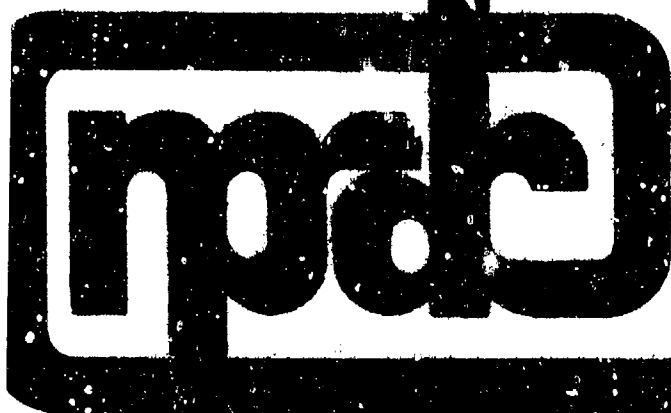


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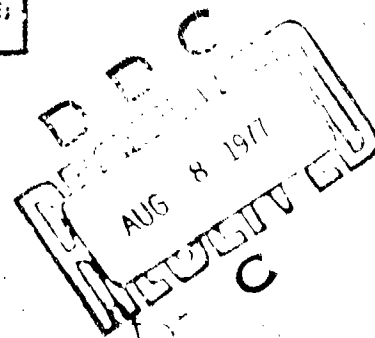


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JULY 1977

**ORGANIZATION DEVELOPMENT IN THE NAVY:
A STRATEGY FOR ADDRESSING DISCIPLINARY PROBLEMS**

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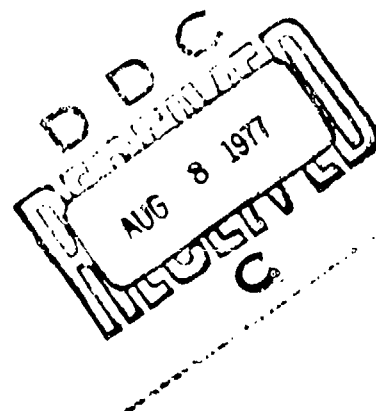


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July 1977

ORGANIZATION DEVELOPMENT IN THE NAVY:
A STRATEGY FOR ADDRESSING DISCIPLINARY PROBLEMS

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The Navy's Organization Development (OD) program, Human Resource Management (HRM), was investigated as a potential method for addressing and ameliorating those conditions that contribute to disciplinary problems. The design involved a comparison of ships that had participated in HRM activities with a matched group of control (non-HRM) ships. The dependent variable was the unit-level nonjudicial punishment (NJP) rate, which was used as an indicator of the number of disciplinary offenses within the command.			

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A comparison of changes in NJP rates between experimental and control ships yielded no significant differences. That is, no evidence was found to suggest that mere participation in HRM-related activities had any significant impact upon NJP rates.

It was noted that the HRM Support System is dynamic in nature and that there are a large number of variables that may moderate the effectiveness of HRM activity. Efforts now underway in the standardization of HRM cycle activities should enable more comprehensive evaluations of HRM effectiveness.

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FOREWORD

This study was sponsored by the Deputy Chief of Naval Operations (Human Resource Management). The report is part of a larger effort that is focusing on the impact of the HRM cycle on rates of first-term reenlistment, Naval Status of Forces (NAVFORSTAT) ratings, and Refresher Training scores. Previous related reports from the Navy Personnel Research and Development Center in the HRM area include: Human Resource Management and Nonjudicial Punishment Rates on Navy Ships (TR 76-5), Human Resource Management and Operational Readiness as Measured by Refresher Training on Navy Ships (TR 76-32), and Differential Perceptions of Organizational Climate Held by Navy Enlisted Women and Men (TR 76TQ-43).

Appreciation is expressed for the assistance of Dr. Ervin Curtis and Dr. Edward Alf on statistical matters, Mr. Jerry Bowers on data analyses, and Mr. Edmund Thomas for his thorough review of the manuscript.

The results of this study are intended for use by the Chief of Naval Personnel (Pers-6).

J. J. CLARKIN
Commanding Officer

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SUMMARY

Problem

The development of strategies to combat high disciplinary rates has been an important goal of both researchers and policy makers. The traditional screening approach to this problem has met with limited success because of low test validities and the present zero-draft environment.

Objective

The objective of this study was to investigate organization development (OD) as a potential technique for addressing those conditions that contribute to disciplinary problems. The Navy has recently institutionalized an organization development program, the Human Resources Management Support System (HRMSS). The HRMSS utilizes various OD activities in an attempt to improve command functioning. The present study evaluated whether such efforts had an impact upon unit-level disciplinary rates.

Approach

The design involved a comparison of ships that had participated in HRM activities (referred to as the HRM cycle) with matched control ships. The HRM cycle comprises a series of activities that range from diagnosing unit-level organizational problems (through use of an HRM survey) to development of a Command Action Plan (CAP) aimed at ameliorating identified weaknesses.

The Navy Judge Advocate General Report 5800.9A, a semiannual summary of nonjudicial punishments (NJP) awarded within individual units, was used as the source of the dependent measure, disciplinary offenses. The sample consisted of 92 surface ships distributed within CINPAC and CINCLANT (46 ships from each). Within each fleet, 23 were experimental ships (i.e., they had participated in the HRM cycle) and 23 were controls. Experimental and control ships were matched on ship type/class and employment schedules since both of these factors were found to be related to NJP rates.

Findings

A comparison of changes in NJP rates between experimental and control ships yielded no significant differences. That is, no evidence was found to suggest that participation in an HRM cycle, per se, had any significant impact upon unit-level NJP rates. Potential moderator variables that could affect NJP rates such as ship size, employment schedule, and CO/XO rotation were similar for the experimental and control ships and therefore did not affect the above finding.

Conclusions and Recommendations

Definitive conclusions cannot be reached regarding the potential effectiveness of HRM activities in dealing with disciplinary problems. The present study focused on HRM cycle activities in their broadest context. Due to a lack of

data, consideration was not given to such factors as: (1) varying consultant activities across units based on differing client (ship) needs, (2) degree of concern of the client with NJP rates, and (3) whether a workable CAP was developed and implemented. Future research must address these factors as they relate to the general effectiveness of the program and its impact on disciplinary problems. It was noted that efforts are now underway which should result in greater standardization of HRM cycle activities. This should allow for more comprehensive evaluations of HRM effectiveness.

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INTRODUCTION

Problem

The development of strategies to combat high disciplinary rates has been an important goal of both researchers and policy makers within the military. Behavior that may be tolerated in the civilian sector is often considered as a disciplinary offense within the armed forces. More serious offenses have obvious negative consequences in terms of administrative expenses, lost working time, and disruption of cohesive work group activities.

Within the Navy as well as the other services, most research in the area of military discipline has focused on attempting to delineate background, attitudinal, and personality characteristics that are associated with delinquent behavior (see Bell & Holz, 1975; Dyer & Harris, 1972; Yellen, 1975). The objective of such efforts has been to develop instruments that can identify potential delinquents so they can either be rejected for service or entered into special preventative or counseling programs.

