they will search for innovative ways to overcome all these obstacles [19].

The level of academic self-efficacy among a sample of university students was identified in [20]. The study results showed that academic self-efficacy among the study sample was high, and there were no differences in academic self-efficacy according to gender and academic level. Psychological flow and its relationship to academic ambition among a sample of graduate students were examined in the three universities of Hebron Governorate [21]. The study results showed that the levels of psychological flow and academic ambition among students were high. There was a positive direct relationship between psychological flow and academic ambition in favor of female students.

Meanwhile, as found in [22], the degree of psychological flow and academic self-efficacy of the student respondents in Kuwait came to a medium degree. There were no differences between the males and females in psychological flow and academic self-efficacy levels. Academic self-efficacy, ambition, and compatibility were examined among Jordanian university students. The levels of academic self-efficacy, ambition, and agreement were found to be high, and there was a direct effect for each of the domains of academic self-efficacy [23].

The relationship between psychological flow and perfectionism among outstanding and normal Jordanian students was studied as well. The study results showed that there was a strong relationship between psychological flow and perfection among outstanding and normal students. Also, there was a significant difference between male and female students (outstanding and normal ones) in the level of psychological flow and perfectionism, which favored the outstanding students [24].

A positive correlation was found between the state of psychological flow and the level of ambition among Egyptian students [14]. There were also differences between the scores of individuals on the psychological scale according to the age variable, which was in favor of the elderly. the psychological flow experience of Jordanian university students was identified according to the gender variable in [10]. The study revealed that students enjoyed a high level of psychological flow, and there were no differences in psychological flow between male and female students.

A positive relationship was found between psychological flow and life satisfaction among female students of educational diploma at Jeddah University [13]. There was also a positive relationship between

psychological flow and academic adjustment among students. An inverse relationship was revealed between the components of academic self-efficacy and cognitive failure, and there was no relationship between cognitive failure and motivation for academic achievement [25]. A difference in the levels of psychological flow experience was found according to the age and academic level of students in Istanbul University [15]. Likewise, it was revealed in [26] that a good level of psychological flow distinguished university students in Jordan. Males and females were equal in psychological flow, and there were no significant differences attributable to the academic field.

It was found that psychological happiness influenced predicting psychological flow and the psychological happiness variable impacted predicting self-concept among Omani University students [1]. Another study showed that female students at the faculty of education in New Valley, Egypt, enjoyed a high level of psychological flow. The prevalence of academic procrastination was medium among female students [29]. In addition, it showed that the level of vigilance was high among female students. As revealed in [30], psychological flow and academic self-efficacy were important factors in student's academic achievement obstacles. They affected the reception, storage, and retrieval of information because of their effects on memory processes, and it was not easy to separate them from each other.

To sum up, psychological flow is one of the most important positive concepts in positive psychology, and it is an important variable of mental health in an individual's life. It is one of the most important educational issues related to mental health [15]. Academic self-efficacy plays an important role in shaping the learning process. It is considered an indicator of the learning process as it is linked to the cognitive, emotional, and social variables and the environment in which the students live [27].

3. Methodology

3.1. Population and Sample of the Study

The study population is Irbid University College students for the second semester of the academic year 2020/2021. The study sample consisted of (652) male and female students from Irbid University College, one of the colleges affiliated with Al-Balqa Applied University, Jordan. The tool was sent electronically to 1000 students, and (652) replied to the questionnaires and emailed them back to the researchers. Table 1 shows the characteristics of the study sample members according to their distribution in terms of gender and study level.

Table 1 Distribution of study sample members according to gender and study level

Variable	Level/Category	No.
Sex	Male	258
	Feminine	394
	Total	652
Educational Level	Bachelor's	382
	Diploma	270
	Total	652

3.2. Study Tools

3.2.1. Psychometric Flow Scale

To achieve the goal of the current study, the researchers developed a psychological flowmeter that consisted of two parts. The first part contained preliminary information: gender and study level. Moreover, the second part included (20) items. The answer to each item dealt with four levels according to the four-graded Likert method.

