

## PROGNOSTIC VALIDITY OF BEING INFORMED ABOUT HUMAN RELATIONS FOR THE BEHAVIOUR OF WORKERS

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Effectiveness of the knowledge of interpersonal relations of the managerial staff was tested on 12 supervisors in a textile factory. The supervisors were held a 7-day course in human relations and underwent a knowledge test of human relations immediately before and after the course. Besides, workers' daily estimate of their supervisors' behaviour was recorded in full anonymity through 50 consecutive days prior to the course and 50 days after the course. Analysis of the results obtained confirmed the starting hypotheses:

1. Supervisors' knowledge of the principles and facts of good human relations was considerably greater after the course.
2. Supervisors' actual behaviour estimated on the basis of the ratings given by their workers did not appreciably change.
3. No significant correlation was found between the changes in supervisors' knowledge of interpersonal relations and the changes in their actual behaviour.

The Yugoslav worker today plays an ever increasing active role in the production and management. This has resulted in a need for greater knowledge of interpersonal relations, as has already been pointed out by many systematic studies. However, a basic problem still remains, that is, how to best qualify the leaders of industry to cope with human relation problems of various types of industrial workers? One method is to disseminate this information through organized courses and seminars.

### PROBLEM

The problem of this study was to assess the effectiveness of a 7-day course in human relations. In other words, we wanted to learn how much of the material taught in the courses was put into practice in the actual industrial situation.

The effectiveness of these courses could be ascertained only by an analysis of the pre- and post- course actual behaviour of the managerial

staff, and not by examining the supervisor's knowledge of human relations gained during the courses.

The following working hypotheses were made:

- H No 1: The course would considerably improve knowledge about how to treat people.
- H No 2: The course would not considerably change the actual behaviour of the managerial staff towards the workers in so far as this behaviour is judged by the workers themselves.
- H No 3: Certain improvements in the actual behaviour of the managerial staff are to be expected immediately after the courses have been completed. However, the improvement would soon decrease partly because long-term self-control of the managerial staff is difficult to maintain, and partly because of the difficulty in adjusting the criteria of assessment to the concrete quality which is being assessed.
- H No 4: There will be no significant correlation between the changes in the supervisor's knowledge of human relations and the changes in his actual behaviour as assessed by the workers.

#### METHOD

The above stated hypotheses were tested on 6 supervisors of large working groups ( $N = 41-65$ ) and on 6 supervisors of small working groups ( $N = 12-16$ ) in a textile factory in Maribor. The number of experimental groups was relatively small, since several groups had to be discarded because they could not be equated on the several used variables.

The criteria governing the choice of experimental groups were: a) an experimental group had to contain at least 10 workers, b) workers in experimental groups had to be in daily contact with their supervisors, c) the inner structure of experimental groups should not change appreciably.

The third criterion enabled us to secure only 12 experimental groups which consisted mainly of semi-skilled and skilled workers. It is to be noted that we were not in a position to select the supervisors, since this would have further curtailed the number of experimental groups.

The experiment was carried out in the following manner: a) Immediately prior to the start of the course, we tested the supervisors' knowledge of interpersonal relations and their knowledge of factors detrimental to the basic principles of good human relations. After the course, the supervisors were again tested with the same knowledge test. Then we recorded workers' daily estimate of their supervisors' behaviour through 50 consecutive days. During this period we recorded the marks

of those supervisors who did not take part in the course. b) The workers' estimates of their supervisors' behaviour were registered throughout 50 days prior to the course and 50 days after the course. Every day one hour before finishing his work every worker estimated his supervisor with the one of the following ratings:

- I am satisfied with the supervisor's behaviour
- I am not satisfied with the supervisor's behaviour
- I cannot decide upon the issue

The registration of these responses was fully automatic and assured full anonymity to the worker, as well as independent and objective ratings. The daily ratings of individual supervisors were calculated by the Hostätter's formula

$$x = (p+ - p-) \cdot \frac{100 - p_0}{100}$$

- $p+$  stands for the percentage of satisfactory ratings
- $p-$  stands for the percentage of unsatisfactory ratings
- $p_0$  stands for the percentage of undecided ratings.

