

Psychological Flow among Primary School Principals - A Field Study -

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Abstract:

The current study aimed to identify the level of psychological flow among primary school principals in the city of Ouargla, using the descriptive analytical method and employing a questionnaire consisting of (40) five-point items, distributed across four dimensions. Its validity and reliability were verified, and it was then administered to a sample of (64) male and female principals in the city of Ouargla. After statistical processing using the SPSS statistical package, it was concluded that the level of psychological flow among the study sample was high. The results showed that the dimension related to clear goals obtained the highest mean, followed by the dimension related to the loss of the sense of time and self-awareness, then the dimension related to immediate feedback, and finally the dimension of immersion and concentration. The results also indicated that there were no statistically significant differences in the level of psychological flow attributable to the gender variable, and no statistically significant differences were found attributable to the professional experience variable.

Keywords: Psychological flow, primary school principal.

Introduction

The emergence of positive psychology constituted a qualitative shift in the study of the human psyche, as it focused on the positive aspects of personality and sought to achieve psychological and mental balance that ensures the individual's mental health and enhances his well-being and happiness, especially in light of the challenges faced by the individual in an era full of difficulties and pressures, while constantly striving to reconcile and maintain balance between these pressures and his mental health. Hence, it has become necessary to search for psychological states that provide him with a sense of satisfaction, productivity, and enjoyment when performing his tasks and duties. In this context, one of the most important concepts associated with positive psychology has emerged, namely the concept of psychological flow.

This state is of particular importance in professions that require creativity, commitment, and continuous effort to achieve goals. Among the most prominent of these professions is teaching, where psychological flow is considered a central element that enhances the efficiency of the primary school principal and helps him respond effectively to the daily challenges of the work environment, in addition to being creative in carrying out his administrative and educational duties through innovative and attractive methods that contribute to achieving the school's objectives.

1. Study Problem:

The school principal constitutes one of the fundamental pillars of the educational process, as his administrative and leadership performance is linked to the quality of the school environment, the effectiveness of educational programs, and learning outcomes. In light of the increasing professional requirements and administrative pressures faced by school principals, interest has emerged in studying the psychological factors that contribute to enhancing their competence and motivation toward achievement (**Hayah and Ammar, 2026, p 282**).

Since this profession involves many conflicts and professional pressures, it affects the principal's personality and work climate, leading to physical and emotional exhaustion. This requires the availability of a psychological state associated with positive psychology, namely the state of psychological flow, so that he can master his profession and raise it to the highest levels of performance and creativity. Guan (2013) likened psychological flow to a magnet for the educational process, through which the educational process becomes more enjoyable. Consequently, the principal continues to achieve the desired goals and attempts to repeat the state of flow more than once in order to ignite desire and enthusiasm and discover new ways to create a stimulating educational environment (**Khashaba, 2017, p 227**).

Psychological flow represents the optimal experience that embodies the highest manifestations of positive mental health and quality of life in general, forming a state that reflects the extent to which the individual is fully absorbed in the activities or tasks he performs. During this state, the individual forgets himself and does not feel the passage of time or the presence of those around him, as if he were in a state of unawareness of everything around him except the activities or tasks he is performing. This is accompanied by a state of happiness that helps him discover the meaning of life, making his life purposeful and meaningful (**Al-Zahrani, 2022, p 140**).

Flow is accompanied by many positive effects, such as happiness. A happy personality possesses many traits, such as self-motivation, self-confidence, continuous work, appreciation of the value of work, control over feelings of anxiety, reduction of negative emotions, self-actualization, and planning work before carrying it out, while setting limits to ambitions that are consistent with one's abilities and capabilities. This is in addition to an overwhelming sense of vitality and enthusiasm, as well as the pursuit of success and perseverance (**Khashaba, 2017, p 223**).

In light of the administrative and educational challenges faced by primary school principals, the importance of positive psychological factors that help them perform their duties and achieve balance between the demands of the profession becomes evident. Therefore, this study was conducted, as it is considered one of the few studies that attempt to investigate psychological flow among primary school principals. In order to gain a deeper understanding of the subject, the questions falling under this problem will be answered.

