How to Cite (Style APA):

Як цитувати (Стиль ДСТУ 8302: 2015):

Abstract
The purpose is to study the predictors that forecast the structure of the adaptation process of future medical workers to the conditions of professional activity. It is assumed that adaptation to the conditions of professional activity of future medical workers among others is provided by latent factors that are the result of the interaction of personality traits and qualities.

Methods: testing by “Social-Psychological Adjustment Questionnaire” (Rogers & Dymond, 1954). Subjective resources for overcoming difficulties in various areas of mental activity were studied using “Ways of Coping Questionnaire” (Folkman, Lazarus, 1980). Internal psychological regulatory resources involved in...
the adaptation process were assessed using the Action Control Scale (Kuhl, 2001). The versions of the questionnaires validated on the Ukrainian sample were used. The total research sample was 84 future medical workers (college students) of the specializations "General Medicine", "Nursing". The sample is homogeneous, formed randomly. 

Results. Latent factors (predictors) that ensure the adaptation process of future medical workers were identified: "Support seeking" (F1), "Friendliness" (F2), "Conformity" (F3), "Anti-stress" (F4), "Rationalism" (F5), "Self-analysis of situations" (F6). The share of predictors involved in the formation of adaptation processes of future medical workers was determined. Four of the six factors were included in the multiple analysis regression model. Two predictors ("rationalism" \( t = 1.299; p = .201 \) and "self-analysis of the situation" \( t = .356; p = .356 \)) were not included in the regression models due to the lack of statistical significance of their t-test. 

Discussion and conclusions. Future medical workers have been diagnosed with a medium level of adaptive capacity, which helps them adapt to the conditions of professional activity at the stage of primary professionalization. The factors that form the structure of the adaptive capacity of future medical workers were identified. Using the method of linear multiple regression, the share of each factor in ensuring the effectiveness of the adaptation process was determined. The share of "friendliness" (32.00%) in the explanation of "adaptation" is the highest. The share of "conformity" is slightly lower (20.00%). "Support seeking" accounts for only 11.56% of the variance explained. The smallest share in the regression model belongs to the predictor "anti-stress" – 3.72% of the explained variance. The prospect of further research on the problem highlighted in the article is the validation of the factor model, which requires a confirmatory analysis.

Keywords: adaptation, multiple equations, personal resources, self-regulation, coping strategies, predictors, personality traits.

Introduction

The formation of an individual as a personality, the formation of their social consciousness, is impossible without their socialization. During socialization, a person learns the rules of behavior in society, social norms, produces a model of their being in society. One of the key components of socialization is adaptation to the environment: social, educational, professional, etc.

Adaptation is an interdisciplinary, and therefore multidimensional concept that requires an analysis of psychological regulatory resources, isolated in the adaptation process, are determined for a complete understanding of the phenomenon. The study of the stability of the investigation revealed that 84 future medical workers were identified. Using the method of linear multiple regression, the share of each factor in ensuring the effectiveness of the adaptation process was determined. The share of "friendliness" (F1), "Friendliness" (F2), "Conformity" (F3), "Anti-stress" (F4), "Rationalism" (F5), "Self-analysis of situations" (F6). The share of predictors involved in the formation of adaptation processes of future medical workers was determined. Four of the six factors were included in the multiple analysis regression model. Two predictors ("rationalism" \( t = 1.299; p = .201 \) and "self-analysis of the situation" \( t = .356; p = .356 \)) were not included in the regression models due to the lack of statistical significance of their t-test. 

Discussion and conclusions. Future medical workers have been diagnosed with a medium level of adaptive capacity, which helps them adapt to the conditions of professional activity at the stage of primary professionalization. The factors that form the structure of the adaptive capacity of future medical workers were identified. Using the method of linear multiple regression, the share of each factor in ensuring the effectiveness of the adaptation process was determined. The share of "friendliness" (32.00%) in the explanation of "adaptation" is the highest. The share of "conformity" is slightly lower (20.00%). "Support seeking" accounts for only 11.56% of the variance explained. The smallest share in the regression model belongs to the predictor "anti-stress" – 3.72% of the explained variance. The prospect of further research on the problem highlighted in the article is the validation of the factor model, which requires a confirmatory analysis.

Keywords: adaptation, multiple equations, personal resources, self-regulation, coping strategies, predictors, personality traits.
of interpretations in a biological, medical, socio-
philosophical and psychological context. Research
on adaptation in recent decades has been related
to the study of the role of the nervous system as
the main factor of balance, as a mechanism that
organizes numerous specific biological responses
into a clearly adaptive system. There is a thought
about the role of functional asymmetry of the brain
to explain psychological adaptation. Studies by
I. Paponsek, G. Scholter (2002) stated the role
of brain asymmetry in changing the mechanisms
of stress development. The development of this
direction in neurophysiology makes it possible
to understand the ways of building individual
adaptive capacity over hereditary one.

From a philosophical and sociological point
of view, adaptation is an attribute of any living
being, which manifests itself whenever significant
changes occur in the system of their relationship
with the environment. The term "social
compliance" proposed by H. Hartmann (1958)
denotes the ability of the social environment to
regulate adaptation disorders.

