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Socio-Psychological Adaptation of Workers and Efficiency of Small Groups

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The article brings forward the results of the research of workers' adaptation in small groups and informal subgroups. It examines the interrelationship between adaptation and the socio-psychological and subject and activity-based efficiency of groups and subgroups perceived by workers. We have surveyed 239 workers in 27 structural divisions with various profiles of activity. We have ascertained that workers included into informal subgroups have higher adaptation in their subgroups than in the group as a whole. At the group level adaptation has stronger positive correlation with the indices of the socio-psychological efficiency than with the indices of the subject and activity-based efficiency. The interrelationship between adaptation and the indices of the socio-psychological efficiency is higher at the level of small groups than at the level of informal subgroups.

Key words: *small group, informal subgroup, socio-psychological adaptation, socio-psychological efficiency, subject and activity-based efficiency.*

Workers' potential activation which depends on their adaptation in the group and organization is a factor defining the efficiency of the primary structural division (small group) in the organization. Workers' socio-psychological adaptation is related to their inclusion in the system of relations within the collective, adoption of its purposes, norms and values, social roles and statuses [3, 4]. There are many works devoted to studying both the socio-psychological adaptation of workers and the efficiency of working groups. The number of researches of the adaptation problem has considerably increased for the last 15 years; more often experts pay attention to adaptation in the context of the person's relationship with the group. Thus, scientists choose various directions of research in this area, studying psychophysiological, medico-psychological, sociological, economic, cultural, and socio-psychological aspects of adaptation [2, 6, 9].

At the present time the research of group efficiency is focused on creation of its conceptual models and also on research of its external and internal factors. In modern psychological literature the group efficiency concept is related not only to its productivity, efficiency, but also to socio-psychological indices of a concrete group activity: the level of its development, motivation, group values and norms, unity, trust, etc. [12]. The socio-psychological component of the



group efficiency presupposes the analysis of satisfaction of the group members with the work process, its results and consequences.

The problem of interrelation of the personnel adaptation and the group efficiency in the organization is of interest. In particular, abroad there is a concept of "adaptive performance" which reflects the worker's ability to the most effective work even under unforeseen contingencies in the form of a supernew problem definition. For example, workers' low level of perception of the efficiency of organizational policy can lead to failure of the problems stated by the head. According to experts, adaptive productivity is an important aspect of labour productivity and efficiency [13, 14, 15, 16]. Russian scientists are more often interested in another problem: the success of adaptation and its determinants [2, 6, 8, 9]. One of key ideas is that in many respects the socio-psychological adaptation success depends on how adequately the person perceives own social position, qualities and social ties.

The socio-psychological adaptation of the individual and efficiency in small groups are traditionally considered in the all-group context. However, in our opinion, the manifestation of the considered phenomena may have a more complicated pattern which is caused by existence of a socio-psychological structure in the group – informal subgroups and the members not included in them, relations between them. Therefore the analysis of the features of the socio-psychological adaptation of individuals and group efficiency and also their interrelation with regard for the group structure will make it possible to set new vectors in this problem studying [10].

In this research we will understand the socio-psychological adaptation as a process and result of mutual activity of the individual and the group related to the person's adoption of the purpose and tasks, norms and values of the group, a place definition in the system of relations in compliance with mutual interests and opportunities [10]. We will also be based on a multidimensional model of efficiency which includes two types (socio-psychological and subject and activity-based efficiency) and two aspects (potential and real efficiency) [12]. In particular, the real socio-psychological efficiency is a group achievement of the specified level of the social activity structure. This efficiency consists of three components: members' satisfaction with the group and the results of its activity, psychological comfort of members in the group, promotion of personal and professional development of members. The real subject and activity-based efficiency is a group achievement of the specified level of the performance of specific tasks and the objective function. Such efficiency may have two types of indices: objective indices of activity (the quantity of the work performed, the quality of the work performed, the correlation of the result and expenditures of activity) and subjective indices by expert judgements (the measure of the implementation of a plan, problem-solving or the project implementation, success of activity under trying conditions, etc.).



The research goal is to study the interrelation between the socio-psychological adaptation of workers in the group and the group efficiency perceived by them. The research object consists of individuals in small working groups; the research subject is the socio-psychological adaptation and efficiency.

The studied variables: a) socio-psychological adaptation of the individual (SPA); b) socio-psychological efficiency indices (SPE): satisfaction of members with the group and the results of its activity concerning achievement of the main objectives (S), psychological comfort of members in the group (C), promotion of the personal and professional development of members (D); c) subject and activity-based efficiency indices (SAE): implementation of a plan and the solution of current tasks (PT), activity under trying conditions (TC) [12].

The research hypotheses:

- 1) members of informal subgroups have higher socio-psychological adaptation in subgroups than in small groups;
- 2) there is a positive communication between the socio-psychological adaptation of workers in small groups and informal subgroups and the efficiency of groups and subgroups perceived by them;
- 3) both some indices of the group efficiency and a combination of these indices influence the socio-psychological adaptation of workers.