1.1. Study Questions:

This study seeks to answer the following questions:

- What is the level of psychological flow among primary school principals in the city of "Ouargla"?
- Are there statistically significant differences in the level of psychological flow among primary school principals in the city of "Ouargla" attributable to the principal's gender variable?
- Are there statistically significant differences in the level of psychological flow among primary school principals in the city of "Ouargla" attributable to the professional experience variable?

1.2. Study Hypotheses:

The current study attempts to verify the validity of the following hypotheses:

- There is a high level of psychological flow among primary school principals in the city of “Ouargla”.
- There are statistically significant differences in the level of psychological flow among primary school principals in the city of “Ouargla” attributable to the principal’s gender variable.
- There are statistically significant differences in the level of psychological flow among primary school principals in the city of “Ouargla” attributable to the professional experience variable.

1.3. Importance of the Study:

The importance of the current study lies in the fact that it addresses a recent variable in positive psychology, namely “psychological flow”, which seeks to investigate and develop the positive aspects of personality through the optimal use of individual energies and abilities, by focusing on strengths and enhancing them, as well as working to create appropriate conditions to achieve the highest possible level of competence, creativity, and development.

This importance also stems from the fact that the study included an important and essential sample within the educational system, namely primary school principals, who have not yet received sufficient attention in such studies.

1.4. Objectives of the Study:

The current study aims to achieve the following:

- To identify the level of psychological flow among primary school principals in the city of “Ouargla”.
- To investigate whether there are statistically significant differences in the level of psychological flow among the study sample attributable to the variables of gender and professional experience.
- To provide recommendations aimed at enhancing the factors that support psychological flow in the school environment.

1.5. Operational Definition of the Study Concepts:

Psychological Flow:

Jackson and Marsh (2006) define psychological flow as a momentary emotional state that occurs when a person is fully engaged in performance, in a situation where personal skills are balanced with the demands of the challenge, during which the individual experiences a state of altered awareness in performance and immersion in the activity (**Ben Sheikh, 2015, p 16**).

Operationally, in the current study, psychological flow is defined by the extent of the principal’s immersion and concentration, loss of sense of time, and self-awareness, based on the score he obtains when responding to the items of the psychological flow scale adopted in the current study and prepared by Al-Natsheh and Masri (2022).

Primary School Principal:

A primary school principal is the qualified person, after being promoted from the position of teacher, who is responsible for pedagogical supervision, administrative management, and educational coordination. He exercises authority over all school staff, is responsible for taking all measures necessary for the proper functioning of the school, and is considered the stable link in school relations.

2. Previous Studies:

In this section, we will address a set of previous studies from which we proceeded in establishing the theoretical background of the study, with the aim of benefiting from them in discussing the results reached, as well as presenting the aspects of benefit, difference, and similarity between them and the subject of our current study.

2-1- Study of Al-Natsheh and Masri (2022):

This study aimed to identify the relationship between psychological flow and academic ambition among a sample of postgraduate students at Hebron University. The study used the descriptive correlational method, and was conducted on a sample consisting of (188) male and female students selected by the simple random method. The study used both the psychological flow scale and the academic ambition scale. The results showed that the level of psychological flow was high among the research sample, and that their level of academic ambition was also high, with a statistically significant positive direct relationship between psychological flow and academic ambition among the research sample.

2-2- Study of Al-Juhani and Al-Ahmadi (2022):

This study aimed to determine the level of both psychological flow and psychological resilience among secondary education students. It also aimed to measure the contribution of psychological resilience in predicting their level of psychological flow, based on the descriptive survey correlational method. The research sample consisted of (392) female students selected by the simple random method. The psychological flow and psychological resilience scales were used as tools for data collection. The results revealed a high level of both psychological flow and psychological resilience among secondary school students in Medina, as well as a positive direct correlational relationship between the two variables.

2-3- Study of Al-Aswad and Al-Aswad (2020):

This study aimed to identify the level of psychological flow among students at the University of Ouargla. The study followed the descriptive analytical method, and the sample consisted of (82) male and female university students selected randomly. The psychological flow scale of Imad Nassif (2015) was applied. The results showed a high level of psychological flow among the sample members. The results also showed that there were no statistically significant differences in the level of psychological flow attributable to the gender variable, while differences were found attributable to the variables of specialization and academic level.