In the context of the medical-psychological
approach, J. Schkade, S. Schultz (1992) proposed
the idea of normal human development as
a condition for the emergence of competence
in professional functioning. Different activities
have their own social and cultural properties
that develop a professional outlook and form
the ability to adapt to various activities. This
is reflected in the idiosyncratic configuration
of the sensorimotor, cognitive and psychosocial
systems that are actively involved in each
professional action (Schkade & Schultz, 1992;

The COVID-19 pandemic has exacerbated
existing problems in medicine, among others,
the problem of the impact of mental and emotional
stress on both patients and medical workers
(Onwubu, et al., 2023). The need to improve
adaptation and psychological resilience, mitigate
psychological stress and prevent exhaustion
among medical and social workers is emphasized
by T. Levinson et al. (2023), Ya. Lihua et al.
(2023). A number of studies have stated that
developing resilience and implementing positive
coping strategies, mastering these strategies
are imperative for future medical workers to

Адаптація є міждисциплінарним, а отже,
bагатоаспектним поняттям, що потребує ана-
lізу інтерпретацій у біологічному, медичному,
соціально-філософському та психологічному
контексті. Дослідження адаптації останніх
dесятиліть досить зовсім з вивченням ролі нервової
системи як головного чинника збалансовано-
stі, як механізму, який організовує в чітку адап-
tивну систему численні конкретні біологічні
відображення. Побутує думка про роль функці-
onальної асиметрії мозку для пояснення психо-
логічної адаптації. У дослідженнях I. Paponsek,
G. Scholter (2002) констатовано роль асиметрії
мозку в зміні механізмів розвитку стресу. Роз-
роблення в нейрофізіології цього напряму дає
змогу зрозуміти шляхи надбудови індивідуаль-
ної пристосовницької здатності над спадковою.

З філософсько-соціологічного погляду
адаптація є атрибутом будь-якої живої істоти,
який проявляється щоразу, коли в системі її
взаємин із середовищем виникають значні
зміни. Запропонований Н. Hartmann (1958)
термін "соціальна поступливість" позначає
здатність соціального середовища врегульо-
вувати порушення адаптації.

У контексті медико-психологічного підходу
J. Schkade, S. Schultz (1992) запропонували
ідею нормального розвитку людини як умови
появи компетентності щодо професійного
функціонування. Різні діяльності мають свої
соціальні та культурні властивості, що роз-
вивають професійний кругозір та формують
здатність адаптації до різних діяльностей. Це
відображається в ідіосинкратичній конфу-
рації сенсомоторної, когнітивної та психосо-
ціальної систем, які беруть активну участь
у кожній професійній дії (Schkade, Schultz,

Пандемія COVID-19 загострила існуючі про-
блеми в медицині, з-поміж інших і проблему
впливу психічних та емоційних навантажень
як на пацієнтів, так і на медичних працівників
(Onwubu, et al., 2023). На необхідності покра-
щенні адаптації та психологічної стійкості,
pом'якшення психологічного стресу та запо-
бігання виснаженню серед медичних соціаль-
них працівників наголошують T. Levinson et
al. (2023), Ya. Lihua et al. (2023). У низці дослі-
dжень констатовано, що формування стійкості
withstand unpredictable disasters (S. Shruti et al., 2023; B. Teh et al., 2023). The need to include palliative care in curricula at all levels of medical training is also emphasized (Younis, Hamdan-Mansour, 2024).

In psychology, the problem of adaptation was developed through stress research (Selye, 1936). Subsequently, these studies became multi-vector. Thus, within the framework of a personality-oriented approach, J. Averill (2004; 2005) considers adaptive trends within the theory of emotional creativity (Averill, 2004; 2005). G. Vaillant (1977) proposes an Ego-oriented approach to adaptive defense, and N. Haan (1977) explores the ability to organize one's own environment, defensive strategies, and Ego-values.

Within the cognitive approach, the works of C. Aldwin (2009), R. Lazarus (1993), R. Lazarus et al. (2018) are important. The cognitive-mediated theory of R. Lazarus (1993) is based on the idea of assessing the situation: primary assessment – establishing the significance of the event for the organism; secondary – assessing the organism's ability to cope with the consequences of the event. The interaction between conditions that trigger emotions and coping processes affects cognitive abilities that drive emotional responses. C. Aldwin (2009) examines the nature of psychosocial stress and the implications of different coping strategies for adaptation and health throughout a person's life. The author emphasizes the interaction between mind and body, as well as between people and the environment.

The theory of self-actualization of the individual touches upon the essence of adaptation/ maladaptation as the consistency/ inconsistency of the Self-concept with the ideal Self, real experience and Self-concept (Rogers & Dymond R., 1954). And within the resource approach, D. Navon (1984), D. Navon, D. Gopher (1979), O. Shtepa (2013), A. Halian (2016) emphasize the resourcefulness of the individual, which ensures their adaptation processes. Researchers D. Navon, D. Gopher (1979) emphasize the nature of self-reinforcement of resources when the human system uses the idea of utility to make decisions about the allocation of its limited resources. In our previous works, the role of personal, emotional and in-group factors in the development of adaptation and maladaptation is also emphasized (Andrii Halian, 2016).
and regulatory components as personal resources for adaptation of future medical workers to professional activity was investigated. It was stated that any adaptation consumes the structural, genetically determined resources of the organism, while reducing the human life reserves (Halian et al., 2020).

