Review of Psychology,
2006, Vol. 13, No. 1, 43-50

UDC 159.9

When does unemployment imply impaired psychological health? The mediating role of psychological deprivation and social support

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The purpose was to verify living conditions and individual characteristics which determine mental health status of unemployed individuals, under aggravated societal conditions brought on by high unemployment rate and economic crisis. The questionnaire comprising measures of demographic variables, length of unemployment, work-related attitudes, job search behavior, psychological deprivation, social support and subjective mental health was applied on the representative national sample of registered unemployed persons (N=1,138). Psychological deprivation was defined through two general aspects of latent work deprivation, based on *Jahoda's deprivation theory*: Activity and time structure deprivation, and Social and status deprivation. Perceived social support was defined by a composite measure. Subjective health was examined using Croatian version of the *SF-36 Health Survey*. Based on the national norms, three distinct levels of health status were defined: (1) poor, significantly impaired psychological health; (2) expected level of psychological health for the age and gender; (3) very good, not impaired psychological health. The hierarchical multiple regression analyses revealed age, education, latent work deprivation and social support as significant independent predictors of the individual differences in health status. Social and status deprivation and social support were identified as mediating the relation between individual's age and his or hers psychological health during the period of unemployment. Older and less educated persons, as well as those experiencing more latent work deprivation and less social support, experience more negative consequences of unemployment. The results are discussed in the context of Jahoda's (1982) and Warr's (1987) theoretical explanations of why unemployment may negatively influence individuals' well-being, as well as a general finding on social support as a protective factor in stressful events.

Key words: unemployment, psychological health, age, latent work deprivation, social support

Numerous quantitative studies conducted in the last two decades have provided valid evidence of negative impact unemployment has on individuals' psychological and physical well-being. The aggregate–level studies have shown positive correlations of unemployment rates and indices such as mortality, heart diseases, mental illnesses, and alcoholism (Jin, Shah, & Svoboda, 1995). More arguments for the causal interpretation of the negative relation between unemployment and well-being can be found in the individual-level studies, especially longitudinal ones. These studies have shown that reemployment of unemployed individuals is accompanied with an improvement in their psychological and physical health, while downsizing is followed by a worsening of displaced workers' health. In the same time, cross-sectional studies show that unemployed individuals have lower level of psychological and physical health than employed individuals (see Wanberg, Kammeyer-Mueller, & Shi, 2001 for the review).

To understand why institutional work has such a role in people's well-being, we should not underestimate, not to say ignore, the psychological knowledge on work motivation. Common concepts of job involvement (Lodahl & Kejner, 1965; Kanungo, 1979), satisfaction (Smith, Kendall, & Hullin, 1969; Weiss, Dawis, England, & Lofquist, 1967) and commitment (Meyer & Allen, 1997; Porter, Steers, Mowday, & Boulian, 1974) define individual's cognitive and affective states which are related to his or hers working life and constitute a much wider meaning of work, contrary from a traditional understanding of it solely as a source of material goods. Research of needs and values also suggests the importance of institutional work for people's well-being. It typically reveals a variety of goals people try to attain in their work, and shows small cross-cultural differences in this respect. As authors of the Work Importance Study reported, distinct nations are congruent in intrinsic work values which people try to accomplish through employment - e.g. personality development, ability utilization,

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and achievement were highly ranked professional goals in a majority of the 11 searched world nations (Šverko, 1995). In the terms of recently proposed self-determination theory (Ryan & Deci, 2000), institutional work has a potential to satisfy three universal psychological needs – competence, autonomy, and relatedness, and in this way it is linked to various attitudinal and well-being outcomes.