While such individual differences approaches have met with varying degrees of success, they are quite expensive in terms of personnel utilization for two interrelated reasons:

1. Validity coefficients for most selection instruments tend to be low, usually in the magnitude of the .30s, meaning that large pools of applicants are required in order for such tools to be effective.
2. A large proportion of those individuals rejected as delinquency-prone could, in actuality, make a satisfactory adjustment to military life. That is, while most selection instruments identify the limited number of potential delinquents quite effectively, they concomitantly identify still larger numbers of nondelinquents who will be falsely rejected as applicants. For these reasons and given the present zero-draft environment, alternative strategies to deal with problems of delinquency need to be investigated.

Considerable research has shown that environmental/situational factors can be important determinants of antisocial behaviors (Bandura, 1969; Bowers, 1973; Mischel, 1977). Screening tests, however, utilize only individual measures taken at a single point in time, usually at entry, to predict delinquency. The subsequent person/situation interaction is not (and cannot) be considered. Thus, there continues to exist a strong need to investigate alternative methodologies that assess situational impact and/or this interaction.

Background

Organizational Conditions

One area to be explored with respect to the problem of military delinquency involves the organizational conditions within a naval command. Historically, good order and discipline have been viewed by the Navy as being more the result of effective leadership than of having "good" subordinates in a unit. For

example, over 25 years ago, RADM Arliegh Burke identified four command factors he considered to be most highly related to poor discipline: (1) lack of information among subordinates, (2) lack of interest by seniors, (3) slackness within the command, and (4) instability (see Burke, Note 1). In essence, these four factors represent ineffective management of human resources.

A more recent study lends empirical support to Burke's contentions. Crawford and Thomas (1975) found that perceived organizational conditions are strongly related to disciplinary rates on ships. The authors used the Navy Human Resource Management (HRM) Survey (see Drexler, 1974; Sachar, 1976) as an indicator of organizational conditions and nonjudicial punishment (NJP) rates as a measure of disciplinary offenses. In comparing high- and low-scoring groups on the HRM Survey indices, they found that the NJP rates among the high-scoring ships were nearly half the magnitude of those among the low-scoring ships. Although this investigation was correlational in nature, it did suggest that discipline problems might be addressed by focusing on the organizational conditions present within a ship.

Despite the recognition of the importance of situational factors as contributors to delinquency, research into the dynamics of the person/situation interaction as it relates to disciplinary offenses has been minimal. Army researchers Bell and Holz (1975) have proposed similar research strategies as one means of dealing with disciplinary problems. Goodstadt and Glickman (1975) have also suggested that such policy-relevant research be conducted in the related area of personnel attrition. Nonetheless, there remains a lack of research-based and validated strategies aimed at command-level influences on disciplinary problems.

Organization Development

One area that may provide techniques for addressing and ameliorating those conditions that contribute to disciplinary problems is organization development (OD). An important aspect of this recently emerging discipline focuses on assisting organizations in adjusting to the demands of an evolving environment (Huse, 1975). OD activities are undertaken with the implicit goal of improving organizational effectiveness through "facilitating change and development in people . . . in technology . . . and in organizational processes and structures" (Friedlander & Brown, 1974, p. 314).

In this sense, attempts to improve the selection and screening of personnel can be viewed as one type of OD activity. However, within the environmental framework developed earlier, it would seem that OD techniques that focus on the organizational context, structure, and climate in which disciplinary offenses occur would be a more effective approach. Friedlander and Brown (1974) have dichotomized OD efforts into two groups based on the areas they address: (1) OD efforts that focus on technostuctural elements (e.g., job design, enlargement, and enrichment), and (2) those that focus on human participants and organizational processes. Within this latter category are such OD approaches as survey feedback, group development intervention, and intergroup relations development.

The Navy has recently initiated a large-scale OD program. The approach is largely a survey-guided development program similar to the second group program of OD efforts described above and is part of a larger Human Resource Management (HRM) Support System (see OPNAVINST, Note 2; Forbes, Note 3). Elements within this system are described in detail later. For the present discussion, the program represents an OD effort that could have significant impact upon several recognized criterion measures. As with most OD efforts, the HRM Support System does not focus solely on outcome measures but instead concentrates on intervening processes hypothesized to be related to organizational effectiveness criteria.

In this sense, there is an indirect link between these OD activities and potential impact on such factors as disciplinary offenses. Nonetheless, given the strong relationships between organizational conditions and disciplinary rates (Crawford & Thomas, 1975), if such OD activities improve the management of human resources within a unit, one would expect to see concomitant improvements in organizational outcomes, including a reduction in the number of NJPs.

Nonjudicial Punishment (NJP) Rates

A central tenet of this report is that lower NJP rates are a positive outcome for a command. There can be little question that a reduction in actual disciplinary offenses is a positive change; however, NJPs represent only the number of formal punishments (and only indirectly the number of offenses).¹ Thus, it is possible that, even though two commands have an equal number of disciplinary offenses, one command could have a higher NJP rate because of a stricter adherence to Navy policies and regulations.

While such variability between the differing NJP policies of ships may contribute to the instability of such rates across units, it is the contention of the present author that NJPs still represent an adequate measure of the number of disciplinary problems within a command. This argument is based on three interrelated points:

1. NJP rates have been shown to be related to those organizational practices within a command that are also related to positive outcomes such as Refresher Training scores, reenlistment rates, and NAVFORSTAT ratings (see Crawford & Thomas, 1975; Franklin & Drexler, Note 4; Mumford, 1976).

2. NJP rates are relatively stable across periods of time (24 months), suggesting that changes in the top command personnel do not dramatically change the number of NJPs.

¹Only offenses that are formally reported can result in NJPs. Also, it is possible that, even if a report chit is filed, it may not be carried through to a formal captain's mast. In this case, discipline is informally handled at the level of the workgroup supervisor, division officer, department head, or executive officer. The result is that the offense does not appear in the NJP rate for a command. One can only speculate as to whether the handling of many disciplinary problems at lower levels in the chain of command represents an effective management technique. In any case, more serious offenses and most unauthorized absences result in formal NJP sessions.

3. Borman and Dunnette (1974) found that Navy officers viewed NJP rates as an important measure of the overall status of personnel conditions on Navy ships.

Of course, the actual relationship between the number of disciplinary offenses and the resultant number of NJPs within a command remains an empirical question. However, the present investigator considered NJP rates to be an adequate unit-level indication of the number of disciplinary offenses.

Purpose

The purpose of the present study was to investigate the impact of survey-guided development activities on NJP rates for Navy ships. Based on previous literature and the assumption that such OD efforts may improve organization conditions, it was hypothesized that such activities would have a positive impact on NJP rates. In other words, ships that had participated in an OD intervention were hypothesized to have lower NJP rates than matched control ships.

APPROACH

The research design basically involved a comparison of ships that had participated in a standardized HRM cycle with matched control ships. The dependent variable, unit-level NJP rates, was used to determine whether the experimental group of ships showed significant changes in NJP rates between pre- and post-HRM activities when compared to those of matched controls.

HRM Cycle/Human Resource Availability (HRAV)

The basic construct of the HRM Support System is a command-specific HRM cycle. This cycle involves the following nine basic sequential steps: (1) initial visit, (2) data gathering, (3) diagnosis, (4) feedback, (5) planning, (6) Human Resource Availability (HRAV) week, (7) unit action, (8) follow-on, and (9) follow-up. Each of these steps is discussed in detail in Appendix A.