3.2.1.1. Validity

To verify the significance of the validity of the study tool, it was presented to seven reviewers specializing in psychological and educational counseling, educational psychology, measurement, and evaluation at the Al-Balqa Applied University. They were asked to express their points of view on the tool's structure, the appropriateness of the items, and the clarity and appropriateness of the items and scales. The scale consisted of (20) items. The reviewers agreed that it is suitable for measuring the psychological flow of university students, as the percentage of agreement on the scale was (90%).

3.2.1.2. Construction Validity

The construction validity of the psychological flow scale was verified by calculating the corrected item-total correlation coefficient for the correlation of each item of the scale with the scale as a whole, as shown in Table 2.

Table 2 Correlation of each item of the psychological flow scale and the scale as a whole

No	Correlation Coefficient	No.	Correlation Coefficient
1	.48	11	.30
2	.41	12	.39
3	.40	13	.30
4	.33	14	.52
5	.51	15	.28
6	.36	16	.27
7	.34	17	.31
8	.29	18	.22
9	.21	19	.30
10	.28	20	.43

Table 2 showed that all values of the corrected correlation coefficient were greater than (0.20); thus, they were all statistically significant values for the study.

3.2.2. Academic Self-Efficacy Scale

To achieve the goal of the current study, the researchers developed a measure of academic self-efficacy, which consisted of two parts. The first part contained preliminary information: gender, school stage, and the second part consisted of (39) items. The answer to each item dealt with four levels according to the four-graded Likert method.

3.2.2.1. Validity of the Study Tool

To verify the significance of the validity of the study tool, it was presented to (5) reviewers who are experts in psychological and educational counseling, educational psychology, measurement, and evaluation. The reviewers considered the tool suitable for measuring the psychological flow of university students, as the percentage of agreement on the scale was (90%).

3.2.2.2. Construction Validity

The construction validity of the academic self-efficacy scale was verified by calculating the corrected item-total correlation coefficient for the correlation of each item of the scale with the scale as a whole in which the value was greater than 0.20. Therefore, they are all statistically significant values.

3.2.2.3. Reliability

To verify the reliability, the study was applied to a pilot sample consisting of 24 male and female students from the study community and from outside the sample where the Pearson coefficient of repetition stability reached (0.817), while the coefficient of the internal consistency stability (Cronbach Alpha) reached 0.854, which are considered acceptable values for the purposes of this study.

3.2.2.4. Scale Stability

The study was applied to a pilot sample consisting of 55 male and female students from the study community but from outside the real study to verify the reliability. Pearson coefficient of frequency was 0.793, while the coefficient of the internal consistency (Cronbach Alpha) was 0.831, which were both acceptable values for the purposes of the study.

3.2.2.5. Statistical Manipulations

The means and standard deviations were used to answer the first question. The means and standard deviations were used to answer the second question, according to the following variables: gender and study level. An analysis of variance (T) was used to find out the statistical significance of the apparent differences between the means of the estimates of the study sample on the items of psychological flow scale according to the following variables: gender and study level. The Z-Fisher test was used to detect the statistical significance of the difference in Pearson's correlation coefficient.

3.3. Data Analysis

The data were collected and analyzed, as shown in Figure 1.

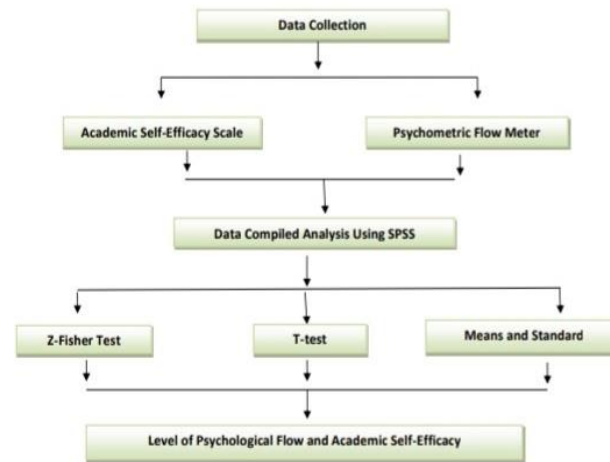


Fig. 1 Methodological framework

4. Results

4.1. Level of Psychological Flow and Academic Self-Efficacy

Q1: What is the level of psychological flow and academic self-efficacy among students of Al-Balqa Applied University during online education in light of the Corona pandemic (COVID-19)?

