

## THE SOCIAL PSYCHOLOGY OF SHIFT WORK: THE CASE OF NURSING

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### BACKGROUND

Few studies and fewer theoretical interpretations have been made of the difference in attitude and experience associated with night work. The most comprehensive study to date has focused on family and social life, but it did not treat of on-the-job relations (Mott et al. 1965). A study of typesetters noted differences in social relations between day and night workers, and that night workers shared more socially than the day workers (Lipset et al. 1956:156).

Two lines of explanation will be pursued.

1) If there are differences in co-worker relations and work-related attitudes between the day and night shifts, we could argue that there is something unique about working odd hours. 2) It may be argued that any empirical differences are spurious products of other factors whose effects on attitudes are already established. Perhaps it is not cognitive reactions to night tours which make night work more informal, but less strict organizational structure. The first line of argument follows from a *reality constructionist* point of view, while the second is called the *structural view*.

It is fundamental that the nature of reality cannot be taken for granted as an objective reality which meaningfully integrates one's experiences (Berger, Luckmann 1966; Holzner 1972). It is possible to outline a priori predictions about the social psychological effects of shift work using the reality constructionist perspective.

Part of the shared reality of American life is the understanding that the normal hours for paid work are the daytime hours. It is reinforced in virtually all of our institutions. The school day and the working day are usually between 8 am and 5 pm. Off-duty time is generally in the evening, used for personal activities and for entertainment, and at night for repose. It violates our everyday reality to work for a living at night, and doing so may not elicit ordinary attitudes about work.

### PREDICTIONS

1) Supervisory relations will be less formal during night shifts. From the worker's viewpoint it is less legitimate to comply with

bureaucratic edicts than during normal daytime working hours. Although authority and domination legitimated by a set of rules is characteristic of modern civilization, its efficacy depends on willing compliance by subordinates (Weber 1947). In conceptualizing supervisor-subordinate interaction as exchange transactions, it is apparent that the subordinate has already undergone some cost by being present on the night shift. To induce full compliance under these conditions, the supervisor needs to forego certain demands which would be made of day shift workers. 2) Co-worker relations will be more positive during night shifts. Sharing the same marginally legitimate conditions can be expected to generate a stronger sense of solidarity among night workers. Traditional sociological theory holds that a common value system and common beliefs are the most important sources of social solidarity. Culture grows from shared experience, so it is plausible that different shifts of workers would evolve their own set of values.

### RESEARCH DESIGN

Registered nurses (RN's) were chosen as relevant subjects for a study of the social psychological consequences of shift work. Most nurses work in hospitals which are staffed 24 hours a day in three shifts: daytime, 7 am-3 pm; evening, 3-11 pm; and night, 11 pm-7 am. Nurses are convenient subjects for survey research since an RN must be registered in the state where they reside and are employed, and the Registry is a public document.

Two probability samples of 300 each were drawn from the Oklahoma Registry, and those living in the Tulsa area were included in the sampling frame. The first group was surveyed in October 1975, and 300 more were contacted in January 1976, by mailed questionnaire. The mailed packet included a questionnaire, a cover letter, a business reply envelope and a return postcard preaddressed to the author, to be returned independently of the questionnaire. Its function was to show that the respondent had returned the questionnaire without breaching anonymity. Two

weeks after the initial mailings, reminders were sent to all who did not return the post card. Two weeks later the investigator telephoned those who had not yet responded.

A total of 227 usable questionnaires were received — 111 from the first sample, and 116 from the second. Analysis of the return post cards and information gathered by telephone contacts showed that 29 percent of those sampled were not currently employed as nurses; 12 percent were employed but not in large hospitals, and did not fit the research objectives; 9 percent had moved and could not be located. Only 13 percent could be classed as non-returns. The net sample of 227 represents an estimated fourth of the relevant population — RN's employed in large institutions in the Tulsa area. Of the 227, only 192 are used in the analysis. Excluded were a total of 35, including nursing instructors, public health nurses, and school and industrial nurses, leaving 182 who work in hospitals and 10 who work in nursing homes.

The average nurse in the sample is aged 40, and has been an RN for 15 years. Most had completed the traditional 3-year diploma. Shift assignments included 111 on day shift; 28 on evening shift; and 20 on night shift.