Today, the study of adaptive potential as an integrative factor contributing to the socialization of the individual (Blynova, et al., 2022a; 2022b), their mental health (Bircher, 2016; Baker & Berenbaum, 2007) and adaptation in a professional environment, which is reflected in the works of I. Halian, A. Halian (2018), N. Chaykina (2013), A. Żarczyńska-Dobiesz (2008). It is worth noting that, despite the interdisciplinary interest in the problem of adaptation, there is no generally accepted definition of the concept of adaptation. Also, its essential characteristics, stages of adaptation, as well as issues of structural and content features of adaptation are not fully explored. However, common to all theories is the consideration of mechanisms for overcoming life’s difficulties based on the theory of personality.

In addition, a study by N. Ngoc, N. Tuan (2024) showed that almost half of nursing students experienced stress at different levels, which was caused by financial factors, education, clinical problems and uncertainty (Ngoc, Tuan, 2024). To this are added the difficulties with independent online training of students of medical professions (Xu, et al., 2024). Therefore, there is a growing need to research the adaptive potential of future health workers at the stage of primary professional training. At the same time, it is appropriate to study the predictors that forecast the possible structure of the adaptation process of the future specialist to the conditions of professional activity.

**Hypothesis.** It is assumed that adaptation of future medical workers to the conditions of professional activity among others is provided by latent factors that are the result of the interaction of personality traits and qualities.

The purpose is to study the predictors that forecast the structure of the adaptation process of future medical workers to the conditions of professional activity.
Methods
Methodology. The research of adaptation is based on the ideas of personal and professional-psychological adaptation of the individual, which are reflected in the works of S. Rogers, R. Dymond (1954), on the understanding of the personal resourcefulness of the subject by O. Shtepa (2013), D. Leontiev (2014), A. Halian (2016), as well as on the idea of a systemic approach that considers psychological processes and phenomena in their interconnection and interdependence. These theoretical constructs are operationalized by a variety of diagnostic tools.

Participants. The total sample of the research consisted of 84 future medical workers (students of medical colleges). The sample is homogeneous, aged 16–19 years, formed by the random method. Before their education at the institution, the subjects lived in small towns, villages and regional centers of Ukraine.

Procedures and Instruments. “Social-Psychological Adjustment Questionnaire” (Rogers & Dymond, 1954) diagnoses the features of socio-psychological adaptation and related personality traits. Diagnosed characteristics include integral features of the individual such as: adaptability, self-acceptance, acceptance of others, emotional comfort, internality, desire to dominate, escapism. Subjective resources for overcoming difficulties in various areas of mental activity were studied using “Ways of Coping Questionnaire” (WCQ) (Folkman, Lazarus, 1988). The diagnosed characteristics include eight coping strategies used by the individual: confrontation, distancing, self-control, seeking social support, taking responsibility, escape-avoidance, problem-solving planning, positive reassessment. Internal psychological regulatory reserves involved in the adaptation process were assessed using the Action Control Scale (Kuhl, 1991). Diagnosed characteristics are forms of personal self-regulation: control over the action during its planning, control over the action during its implementation, control over the action in case of failure. The versions of the questionnaires validated on the Ukrainian sample were used.

Variables. To predict the effect of independent variables on the dependent, the method of linear multiple regression was used. The dependent variable is the integral indicator of the future

Andrii Halian

Metody

Учасники. Загальна вибірка дослідження склали 84 майбутні медичні працівники (студенти медичних коледжів). Вибірка гомогенна, віком 16–19 років, сформована рандомним методом. До навчання в закладі освіти досліджувані проживали у невеликих містечках, селах та обласних центрах України.

The research was performed using a confirmatory strategy with prediction of the influence of independent variables on the dependent ones. Statistical analysis of the results was carried out using exploratory factor analysis.

**Table 1. Descriptive statistics of variance according to the criterion "personality adaptation potential" (n = 84)**

<table>
<thead>
<tr>
<th>Variables Змінні</th>
<th>Statistics Статистики</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>56.16</td>
</tr>
<tr>
<td>Acceptance of others</td>
<td>33.33</td>
</tr>
<tr>
<td>Emotional comfort</td>
<td>39.53</td>
</tr>
<tr>
<td>Internality</td>
<td>40.94</td>
</tr>
<tr>
<td>Dominance</td>
<td>21.43</td>
</tr>
<tr>
<td>Escapism</td>
<td>8.00</td>
</tr>
<tr>
<td>Confrontation</td>
<td>27.78</td>
</tr>
<tr>
<td>Distancing</td>
<td>16.67</td>
</tr>
<tr>
<td>Self-control</td>
<td>22.22</td>
</tr>
<tr>
<td>Social support</td>
<td>38.89</td>
</tr>
<tr>
<td>Acceptance of responsibility</td>
<td>.00</td>
</tr>
<tr>
<td>Escape-Avoidance</td>
<td>16.67</td>
</tr>
<tr>
<td>Problem-solving planning</td>
<td>14.00</td>
</tr>
<tr>
<td>Positive reassessment</td>
<td>33.33</td>
</tr>
</tbody>
</table>

Note: M – the mean; SEMe – the standard error; SD – the standard deviation; A – the asymmetry; SEA – the standard asymmetry error; K – the kurtosis; SEK – the standard kurtosis error; min – the minimum; max – the maximum.