Data were compiled in excel for further analysis using SPSS software. The results obtained were compared by using a different statistical tool. The means and standard deviations of the estimates of the study sample were calculated on the items of the psychological flow scale as a whole, as shown in Table 3.

Table 3 Psychological flow scale as a whole, in descending order

R	Item	SMA	SD	L
1	I feel that the steps to accomplish any task given to me are clear	3.75	0.75	High
2	My sense of the success of the first step to accomplish the task motivates me to other more positive steps	3.73	0.84	High
3	I can carry out the duties assigned to me perfectly	3.71	1.23	High
4	I try to suggest some solutions that help others get their work done	3.69	1.32	High
5	I feel good when others ask me to do something	3.57	1.50	High
6	I merge with the task assigned to me, and I can hardly see anything else	3.46	1.12	High
7	I focus on the details of the activity I am in	3.44	0.73	High
8	I arrange the steps to complete the work in order of importance	3.41	0.68	High

9	The task I do keeps me from the behavior of others around me	3.39	1.30	High
10	I find myself attuned to the task at hand	3.36	0.67	High
11	I feel time flies while I am getting the job done	3.33	0.61	High
12	I do not pay attention to the satisfaction of my personal needs when I am busy doing an activity	3.28	1.04	High
13	I feel it is fun while doing the task assigned to me	3.27	1.24	High
14	I almost forget myself while I am doing something	3.26	1.41	High
15	I feel relieved when I see myself going in the right direction in accomplishing any activity	3.24	0.67	High
16	I have the ability to adjust my steps to achieve objectives of the assigned mission	3.22	1.47	High
17	I see that the activity I am assigned does not have clear details	2.46	1.03	Low
18	I get bored when doing a task at hand	2.34	0.61	Low
19	Criticism of others for my work confuses my accomplishment of the task	2.36	1.34	Low
20	Failure strikes me before I do any task at hand	2.33	1.51	Low
	Total	3.45	1.09	High

* R = rank

* L = level

It is evident from Table 3 that the means of the scale items ranged between (2.33) and (3.75) with a high mean.

The means, standard deviation, and t-value were calculated on the students' academic self-efficacy scale (n = 652). The results showed that the level of academic self-efficacy among university students in light of the Corona pandemic came to a high degree, with a total mean of 3.45, and a standard deviation of 0.78.

4.2. Differences of the Psychological Flow and Academic Self-Efficacy Scales Due to Gender and Study Level

Q2: Are there statistically significant differences at the level of statistical significance ($\alpha = 0.05$) between the means of the study sample members' estimates on the items of the psychological flow scale and academic self-efficacy due to the following variables "gender and "study level"?"

4.2.1. Differences Due to Gender

T-test was used to find the differences between the psychological flow and academic self-efficacy due to gender, as illustrated in Table 4.

Table 4 T-test results for two independent samples/gender

Variable	Gender	N	SMA	SD	T.	Sig.
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value						
Psychological Flow	Male	258	2.21	1.41	0.255	0.547
	Female	394	2.30	1.02		
Academic Self-Efficacy	Male	258	2.51	1.21	0.351	0.427
	Female	394	2.90	1.32		

As the results have shown in Table 4, it was found that the probabilistic value (Sig.) corresponding to the T-test for two independent samples was greater than the significance level (0.05). Thus, it can be concluded that there were no statistically significant differences between the average estimates of the study sample about psychological flow due to gender.

4.2.2. Differences Due to Study level

T-test found the differences between the psychological flow and academic self-efficacy due to the variable 'study level' as shown in Table 5.

Table 5 T-test results for two independent samples/study level

Variable	Educational Level	N	SMA	SD	T Value	Sig.
Psychological Flow	Diploma	270	3.39	0.78	0.865	0.481
	Bachelor's	383	3.65	1.23		
Academic Self-Efficacy	Diploma	270	3.11	1.45	0.762	0.380
	Bachelor's	383	3.12	1.33		

Table 5 showed that the probabilistic value (Sig.) corresponding to the T-test for two independent samples was greater than the significance level (0.05), and thus it can be concluded that there were no statistically significant differences between the average estimates of the study sample about psychological flow and academic self-efficacy due to the study level.