2-4- Study of Al-Sawi (2020):

This study aimed to identify the nature of the relationship between psychological flow and the positive self among a sample of university students who participated and did not participate in student activities. The study sample consisted of (300) male and female students: (150) participating students and (150) non-participating students. The results revealed a statistically significant correlational relationship between psychological flow and the positive self among the members of the study sample, statistically significant differences between students participating and non-participating in student activities in psychological flow in favor of students participating in student activities, and statistically significant differences between participating and non-participating students in student activities in the positive self in favor of students participating in student activities.

2-5- Study of Al-Sawafi (2019):

This study aimed to investigate the relationship between psychological flow and test anxiety among a sample of ninth-grade students in the schools of North Al Sharqiyah Governorate. The study sample consisted of (400) male and female students. To achieve the objectives of the study, the descriptive correlational method was used. The results revealed an average level of both psychological flow and test anxiety among the study sample. The results of multiple linear regression analysis also showed that the cognitive dimension was the only significant predictor, contributing (3.6%) to explaining the variance in students' scores on the psychological flow scale.

2-6- Study of Al-Obaidi (2016):

This study aimed to identify the level of psychological flow among university students in light of some variables, namely gender and academic specialization. The researcher constructed a psychological flow scale for university students, and after verifying the psychometric properties of the scale, it was applied to a sample consisting of (200) male and female students selected by the simple random method. The results showed that the study sample had a good level of psychological flow. The results also indicated that there were no differences in psychological flow between males and females, and that there were no differences in psychological flow between students of scientific specializations and students of humanities specializations.

2-7- Study of Ben Sheikh (2015):

This study aimed to reveal the nature of the relationship between emotional balance and psychological flow among a sample of secondary education teachers in the city of Ouargla. The researcher relied on the descriptive analytical correlational method by applying two scales: emotional balance and psychological flow, to a sample consisting of (213) secondary education teachers in the city of Ouargla, selected by the stratified random method. The researcher concluded that there was no relationship between emotional balance and psychological flow among secondary education teachers of some literary subjects in the city of Ouargla. Among the findings of the study was the absence of a specific level of psychological flow among secondary education teachers, a high level of emotional balance, and the absence of statistically significant differences among secondary education teachers of some literary subjects in the city of Ouargla in the degree of psychological flow according to the seniority variable, while differences existed in the degree of emotional balance.

*** Commentary on Previous Studies:**

In light of the multiplicity of studies reviewed that are related to the variable of psychological flow, the following can be clarified:

In terms of the study topic and objective: What can be observed is the diversity of studies that addressed the topic of psychological flow from several perspectives. Most previous studies aimed to link the psychological flow variable with other variables, such as emotional balance in the study of Ben Sheikh (2015), as well as academic ambition in the study of Al-Natsheh and Masri (2022). In Al-Sawi's study (2020), it was addressed in relation to the positive self, while it was examined with psychological resilience in the study of Al-Juhani and Al-Ahmadi (2022), and with test anxiety in the study of Al-Sawafi (2019).

- **In terms of the study method:** Most studies used the descriptive method, which is appropriate for this type of study, as is the case in the current study.

- **In terms of the study sample:** There was diversity in terms of the sample, as most studies were conducted on students, as in the studies of Majed (2019), Al-Sawafi (2019), Al-Sawi (2020), Al-Natsheh and Masri (2022), and Al-Juhani and Al-Ahmadi (2022). Meanwhile, the sample of Ben Sheikh's study (2015) was represented by secondary education teachers, whereas the sample of the current study consists of primary school principals.
- **In terms of the study tool:** Similar to the present study, most studies used the questionnaire as a study tool. However, researchers varied in terms of these tools; some constructed their own tools, as in the study of Majed (2019), whereas the remaining studies adopted ready-made tools, as is the case in this study.
- **In terms of the study results:** The results of previous studies varied according to the objectives for which they were designed. As for the current study, it will be discussed in light of the results reached.

3. Study Procedures:

3-1- Study Method:

Since the aim of the study was to reveal the level of psychological flow among primary school principals, this required the use of the descriptive method, which is based on collecting data about the phenomenon under study in order to test the hypotheses or answer the study questions related to the current status of individuals.