Примітка: М – середне; SEMe – помилка середнього значення; SD – середнєквадратичне відхилення; A – асиметрія; SEA – помилка середнього значення асиметрії; K – ексцес; SEK – помилка середнього значення ексцесу; min – мінімум; max – максимум.
the method of exploratory factor analysis and the method of linear multiple regression using the IBM SPSS statistical program, version 27.

Results
The empirical stage of the research is aimed at determining the share of personal formations in the general structure of the adaptive potential of the personality of future medical workers. Factor and regression analyses were used to implement this intention. Factor analysis was carried out with the involvement of the diagnostic results of personal resources that ensure the adaptation of future medical workers to professional activity. The results of the research were taken into account according to some of the methods that operationalized these resources: “Social-Psychological Adjustment Questionnaire” (Rogers & Dymond, 1954); “Ways of Coping Questionnaire” (Folkman, Lazarus, 1988); the Action Control Scale (Kuhl, 1991). The diagnosed characteristics are expressed through the scales of the mentioned diagnostic techniques. Descriptive statistics based on the results of the conducted methods are presented in Tabl. 1. Variables (scales) reflecting “adaptation” are presented in the table by integral indicators calculated according to the formulas presented in the methodology instructions, taking into account their positive and negative subscales (for example: self-acceptance / non-acceptance = self-acceptance (integral scale); acceptance of others / non-acceptance of others = acceptance of others (integral scale)). The results of asymmetry and kurtosis presented in Table 1 indicate a tendency towards a normal distribution, which, together with a sufficient number of subjects, justifies the factor and regression analysis.

During the factorization procedure, six factors were identified that together account for 72.69% of the variance (Tabl. 2). All factors have approximately equal weight in the explained cumulative variance, except for the first two, which account for 33.24% of the explained variance. The resulting factors are further used as independent variables in regression analysis. We consider this approach justified, since factor analysis has identified latent variables that may not always be realized, but have a significant impact on the adaptation process of the individual (Tabl. 3–5).
### Table 2. Matrix of factor loads according to the criterion of "personality adaptation potential" of future medical workers

<table>
<thead>
<tr>
<th>Components Компоненти</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
<th>F6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social support Соціальна підтримка</td>
<td>.812</td>
<td>.249</td>
<td>.019</td>
<td>.036</td>
<td>-.035</td>
<td>-.143</td>
</tr>
<tr>
<td>Problem-solving planning Планування вирішення проблеми</td>
<td>.807</td>
<td>-.122</td>
<td>.346</td>
<td>.084</td>
<td>-.055</td>
<td>.091</td>
</tr>
<tr>
<td>Positive reassessment Позитивна переоцінка</td>
<td>.802</td>
<td>.187</td>
<td>.043</td>
<td>.232</td>
<td>.013</td>
<td>.150</td>
</tr>
<tr>
<td>Acceptance of others Прийняття інших</td>
<td>.741</td>
<td>-.010</td>
<td>-.045</td>
<td>.239</td>
<td>.318</td>
<td>-.131</td>
</tr>
<tr>
<td>Self-control Самоконтроль</td>
<td>.099</td>
<td>.868</td>
<td>-.001</td>
<td>.054</td>
<td>-.164</td>
<td>-.063</td>
</tr>
<tr>
<td>Emotional comfort Емоційний комфорт</td>
<td>.078</td>
<td>.735</td>
<td>.470</td>
<td>.294</td>
<td>.082</td>
<td>-.117</td>
</tr>
<tr>
<td>Domainance Домінування</td>
<td>.201</td>
<td>.671</td>
<td>.547</td>
<td>-.126</td>
<td>-.005</td>
<td>-.030</td>
</tr>
<tr>
<td>Internality Інтернальність</td>
<td>.018</td>
<td>.121</td>
<td>.888</td>
<td>-.074</td>
<td>-.066</td>
<td>-.048</td>
</tr>
<tr>
<td>Confrontation Конфронтація</td>
<td>.262</td>
<td>.482</td>
<td>.561</td>
<td>.278</td>
<td>.103</td>
<td>.040</td>
</tr>
<tr>
<td>Distancing Дистанціювання</td>
<td>.182</td>
<td>-.035</td>
<td>.153</td>
<td>.785</td>
<td>-.180</td>
<td>.013</td>
</tr>
<tr>
<td>Realization Реалізація</td>
<td>.043</td>
<td>-.015</td>
<td>-.112</td>
<td>-.209</td>
<td>.681</td>
<td>.064</td>
</tr>
<tr>
<td>Planning Планування</td>
<td>.252</td>
<td>.016</td>
<td>.051</td>
<td>-.100</td>
<td>.671</td>
<td>.357</td>
</tr>
<tr>
<td>Acceptance of responsibility Прийняття відповідальності</td>
<td>.512</td>
<td>.268</td>
<td>-.179</td>
<td>-.103</td>
<td>-.640</td>
<td>.121</td>
</tr>
<tr>
<td>Failure Недвіда</td>
<td>.152</td>
<td>.020</td>
<td>.035</td>
<td>.023</td>
<td>-.231</td>
<td>-.786</td>
</tr>
<tr>
<td>Escapism Ескапізм</td>
<td>.086</td>
<td>-.392</td>
<td>.012</td>
<td>-.224</td>
<td>.029</td>
<td>.570</td>
</tr>
<tr>
<td>Escape-Avoidance Втеча-Уникнення</td>
<td>.363</td>
<td>.229</td>
<td>-.138</td>
<td>.463</td>
<td>-.159</td>
<td>.506</td>
</tr>
<tr>
<td>Variance, % Дисперсія, %</td>
<td>18.753</td>
<td>14.492</td>
<td>11.054</td>
<td>10.147</td>
<td>9.387</td>
<td>8.856</td>
</tr>
<tr>
<td>Σ of variance, % Σ дисперсії, %</td>
<td>18.753</td>
<td>33.245</td>
<td>44.300</td>
<td>54.447</td>
<td>63.834</td>
<td>72.690</td>
</tr>
<tr>
<td>Value Значення</td>
<td>3.188</td>
<td>2.464</td>
<td>1.879</td>
<td>1.725</td>
<td>1.596</td>
<td>1.506</td>
</tr>
</tbody>
</table>