Methodology

Research participants. We have surveyed 239 workers in 27 structural divisions (small groups) in organizations with various profiles of activity: sale and services in the motor transport sphere, banking accommodation, state and social services, design and manufacturing work. The numerical composition of groups varied from 6 to 20 persons; on the average it was 9.

Research methods. We used the formalized method developed by A.S. Gorbatenko for detection of informal subgroups in groups [1]. For research of the variables stated above the following author's techniques were used: "The technique of studying of the socio-psychological adaptation of the individual in the group and subgroup" (TSPA), "The technique of studying of the socio-psychological efficiency of the group and subgroups" (TSPE) and "The technique of studying of the subject and activity-based efficiency of the group and subgroups" (TSAE) [5].

The TSPA includes 14 items in the reverse wording form (for example, "It seems to me that other people underestimate my abilities"). The TSPE contains 6 items in the reverse wording form; two items correspond to each subscale: "satisfaction of members with the group/subgroup and the results of its activity" (S), "psychological comfort of members in the group/subgroup" (C), "group/subgroup promotion of the personal and professional development of members" (D) (for example, "I'm not satisfied with what occurs in the group"). The TSAE is developed on the basis of two subjective criteria and includes two subscales corresponding to them: "implementation of a plan and the solution of current tasks" (PT), "activity under



trying conditions" (TC). The technique includes six items in the reverse wording form; three items correspond to each subscale (for example, "The group can't solve new tasks or complex problems quickly").

These techniques consist of two parts: "In the group in whole" or "The group in whole" (part 1) and "Among those with whom I maintain close relations" or "The community of those with whom I maintain close relations" (part 2). The first part is intended for studying the adaptation of workers in the group and the group efficiency, and the second one – for adaptation in the informal subgroup and the efficiency of subgroups. The examinees have estimated the expressiveness of the sign represented in each item on the basis of the scale consisting of 7 marks. The values of the TSPA test points may vary from 14 to 98, of the TSPE subscales – from 2 to 14, of the TSAE subscales – from 3 to 21. All techniques underwent the procedure of standardization, estimation of a substantial and obvious validity, reliability-coherence and retest reliability. It is ascertained that questionnaires are reliable and valid. In particular, by the first part of questionnaires the values of Cronbach's alpha were: TSPA – .853, TSPE – .856 (S), .827 (C), and .894 (D), TSAE – .851 (PT) and .927 (TC).

The "Group Potential" computer technology includes the techniques [11]. By means of this technology we have surveyed the examinees on the computer, and then the data processing was carried out. The technology has a number of functional capabilities: the current control and blocking of the examinee's work in case of omissions of tasks or obvious distortion of answers, automatic calculation of test results, etc. Thus, the reliability of results increases in comparison with a blank form of research and "manual" processing of data. Statistical data processing was carried out by means of the SPSS 21.0 program. We have calculated average values and Wilcoxon's *W*-criterion, used Pearson's correlation analysis and the linear regression analysis.

Results and discussion

1. *The socio-psychological adaptation of individuals in small groups and informal subgroups.* For the test of the first hypothesis we have analyzed the results by means of the *W*-criterion average value calculation.

It was revealed that the average value of the SPA of individuals in the small group is 53.1; in the informal subgroup it is 81.4. The difference between the adaptation in the group and subgroups is statistically significant ($Z = -9.25$, $p = .000$). Therefore, workers have higher level of adaptation in the informal subgroup (if they belong to one or another subgroup) than in the group in whole. It is caused by a number of characteristics of the informal subgroup: in comparison with the group as a whole in the subgroup people have higher interrelation, they are united on the basis of their more significant and common characteristics; in comparison with the group in a rather steady subgroup integrative phenomena (for example, unity, trust, identity) are more strongly expressed; the subgroup is



more capable to realize functions in relation to its members (to inform, promote realization of individual purposes and satisfaction of social needs, ensure safety in the group, help to be guided in the group environment) [10]. The obtained data also makes it possible to assume that the adaptation of members (included in subgroups) in the small group is determined by their adaptation in the informal subgroup.

2. *The interrelation of the socio-psychological adaptation of individuals and the group efficiency perceived by them.* For the test of the second hypothesis the correlation analysis between the SPA, on the one hand, and the SPE (S, C, D) and the SAE (PT and TC), from the other is carried out (tab. 1). The interrelation between the SPA and SPE was studied separately at the group level and at the informal subgroup level, and between the SPA and SAE – only at the group level.