The ratings obtained in this manner indicate direction and intensity of the opinion of the majority and are recorded on the ordinal scale. The oscillations of average ratings are shown graphically in 5-day intervals for the entire duration of the assessed period.

RESULTS

1. Ad H 1: was proved by means of the t test. We came to the conclusion that the difference between the results of the first and the second test of knowledge of human relations is statistically significant at the 0.001 level.
2. Ad H 2: was tested by the median test for every supervisor individually. With 9 supervisors the difference between the median ratings

N = 12

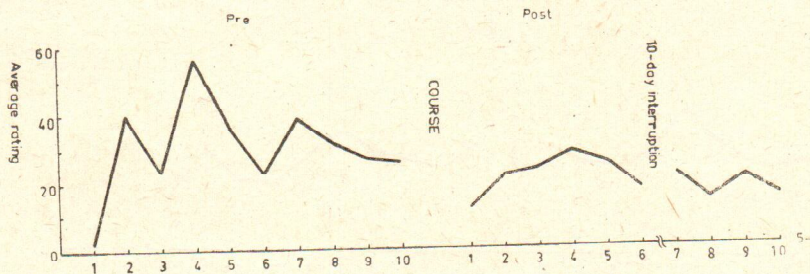


Fig. 1

before and after the course was found to be statistically insignificant ( $p > 0,005$ ). In 3 supervisors, however, the differences were significant ( $p < 0,05$ ) but in the direction opposite to the one hypothetically expected.