4.3. The Relationship between Psychological Flow and Academic Self-Efficacy

Q3: Is there a statistically significant relationship between psychological flow and academic self-efficacy among students of Al-Balqa Applied University?

Pearson's correlation coefficient and its statistical significance were calculated between the estimates of the study sample on the psychological flow scale and their estimates on the items of the academic self-efficacy scale, as shown in Table 6.

Table 6 Psychological flow scale and the academic self-efficacy scale n = 652

Academic Self-Efficacy		
Psychological Flow	Pearson Correlation Coefficient	0.812*
	Statistical Significance	0.001

* Statistically significant level of statistical significance ($\alpha = 0.01$)

It is noticed from Table 6 that there is a positive and statistically significant relationship between the estimates of the study sample members on the psychological flow scale and the academic self-efficacy scale, where the value of the statistical significance reached 0.001, which is less than the level of statistical significance ($\alpha = 0.01$), and that the value of the Pearson correlation coefficient reached 0.812.

4.4. The Strength of the Relationship between Psychological Flow and Academic Self-Efficacy According to Gender

Q4: What is the Strength of the Relationship between Psychological Flow and Academic Self-Efficacy According to Gender?

Z-Fisher test was used to detect the statistical significance of the difference in coefficient Pearson's correlation between the estimates of the study sample members as displayed in Table 7.

Table 7 Difference in Pearson's correlation coefficient between the sample's estimates

Academic Self-efficacy					
Gender	N	Pearson's Correlation	Z-Value	Sig.	Psychological Flow
Female	394	0.53	-	0.030	
Male	451	0.67	2.035		

Table 7 showed that the value of ($z=-2.045$) was statistically significant ($\text{Sig.}=0.040$), which was less than ($\alpha=0.05$). This finding indicated the difference in Pearson's correlation coefficient between the estimates of the study sample on the psychological flow scale as a whole, and their estimates on the items of the academic self-efficacy scale as a whole, according to gender, which was in favor of males. In other words, the relationship between psychological flow and academic self-efficacy in males was stronger in males than in females.

5. Discussion

The results showed that the level of psychological flow among students of Irbid University College came to a high degree. It also showed that the level of academic self-efficacy among university students was at a high degree. This can be attributed to the appropriate educational environment through the provision of online education systems that have provided a high degree of focus for students and integration into the task assigned to them, making it possible to implement the task easily and have clear objectives. The students' abilities are suitable for the tasks and responsibilities required of them so that there was a balance between what was required of them and the type of challenges presented to them.

The current study results were consistent with the findings which showed that university students enjoy a high level of psychological flow [10]. Also, they confirmed a positive relationship between psychological flow and life satisfaction and a positive relationship between psychological flow and academic adjustment among the participants of the study [13]. Likewise, these results were consistent with another study, which showed that university students in Jordan possess a high level of psychological flow [27].

University students' psychological flow helps to deal with conditions and mitigate their effects on

students' mental health and psychological compatibility as much as possible to walk confidently with decisive steps towards academic success and scientific excellence. Academic self-efficacy is an important driver towards success and represents an important center in the student's motivation to do any work or study activities. It helps them face various academic pressures. Students' self-efficacy can be raised through continuous practice and training on some academic activity skills [35].

Psychological flow affects the academic self-efficacy by improving self-confidence, understanding the educational process and the method of obtaining information as it is part of the formation of the student's personality since it affects the students' style of thinking and perception, especially in solving the problems they may face [28]. In addition to the cognitive and emotional changes students acquire in their university life, they are positively related to motivation and clarity of goals. As pointed out in [5], psychological flow consists of integration, focus, the balance between ability and challenge, and the sense of ability to control activities, pleasure, and creativity.

Psychological flow is a vital force in the students' success in the work and activities they perform and the feeling of spontaneous enjoyment during the performance of the activity [13]. It is also described as a state of deep concentration that occurs when the students engage in dealing with tasks that require focus, perseverance, and effort [5], [31]-[33]. The educational and family environment in online education in light of the Corona pandemic (COVID-19) provides a worthy degree of focus and integration for the students in the task assigned to them; therefore, these tasks become clear objectives and consist of easy steps to be implemented. The students' abilities and skills become appropriate for the work and tasks required of them so that there is a balance between the student's abilities and the type of challenge presented to them [3], [34].