3-2- Study Sample:

The scope of the current study is limited to revealing the level of psychological flow among primary school principals in the city of Ouargla, on a sample consisting of (64) male and female principals during the period from 08/02/2026 to 22/02/2026 of the 2025/2026 academic year. The following is a description of the characteristics of the basic study sample according to the study variables.

Table No. (01) shows the distribution of the study sample according to gender and professional experience.

Variables	Variable Categories	Frequency	Percentage (%)
Gender	Male	15	%23.24
	Female	49	%76.56
	Total	64	% 100
Professional Experience	Less than 5 years	13	% 20.31
	From 5 to 10 years	36	% 56.25
	More than 10 years	15	% 23.44
	Total	64	% 100

3-3- Study Tool and Its Psychometric Properties:

To achieve the purpose of the study and answer its questions, the scale of Al-Natsheh and Masri (2022) was adopted. It was developed based on previous scales, and its final version included (40) items distributed across four dimensions related to: clear goals (10 items), immersion and concentration (10 items), loss of sense of time and self-awareness (10 items), and immediate feedback (10 items).

Psychometric Properties:

To verify the validity of the scale, its validity and reliability were confirmed by applying it to a sample consisting of (30) male and female principals of primary schools in the city of “Ouargla”. Its validity was verified through internal consistency between the scores of the dimensions and the total score, where the values ranged between (0.72) and (0.89), all of which were significant at the significance level of 0.01. It was also verified through discriminative validity by using the extreme-group comparison method, where the calculated “t” value reached (8.34). As for reliability, it was calculated based on the internal consistency method (Cronbach’s Alpha), which reached (0.78), and also through the split-half method, where the calculated “r” value reached (0.73).

Scale Scoring:

The length of the five-point scale was divided into three categories in order to determine the degree of agreement of the study sample members regarding their level of psychological flow. The three categories of the five-point scale were calculated as follows:

Scale range = the upper limit of the scale – the lower limit of the scale = (5 - 1) = 4

Number of categories = 3

Category length = scale range ÷ number of categories

$4 \div 3 = 1.33$

By adding the category length (1.33) to the lower limit of each category, the categories of arithmetic means are obtained. Thus, the judgment criterion is as shown in Table (02).

Table (02) shows the judgment criterion for the levels of psychological flow.

Arithmetic Mean Categories	Relative Weight	Level of Psychological Flow
2,33-1	%46,6- %20	Low Level
3,67-2,34	%73,4- %46,7	Medium Level
5 -3,68	%100- %73,5	High Level

4. Presentation, Interpretation, and Discussion of the Study Results:**4-1- Presentation, Interpretation, and Discussion of the Results of the First Hypothesis:**

The first hypothesis of the study stated that: There is a high level of psychological flow among primary school principals in the city of “Ouargla”. To verify the validity of the hypothesis, arithmetic means, standard deviations, and percentages were used. Table (03) shows the aforementioned statistical analysis.

Table No. (03) shows the level of psychological flow among the study sample according to the dimensions and according to the total score of the scale.

Order	Dimensions	Number of Items	Arithmetic Mean	Standard Deviation	Percentage	Level
1	Clear Goals	10	3.81	0.872	76%.2	High
2	Loss of Sense of Time and Self-Awareness	10	3.79	0.89	75%.8	High
3	Immediate Feedback	10	3.72	0.956	74%.4	High

4	Immersion and Concentration	10	3.67	0.817	73%.4	Medium
Total		40	3.75	0.883	75%	High

Table No. (03) shows that the results of the respondents' responses to the scale as a whole reached (3.75), which is a value indicating that the level of psychological flow is high among the study sample. The dimensions were ranked as follows: the dimension related to "clear goals" came first, with an arithmetic mean estimated at (3.81), followed by the dimension related to "loss of sense of time and self-awareness", with an arithmetic mean of (3.79). The third rank was occupied by the dimension related to "immediate feedback", with an arithmetic mean reaching (3.72). All these values fall within the high level, whereas the fourth rank was occupied by the dimension related to "immersion and concentration", with an arithmetic mean estimated at (3.67), which is the only dimension that falls within the medium level.