## FINDINGS

Prior data revealed more amicable supervisory relations among evening and night workers, but the present data do not (Riedesel 1976). To the question, "How well do you get along with your supervisor?" 71 percent responded that they got along *very well* and only 2 persons said *not well*. The differences by work shift were not significant, and could be ascribed to sampling variation.

Other questions were designed to find whether the respondents were comfortable interacting with their supervisors off the job. Do the diffuse characteristics from a work setting transfer to a social setting? Percentage patterns among the four work shift groups do not support the predictions made from speculations about reality construction. Day and evening workers say that they would be equally comfortable at social occasions with their supervisors. To the question, "Would you like to be at a party where your supervisor was also present?" 70 percent said yes, and 30 percent responded otherwise, but again there

**TABLE 1: WOULD INVITE SUPERVISOR WITH OTHER FRIENDS TO A PARTY**

Shift	Yes	Other
Day	47	8
Evening	9	11
Night	9	16
Rotating	7	11

Chi squared = 26.2; df=3; p = .001

**TABLE 2: COMPARE ENJOYMENT OF RELATIONS WITH CO-WORKERS AND PERSONAL FRIENDS**

Shift	Coworkers more	Both the same	Friends more
Day	2	72	36
Evening	2	19	7
Night	4	13	16
Rotating	1	11	7

Chi squared = 12.0; df=3; p = .06

was no difference according to work shift. As shown in Table 1, there was a difference in willingness to invite the supervisor to a party given by the respondent. Almost 98 percent of day shift workers would invite the supervisor, while less than half of those on other shifts would do so.

While supervisory relations proved not to differ markedly across shifts, the general nature of co-worker relations among the nurses is in accordance with the predictions. The highest level of solidarity is found on the evening shift. Patterns uncovered among the night workers were different. Only 9 of 190 indicated that relations with co-workers were more enjoyable than relations with friends (Table 2), but a majority said that their co-workers were on equal standing with other friends. About a third said that they enjoyed their other friends more. Evening shift nurses were least likely to give that response.

Another indicator of personal intimacy is the frequency with which workers talk to each other about personal problems. The nurses were asked whether they sometimes talked to co-workers about personal problems, and whether co-workers ever talked to them about personal problems. The two questions produced different results, in that 61 percent said that they had initiated such discussion, while 90 percent said that co-workers occasionally discussed personal problems with them. Differences between shifts were not statistically

significant.

Unlike the tests involving comparative frequency of informal socializing with supervisors, tests involving co-workers continued to show denser interaction among those working evening shifts. Responding to a question on how many of their co-workers they would invite if they had a party, the mean was 4.8, but it varied significantly by shift. It was lowest for the rotating shift, at 3.3; 3.8 for night nurses, 4.5 for day shift nurses, but 8.4 for nurses of the evening shift ( $F_{3,151} = 3.08$ ;  $p = .02$ ). Shift explains 5.8 percent of the difference in the criterion variable, *number of co-workers invited*. Regarding time spent with co-workers during off-duty hours, generally, 30 percent of the nurses on the day, night, and rotating shifts answered that they did spend some time with co-workers, compared to 49 percent of the evening shift nurses, which is a significant difference ( $z = 1.84$ ;  $p = .05$ ; one-tailed test).

To provide another kind of evidence, nurses were given the opportunity to describe what they say as the biggest differences between the day, evening, and night shifts. Most commonly mentioned were differences in the duties for each shift: the staffing situation of each shift was also named by many respondents. Of immediate interest here were allusions to the basic emotional climate:

There is generally a more friendly attitude among the nurses as well as less emphasis on status and rules on the night shift.

The night shift gets along better; there is much less gossip, quarreling, etc. and we stick together. The biggest differences lie in staff psychology. On days, the patient load and time pressures impose a permeating tension on everyone. On evenings, the atmosphere leads to a more relaxed frame of mind, and on nights a purposeful doggedness prevails.

Days aren't as friendly. Everyone seems tense and bound to rules ... evening is more relaxed among staff members.

The day personnel seem to have greater rapport with their patients; sometimes less rapport among themselves. I feel the evening nurses sometimes have less rapport with patients due to decreased staff on this shift.