Finally, findings from the studies on work motivation imply that both, individual and society, would be especially vulnerable to the problem of unemployment. Current European public opinion pools can verify this. According to the Standard Eurobarometer (2005), unemployment is the dominant concern among the EU citizens – 44% of the respondents consider unemployment to be the most important problem facing their country, and its prominence is emphasized by the increase of unemployment rates in these countries. Consequently, this matter affects a much broader spectrum of the population in the new Member States than is the case in the fifteen old Member States. But there is almost no other country with such a wide recognition of this problem among its inhabitants as in Croatia, where 71% of respondents specify unemployment as their dominant concern. Such public opinion is a consequence of the high rate of registered unemployment in Croatia (cca. 20%) which has not changed over the years and is characterized by a large number of long-term unemployed individuals (the majority has been unemployed for longer than a year, and more than one third longer than three years). Although it represents one of the consequences of the underwent transitional process, a high rate of unemployment in Croatia could also be viewed as a part of a more general, international trend of growing job insecurity and unemployment which has been registered in industrialized countries in the past two decades (see Sverke, Hellgren, Näswall, Chirumbolo, De Witte, & Goslinga, 2004). These unwanted processes have also confirmed the realization that institutional work is a source of national and individual wealth and it represents a close link between an individual and society to which he or she belongs.

Specific and coherent theoretical explanations of why unemployment may negatively impact individual's health were provided by researchers studying behavior and cognitions of unemployed people. Among them, Marie Jahoda (1982) and Peter Warr (1987) advanced two best known and complementary theories. Warr proposed that unemployment leads to negative psychological and physical outcomes because unemployed individuals do not experience nine positive benefits associated with employment (known from his *Vitamin model*): opportunity for control, opportunity for skill use, externally generated goals, variety, environmental clarity, availability of money, physical security, opportunity for interpersonal contact, and valued social position. Based on Freud's view that work represents our strongest tie to reality, Jahoda similarly concludes that unemployment leads to negative outcomes because unemployed individuals are less likely to experience positive consequences associated with employment. She advanced the *deprivation theory* that distinguishes between the manifest benefits of employment (earning money) and its assumed latent benefits which serve to maintain links with reality. According to Jahoda's terminology, employment imposes a time structure on the day, allowing individuals to socialize with others, providing people with a sense of purpose, assuring for a higher status and encouraging activity.

Jahoda's deprivation theory was a starting point for the research on unemployment in Croatia we started in 2003. But it was not the only motive. We used it as a theoretical background guiding the search for situational and individual characteristics proving to have a beneficial or aggravating effect on the individual's health during unemployment under the adverse societal conditions common to transitional and postwar societies. Namely, described hypotheses have been researched and proved by a number of empirical findings, but almost exclusively in Western economies. As McKee-Ryan, Song, Wanberg, and Kinicki (2005) recently showed in a meta-analysis of 59 studies with 67 independent samples, work-role centrality, coping resources, cognitive appraisal, coping strategies, human capital and demographic variables are significant correlates of well-being during unemployment. Some of these variables were included in our study with the aim of finding out the living conditions and individual characteristics determining the mental health status of unemployed individuals in Croatia. The mediating role of latent work deprivation and social support on the relationship between human capital variables and mental health during unemployment was of the special interest. To that extent, the study represents a further elaboration of the two earlier findings - the impaired psychological health of unemployed people in comparison to the general population, and the moderating effect of age on the mental health status during unemployment (Maslić Seršić, Šverko, & Galešić, 2005). Consequently, two research problems were put forward: (1) to identify demographic and motivational characteristics which determine individual well-being during unemployment; (2) to test the mediating role of psychological deprivation and social support on the relationship between the individual characteristics and mental health during unemployment.

METHOD

Sample and data collection

Total of 1,882 persons were asked to participate in the study during their regular reporting to regional branch-offices of the Bureau for Employment. Since 743 (39.5%) refused to participate, the final sample consisted of 1,138 respondents (approximately 0.35% of the total number of registered unemployed persons). Geographical (by coun-

ties) and gender structure (58% female) of the sample corresponded to that of Croatian unemployed population, but the sample included larger proportions of younger and better educated people. Older or less educated persons frequently refused to participate in the research, a trend noticed in other poll surveys (for example, see Groves, 1989). The age of participants ranged from 17 to 62 years (M = 33.1; SD = 11.7). 15.3% of participants had up to 8 years of education (finishing elementary school or less), 67% has completed a vocational school or high school (10-12 yr of education) and 17.2% had college or university degree (14 yr and more). The length of unemployment in the sample ranged from 0 (just registered) to 439 months (M = 36.5, SD = 49.6). 33% of our participants were unemployed for more than 3 years and, according to the Croatian Employment Bureau classification, have belonged to the category of long-term unemployed.