N = 65

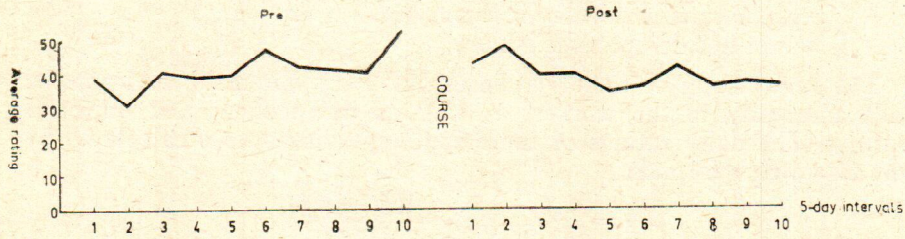


Fig. 2

N = 56

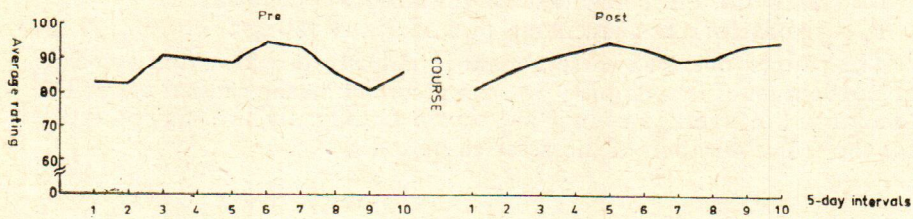


Fig. 3

N = 62

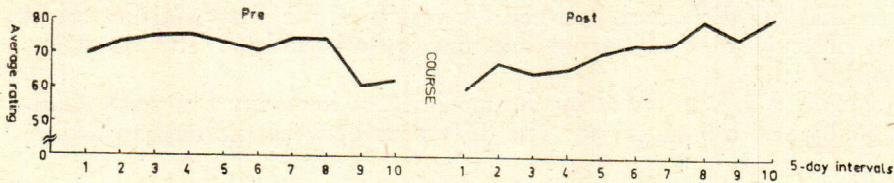


Fig. 4

N = 41

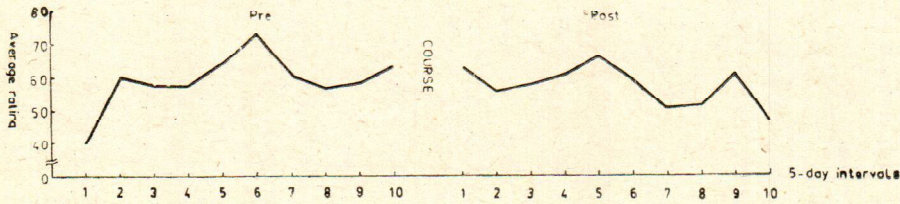


Fig. 5

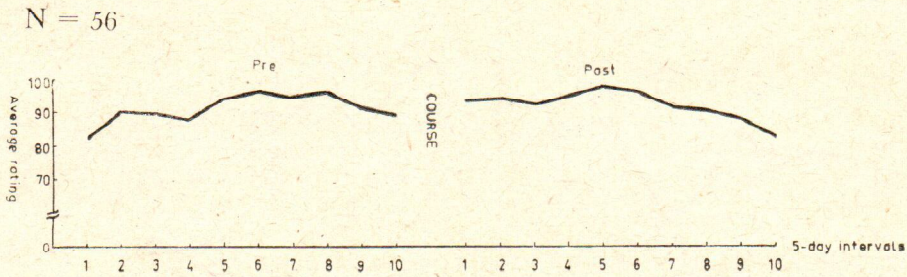


Fig. 6

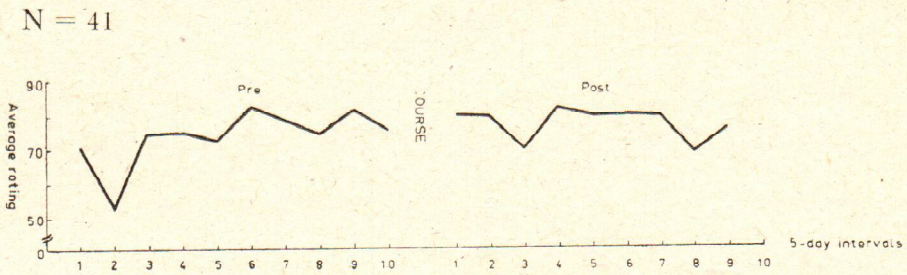


Fig. 7

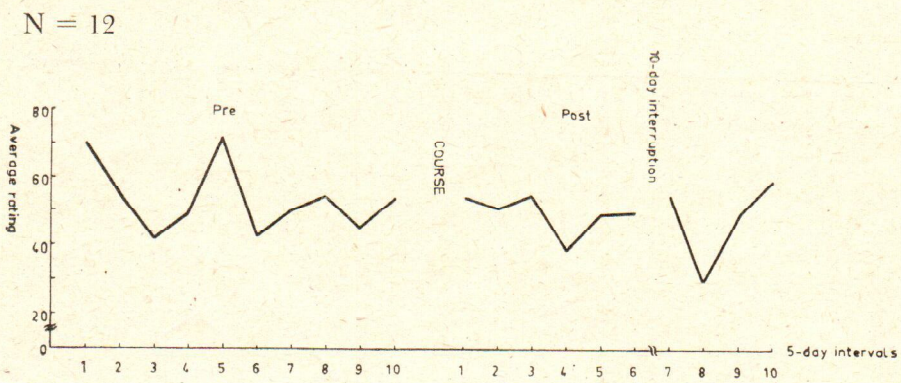


Fig. 8

3. Ad H 3: was tested by means of Friedman's non-parametric analysis of variance of average ratings in the interval of 5 days; supervisors with large and supervisors with small groups were tested separately. It was found that the average ratings do not vary systematically in 5-day intervals according to the scale ( $p > 0.05$ ).