It appears that the evening shift nurses have far more common interests. Respondents were asked if they felt that their co-workers enjoyed the same things that they did ( $\chi^2 = 9.8$ ;  $df = 2$ ;  $p = .01$ ). More of the

evening shift nurses felt that they were like their co-workers. They also suggested other explanations, frequently commenting that without as many physicians on the premises and less patient movement around the hospital, the evening shift can devote more time to "pure nursing," which after all, is what they are trained to do. A revealing remark from a charge nurse was: "I've seen more nurses on the 3-11 shift than any other shifts who are there because they *enjoy* nursing. Doctors have gone home and most procedures are done. They can devote more of themselves to the patient and his family."

Is there something about the evening shift and the kind of people who work them which can explain the several differences in attitude? More sophisticated analysis shows that this is a possibility. Evening shift nurses averaged 37 years old, with 13 years' experience in nursing, compared to 40 years of age and 15 years experience in nursing for day shift nurses.

An index was constructed from five items on the questionnaire measuring the strength of ties with co-worker ties which relates to alienation from expressive relations (Aiken, Hage 1966). The alienation refers to dissatisfaction in social relations with supervisors and fellow workers. Does controlling for age reduce the association between scores on this index for the night shift? The items were:

- Are the people you work with mostly like you?
- Do you enjoy your relations with co-workers as much as with other friends?
- Do you and your co-workers enjoy the same things?
- Do you sometimes talk to your co-workers about personal problems?
- Do your co-workers ever talk to you about personal problems?

The evening shift nurses had the lowest score on this index ( $F_{3,164} = 3.12$ ;  $p = .03$ ). But does this finding validate the constructionist hypothesis? A test using analysis of covariance indicates that a more parsimonious explanation is possible. There is a moderate positive correlation between the index of alienation from expressive relations and the length of time spent working as a nurse ( $r = .17$ ;  $p = .02$ ). As shown in Table 3, when the length of the nursing career is controlled, the effect of shift is attenuated.

**TABLE 3: ANALYSIS OF COVARIANCE**  
 Dependent variable: Index of Alienation from Expressive Relations.

Source of variation	Sum of squares	df	Mean Sq	F	p
Linear Variable:					
Years worked as nurse	11.6	1	11.57	6.20	.02
Categorical variables:					
Shift	13.2	3	4.41	2.36	.05
Job*	.9	2	.44	.23	.50
Interaction:					
Shift x Job	6.2	6	1.03	.55	.50

\*Job categories: "Head or charge nurse; Staff; Nurse specialist

While there is association between shift and index, any causal effect is largely spurious. RN's employed on the evening shift in hospital settings maintain closer personal relations with each other and find these co-worker ties more satisfying than is the case for nurses on the other shifts. The reasons appear relatively simple. It is not that some sense of pervading abnormality brings them together, but rather the particular social setting and structure of their work. They are somewhat younger and are more likely to share common interests. If misery were to generate camaraderie, the night shift should have exhibited these patterns to a greater degree. It did not. On the night shift a combination of quite new nurses and quite old ones is found. They speak of the quiet and the lack of busyness, but they are not drawn together into a solidary group.

### SUMMARY

The evidence of this survey of institutional nurses in Tulsa demonstrates that the climate and atmosphere of work varies from shift to shift. Particularly noteworthy are the contrasts in the tone of interpersonal relations. One measure after another shows that individuals who work the 3-11 evening shift are more concerned about getting along with their fellow nurses, and that they do have stronger interpersonal relations. The reasons for these outstanding findings are less clear. For one thing, the evening shift nurses are more homogeneous in age and interests. This provides a base for solidarity. They are somewhat younger, and perhaps more idealistic, and perhaps less involved in community affairs. Such explanations argue against a sense of

isolation due to the abnormal hours of work and the corresponding detachment from the day-to-day reality of life.

The nature of supervision and reactions to it seem not to vary much by shift. Night shift nurses feel a little more distant from their supervisors, but this is not the case for the nurses of the evening shift.

As indicated in the introduction, investigation into the correlates and consequences of shift work are sparse. This study explored one approach to these questions in some depth, though it proved to have little predictive validity. The sociology of knowledge and the reality constructionists still suffer major defects as guides for systematic research. The present attempt to fit them to a specific empirical problem was unsuccessful. Where it could be applied, existing knowledge of organizational behavior provided more satisfactory explanation of the data.

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