Since a unit participates in the entire HRM cycle, isolation of one step as an independent variable was not possible. The study involved matching units that had participated in the cycle with control units that had not. Thus, if there is some evidence of positive change in NJP rates for the experimental units, it is not possible to identify which aspect(s) of the cycle (e.g., giving the HRM Survey, interviewing of unit personnel, generating and implementing the CAP, or participating in the HRAV week) were the main causal agents.

Along these same lines, it is also possible that one part of the cycle could have a positive effect while other elements could have negative impact, with the overall result of there being no change in NJP rates. Thus, it is important to keep in mind that the design for the present study focused only on the HRM cycle as a whole (and, in particular, the HRAV) rather than attempting to isolate specific factors that moderate or contribute to its effectiveness.

One final factor that should be noted is that implementation of steps eight and nine (follow-on and follow-up assistance) have not been completely standardized for all units. Thus, for the present study, participation in these final steps of the HRM cycle was not considered as a necessary condition for having completed the cycle. Empirical data assessing the criticality of these elements are not presently available.

Nonjudicial Punishment (NJP Rate)

The dependent variable in this effort was the NJP rate for a given ship. All Navy units (ships, air squadrons, shore commands, etc.) submit a semi-annual report listing the number of nonjudicial punishments imposed over the previous 6-month period. These offenses, subsumed under Article 15 of the Uniform Code of Military Justice, are similar to misdemeanors, with the majority of cases handled within the command by the commanding officer.

A 6-month summary report (Navy Judge Advocate General, NAVJAG 5800.9A) is submitted in January and July of each year. It should be noted that the report does not list the absolute number of personnel involved in NJPs but, rather, the total number of NJPs awarded within the unit. Thus, if an individual receives multiple NJPs during the reporting period, each NJP is included in the total reported.

Data were available for five 6-month reporting periods converging the time frame from July 1973 through December 1975. The reports were obtained from the legal offices of two type commands--Surface Force, Pacific Fleet, and Surface Force, Atlantic Fleet. Because of missing data, the number of ships in this overall sample varied from as few as 99 in the December 1973 report to as many as 257 in the December 1974 report.

The NAVJAG 5800.9A reports provided data on the numbers of NJPs imposed over each 6-month period. Because the ships included in the study varied considerably in terms of the number of men assigned, the NJP data were transformed to a common-based scale that took this manning level into account. Since it is generally enlisted personnel who are involved in NJPs, the enlisted allowance was obtained for each ship.² This allowance was then used to generate a standardized NJP rate--the mean number of NJPs per 6-months per 100 enlisted personnel.

Factors Affecting NJP Rates

Several factors may affect rates of nonjudicial punishment. For example, a basic consideration in working with any criterion variable over time concerns stability. As Drexler and Franklin (Note 5) have pointed out with respect to unstable measures, "Relating such data to organizational experiences would not be useful if the variation from time period to time period were excessively large One could not expect them to be related systematically" (p. 3). In this sense, if NJP rates on ships showed very low correlations across different reporting periods, it would be unfeasible to investigate whether or not an organization development program had resulted in any systematic changes on such unstable measures.

In order to investigate the stability of NJP rates, correlations were computed between the unit-level reports across each of the five reporting periods. The results of these analyses are shown in Table 1. A not unexpected finding was the consistent decrease in the strength of the coefficients as the time between reporting periods increased. This is probably the result of numerous factors such as crew turnover, varying operational schedules, changes in CO/ XO, etc. Such changes would differentially affect commands and reduce the stability of NJP rates across time. Nonetheless, the r 's between adjacent reporting periods ranged from .41 to .69 and were high enough to suggest that NJP rates are relatively stable across time.

²It should be noted that the number of enlisted personnel on a ship varies from month to month. Also, the actual on-board count is usually slightly lower than the ship allowance. Because monthly on-board counts were not available on a historical basis for all ships, it was felt that the allowance figures provided the best estimates available. Thus, the rates reported in this effort are slightly lower than the actual NJP rates. However, this error should be relatively constant across ships.

Table 1
Correlations Between Ship-Level Nonjudicial Punishment
Rates Across 6-Month Reporting Periods

Reporting Period	1	2	3	4	5
1. Jul-Dec 1973	-	.69 (N=95)	.43 (N=96)	.47 (N=92)	.27 (N=77)
2. Jan-Jun 1974		-	.53 (N=185)	.42 (N=179)	.23 (N=165)
3. Jul-Dec 1974			-	.41 (N=237)	.28 (N=210)
4. Jan-Jun 1975				-	.43 (N=206)
5. Jul-Dec 1975					-

Three other variables were also considered in developing the matched experimental and control units. These were fleet, type of ship, and employment schedule. Results from each of these analyses are presented in Appendix B. Overall, it was noted that all three variables were important and significant moderators that had to be considered in the process of matching experimental and control units.

Sample

Selection of the final sample of ships was based on a number of factors. Experimental units were chosen on the basis of having participated in the HRM cycle and, in particular, the 5-day Human Resource Availability (HRAV) period that is dedicated to HRM-related activities. Because of the design of the study, units were considered for inclusion only if they had NJP data over the following time frames: (1) pre-HRAV--the 6-month NJP reporting period prior to the HRAV, (2) HRAV--the 6-month NJP reporting period during which the HRAV occurred, and (3) post-HRAV--the 6-month NJP reporting period after the HRAV. This requirement eliminated ships that had missing data during any of the three periods.

Units that were considered to be nontypical of general Navy ships as well as those that were in the reserve fleet or were participants in special experimental programs (e.g., an 80% manning study) were also eliminated in

establishing the sample. The result was that the experimental sample consisted of 46 ships that had participated in an HRM cycle and for which complete NJP data were available.

Similar ships that had not participated in an HRM cycle were then selected as controls. These units were matched one-to-one with experimental units on the basis of fleet, type, and (insofar as possible) employment schedule. The distribution of the final sample, consisting of 92 ships (46 experimentals and 46 controls), is shown in Table 2.

Table 2
Distribution of HRAV and Control
Ships by Fleet and Ship Type

Class	Pacific Fleet		Atlantic Fleet	
	Number of HRAV Ships	Number of Control Ships	Number of HRAV Ships	Number of Control Ships
Destroyer	7	7	8	8
Frigate	6	6	7	7
Cruiser	2	2	1	1
Amphibious warfare	8	8	2	2
Underway replenishment	0	0	4	4
Auxiliary	0	0	1	1
TOTAL	23	23	23	23

General Research Issues

The research design and hypotheses for this study have been presented as if the HRAV is a standardized OD package that robot specialists administer to static commands. However, the true picture is considerably more complex. Like most OD programs, the HRM cycle with its HRAV is a dynamic process that varies as a function of numerous factors. Likewise, the client commands are complex open systems in which contextual, structural, and organizational variables probably interact to moderate the effectiveness of the cycle. Thus, while the research was designed to focus simply on NJP rates, numerous other issues must

be considered if one is to have a more thorough understanding of the HRM process. Of the issues discussed below, HRM Specialist competency, top level commitment, implementability of the CAP, and specific HRAV activities were not investigated in the present study. However, they are included because they are important factors that must be addressed by future research in this area.