The field work was conducted from June to August 2003, in regional branch-offices of the Croatian Employment Bureau. Number of respondents interviewed in each office corresponded to the regional proportion of the total unemployed population. To control for the possible differences in the characteristics of the unemployed persons reporting to the Bureau at different times, the data were collected on different days in the week, at the beginning, in the middle and at the end of the month, and at various times during the day, according to a previously determined schedule. The interviewers - 28 trained senior-year psychology students - approached all persons camign to their regional branch office of the Bureau for their obligatory monthly report and asked them to complete an anonymous questionnaire lasting approximately 20 minutes. The participants completed the questionnaire in a separate room. After receiving initial instructions and guidance, most of the respondents completed the questionnaire by themselves. The interviewers helped a smaller number of respondents who had difficulties in reading and writing, by reading questions and filling in their answers. For the persons who refused to participate, the interviewers recorded their sex and approximate age.

Measures

The questionnaire included measures of various constructs related to the hypothesized psychological, social, and demographic correlates of unemployment.

Subjective psychological health was measured by the Croatian version of the SF-36 Health Survey (Ware & Sherbourne, 1992; Jureša, Ivanković, & Vuletić, 2000), an instrument often used in various studies of subjective health. It was designed to measure two general health concepts – physical and psychological health, as well as their two general manifestations – functioning and well-being. Each of its 36 items refers to one of the 8 health scales: physical functioning (10 items, α = .89), limitations in performing important life roles due to physical health (4 items, α = .84), bodily pain (2 items, α = .86), general health (5 items, α = .81), vitality (4 items, α = .78), social functioning (2 items, α = .72), limitations in performing important life roles due to emotional problems (3 items, α = .82), and mental health - absence of anxiety and depression (5 items, α = .83). Possible range of values on each scale is from 0 (minimum health) to 100 (maximum health). The combination of the first three scales represents a subjective evaluation of one's physical health (α = .76), while the last three scales jointly indicate subjective evaluation of one's psychological health (α = .74) which was used in this study.

Work-related attitudes were defined through two employment commitment scales. One was a 4-point scale of work evaluation adjusted from Warr, Cook, and Wall (1979), with items such as "Having a job is very important for me" and "Even if I won a great deal of money in the lottery, I would accept a job". The final score on this scale was formed by averaging the results for each item (6 items, α =.74). The other was a list of minimum conditions for accepting a job. The question was "Would you accept a job that...", followed by 10 yes-no items such as "...does not seem interesting", "...requires lower education than yours", "...requires 2 hour of commuting in one direction", "...is paid less than you expect", etc. A composite variable was computed (10 items, α =.71) by counting the number of "yes" answers.

Latent work deprivation was measured by two questions about the *level of daily activities and time structure* (α = .65) and a 4-item scale (α =.72) covering *contacts with other people and perceived social status*. Examples of items are "How much opportunity do you have for meeting people, socializing and social activities?" and "What do you personally think, are you a valuable member of society?" The answers were given on a 4-point scales, where 1 implied little or no deprivation, and 4 implied a lot of deprivation.

Social support was measured by a scale adjusted from Abbey, Abramis, and Caplan (1985) including 8 items asking about the degree to which respondents' significant others provide them with "encouragement", "useful information" and "direct help". The response scale was from 1 – indicating minimum support, to 4 – indicating maximum support, and we used summed scores as a composite measure of experienced accessibility of social support (8 items, α =.89).

Job search was measured in three ways. First, we asked a general question about the frequency of job search: "How often do you actively search for a job?" with answers ranging from "not at all" to "every day". Second, we asked a series of questions on the intensity of various methods of job seeking, such as "reading and searching through paper advertisements", "asking friends and acquaintances if they've heard of any job", "personally calling or visiting different employers". Third, we asked how many times have participants "answered to job advertisements", "went to a

job interviews or tests", "were on trial work for a job". We standardized and combined the three measures in one, ranging from 1 to 4 (10 items, α =.82).

Demographic variables and length of unemployment were measured by a standard 1-item measures related to the gender, age, education level (1- no school to 10 – PhD), level of family obligations (1- not married, no children to 4 – married, has children). Length of unemployment was measured in months.