Note: factor extraction method: Principal Component Analysis; rotation method: varimax with Kaiser normalization; F1 – support seeking; F2 – friendliness; F3 – conformism; F4 – anti-stress; F5 – rationalism; F6 – self-analysis of situations.

Примітка: метод виділення факторів: метод головних компонент; метод обертання: варімакс з нормалізацією Кайзера; F1 – Прагнення підтримки; F2 – Дружелюбність; F3 – Конформізм; F4 – Антистрес; F5 – Раціоналізм; F6 – Самоаналіз ситуацій.
### Table 3. Summary data for regression analysis model

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Correction R²</th>
<th>SE</th>
<th>R² F df (1) df (2) p (for F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.568+</td>
<td>.323</td>
<td>.307</td>
<td>7.39099</td>
<td>.323</td>
</tr>
<tr>
<td>2</td>
<td>0.717b</td>
<td>.514</td>
<td>.491</td>
<td>6.33413</td>
<td>.191</td>
</tr>
<tr>
<td>3</td>
<td>0.794c</td>
<td>.630</td>
<td>.603</td>
<td>5.59338</td>
<td>.116</td>
</tr>
<tr>
<td>4</td>
<td>0.817d</td>
<td>.667</td>
<td>.634</td>
<td>5.37014</td>
<td>.037</td>
</tr>
</tbody>
</table>

a. Predictors: (constant), friendliness
b. Predictors: (constant), friendliness, conformism
c. Predictors: (constant), friendliness, conformism, support seeking
d. Predictors: (constant), friendliness, conformism, support seeking, anti-stress

Note: 1, 2, 3, 4, are multiple regression models; R – the correlation coefficient of the predictor with the model; R² – the coefficient of determination; SE – standard error; F – Fisher’s test; p – statistical significance; VIF – variance inflation factor; df (1, 2) – degrees of freedom.

### Table 4. Indicators of differences in empirical distribution

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1144.784</td>
<td>1</td>
<td>1144.784</td>
<td>20.957</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>2403.573</td>
<td>83</td>
<td>54.627</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3548.358</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression</td>
<td>1823.148</td>
<td>2</td>
<td>911.574</td>
<td>22.721</td>
<td>.000c</td>
</tr>
<tr>
<td>Residual</td>
<td>1725.209</td>
<td>82</td>
<td>40.121</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3548.358</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression</td>
<td>2234.351</td>
<td>3</td>
<td>744.784</td>
<td>23.806</td>
<td>.000d</td>
</tr>
<tr>
<td>Residual</td>
<td>1314.006</td>
<td>81</td>
<td>31.286</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3548.358</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression</td>
<td>2365.983</td>
<td>4</td>
<td>591.496</td>
<td>20.511</td>
<td>.000e</td>
</tr>
<tr>
<td>Residual</td>
<td>1182.375</td>
<td>80</td>
<td>28.838</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3548.358</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent variable: adaptation
b. Predictors: (constant), friendliness
c. Predictors: (constant), friendliness, conformism
d. Predictors: (constant), friendliness, conformism, support seeking
e. Predictors: (constant), friendliness, conformism, support seeking, anti-stress


**Discussion**

Despite the variety of interpretations of adaptation, two aspects of its understanding can be clearly traced. In the first case, we are talking about adjustment as an active process, the ultimate goal of which is homeostatic equilibrium. In the second case, it is about actual adaptation as an active process, building a system of productive interaction of the individual with the environment, the absence of conflicts, which

Table 5. Beta coefficients of independent variables in the regression analysis model