Our research results also showed no statistically significant difference between the two means of the study sample's estimations on the items of the psychological flow scale due to the variables of gender and study level. This can be explained by the fact that male and female students, whether at the intermediate diploma or bachelor's level, have clear and specific goals throughout the study period because they have participated in the same curricula and are studying in the same university college. Furthermore, the evaluation criteria are unified for all students because the university environment is common, and the two sexes were subjected to the same undergraduate experiences. Moreover, all the sources of knowledge that the university made available from the Internet and library, including various knowledge sources, were available to all students without exception. Therefore, there were no differences between them concerning psychological flow.

This result may be caused by the appropriate educational environment at BAU that provides a good degree of focus for the learners on what they are doing, as well as that the projects they undertake are within reach of the student's abilities and skills and are appropriate to the tasks they are doing and the challenges they may confront. As such, the result was consistent with [10] which showed that there were no differences in the psychological flow between males and females among university students in Baghdad. As well it was in line with [26] which concluded that males and females were equal in the level of psychological flow and there were no differences due to the academic field. This result can be attributed to the nature of homogeneity among students in family, environmental, social and academic conditions, which narrowed the gap between them. This may be attributed to the nature of the It was also the students' personality patterns, the nature of their motives towards learning, and the stimuli of the family and school learning environments from which they come from, which have a lot of convergence and similarity in most of the influences that shape their orientations and goals.

Cultural and social factors are among the key factors that affect the level of psychological flow. Furthermore, psychological flow as a subjective experience is a positive phenomenon achieved when the individual dissolves in the tasks and actions associated with a state of euphoria and exhilaration. The state of flow represents a decisive factor in forming the meaning of life and the purpose of life and giving meaning and value to it, which pushes those who coexist with it towards creativity, motivation, and excellence.

The results also showed that the relationship between psychological flow and academic self-efficacy in males was stronger than in females. This result can be explained by the characteristics of males, their mental abilities, and their different way of thinking as entering the state of flow requires focusing attention on the work or activity students are doing because the essence of the flow is a state of high concentration [27], [36]. Moreover, the flow state is proportional to the size of the flow of students' abilities, and males tend to have more focus and attention on work and activity than females, and their mental abilities may also be high. They have the opportunity to focus and study more than females [27], as females in the Jordanian society have more responsibilities and chores to do at home than males in general.

6. Conclusion

This study found that students enjoy a high degree of psychological flow and a high level of academic self-efficacy in light of the Corona pandemic. The psychological flow and academic self-efficacy enhance the positive aspects of the university students' personality and contribute to their psychological and

academic compatibility. The development of skills is related to academic performance. The study found a positive correlation between psychological flow and academic self-efficacy. The more the students enjoy the psychological flow, the more they enjoy a high level of self-efficacy. The more they can accomplish the academic tasks assigned to them and carry out any work or study activity.

The study showed no differences in the psychological flow and academic self-efficacy among students due to the variables of sex and academic level and that the relationship between psychological flow and academic self-efficacy among males was stronger than that of females due to males' characteristics, mental abilities, way of thinking, and personal preparations or presumed preparations to respond in a specific and different ways from females. The study results agree with the findings of previous studies, which revealed the importance of psychological flow and academic self-efficacy. However, previous studies did not attempt to link psychological flow and academic self-efficacy and their relationship among university students.

Psychological flow is an important force in students' success in the activities they practice as it provides them with energy and the ability to self-awareness control. They will be able to control their emotions, be free from psychological pressures, and enable them to develop their performance, increase their learning motivation, and solve expected problems while performing their tasks. This is directly reflected in the effectiveness of the academic self.

Based on these results, the study recommended educating students about the importance of psychological flow and academic self-efficacy by directing academics and teachers to pay attention to psychological flow as it is an experience that can be exploited in the educational process by creating certain factors and conditions that help students to have a state of psychological flow in order to help them to progress in various fields, especially in the course of studying, learning and preparing for exams. They have to develop the skills of psychological flow and academic self-efficacy among students through therapeutic and training counseling programs that develop these two variables, as there is a strong positive relationship between the effect of psychological flow and academic self-efficacy.

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