Data analysis

Using the SF-36 national norms for adult women and men of different age groups, gathered on a representative sample (*N*=9,070) of Croatian adult population (Maslić Seršić & Vuletić, 2006), we could define three distinct levels of individual health status: (1) individual scores corresponding to the lowest fourth of the scores in general population (up to 40.2% of our respondents); (2) individual scores corresponding to second and third quartile (51% of our respondents); (3) individual scores corresponding to the highest fourth of the scores in general population (just 8.6% of our respondents). Individual health status was coded accordingly: (1) poor, significantly impaired psychological health – means *more problems than expected* in social and emotional functioning, with feelings of nervousness and depression; (2) expected for the age and gender – means *average* social and emotional functioning, and absence of nervousness and depression symptoms; (3) very good, not impaired health – means *better than expected* social and emotional functioning, and domination of positive feelings.

To find out personal and situational characteristics predicting individual differences in health status, three hierarchical multiple regression analyses in three steps were performed. Psychological health status served as the criterion variable. Each time, *demographic variables* (gender, age, education, family obligations and length of unemployment) were entered in the first step and *motivational variables* (work value, willingness to accept job and job search) in the second step. Activity and time structure deprivation, social and status deprivation, and social support were treated in the separated analyses and entered in the third step.

RESULTS

Table 1 lists the means, standard deviations and *Pearson* bivariate correlation coefficients between researched variables. 4 out of 8 predictor variables and all three hypothesized mediators significantly correlated with the criterion variable - psychological health. These significant correlations ranged from -.10 (with the level of family obligations and the length of unemployment) to -.32 (with the social and status deprivation). Gender among the *demographic variables* and all of the *motivational variables* (job search, work value and willingness to accept job) were not the significant linear correlates of psychological health. Most intercorrelations between predictor variables were insignificant or low. Among the *demographic variables,* moderate correlations were found between the age and the level of family obligations (.36), as well as between the age and the length of unemployment (.44). Searched *motivational variables* were in significant positive intercorrelations, with highest coeffi-

Table 1

Arithmetic means, standard deviations, and *Pearson* bivariate correlations between the investigated variables (*N*=1129)

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1 Gender[a]	1.57	.50	-										
2 Age	32.36	11.61	.00	-									
3 Educational level	4.90	1.49	.10**	-.10**	-								
4 Level of family obligations	1.75	0.95	.21**	.36**	-.16**	-							
5 Length of unemployment	36.48	46.69	-.02	.44**	-.13**	.17**	-						
6 Job search	1.87	0.56	.00	-.16**	.09**	.01	-.11**	-					
7 Work value	3.27	0.60	.10**	-.06	.00	.01	-.05	.34**	-				
8 Willingness to accept job	5.57	2.46	.02	-.08*	.06*	-.08*	.07*	.26**	.23**	-			
9 Activity and time structure deprivation	2.01	0.74	-.15**	-.02	-.06*	-.18**	.00	-.01	-.01	.04	-		
10 Social and status deprivation	2.00	0.58	.05	.27**	-.05	.14**	-.08**	.11**	.15**	.02	.42**	-	
11 Social support	2.84	0.70	.13**	-.14**	.09**	-.07*	-.08**	.11**	.15**	.02	-.26**	-.37**	-
12 Psychological health[b]	1.50	0.73	-.02	-.12**	.14**	-.10**	-.10**	-.01	.00	-.01	-.21**	-.32**	.28**

Note. [a] 1-male, 2-female ; [b] 1-impaired psychological health, 2-average psychological health, 3-very good psychological health;
*p <.05 ; ** p < .01.

cient between job search and work value (.34). Two aspects of latent work deprivation were in positive correlation (.42), and they both correlated negatively with social support.

Hypothesized mediating variables showed different relations with predictors – social support, as well as social and status deprivation, had more significant correlations with *demographic* and *motivational* variables. All of them, except willingness to accept job correlated in a significant and interpretative way with perceived social support. Age, level of family obligations, job search behavior and work value revealed significant positive correlations, while the length of unemployment correlated negatively with the experience of social and status deprivation. Just three variables - gender, education and family obligations revealed significant negative correlations with the activity and time structure deprivation.