Thus, this result agrees with the findings of the study of Hayah and Ammar (2026), the study of Al-Aswad and Al-Aswad (2020), the study of Al-Juhani and Al-Ahmadi (2022), the study of Al-Natsheh and Masri (2022), and the study of Al-Obaidi (2016), all of which concluded that there was a high level of psychological flow among the members of the samples. However, this result differed from the findings of the study of Ben Sheikh (2015) and the study of Al-Sawafi (2019), which concluded that there was a medium level of psychological flow among the members of the study samples.

The high level of psychological flow among primary school principals can be explained by the nature of the leadership role they perform, and by their possession of the professional experience and competence necessary to carry out their duties efficiently, which enables them to deal effectively with daily challenges. This helps them achieve a balance between work requirements and their personal abilities. Moreover, the nature of administrative and educational work is characterized by clear goals and functional tasks, as well as the diversity of activities and challenges, which requires a high level of concentration and continuous engagement in these activities. This, in turn, enhances concentration, immersion in work, and the sense of responsibility and achievement.

In addition, leadership responsibility and continuous interaction with the various parties involved in the educational process provide diverse professional experiences and renewed challenges that contribute to developing internal motivation, which is reflected in the high level of psychological flow among principals. Furthermore, the professional status and social appreciation associated with the position of school principal may contribute to increasing job satisfaction and the sense of self-efficacy, both of which are positively related to psychological flow.

4-2- Presentation, Interpretation, and Discussion of the Results of the Second Hypothesis:

The second hypothesis of the study stated that: There are statistically significant differences in the level of psychological flow among primary school principals in the city of "Ouargla" attributable to the gender variable.

To verify the validity of the hypothesis, the "t-test" was used to determine the significance of differences between means. The results were as shown in the following table.

between males and females in the level of psychological flow.

	Number	Arithmetic Mean	Standard Deviation	Calculated "t"	Tabulated "t"	df	Significance Level
Males	15	148,20	19,76	0,33	2,66	62	0,74
Females	49	150,73	27,6				

It is clear from Table No. (04) that the calculated “t” value, estimated at (0.33), is lower than the tabulated “t” value, estimated at (2.66), at the degree of freedom (62) and the significance level (0.01). This indicates that there are no statistically significant differences between the mean responses of male principals and the mean responses of female principals on the items of the scale. Therefore, we reject the research hypothesis and accept instead the null hypothesis, which states that there are no differences between the two genders in the level of psychological flow. This is the same result reached in the study of Hayah and Ammar (2026), the study of Al-Aswad and Al-Aswad (2020), and the study of Al-Obaidi (2016).

The absence of statistically significant differences in the level of psychological flow between male and female principals can be explained by the fact that psychological flow is more closely related to personal and professional factors than to gender. Psychological flow depends on the balance between the individual’s skills and the level of challenges he or she faces, which are factors that can be available among both male and female principals. In addition, the high level of professional competence among the sample members, as reaching the position of school administration requires certain experiences and qualifications, may make male and female principals possess similar abilities that help them achieve comparable levels of psychological flow.

Moreover, male and female principals were subject to the same selection and recruitment conditions, while enjoying the same academic and professional training. They also experience the same working conditions, perform similar tasks, work under comparable organizational and professional circumstances, and receive equal opportunities for training and professional development. This makes the opportunities for feeling immersion and concentration at work similar between the two genders.

4-3- Presentation, Interpretation, and Discussion of the Results of the Third Hypothesis:

The third hypothesis of the study stated that: There are statistically significant differences in the level of psychological flow among primary school principals in the city of “Ouargla” attributable to the professional experience variable.

To verify the validity of the hypothesis, one-way analysis of variance was used to identify the differences between means. The results were as shown in the following table.

Table No. (05) shows the results of the one-way analysis of variance (ANOVA) for the differences between means according to the professional experience variable.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F Value	Significance Level
Between Groups	1090,98	2	545,49	0,81	0,449
Within Groups	41014,74	61	672,37		
Total	42105,73	63			

By reviewing the results included in Table (05), it becomes clear that there are no statistically significant differences between the arithmetic means of the responses of the study sample members regarding their responses to the psychological flow scale according to the professional experience

variable (less than 5 years / from 5 to 10 years / more than 10 years). The calculated (F) value reached (0.81), which is not significant at the level ($\alpha = 0.05$). This calls for rejecting the research hypothesis and accepting instead the null hypothesis, which states that there are no differences among the members of the study sample attributable to the professional experience variable. This is the same result reached in the study of Hayah and Ammar (2026).