<table>
<thead>
<tr>
<th>Model</th>
<th>non-standardized</th>
<th>Standardized</th>
<th>t</th>
<th>p</th>
<th>VIF</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>beta coefficient</td>
<td>Standardized coefficient</td>
<td>t</td>
<td>p</td>
<td>VIF</td>
<td>Correlations</td>
</tr>
<tr>
<td></td>
<td>β SE β</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Zero order</td>
</tr>
<tr>
<td>Model</td>
<td>non-standardized</td>
<td>Standardized</td>
<td>t</td>
<td>p</td>
<td>VIF</td>
<td>Correlations</td>
</tr>
<tr>
<td></td>
<td>β SE β</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nульового порядку</td>
</tr>
<tr>
<td>1</td>
<td>(constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Константа)</td>
<td>59.605</td>
<td>1.090</td>
<td>54.697</td>
<td>.000</td>
<td></td>
<td>.568</td>
</tr>
<tr>
<td>friendliness</td>
<td>Дружелюбність</td>
<td>5.044</td>
<td>1.102</td>
<td>.568</td>
<td>4.578</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>(constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Константа)</td>
<td>59.605</td>
<td>.934</td>
<td>63.823</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>friendliness</td>
<td>Дружелюбність</td>
<td>5.044</td>
<td>.944</td>
<td>.568</td>
<td>5.342</td>
<td>.000</td>
</tr>
<tr>
<td>conformity</td>
<td>Конформізм</td>
<td>3.883</td>
<td>.944</td>
<td>.437</td>
<td>4.112</td>
<td>.000</td>
</tr>
<tr>
<td>support seeking</td>
<td>Прагнення підтримки</td>
<td>3.023</td>
<td>.834</td>
<td>.340</td>
<td>3.625</td>
<td>.001</td>
</tr>
<tr>
<td>3</td>
<td>(constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Константа)</td>
<td>59.605</td>
<td>.825</td>
<td>72.275</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>friendliness</td>
<td>Дружелюбність</td>
<td>5.044</td>
<td>.834</td>
<td>.568</td>
<td>6.049</td>
<td>.000</td>
</tr>
<tr>
<td>conformity</td>
<td>Конформізм</td>
<td>3.883</td>
<td>.834</td>
<td>.437</td>
<td>4.656</td>
<td>.000</td>
</tr>
<tr>
<td>support seeking</td>
<td>Прагнення підтримки</td>
<td>3.023</td>
<td>.801</td>
<td>.340</td>
<td>3.776</td>
<td>.001</td>
</tr>
<tr>
<td>anti-stress</td>
<td>Антистрес</td>
<td>1.710</td>
<td>.801</td>
<td>.193</td>
<td>2.136</td>
<td>.039</td>
</tr>
</tbody>
</table>

Note: a – dependent variable: adaptation; constant – intercept; 1, 2, 3, 4, – multiple regression models (see Table 1); β – beta coefficient; SE – standard error; p – statistical significance; t – Student’s test; VIF – variance inflation factor.

Примітка: a – залежна змінна: адаптація; константа – інтерсепт; 1, 2, 3, 4, – моделі множинної регресії (див. прим. табл. 1); β – бета-коефіцієнт; SE – стандартна помилка; p – статистична значущість; t – критерій Стьюдента; VIF – показник колінеарності.

Pri roughly identical weight in the explained variance, except for the first two, which explain 33.24% of the explained variance.

Отримані фактори надалі ми використовуємо як незалежні змінні в регресійному аналізі. Такий підхід вважаємо виправданим, оскільки факторний аналіз виокремив латентні змінні, що не завжди усвідомлюються, але мають важливий вплив на адаптаційний процес особистості (табл. 3–5).
implies self-actualization and self-realization of the individual in a real social environment (Halian, 2016). In interpreting adaptation as an active process, self-change, the emergence of new personal qualities, and self-correction under the requirements of the environment are assumed. To further understand the concept of professional adaptation, N. Shoba, S. Mandy (2015) propose using a methodology aimed at revealing the social context of adaptation related to identity and well-being. In their opinion, this will enable the use of professional adaptation as a strategy for proactively responding to situational changes and expanding professional horizons. We focus on personal factors that, taking into account social conditions, form a new socio-psychological reality (active adaptation), which, ultimately, in the form of latent factors (predictors) determines adaptation processes.

During the factor analysis, six factors were identified that determine the structure of the adaptive capacity of future medical workers (see Tabl. 2). Collectively, they explain 72.69% of the variance. The first factor “Support Seeking” explains 18.75% of the variance. Formed by the scales of coping strategies (“social support” with a factor load $rs = .812$; “problemsolving planning” $r_s = .807$; “positive reassessment” $r_s = .802$ and “self-control” $rs = .741$), it confirms the dominant role of social support in the adaptation process. The second factor “Friendliness” explains 14.49% of the variance. “Acceptance of others” ($r_s = .868$), “emotional comfort” ($r_s = .735$) and “self-acceptance” ($rs = .671$) emphasize the positive expectations of future medical workers about themselves and others. It also depends on self-acceptance. Some studies have shown that the inverse relationship between feelings of stress and physical and psychological quality of life grows with increasing levels of self-care in the medical profession (Ayala, et al., 2018).