Table 2 and 3 summarize the results of the three hierarchical multiple regression analyses: the cumulative (adjusted R^2, ΔR^2) and independent (standardized ß coefficients) contribution of the investigated variables in explaining the variance of psychological health. *Demographic variables* entered in the 1st step explained about 4% of the total criterion variance. Among them, age and education appeared to be significant independent predictors. *Motivational variables* were not a significant addition to the prediction of psychological health variance. Hypothesized mediating variables significantly improved the prediction. When activity and time structure deprivation was entered in the third step, 9.7% of the total variance was explained, 12.8% when social and status deprivation was entered, and 11.5% when social support was added to the model. Social and status deprivation, and social support met the criteria of mediating variables in the relationship between age and psychological health: age was significantly related to both of the hypothesized mediators, as well as to the psychological health; both hypothesized mediators were significantly related to psychological health; partial regression coefficient of age was attenuated when social and status deprivation or social support was included in the regression equation.

DISCUSSION

There are several valid reasons for studying psychological health of unemployed persons. Some of them are related to the theoretical issues of work motivation or human behavior during the stressful life events, while others are more practical and oriented towards psychosocial interventions with unemployed individuals or towards the assessment of the individual and the social costs of unemployment. In this context we will discuss results presented in this paper.

For a start, our findings are in accordance with the theoretical explanations for why unemployment may negatively influence individuals' well-being provided by Jahoda (1982) and Warr (1987), and with the general findings of

Table 2

The mediating effect of latent work deprivation on the relationship between age and mental health during unemployment: Results of the hierarchical multiple regression analysis

Predictors	Standardized partial regression coefficients (β)					
Demographic variables	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Gender[a]	-.03	-.03	-.05	-.02	-.02	-.01
Age	-.09*	-.09*	-.09*	-.09*	-.10*	-.02
Education	.14**	.15**	.13**	.14**	.14**	.14**
Family obligations	-.04	-.04	-.09	-.05	-.04	-.03
Length of unemployment	-.05	-.05	-.05	-.05	-.04	-.04
Motivational variables						
Work value		.02	.02		.02	.01
Willingness to accept job		-.02	-.01		-.02	.02
Job search		-.04	-.04		-.04	-.06
Latent work deprivation						
Activity and time structure deprivation			-.25**			
Social and status deprivation						-.31**
Adjusted R^2	.040**	.039**	.097**	.040**	.039**	.128**
ΔR^2	.045**	.002	.059**	.045**	.002	.089**

Note. [a]1=male, 2=female.
*$p<.05$; **$p<.01$.

Table 3

The mediating effect of social support on the relationship between age and mental health during unemployment: Results of the hierarchical multiple regression analysis

	Standardized partial regression coefficients (β)		
Predictors	Step 1	Step 2	Step 3
Demographic variables			
Gender[a]	-.03	-.03	-.06
Age	-.09*	-.10**	-.07
Education	.14**	.14**	.12**
Family obligations	-.04	-.04	-.02
Length of unemployment	-.05	-.05	-.04
Motivational variables			
Willingness to accept job		-.02	-.01
Work value		.02	-.03
Job search		-.04	-.06
Social support			.29**
Adjusted R^2	.040**	.039**	.115**
ΔR^2	.045**	.002	.077**

Note. [a]1=male, 2=female.
*$p<.05$; **$p<.01$.

social support being a protective factor during stressful life events (see Lazarus & Folkman, 1984/2004). Both latent work deprivation variables showed negative association with psychological health, and social and status deprivation had the highest coefficient among all of the investigated variables. Diminished level of daily activities, absence of time structure, reduced contacts with other people, and decreased social status are closely linked to the poor psychological health during unemployment. Similar findings were observed for the perceived social support. This variable correlated positively with the psychological health, and similarly with the experienced social and status deprivation. Also it has mediated the negative impact of aging on the psychological health during unemployment.

These results have stressed the importance of the latent function of work which has been the topic of several recent studies. Among other things, these studies have identified the financial benefit of the employment (the manifest function of work), and the experience of its deprivation during unemployment, as a phenomenon more complex than was expected. As Vinokur and Schul (1997) demonstrated in a longitudinal study, financial strain mediated psychological health during unemployment, but subsequent reemployment reduced the influence of financial strain on psychological health. Price, Choi and Vinokur (2002) suggested that the loss of personal control is a pathway through which economic adversity is transformed into a poor health of unemployed persons. Since personal control is the important dimension of the latent work deprivation (as well as its manifestation), we have supposed that circumstances of the latent work deprivation have a meditating effect on the individual health during unemployment. Our results have confirmed this for the social aspects of psychological deprivation during unemployment. The experience of diminished level of daily activities and the absence of time structure during unemployment was related to several demographic variables showing that women, educated individuals and those with higher level of family obligations experienced a lesser level of this aspect of latent work deprivation. But this variable had significant and independent contribution to the individual differences in health status.