N = 16

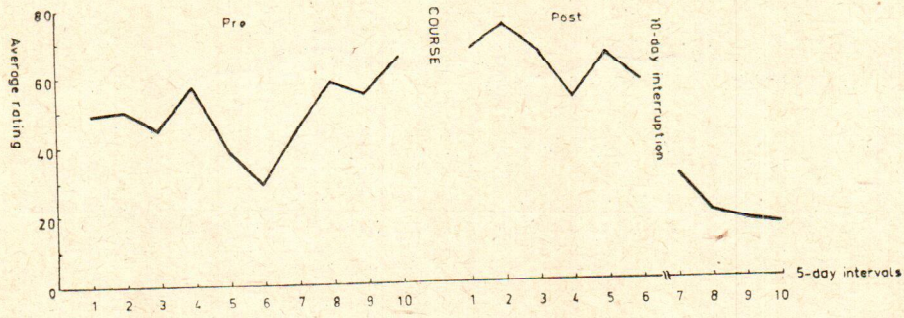


Fig. 9

N = 13

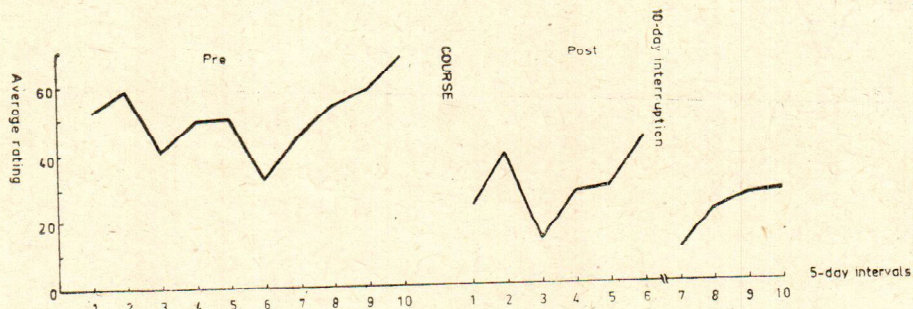


Fig. 10

N = 16

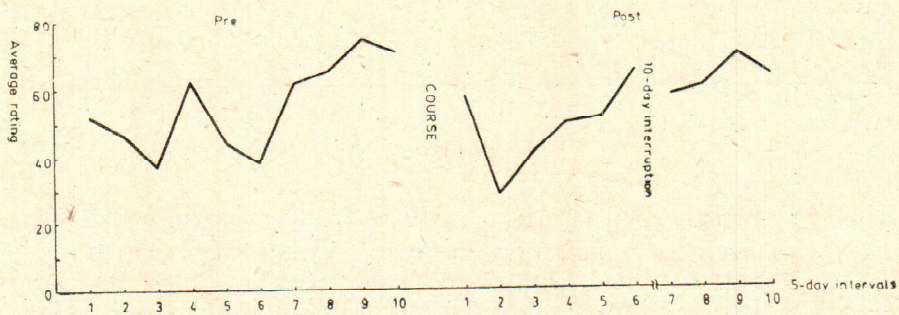


Fig. 11

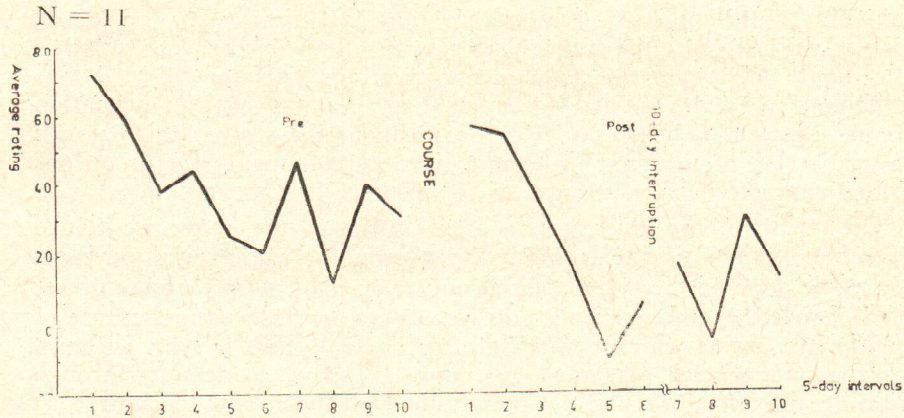


Fig. 12

4. Ad H 4: was tested by means of rank correlation between the differences in the scores of the first and second test of knowledge of human relations on the one hand and the differences of the mean values of the ratings before and after the course on the other. The correlation is not statistically significant ( $\rho = 0.26$  and  $n = 10$ ,  $p > 0.05$ ).