HRM Specialist Competency

The effectiveness of most OD activities is certainly a product of the background and skills of the OD practitioner. Previous research (Pollard & Tucker, 1975) and recent anecdotal evidence suggest that HRM Specialists vary considerably in their OD skills and overall competencies. While specialists receive both formal and on-the-job training, individual disparities still exist. As a result, certain HRMS teams within an HRMC are probably conducting more effective HRAVs than others. Recent changes in the overall program to provide a greater degree of "standardization" should result in improved HRAV activities and outcomes.

Commitment of CO, XO, and Department Heads

The HRAV is a nonvoluntary program in which commands are scheduled for participation on the basis of their operational schedules. As a result, it is quite possible that a command may not be favorably disposed towards participation in the HRAV as well as implementation of a Command Action Plan (CAP). Such a negative orientation would be especially critical if it was manifested by personnel at the top of the command (e.g., CO, XO, and Department Heads). Most OD theorists argue that key people in the organization must be committed to the objectives of the OD effort (e.g., Bennis, 1969; Blake & Mouton, 1969). While some theorists (Huse, 1975) do not consider top level management involvement and commitment essential, it certainly remains as a potential moderator of the effectiveness of the HRAV.

Stability at the CO/XO Level

Related to the previous issue is the factor of CO and XO turnover. If commitment of top management is critical, it would seem that any changes in command immediately following the HRAV could affect the degree of implementation of the CAP. The CO/XO present during the HRAV could be expected to feel more ownership of the CAP than a new CO/XO. As a result, it is possible that the original CO/XO would be more likely to attempt implementation than their replacements. CO/XO rotation for HRAV and control units is discussed in the Results section.

Implementability of Command Action Plan (CAP)

Since a unique CAP is developed for each command going through an HRAV, there is probably a large variation in the degree to which different CAPs can be successfully implemented. For example, some CAPs may state goals in such broad and abstract terms that it is extremely difficult to determine the specific action steps necessary to accomplish the objectives. Since each CAP is unique for a given unit, it is difficult to assess which common factors are critical for implementation and potential success.

HRAV Activities

Previous research (Crawford & Thomas, 1975) has shown certain areas of organizational behavior (e.g., supervisory support) to be more strongly related to NJP rates than other factors. Hence, it would seem reasonable to hypothesize that HRAVs that are directed primarily toward those areas would result in more impact in NJP rates. Likewise, commands that perceive discipline as being a significant problem area are more likely to devote energy during the HRAV and in the CAP to addressing issues/conditions related to discipline. If such units could be identified, one would expect to see more impact of the HRM cycle/HRAV on NJP rates. From the standpoint of the present study, the HRAV was considered in its broadest context. That is, HRAV activities were seen as attempting to impact on a wide variety of organizational processes, some of which are strongly related to NJPs.

Time Lag

Likert and Bowers (1969) postulate that criteria or end-result variables "are the dependent variables that reflect the results achieved by that organization" (p. 586). In civilian organizations, such system outcomes include volume, efficiency, and quality of work. Other criteria, such as attendance, development (growth), and human costs (accidents, health, conflict, disciplinary actions, etc.), are theorized by Likert and Bowers to be subordinate criteria in that they are antecedent to and thus affect primary outcomes.

NJPs are thus seen as subordinate criteria. However, the hypothesized relationship between NJPs and organizational conditions is not a concurrent one. Rather, a time lag is postulated as a part of a causal flow model (see Franklin, 1975; Likert & Bowers, 1969; Likert, Bowers, & Norman, 1969). If this theoretical model holds up, one would not expect to see immediate changes in NJP rates as a result of organizational changes brought about by the HRAV and the CAP. The amount of expected time lag remains an empirical question since numerous factors may affect it (e.g., size of command, degree of implementation of organizational changes, hierarchical level at which most changes are introduced, etc.). Nonetheless, it is a factor that must be considered when attempting to determine if HRAV units show differential changes in NJP rates. In the present study, NJP rates were investigated up to 15 months following the HRAV.

Size of Command

Navv ships vary considerably in their size or number of assigned personnel. Because larger ships are likely to have more departments and divisions, as well as more hierarchical levels, it would seem that they would require greater allocation of OD resources. Also, it is possible that large commands have more institutional "inertia" and are thus more difficult than small units to initiate system-wide organizational development activities.

While HRMCs do allocate more personnel for HRAVs with large ships, this increase may not be commensurate with the increased needs of larger commands. As such, one might expect to see differential impact as a function of size of command. This moderator is further discussed in the Results section.

In summary, there are numerous variables that can influence or moderate the success and impact of the HRAV and CAP. Given such a dynamic situation, the present study is not to be viewed as an evaluation of the HRM cycle but, rather, as a determination of the impact of a wide spectrum of organizational development activities on one selected outcome measure--NJP rates.

Bowers (1976) has conceptualized two forms of evaluation of organization development programs. One type, called bottom-line evaluation, focuses only on overall outcomes. The second, which he labeled midcourse correction, is designed to use evaluation as a method for further development or modification of an existing program. Along these lines, the present effort can perhaps be categorized as "bottom-line" since the degree of knowledge concerning intervening activities (i.e., the HRAV and CAP) is minimal. The need for more detailed evaluation efforts of the second type, midcourse correction, is obvious and must be addressed through future research.

Data Analysis

Analyses were undertaken separately, within each fleet, as well as with both fleets combined. Tests for statistical significance were used to compare the direction and degree of change between the pre-HRAV, HRAV, and post-HRAV periods. Chi square, analyses of variance, and t tests were performed where appropriate to compare the experimental and control groups formed on the basis of matched pairings (see McNemar, 1969, p. 116).

Standardization of Time Frames

Because different ships participated in an HRAV during different NJP reporting periods, it was necessary to standardize the time frames for the NJP data for each experimental unit and its matched control. Table 3 gives an example of this process for two experimental and two matched control ships.

As can be seen, the standardization process resulted in three scores for both the experimental and control units. Even though the control units did not have an HRAV, they have NJP data corresponding to the exact time periods during which NJP data were being collected for the experimental units. The result is that any trends over time are taken into account with the control units. For a subsample of ships, data were also available for a second additional NJP reporting period after the HRAV. This additional period was used to determine if impact from the HRAV was occurring during a period longer than the post-HRAV time frame.

Table 3
Example of Standardization Process for
Two Experimental and Two Control Ships

Ship	NJP Rate During Reporting Period				
	Before Standardization				
	<u>Jul-Dec 1973</u>	<u>Jan-Jun 1974</u>	<u>Jul-Dec 1974</u>	<u>Jan-Jun 1975</u>	<u>Jul-Dec 1976</u>
Experimental A	21.0	23.0**	21.0	22.1	21.6
Control A	18.5	19.2	18.7	20.3	18.5
Experimental B	19.0	22.0	23.0**	21.5	22.0
Control B	18.0	19.1	19.5	20.8	20.0
	After Standardization				
	<u>Pre-HRAV T-1</u>	<u>HRAV T-0</u>	<u>Post-HRAV T+1</u>		
Experimental A	21.0	23.0	21.0		
Control A	18.5	19.2	18.7		
Experimental B	22.0	23.0	21.5		
Control B	19.1	19.5	20.8		

**This represents the 6-month period during which the HRAV occurred.

RESULTS AND DISCUSSION

Changes in NJP Rates

The initial analyses compared the number of ships within each group that reported increases or decreases in NJP rates across reporting periods. The results from these comparisons, which focused only on direction as opposed to magnitude of change, are given in Table 4.