The “Conformism” factor (11.05% of the variance) is formed by low values of the “striving for dominance” subscale ($M_{emp} = 20.75$; $M_{norm} = 12–24$) with a factor load ($r_s = .888$) and high “subordination” ($M_{emp} = 10.24$; $M_{norm} = 6–12$). This attests to some of the uncertainty that is expressed in the pursuit of conformism. The fourth factor “Antistress” (10.14%) is formed by

**Дискусія**

Попри розмайття тлумачень адаптації, досить чітко простежується два аспекти її розуміння. У першому випадку йдеться про пристосування (adjustment – пасивне пристосування), кінцевою метою якого є гомеостатична рівновага. У другому випадку – про власне адаптацію (adaptation – активне пристосування), побудову системи продуктивної взаємодії особистості з середовищем, відсутність конфліктів, що передбачає самоактуалізацію та самореалізацію особистості в реальному соціальному середовищі (Галян, 2016).

У тлумаченні адаптації як активного пристосування передбачаються самозміни, поява нових особистісних якостей, самокорекція згідно з вимогами середовища. Для подальшого розуміння концепції професійної адаптації N. Shoba, S. Mandy (2015) пропонують використовувати методологію, спрямовану на розкриття соціального контексту адаптації, пов’язаної з ідентичністю та благополуччям. На їхню думку, це уможливить використання професійної адаптації як стратегії для проактивного реагування на ситуативні зміни та розширення професійного кругозору. Нами акцентовано на особистісних чинниках, які з огляду на соціальні умови формують нову соціально-психологічну реальність (активне пристосування), що, зрештою, у вигляді латентних факторів (предикторів) детермінует адаптаційні процеси.

Під час факторного аналізу було виявлено шість факторів, що визначають структуру адаптаційної здатності майбутніх медичних працівників (табл. 2). Сукупно вони пояснюють 72.69% дисперсії. Перший фактор “Прагнення підтримки” пояснює 18.75% дисперсії. Сформований шкалами конпі-стратегій (“соціальна підтримка” з факторним навантаженням $r_s = .812$; “планування розв’язання проблем” $r_s = .807$; “позитивна переоцінка” $r_s = .802$ та "самоконтроль" $r_s = .741$), він засвідує домінуючу роль соціальної підтримки в адаптаційному процесі. Другий фактор “Дружелюбність” ($r_s = .868$), “емоційний комфорт” ($r_s = .735$) та “самоприйняття” ($r_s = .671$), акцентує на позитивних очікуваннях майбутніх
variables of coping strategies “confrontation” ($r_s = .785$) ($M_{emp} = 10.08$; $M_{ser} = 7–12$) and “distancing” ($r_s = .687$) ($M_{emp} = 9.95$; $M_{ser} = 7–12$). The empirical values of these variables testify to the subject's ability to resist difficulties and stressful effects, the possibility of reducing the subjective significance of problem situations and preventing intense emotional reactions to frustration. The fifth factor “Rationalism” (9.38%), is formed by the scales “implementation” ($r_s = .681$) and “planning” ($r_s = .671$) of Y. Kuhl's test “Behavior Control”, indicates the rational distribution of internal resources during the planning and implementation of actions. The sixth factor “Self-analysis of situations” (8.85%), formed by the variables “control of failure” ($r_s = -.786$) ($M_{emp} = 7.58$ points), “escapism” ($r_s = -.570$) ($M_{emp} = 16.12$; $M_{ser} = 10–20$) and “escape-avoidance” ($r_s = .506$) ($M_{emp} = 13.65$; $M_{ser} = 7–12$), confirms the rejection of a failure situation as threatening, which they seek to solve without excessive emotional stress, ultimately facilitating their adaptation. This is confirmed by the relatively high rate of the “escape-avoidance” strategy. However, as further regression analysis showed, this is not a determining factor in the adaptation structure of future medical workers.

Summarizing the results of the factor analysis, it is worth noting that the researched future medical workers have a desire for emotional and social support at the stage of primary professionalization. Preferring a constructive relationship with the environment, they rely on their internal resources, trying to reach a suprapersonal level of understanding of the social situation. This is an adaptive strategy that contributes to the constructive resolution of possible difficulties.

The identified factors (predictors) are latent, and therefore not always conscious. However, this does not reduce their role in ensuring the process of adaptation to professional activity. The conducted regression analysis helped to determine the contribution of each of the predictors in the factor model of adaptation of future medical workers. In the process of analysis, the last two factors (“rationализм” and “self-analysis of the situation”) were rejected as statistically insignificant ($p > .05$) medical and nursing professionals. This is a statistical insignificance of the variable and its role in the model of adaptation. However, their contribution cannot be ignored completely, as they exhibit a certain degree of significance in the case of high values of the variables. This suggests that the role of these factors may be more pronounced under specific conditions or in certain groups of medical workers.
regarding the structure of the regression model. The lack of statistical significance for these two factors was determined during the application of the exploratory regression analysis using the “Enter” method. For further analysis, the “stepwise” method was used. As shown in Table 3, the correlation (R) between the observed values and those predicted by the model (i.e. those along which the regression line passes) for each stepwise analysis model is quite high (R = .817). The coefficient of determination (R² = .634) for the selected four predictors shows an acceptable level of variability explained by the model.