Table 1

**The correlation between the adaptation of individuals
and the group efficiency**

Socio-psychological adaptation	Group efficiency				
	SPE			SAE	
	S	C	D	PT	TC
SPA-G/SPA-S	.61**/.35**	.78**/.35**	.74**/.48**	.13*/-	.23*/-

Note: 1) SPA-G is the socio-psychological adaptation of the individual in the group; SPA-S is the socio-psychological adaptation of the individual in the informal subgroup; 2) figures before a line are values of correlation at the group level; figures behind a line are values of correlation at the informal subgroup level; 3) * – the significant coefficient of correlation when $p < .05$, ** – when $p < .01$.

The results show some features of the interrelation between the adaptation of individuals and the group efficiency. First, at the group level we have revealed the positive interrelation between the SPA and SPE indices (S, C, D), whereas the interrelation between the SPA and SAE indices (PT and TC) is actually absent. It means that the higher the adaptation of individuals in the group is, the more positively they perceive the socio-psychological efficiency of the group. On the contrary, the lower adaptation is, the less positively individuals estimate the SPE. In its turn, it is possible to assume the SPE is a basis for workers' adaptation in the group. High SPE will promote more successful and higher adaptation of individuals in the group. Secondly, the interrelation between the SPA and SPE at the group level is a little higher for C and D indices, than for S indices. That is the psychological comfort of members in the group and members' personal and professional development can promote the socio-psychological adaptation of individuals in the group to a greater degree than members' satisfaction with the group and results of its activity. Thirdly, the interrelation between the SPA and three indices of the SPE is much higher at the small group level. Probably, the adaptation of individu-



als in informal subgroups strongly depends not only on their socio-psychological efficiency, but also on any other characteristics of subgroups. Perhaps, among such characteristics there is the degree in which informal subgroups realize some functions in relation to its members, for example, promote realization of their individual purposes and satisfaction of their social needs.

3. *Influence of efficiency indices on the socio-psychological adaptation of workers.* For the test of the third hypothesis the method of the one-factor and multiple-factor linear regression analysis was used. The first version of the regression analysis has made it possible to estimate the measure of influence of each index of the socio-psychological and subject and activity-based efficiency of the group on workers' adaptation, and the second one – the extent of influence of a combination of indices on adaptation (the regression analysis for indices of the subject and activity-based efficiency was not carried out at the level of subgroups since there were no corresponding results).

For the SPA at the group level the influence of the SPE indices on it were the strongest and statistically significant: not standardized coefficient of regression of $B = 21.49$ ($p \leq .001$) for the index of efficiency of C, $B = 19.13$ ($p \leq .001$) for D and $B = 17.07$ ($p \leq .001$) for S. The influence of the SAE on the SPA is less than the influence of the SPE, and it is statistically significant only for TC index: $B = 8.33$ ($p \leq .001$). At the level of informal subgroups we have revealed a significant and approximately identical influence of the SPE indices on the SPA: $B = 11.17$ ($p \leq .001$) for index S, $B = 11.14$ ($p \leq .001$) for D and $B = 8.81$ ($p \leq .001$) for C.

In the multiple-factor regression analysis, where the SPA was also an independent variable, regression coefficients for all combinations of indices of efficiency, except for PT index, were statistically significant. Thus, at the group level the following not standardized coefficients of regression were obtained: $B = 12.8$ ($p \leq .001$) for C, $B = 7.25$ ($p \leq .001$) for D, $B = 6.06$ ($p \leq .001$) for S and $B = 2.94$ ($p \leq .05$) for TC. At the level of informal subgroups the contribution of the SPE indices was $B = 8.37$ ($p \leq .001$) for S, $B = 6.40$ ($p \leq .001$) for D and $B = 5.67$ ($p \leq .001$) for C.

Thus, the contribution of the SPE indices to the SPA at the group level is greater than at the level of informal subgroups, especially when the indices were considered separately. At the group level the greatest contribution to workers' SPA is at efficiency index C, and at the level of subgroups – at index S. The results of the regression analysis ensure us to look at the data of the correlation analysis, where low values of coefficients between the SPE and SPA at the level of subgroups were obtained, in a different way.

CONCLUSIONS

The workers included into informal subgroups in small groups have higher adaptation in their subgroups than in the group as a whole.

Workers' adaptation in small groups and informal subgroups has a different extent of interrelation with one or another index of group efficiency. Thus, at the group



level the adaptation of individuals correlates with all indices of the socio-psychological efficiency stronger than with the indices of the subject and activity-based efficiency. The interrelation between the socio-psychological adaptation and all the indices of the socio-psychological efficiency is higher at the small group level than at the informal subgroup level. The influence of the indices of the socio-psychological efficiency on adaptation is stronger. This influence is higher at the group level than at the level of informal subgroups.

The prospects for further researches may concern the study of cause-and-effect relationships between the adaptation of individuals and other socio-psychological characteristics of groups and subgroups (for example, unity, confidence, norms), between adaptation and other socio-psychological characteristics of individuals (leadership, psychological status, style of interpersonal behavior) in groups and subgroups.

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