Results presented in this study have confirmed our earlier findings that age moderates health differences between unemployed and general population (Maslić Seršić, Šverko, & Galešić, 2005). Although the trends were not linear, health differences between unemployed and general population increased with age and reached their peak in the middle age group. Warr and Jackson (1984) reported similar results obtained on the sample of unemployed men in UK. In their recently published meta-analysis of health predictors during unemployment, McKee-Ryan and her colleagues (2005) have concluded that human capital variables (education and occupational status) have low, but significant correlations with well-being of unemployed. Our results have also shown positive correlations between educational level and psychological health of unemployed people, and indicated individual impact of this variable in differentiating the unemployed of different psychological health status. By proving the mediating role of latent work deprivation and social support on the relationship between the age and the health status during unemployment, the study answered the question – why is unemployment much more painful for the older than for younger, and explored the reasons behind earlier findings on the moderating effect of age on the health consequences of unemployment.

The variables showing unexpectedly low and insignificant bivariate correlations with psychological health were job search, work value and willingness to accept job. These negative results deserve special attention. As a measure of work motivation, work value and willingness to accept job should be predictors of the health status during unemployment. Individuals with high work motivation usually find their work role as a source of meaning and personal fulfillment and are consequently more vulnerable to the absence of work. Several studies have confirmed this hypothesis and have showed negative correlations between different work-role centrality measures and psychological health of unemployed individuals (Ashforth, 2001; Jackson, Stafford, Banks, & Warr, 1983; Kinicki, 1989). The same was expected for job search behavior which is also a measure of work motivation, with even additional reasons for a negative impact on psychological health. Specifically, job-seek-

ing is often a discouraging process, replete with rejections and uncertainty. Because of that it usually has a particularly negative impact on psychological health during unemployment (Wanberg, 1997).

Conclusion remarks

The present study was conducted on a representative sample of registered unemployed people in Croatia and their health status has been estimated by using the national norms. In this respect, it has overcome some methodological shortcomings of previous studies and has provided valid data on the health status of unemployed people in Croatia. Despite of the high unemployment rate (accordingly to the Croatian Central Bureau of Statistics, 2006 it was 22.3% in 2002, 19.2% in 2003, 18.0% in 2004, 18.1% in March 2006; Crkvenčić-Bojić & Ostroški, 2005), unemployed individuals have shown lower health in comparison to the general population. This finding is similar to that obtained in Hong Kong by Lai, Chan and Luk (1997) who found that almost a half of unemployed individuals have seriously impaired psychological health. In our study 40.2% of the individuals corresponded to the lowest forth of the scores found in general population, and only 8.6 % to the highest fourth.

The experience of latent work deprivation, perceived social support, age and education of our subjects were the variables which played a significant independent role in prediction of health differences. Among them, social component of latent work deprivation and social support mediated the relationship between age and health status. These findings should be taken into account in planning of psychosocial interventions. Precisely, the present study has provided several suggestions: (1) less educated and older persons should be the target group for implementing psychosocial programs among unemployed; (2) social support groups should have beneficial effects on psychological well-being of unemployed people; (3) Diminishing the latent work deprivation should be a good way of psychological help to unemployed people.

However, the present study has a number of limitations. They are primarily related to the measurement of the variables and the use of linear data analyses. The links between social and status deprivation, and perceived social support on the one side, and psychological health on the other, have probably been overestimated due to the *method variance* and reduced incremental validity of the used measures. The evaluations of the proposed psychosocial treatments would probably be the best test of their significance and validity and, thus, represent a suggestion for future work. On the other hand, the insignificant individual effects of *motivational variables* in the prediction of health variance have not proved that links with psychological health do not exist. This finding should be verified in future research on different samples and wider range of the individual scores.

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