In the ANOVA table (see Tabl. 4) the equality results are presented: R² = (≠) 0. The values obtained by us are not equal to "0", as indicated by the level of statistical significance (p < .01), which corresponds to the condition of regression analysis. Table 5 presents beta coefficients (β) that show how much Y (dependent variable) changes when X (independent variable) changes by one unit. We are interested in standardized beta coefficients, since they are presented in z-standardized scores, which allows us to compare different predictors with each other. In a standardized z-scale, the mean equals "0" and the standard deviation equals "1". As can be seen from the values presented in Table 5, the most sensitive “adaptation” (dependent variable) is to “friendliness”: per unit change in “friendliness”, the adaptation will change (increase) by .568 standard deviations (β = .586). All changes in our regression model have a direct dependence (depends on the sign of the β-coefficient). The least sensitive “adaptation” in our regression model is to the “anti-stress” factor (β = .193). All predictors of adaptation in the model are statistically significant at the level of p < .01.

The unique contribution of each predictor is represented in the correlation of the components, that is, the semi-particle correlation, because it shows the contribution of a particular predictor with the calculation of the explained variance of other predictors. Calculating the coefficient of determination based on the results of the semi-particle correlation of each predictor of our regression model, we can state the following. The “friendliness” component in explaining the variability of “adaptation” is 32.26%.
Conformity helps future medical workers adapt in almost 20.00% of cases. The “support seeking” helps to adapt to the professional environment only in 11.56% of cases, and stress resistance – in 3.72%.

Since we consider the predictors formed by latent factors, we are talking about the presence of leading features that form them. If we analyze the substantive context of the factors, the dominance of communicativeness, emotional stability, non-conflict, etc. can be observed. A similar trend is found in studies of athletes’ self-efficacy. Researchers believe that self-efficacy of young athletes is formed by the leading qualities, namely: a high level of development of "communicativeness", "balance", "openness" and low level of "neuroticism", "depressiveness" and "emotional lability" (Halian et al., 2023a; Halian et al., 2023b). This aspect is particularly relevant in adolescence and early youth, the age range of our study subjects.

The proposed factor and regression models of future medical workers’ adaptation to the conditions of professional activity demand verification for effectiveness, which requires a confirmatory analysis. We are also aware that for a comprehensive understanding of the adaptation problem, it is necessary to significantly expand the range of predictors that determine its success. In this context, it is important to study the degree of life satisfaction in the structure of the adaptive capacity of future medical workers. T. Carli et al. (2022) note that in order to improve the quality of life, mainly in the first years of medical education, it is important to apply strategies for psychological support, development of resilience, etc.

It is known that chronic stress can cause professional burnout. The results of the research of M. Prendergast (2024) indicate the need to work on the development of self-reflection throughout the period of study in medical educational institutions, which, according to the respondents, will improve their understanding of burnout and the possibility of overcoming it (Gunsilius, et al., 2024).

Many studies focus on significant psychological burdens on physicians (Gunsilius, et al., 2024). Therefore, researchers believe that medical schools should introduce self-awareness training programs that will help reduce this burden in
the early stages of training (Prendergast, et al., 2024). Studies conducted by N. de C. P. Maddalena et al. (2023), Onwubu, et al. (2023) can assist in understanding the organization of such programs in working with medical students.

This is where we see the prospect of further research on the issue highlighted in the article.

Conclusions

The adaptive capacity of the future medical worker is a dynamic integrative personal formation that reflects the subject’s resource capabilities for maintaining balance and activity during the formation and achievement of professional goals under changed environment.

Future medical workers have been diagnosed with a medium level of adaptive capacity, which helps them adapt to the conditions of professional activity at the stage of primary professionalization. The factors that form the structure of the adaptive capacity of future medical workers have been identified. Using the method of linear multiple regression, the contribution of each factor in ensuring the effectiveness of the adaptation process was determined. The part of “friendliness” (32.00%) in the explanation of “adaptation” is the highest. Slightly less is the part of “conformity” (20.00%). “Support seeking” accounts for only 11.56% of the variance explained. The smallest part in the regression model belongs to the predictor “antistress” – 3.72% of the explained variance.

The prospect of further research is to check the effectiveness of the described model by the method of confirmatory analysis.

References


Adaptation to the Conditions of Professional Activity


Список використаних джерел


Частина "дружелюбності" (32.00%) у поясненні "адаптації" є найвищою. Дещо меншою є частина "конформізму" (20.00%). "Прагнення підтримки" припадає лише на 11.56% поясненої дисперсії. Найменша частина в регресійній моделі належить предиктору "антистрес" – 3.72% поясненої дисперсії.

Перспективою подальшого дослідження є перевірка дієвості описаної моделі методом конфірматорного аналізу.


Halian, I., & Halian, A. (2018). Adaptynnist’ ta rehu lyatorna zdatnist’ yak markery subjektivnosti oso bystosti maybut’oho fakhivtsya [Adaptability and regulatory capacity as markers of the subject’s personality of a future specialist]. *Social Legal Studi os, 2*, 74-82. URL: https://dspace.lvduvs.edu.ua/bitstream/1234567890/2326/1/%D0%A1% D9%F0%D0%A1_2_fin.pdf


Галян І., Галян А. Адаптивність та регуляторна здатність як маркери суб’єктності майбутнього фахівця.
Personal Predictors of Future Medical Workers Adaptation to the Conditions of Professional Activity