INTERPRETATION

The obtained results confirm the stated hypotheses and permit the following conclusions; If the differences between human relations knowledge test scores gathered before and after the course are statistically significant, while at the same time, the differences in the ratings of the supervisors' behaviour, as given by the workers before and after the course, are not statistically significant, we can conclude that the knowledge acquired in the courses of human relations does not influence workers' estimate of their supervisors' behaviour. The same conclusion can also be drawn from the insignificant correlation between the changes in the ratings given by the workers of their supervisors' behaviour before and after the course and the changes in knowledge test scores.

Since the ratings after the course show no systematic variation, we must also reject the hypothesis about the temporary improvement of the ratings given of the supervisors' behaviour.

We would like to mention that the obtained results do not permit a general conclusion that supervisor courses have no bearing whatsoever on the supervisors' treatment of the workers. This could be asserted only if we could prove the hypothesis that the ratings given by the workers vary only under the influence of the supervisors' actual be-

haviour. In the present investigation this hypothesis was considered correct a priori, since the instructions given to the workers were required to estimate only some aspects of human relations. Different observations throughout the experiment lead us to the assumption that the estimation of the supervisors' behaviour was also influenced by other factors such as: projection of personal problems, rater stereotypes, different uncontrolled characteristics of groups; as for instance homogeneity, etc.

The results of the investigation have confirmed the above mentioned hypothesis showing that training the people for managerial purposes cannot be done on the rational level only, that is by supplying the necessary knowledge, since the mistakes in leadership often occur because of emotional reasons which escape rational control. This is why we must prepare managerial personnel for more effective leadership through training and education and not merely through theoretical teaching.

#### *Sadržaj*

### PROGNOSTIČKA VALJANOST INFORMIRANOSTI O MEĐULJUDSKIM ODNOSIMA ZA PONAŠANJE RADNIKA

Ispitivanje je provedeno u cilju da se ustanovi kakva je efikasnost izobrazbe rukovodilaca o međuljudskim odnosima. Dvanaest poslovođa jedne tekstilne tvornice pohađalo je sedmodnevni seminar iz međuljudskih odnosa. Neposredno prije, a isto tako i poslije seminara, ispitano je pomoću jednog testa znanja njihovo poznavanje principa i činjenica o odnosima među ljudima. Osim toga, organizirano je jedno svakodnevno višemjesečno ocjenjivanje tih poslovođa, koje su vršili njihovi radnici. Svakog dana, na kraju radnog razdoblja, radnici su anonimno ocjenjivali svog poslovođu i to ocjenjivanje započelo je 50 dana prije seminara i trajalo je neprekidno do 50 dana iza seminara. Analiza rezultata potvrdila je polazne hipoteze:

1. Poznavanje principa i činjenica o odnosima među ljudima značajno je više nakon seminara.
2. Stvarno ponašanje poslovođa, procijenjeno na temelju ocjena njihovih radnika, nije se značajno izmijenilo.
3. Nije utvrđena značajna korelacija između promjena u znanju poslovođa o međuljudskim odnosima i promjena njihova stvarnog ponašanja.

Na temelju dobivenih rezultata može se zaključiti da znanje koje rukovodioci stječu na seminarima o međuljudskim odnosima ne mora nužno utjecati na promjenu njihova stvarnog ponašanja u realnoj situaciji. To je, vjerovatno, zbog toga što se to znanje usvaja na jednoj racionalnoj osnovi, a u osnovi stvarnog ponašanja često leže emocionalni momenti.

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