As can be seen, these data fail to support the contention that, relative to the control ships, those units undergoing HRAVs attained significantly more decreases in their NJP rates. Comparisons of changes from the pre-HRAV period to both the HRAV and post-HRAV periods yielded virtually identical results for both groups. Overall, for both experimentals and controls, slightly more ships showed increases rather than decreases in NJP rates.

A second set of analyses compared the magnitude of changes in NJP rates as a function of participating (vs. nonparticipating) in an HRM cycle. These results are presented in Table 5.

As can be seen, changes in NJP rates from pre-HRAV to HRAV and to post-HRAV periods were very similar for both the HRAV and matched control units. As a result, none of the t values comparing the degree of change between the two groups attained significance. These results are graphically portrayed in Figure 1, with the HRAV and control units showing almost identical patterns. It should also be noted that, despite the consistently higher NJP rates for HRAV units during each reporting period, these differences between HRAV and control units were not significant. The failure to find such differences was the result of the relatively large standard deviations, which ranged from 6.4 to 10.0 for the subgroups of HRAV and control units.

The largest differences between the two groups occurred when comparing HRAV and control ships from the Pacific in terms of pre- to post-HRAV periods. In support of a time-lag hypothesis, it appeared that those ships participating in HRAVs maintained a relatively constant NJP rate while the control ships showed slight increases. While this change was not significant, it did warrant further investigation as to whether it would be sustained during an additional NJP reporting period.

Data for one additional period were available for 28 HRAV ships and 28 control ships, constituting an overall time frame of 24 months. A comparison of NJP rates from the pre-HRAV period to this additional period (i.e., the third reporting period, which was 18 months later) are shown in Table 6.

Again, there is no evidence of any systematic changes in NJP rates as a function of participation in the HRM cycle. Both the HRAV and control ships reported no changes in rates from the pre-HRAV period to a time frame which corresponded to 13-18 months later. There is no support for the potential time-lag effort mentioned earlier. (Similar results were obtained for the subgroup of 20 Pacific Fleet ships.) Whether the addition of further reporting periods would yield any new changes cannot be addressed in this study due to lack of longitudinal data; however, given the findings already presented, it seems unlikely that any substantial differences would emerge.

Table 4
Changes in Nonjudicial Punishment (NJP) Rates for
HRAV and Control Ships by Fleet

Fleet	Group	Number of Ships with Increases in NJP Rates	Number of Ships with Decreases in NJP Rates	Chi Square Value (df = 1)
Pre-HRAV Period (T-1) to HRAV Period (T-0)				
Pacific	HRAV	10	12	.02 ^a
	Control	9	14	
Atlantic	HRAV	17	6	.01 ^a
	Control	15	7	
Overall	HRAV	27	18	.41
	Control	24	21	
Pre-HRAV Period (T-1) to Post-HRAV Period (T+1)				
Pacific	HRAV	12	10	.18 ^a
	Control	15	8	
Atlantic	HRAV	13	10	.35
	Control	11	12	
Overall	HRAV	25	20	.01
	Control	26	20	

Note. Ships with no change in NJP rates were not included in the comparisons.

^aThis value includes Yates correction for continuity (see McNemar, 1969).

Table 5
Comparison of Changes in Mean Nonjudicial Punishment (NJP)
Rates by Fleet for HRAV and Control Ships

Fleet	Group	NJP Period		Change	df	t ^a
Changes from Pre-HRAV to HRAV Period						
		Pre-HRAV	HRAV			
Pacific	HRAV (<u>N</u> =23)	23.8	23.2	-.06	22	.35
	Control (<u>N</u> =23)	20.5	20.7	+.02		
Atlantic	HRAV (<u>N</u> =23)	19.4	21.8	+2.4	22	.31
	Control (<u>N</u> =23)	18.8	21.8	+3.0		
Overall	HRAV (<u>N</u> =46)	21.6	22.5	+ .9	45	.47
	Control (<u>N</u> =46)	19.7	21.2	+1.5		
Changes from Pre-HRAV to Post-HRAV						
		Pre-HRAV	Post-HRAV			
Pacific	HRAV (<u>N</u> =23)	23.8	24.8	+1.0	22	1.37
	Control (<u>N</u> =23)	20.5	24.1	+3.6		
Atlantic	HRAV (<u>N</u> =23)	19.4	19.1	- .3	22	.44
	Control (<u>N</u> =23)	18.8	17.4	-1.4		
Overall	HRAV (<u>N</u> =46)	21.6	21.9	+ .3	45	.47
	Control (<u>N</u> =46)	19.7	20.7	+1.0		

Note. The NJP rate for a ship is based on the means number of NJPs per 100 enlisted men during a 6-month reporting period.

^aThe t value represents a comparison of the change (gain) scores for HRAV ships with those for matched control ships. None of the t values are significant.

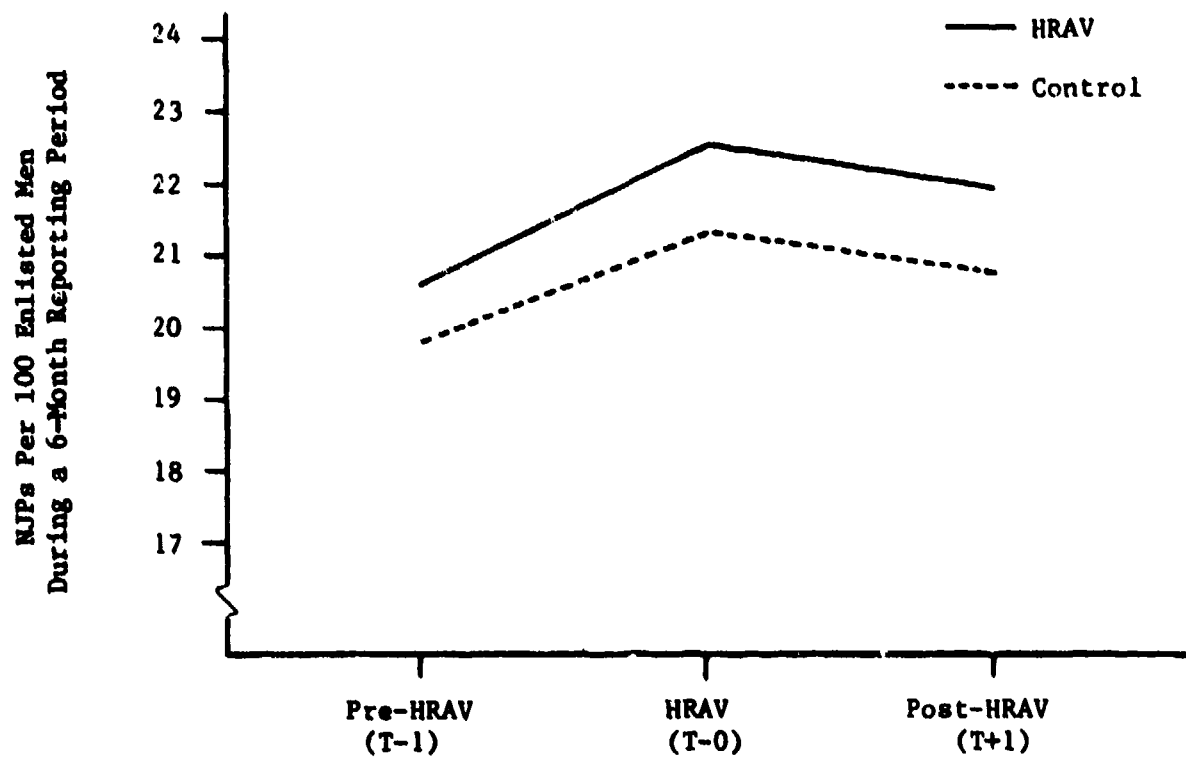


Figure 1. Mean NJP rates for total sample of HRAV and control ships for three reporting periods.