This can be explained by the similarity in the nature of the professional tasks and responsibilities, whether administrative or educational, performed by primary school principals, and by their exposure to similar organizational and educational working conditions as a result of being subject to a unified educational system that determines roles, tasks, and authorities. In addition, they possess similar professional experiences and competencies that help them achieve a balance between work requirements and their personal abilities. The unified organizational environment, as well as professional training and development, also reflected on their ability to concentrate and become immersed in work at similar levels. This was reflected in the absence of differences in the level of psychological flow among the sample members according to differences in years of professional experience.

According to Mihaly Csikszentmihalyi's theory of psychological flow, flow is achieved when the level of challenges is balanced with the level of skills. Most principals may possess appropriate skills to face work requirements, which leads to similar levels of flow.

Study Recommendations:

Through the results reached from the field study we conducted, and through our communication with the principals, we deemed it appropriate to present a set of recommendations, the most important of which are:

- The necessity of paying attention to psychological flow due to its effective role in the educational process.
- The importance of selecting competent principals who are able to adapt to various educational conditions and continue performing their educational duties efficiently.
- Paying attention to the psychological and educational aspect of principals in order to ensure the success of the educational process.
- Preparing more specialized training and development programs for principals in order to improve and raise their level of psychological flow, and to enhance their positive and effective involvement in their profession.
- The necessity of paying attention to the surrounding conditions of the primary school principal and taking them into account in order to develop his psychological flow.
- Providing psychological and professional support to principals to help them discover the strengths within their professional selves, which enhance the possibility of entering a state of psychological flow.

References:

- Al-Aswad, Mahriya and Al-Aswad, Al-Zahra. (2020). Psychological flow among students of KasdiMerbah University Ouargla. *Journal of Psychological and Educational Sciences*. 6(2), 55-69.
- Al-Juhani, Zohour Salim, and Al-Ahmadi, Maria Talib. (2022). Psychological flow and its relationship with psychological resilience among female secondary school students in Medina. *Journal of Education, Al-Azhar University, Faculty of Education in Cairo*. 2(193), 446-484.

- Al-Natsheh, Nermin Hijazi and Masri, Ibrahim. (2022). Psychological flow and its relationship with academic ambition among a sample of postgraduate students in the universities of Hebron Governorate. *Palestine Technical University Kadoorie Journal of Research*. 10(4), 84-104.
- Al-Obaidi, Afraa. (2016). Psychological flow among university students in light of the variables of gender and academic specialization. *Al-Ustadh Journal for Humanities and Social Sciences*. Volume 3, 197-214.
- Al-Sawafi, Mohammed bin Nasser bin Saeed. (2019). Psychological flow and its relationship with test anxiety. *The Comprehensive Multidisciplinary Electronic Journal*. Issue (15), 1-22.
- Al-Sawi, Dalia Yousry Yahya. (2020). Psychological flow and its relationship with the positive self among a sample of university students participating and non-participating in student activities. *Journal of Educational and Social Studies*. 25(6), 219-280.
- Al-Zahrani, Bandar Hamdan Ahmed. (2022). The factorial structure of the psychological flow scale among postgraduate students at the Faculty of Education, Al-Baha University. *Journal of Scientific Research in Education*. 23(6), 139-192.
- Ben Sheikh, Rabia. (2015). The relationship between emotional balance and psychological flow: A field study on a sample of secondary education teachers in the city of Ouargla. [Unpublished Master's thesis]. KasdiMerbah University. Ouargla.
- Hayah, Mohamed Abdel Fattah and Ammar, Miloud. (2026). Psychological flow as a predictor of achievement motivation among public school principals in Ramallah Governorate. *Journal of Communication*. 32(1), 281-302.
- Khashaba, Fatima El-Sayed Hassan. (2017). Psychological flow and its relationship with some psychological and social variables in light of demographic variables among teachers. *The Egyptian Journal of Psychological Studies*. 27(96), 222-316.