Table 6
Comparison of Changes in Mean Nonjudicial
Punishment (NJP) Rates for HRAV and
Control Ships Across 24 Months

Group ^a	NJP Period		Change	df	<u>t</u>
	Pre-HRAV	Third Period Later			
HRAV (N=28)	22.0	21.7	-.3	27	.15
Control (N=28)	19.2	19.2	.0		

^aThe sample includes 20 ships from the Pacific Fleet and 8 from the Atlantic Fleet for both the HRAV and Control groups.

Moderator Variables

Size

One factor that may moderate the effectiveness of an HRAV is size of unit. Given the limited resources available at the HRM Centers and Detachments, larger ships may not receive sufficient consultative assistance. Also, one might hypothesize that larger ships have more "organizational inertia" and are thus more resistant to change by outside (or inside) forces. Taken together, these factors suggest that the HRAV is more likely to have an impact upon a small ship than on a larger one.

In order to investigate this hypothesis, the HRAV and control ships were each divided into 2 subgroups: (1) large ships--units with allowances exceeding 325 personnel, and (2) small ships--units having allowances of less than 325. Comparisons were then made between changes in NJP rates for large and small HRAV and control ships. In this case, analyses were done comparing group changes since units were not matched on a one-to-one basis. Results from these analyses are shown in Table 7.

As can be seen, there were no significant differences between the HRAV and control units when size was taken into account. In general, larger ships reported slightly lower NJP rates than smaller ships.

Table 7

Comparison of Changes in Mean
Nonjudicial Punishment (NJP) Rates for
Large and Small HRAV and Control Ships

Size	Group	NJP Period		Change	df	<u>t</u> ^a
Changes from Pre-HRAV to HRAV Period						
		Pre-HRAV	HRAV			
Large	HRAV (<u>N</u> =16)	19.6	18.4	-1.2	34	1.47
	Control (<u>N</u> =20)	19.0	22.0	+3.0		
Small	HRAV (<u>N</u> =30)	22.6	24.7	+2.1	54	.63
	Control (<u>N</u> =26)	20.2	20.7	+ .5		
Changes from Pre-HRAV to Post HRAV Period						
		Pre-HRAV	Post-HRAV			
Large	HRAV (<u>N</u> =16)	19.6	18.9	- .7	34	.91
	Control (<u>N</u> =20)	19.0	21.0	+2.0		
Small	HRAV (<u>N</u> =30)	22.6	23.6	+1.0	54	.18
	Control (<u>N</u> =26)	20.2	20.6	+ .4		

Note. Large ships included the following types: LCC, LPH, CG, CGN, DDG, AD, AOE, AOR, AE, AFS, AO, LPD, and LKA. Small ships included the following types: FF, FFG, DD, AF, LST, and LSD.

^aNone of the t values obtained significance.

Employment Schedule/Change of CO and XO

As previously noted (see Appendix B), NJP rates for Atlantic Fleet ships were related to their employment schedules. Accordingly, it was necessary to match the HRAV and control units as closely as possible on this particular variable. However, such identical matching was not always achieved because of the limited number of available control ships. Thus, in order to determine whether the experimental and control samples differed on employment schedules, the percentage of units within the three basic categories (deployed, overhaul, or regular status) was calculated for each group across the three NJP reporting periods. Since employment data were not available for all units, the N s vary from period to period. Comparisons between the two groups are given in Table 8. The data indicate that employment schedules for the two groups are almost identical during the pre- and post-HRAV periods.

During the period when the HRAV took place, there was a significant difference ($p < .05$) between the groups with, as might be expected, fewer HRAV ships being deployed. However, since NJP rates appear to be slightly higher in the Pacific Fleet and significantly lower in the Atlantic Fleet during deployments, the small differences reported in Table 8 should not have biased the previously reported findings.

One final area that was investigated concerned changes in command during the three NJP reporting periods. As discussed earlier, changes of COs and/or XOs could affect the degree of implementation of the CAP. Likewise, such changes could influence unit-level NJP rates. It was of interest then to determine if HRAV and control ships differed on the number of changes in top-level personnel.

As shown in Table 8, a comparison between HRAV and control ships yielded no significant differences in the number of CO or XO changes during the three NJP periods considered. In fact, the percentage of ships with changes within the two groups was almost identical.

From the standpoint of the HPM Support System, however, this lack of difference is noteworthy since over 50 percent of HPAV ships had both a CO change and an XO change during either the HRAV or post-HRAV periods. Considering the potential necessity for high level commitment and support for successful implementation of the CAP, this lack of stability could have substantial negative effects on the impact of HRM cycle activities.

Table 8
Comparison of HRAV and Control Ships on Employment
Schedules and Changes of Commanding and Executive Officers
During Three Standardized Time Periods

	Pre-HRAV		HRAV		Post-HRAV	
	Percentage in Category					
Moderator Variable	HRAV (N=44)	Control (N=46)	HRAV (N=45)	Control (N=46)	HRAV (N=30)	Control (N=31)
1. Employment						
a. Deployment	32	33	07 ^a	26 ^a	27	29
b. Overhaul	14	17	11	15	27	16
c. Regular	54	50	82	59	46	55

2. Change of CO During Reporting Period						
a. Yes	24	24	22	26	30	20
b. No	76	76	78	74	70	80

3. Change of XO During Reporting Period						
a. Yes	33	33	22	20	37	44
b. No	67	67	78	80	63	56

^a A comparison between HRAV and control ships on employment schedule at time T-0 yielded a chi square value of 7.29, $p < .05$. No other comparisons between HRAV and control ships on both employment schedules and change of CO/XO were significant.

CONCLUSIONS

The results of this study suggest that the HRM cycle, per se, has no significant impact upon unit-level NJP rates. Potential moderator variables such as ship size, employment schedule, and CO/XO rotation did not appear to affect the principal findings. It should again be noted that this investigation was limited to and focused on the entire HRM cycle in its broadest context. Due to lack of easily accessible data, consideration could not be given to such potentially important moderating variables as: (1) varying specialist activities based on differing client (ship) needs, (2) degree of concern by the client with disciplinary offenses, and (3) whether a workable CAP was developed and implemented. Future research must necessarily address such factors as they relate to the impact of the entire HRM cycle.

Definitive conclusions cannot be reached as to the potential effectiveness of OD activities as they relate to disciplinary problems. Since the HRAV tends to focus on a large variety of process variables (e.g., leadership, communications, work group activities, etc.), it was not possible to determine the degree to which those organizational practices known to be related to NJP rates were addressed (see Crawford & Thomas, 1975). Undoubtedly, HRAV workshops and CAPs oriented towards such practices would increase the probability of impact on NJP rates.

However, it is perhaps unrealistic to expect a command to devote its energies during and after the HRAV to specifically improving those conditions contributing to disciplinary problems. Other outcomes subsumed under the general rubric of operational readiness certainly have higher priorities. Also, it may be unrealistic to expect that a relatively short-term OD intervention, as currently implemented in the Navy, will result in substantial change in a command.

RECOMMENDATIONS

With regard to the HRM program, further research is recommended in order to isolate those variables that are critical to the effectiveness of the HRM cycle. Such research should focus on, but not be limited to, the following factors: (1) competency of HRM specialists, (2) optimal scheduling time for the HRAV, (3) effectiveness of specific RAV workshops/activities, (4) components of an effective CAP, and (5) commitment and capabilities of commands for positive change during the HRM cycle. It should be noted that efforts are now underway to provide for more standardization of HRM cycle activities. This should allow for more comprehensive studies of HRM effectiveness since critical elements in the process will be more precisely defined and implemented with less variability.

In the specific arena of the disciplinary problems, it is recommended that further studies be initiated to address the effectiveness of strategies aimed at improving environmental/situational factors that contribute to delinquent behaviors, with specific attention being given to the person/situation interaction. OD efforts represent only one of many possible methodologies. Such research should not only contribute to a better understanding of the dynamic factors associated with disciplinary problems, but also provide the Navy with the necessary tools to combat those factors.

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APPENDIX A
HUMAN RESOURCE MANAGEMENT CYCLE

HUMAN RESOURCE MANAGEMENT (HRM) CYCLE

The nine basic elements of the HRM cycle, as outlined in OPNAVINST 5300.6B (see Note 1), are presented below along with an introductory description of the implementing HRM Centers and Detachments.

HRM Centers and Detachments (HRMCs/Ds)

HRMCs/Ds are staffed by HRM Specialists (HRMS). They are trained to employ consultant assistance methods for supporting command action in leadership and management, overseas diplomacy, equal opportunity/race relations, drug abuse control, and alcoholism prevention. HRMSs are organized into HRM Support Teams (HRMST) and one or more HRMSTs are assigned to perform the following tasks in connection with a particular command:

1. Conduct the HRM Survey prior to the dedicated HRAV period to identify areas that may require command action.
2. Provide services during each dedicated HRAV period to assist command in the development or assessment of existing CAPs.
3. Provide on-board assistance as requested by the commander or commanding officer. As feasible during HRAV, provide command personnel with skills necessary to implement and support the CAP.
4. Provide follow-on services after the dedicated HRAV period on a mutually agreeable basis and within available HRMC/D resources.
5. Conduct 6- to 12-month follow-up visit after each dedicated HRAV period to determine additional assistance that may be required.

Nine Basic Steps of HRM Cycle

Step 1 (Initial Visit)

1. The commanding officer/officer in charge of the HRMC/D will call on or write to the unit commanding officer to establish introductory communications.
2. The assigned HRMST will call on the commanding officer prior to the scheduled HRAV. The purposes of this call are (a) to describe in full the capabilities and resources of the HRMC/D, and (b) to provide the commanding officer with an in-depth understanding of the HRM cycle and each individual step in the process.

Step 2 (Data Gathering)

The primary tool used to gather data on human resource management is the Navy HRM Survey. Interviews are used to supplement the survey as appropriate.

Navy HRM Survey. The purpose of the survey is to provide commanders and commanding officers with the objective data necessary to make appropriate decisions on the issues, priorities, and actions to be addressed in the CAP. The survey is administered by the HRMST with assistance from the unit when feasible. Sampling techniques may be used in units with over 1500 personnel assigned. The HRM Survey provides command with data in the following areas:

1. Command Climate (communications flow, decision making, motivation, human resource emphasis, lower level influence).
2. Supervisory leadership (support, teamwork, goal emphasis, work facilitation).
3. Peer leadership (support, teamwork, work facilitation, problem solving).
4. Work group processes (work group coordination, work group readiness, work group discipline).
5. Satisfaction.
6. Integration of personnel and mission.
7. Training.
8. HRM areas.

All data collected by HRMSTs during surveys, follow-on activities, and scheduled follow-up visits are provided in confidence to the commander or commanding officer of the unit concerned. This ensures that he has the information required to assess unit performance and the effectiveness of his CAP. All requests for data pertaining to a specific unit, command, or staff will be addressed to the commander or commanding officer of the unit concerned. HRM Survey data attributable to any specific Navy command will be disclosed by the HRMST assisting the commanding officer only to the commanding officer, designated command personnel, and research activities specified by the CNO. Deviation from this policy will not be made except upon approval of the DCNO (Manpower, OP-01).

Interviews. The purpose of interviews is the same as stated for the HRM Survey and, at the request of the commanding officer, can be conducted at any time during the HRM Cycle. Their specific functions include (1) supplementing the HRM Survey, and (2) providing additional verification and validation of the survey data desired by the commanding officer after initial diagnosis and feedback.

Step 3 (Diagnosis)

During this step of the HRM Cycle, data obtained from the unit's survey and interviews (when conducted) are analyzed. They will be broken down to numbers and graphs and then grouped by computer print-out according to issue areas and demographic data (i.e., race, rate, department, division, etc.). Relationships between survey questions will also be analyzed. The

purpose of diagnosis is to organize the raw data in order to assist commands in determining its meaning and implications.

Step 4 (Feedback)

During this step, the HRMST provides the commanding officer with the results of the survey and interviews. As determined by the commanding officer, feedback of the data to other designated command personnel may take place at this time or during the planning session described below.

Step 5 (Planning)

After the feedback of the survey/interview data to the unit, a planning session will be conducted. Ideally, this session occurs 2 weeks prior to the HRAV. Based upon the action areas and priorities set by the unit commanding officer, a flexible plan for the HRAV will be developed. Final support details are worked out after the HRAV activities have been determined. During the planning session, the commanding officer should schedule additional HRM training for personnel not involved in developing the CAP during the HRAV. This training may include, but is not limited to, sending command personnel to pertinent HRM training courses, conducting special training or workshops for unit personnel, and assessing and providing technical support for current command programs.

Step 6 (Human Resource Availability (HRAV) Week)

The required unit output for this 5-day period is the development or modification of an existing CAP that can be promulgated in the command within 30 days of completion of the HRAV. HRMSTs generally employ a workshop methodology to assist commands but, if commanding officers desire, HRMSTs can recommend various other methods to assist commands in meeting this requirement. As a minimum, this workshop should include the participation of key command personnel. Generally, workshop personnel should be drawn from the following groups:

1. CO/XO/Department Head.
2. Division Officer level.
3. CPO/Leading PO level.
4. Personnel who, either because of their rank/rate, job or leadership capabilities, are respected by and knowledgeable about the unit and its personnel (e.g., members of the Human Relations Council, Striker Board, etc.).

The specific number of personnel from each group is determined by the unit commanding officer; however, the senior group (CO/XO/Department Head) should normally be fully represented. Personnel from the other groups should be representative of the rank/rate/minority distribution within the command.

In addition to working towards a CAP, this week should also be utilized for other workshops, training, and activities appropriate to the needs of the command in furthering command effectiveness through optimum management of human resources.

Step 7 (Unit Action)

This is the continuing actual implementation and monitoring of actions set forth in the Command Action Plan.

Step 8 (Follow-on)

At the request of the unit commanding officer, follow-on activities may be conducted to provide additional assistance in the development and implementation of the CAP.

Step 9 (Follow-up)

Six to 12 months after the HRAV, a follow-up visit will be scheduled. The purpose of this visit is to determine additional assistance that may be required by the commanding officer to modify and update command actions.

APPENDIX B

FACTORS CONSIDERED IN THE MATCHING OF UNITS

FACTORS CONSIDERED IN THE MATCHING OF UNITS

Fleet and Type of Ship

Since the basic design for this investigation involved matching experimental and control units, it was necessary to determine whether factors such as fleet and type of ship were systematically related to NJP rates. Ship-level NJP rates for the five reporting periods are given by fleet in Table B-1.

Table B-1

Ship-Level Nonjudicial Punishment (NJP) Rates by Fleet for 5 Reporting Periods

Reporting Period	NJPs per 100 Enlisted Men During Period					
	Pacific Fleet		Atlantic Fleet		df	F
	Number of Ships	Mean	Number of Ships	Mean		
Jul-Dec 1973	23	21.8	76	14.8	(1,97)	14.0**
Jan-Jun 1974	115	23.0	76	17.6	(1,189)	13.8**
Jul-Dec 1974	114	22.4	143	19.5	(1,255)	5.4*
Jan-Jun 1975	111	26.5	138	19.7	(1,247)	27.1**
Jul-Dec 1975	113	21.7	105	19.0	(1,216)	5.1*

*p < .01

**p < .001

For all five periods, the NJP rates among Pacific Fleet ships were significantly higher than those from the Atlantic Fleet. Overall, the data show no consistent trends across reporting periods. The implication of this finding is that experimental (HRAV) and control units must be matched on the basis of fleet.

Data for reporting periods are further broken down in Table B-2 by fleet and type class. Again, where comparisons are possible, NJP rates within all types of units (Cruiser, Destroyer, Escort, Amphibious Warfare) were higher for Pacific Fleet ships. Also, there are consistent differences between types of ships. Amphibious ships reported the highest number of NJPs in both fleets, a finding consistent with Crawford and Thomas (1975).

Table B-2

Ship Nonjudicial Punishment (NJP) Rates
by Ship Type and Fleet for Five Reporting Periods

Ship Type	NJP Reporting Period					Overall
	Jul-Dec 73	Jan-Jun 74	Jul-Dec 74	Jan-Jun 75	Jul-Dec 75	
Pacific Fleet						
Cruiser	17.25 (N=2)	21.04 (N=14)	22.31 (N=14)	25.42 (N=14)	22.53 (N=14)	22.63 (N=58)
Destroyer	18.68 (N=4)	20.23 (N=40)	20.92 (N=39)	25.44 (N=38)	19.80 (N=37)	21.51 (N=158)
Escort	16.37 (N=7)	18.74 (N=30)	19.38 (N=31)	23.54 (N=31)	20.35 (N=31)	20.29 (N=130)
Amphibious Warfare	27.64 (N=10)	31.63 (N=31)	27.31 (N=30)	31.70 (N=28)	24.97 (N=31)	28.75 (N=130)
Atlantic Fleet						
Cruiser	11.25 (N=12)	15.84 (N=11)	13.28 (N=11)	14.01 (N=12)	13.46 (N=8)	13.54 (N=54)
Destroyer	17.11 (N=37)	20.01 (N=37)	20.45 (N=40)	18.83 (N=37)	17.94 (N=27)	18.95 (N=178)
Escort	13.24 (N=27)	15.22 (N=28)	14.74 (N=30)	16.60 (N=28)	18.05 (N=23)	15.48 (N=136)
Amphibious Warfare			25.65 (N=27)	24.16 (N=27)	23.92 (N=18)	24.66 (N=72)
Auxiliary/Underway Replenishment			19.73 (N=35)	21.54 (N=34)	19.32 (N=29)	20.24 (N=98)

Note. The NJP rate for a ship is based on the mean number of NJPs per 100 enlisted men during a 6-month reporting period.

NJP rates within other types of units vary as a function of both fleet and type. For example, in combining the data for all five periods, cruisers had the lowest NJP rate in the Atlantic, whereas escorts were lowest in the Pacific. Again, these findings indicate that matching must include both fleet and type of unit.

Employment Schedule

A final variable that was considered as a potential moderator of NJP rates was a ship's employment or operational schedule. While ships participate in various types of scheduled operations, for the purposes of this report, the following three types of employments were considered: (1) Deployment--a period when the ship leaves the East or West Coast for a major overseas tour, (2) Overhaul--a period when the ship is in a shipyard to receive major work, and (3) All other periods (regular)--activities other than those subsumed under 1 and 2 above.

For analysis purposes, a decision rule was established whereby a ship was considered in employment states 1 or 2 only if 3 or more months out of the 6-month NJP reporting period were spent in that particular employment. For example, if a ship was deployed only 1 of the 6 months but was in an overhaul status for 3-1/2 of the remaining months, that time frame was considered an "overhaul" period. If a ship was not in a deployment or overhaul status, it was considered in the regular category. Using this system, mean NJP rates were determined for each type of employment. The results are given in Table B-3.

Analyses of variance revealed that for the Atlantic Fleet, NJP rates significantly varied as a function of type of employment. The significant F ratio was the result of the lower NJP rates during those periods where units were deployed. There were no significant differences associated with deployment status in the Pacific Fleet although the highest NJP rates occurred during periods of deployment.¹ Whatever the cause for these differences, they suggest that deployment schedules should be a relevant matching variable, at least within the Atlantic Fleet.

¹One possible explanation of this difference concerns the different itineraries for deployments within each Fleet. In the Atlantic, ships have few stopover points between the East Coast and the Mediterranean Sea. In the Pacific, ships have more stopovers including Pearl Harbor, Guam, Subic Bay, etc. The result is that there are few chances for "liberty related" disciplinary offenses to occur in the Atlantic. Also, it has been suggested to the authors that there may be stricter rules related to liberty in the Mediterranean than in the Far East.

Table B-3

Ship Nonjudicial Punishment Rates by Fleet
for Different Employment Periods

Fleet	Type of Employment			df	F
	Mean Rate When Deployed	Mean Rate During Overhaul	Mean Rate During All Other Periods		
Pacific	25.24 (N=83)	22.35 (N=38)	23.91 (N=91)	(2,209)	1.11
Atlantic	15.26 (N=74)	21.69 (N=28)	20.64 (N=130)	(2,229)	11.21*
Overall	20.54 (N=157)	22.07 (N=66)	21.99 (N=221)		

Note. The NJP rate for a ship is based on the mean number of NJPs per 100 enlisted men during a 6-month reporting period.

* $p < .001$

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