1997

A Study to Investigate the Implementation of Performance Standards and Feedback Reports on the Effect of Productivity of Substance Abuse Clinicians at a Community Mental Health Center

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A STUDY TO INVESTIGATE THE IMPLEMENTATION OF PERFORMANCE STANDARDS AND FEEDBACK REPORTS ON THE EFFECT OF PRODUCTIVITY OF SUBSTANCE ABUSE CLINICIANS AT A COMMUNITY MENTAL HEALTH CENTER

A Research Paper

Presented to the Graduate Faculty of the

Department of Occupational and Technical Studies

at Old Dominion University

In Partial Fulfillment

Of the Requirements for the

Master of Science in Education Degree

By

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October 1997

Approval Page

This research paper was prepared by Fred W. Jenkins under the direction of Dr. John M. Ritz in OTED 636, Problems in Education. It was submitted to the Graduate Program Director as partial fulfillment of the requirements for the Degree of Master of Science of Education.

APPROVAL BY: John M. Ritz 10-30-97

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CHAPTER I

INTRODUCTION

The ability of an organization to measure employees' productivity and performance is paramount to the economic health of a business. In the industrial model of productivity, efficiency and effectiveness are evaluated through the measurement of inputs and outputs, usually in units of goods produced and/or units of labor. Interest in the measurement of the productivity of providers of mental health services has significantly lagged behind their industrial counterparts.

Managers of mental health services have not, in the past, applied accountability measures for evaluation purposes of clinical staff. Clinicians have focused on outcomes as related to individual clients' improved functioning. The measurement of client improvement has often been a subjective process with minimal use of applicable measurement tools. This unfamiliarity, usually discomfort, with defined criteria for measuring outcomes, has also been a barrier to the application of clear productivity and performance standards in the mental health field.

The demand to contain the costs of mental health services driven by funding cutbacks and health management organizations has forced mental health agencies to attempt to adapt unfamiliar productivity and performance standards to their evaluation processes. Comprehension of the goals and criteria for measuring productivity and performance is essential to the successful application of the measurement process. Management of mental health services, to survive the era of measurement, increased

cutbacks and forced downsizing of staff and resources must be able to marry the individuality of clinical work to a model of accountable productivity.

STATEMENT OF THE PROBLEM

The problem of this study was to investigate if the implementation of performance standards and feedback reports has an effect on the productivity of substance abuse clinicians at a community mental health center.

RESEARCH HYPOTHESIS

The following hypothesis was selected to guide this study.

H1: The implementation of performance standards and monthly measurement reports will improve the productivity of mental health clinicians in a community mental health facility.

BACKGROUND AND SIGNIFICANCE

As America moves toward the twenty-first century, the utilization of goal setting and feedback procedures in the mental health services has become a pains taking chore that administrators have been avoiding for many years. Interventions that have been applied extensively in industrial settings to study the combined effects of productivity, efficiency and effectiveness of the overall performance of employees have not been applied to mental health clinicians (Sajwaj, Schnelle, McNees, and McConnell, 1983, pp. 245-261).

Establishment of an evaluation model that will measure the productivity and performance of clinical staff without limiting their ability to develop individual treatment plans for clients is paramount to the survival of community operated mental health

facilities. A system that promotes open discussion and provides positive feedback can only increase service time in the face of limited resources. Managers and administrators must be in a position to deal with issues of training and education as related to the newly established productivity model.

LIMITATIONS

The limitations that apply to this study included:

1. The information derived was from contact with clinicians and administrators at an urban community mental health center.

2. Clinicians have access to and have been trained in the productivity and performance evaluation process that is already in place at the community mental health center.

ASSUMPTIONS

The researcher made the following assumptions:

1. Clinicians were willing to accept productivity and performance evaluations.

2. Clinicians have a working knowledge of the productivity and performance model of evaluation.

3. Productivity and performance standards will be used equally for the betterment of the agency and ultimately the clinician and client.

PROCEDURES

The researcher used performance data to conduct this study. The results of the data were collected and tabulated. The results were determined by evaluating

performance data provided by administrative staff. Finally, the performance reports were analyzed and the results and explanations were tabulated.

DEFINITION OF TERMS

The following terms are defined to assist the reader in understanding this study:

1. Productivity - Yielding favorable or useful results; constructive (The American Heritage Dictionary, Second College Edition, 1985, p. 989).

2. Performance -The way in which someone or something functions (The American Heritage Dictionary, Second College Edition, 1985. p. 922).

OVERVIEW OF CHAPTERS

The problem of this study was to investigate if the implementation of performance standards and feedback reports effect the productivity of substance abuse clinicians at a community mental health center. With information provided by clinical and administrative staff, it will be decided if performance and productivity procedures reinforce the need for mental health service agencies to evaluate their clinicians under a cost and effect model.

This project will help determine the ability of management to provide services to the community more efficiently and effectively without damaging the individuality of clinical work in an era of forced downsizing and reduced funding. Chapter II reviews the literature that the study is based on and Chapter III further defines the methods and procedures that are to be used. Chapter IV states the report's findings and Chapter V presents the summary, conclusions and recommendations that have been drawn from this study.

CHAPTER II

REVIEW OF LITERATURE

This chapter will review the literature concerning the field of mental health, dealing with program effectiveness, performance and productivity. It will also review what administrators, and clinical staff, are required to do for the mental health agency to survive.

PURPOSE

In the field of mental health, there has been an emphasis on program effectiveness, in terms of improved functioning of clients, and a neglect of the issue of staff efficiency. Administrators, clinical staff, and the clients have been more attentive to consumer issues such as satisfaction with services and accessibility. With little interest and even less knowledge in productivity measurement of mental health service providers, there have been few efforts to develop models which would effectively apply to this profession. Managers of mental health services usually have their background in human services rather than in business administration, so they are minimally trained to meet the demands of applying industrial models of efficiency and effectiveness (Hall, 1985, p. 409).

The current need to contain the costs of mental health services while meeting the increasing demands for services requires the development of practical strategies for managing the cutbacks in resources (Hall, 1985, pp. 409-416; Walfish, et al., 1986, p. 630). Sajwaj, et al. (1983, p. 246) considers the ability to monitor and evaluate the quantity and cost of work performance as vital to the organization. If staff performance is variable or consistently low, the program costs can outweigh the issue of effectiveness

because the program may not survive. Low output may reduce services which leads to waiting lists and denial of services which may lead to loss of public confidence and client revenue. Reduced government funding demands an increasing need to generate other sources of income which equates with a need for increased efficiency. Walfish, et al. (1986, pp. 245-261) developed a study which generated seventy-seven separate action strategies to deal with cutbacks and had them rated by top managers and middle managers using the Delphi method. The top manager pool ranked "develop productivity standards" in the top ten, but the middle manager pool did not rank this item in the top ten.

STRATEGIES

Two of the most widely used strategies to increase work productivity are goal setting and performance feedback (Calpin, et al., 1988, p. 35). Most of the studies have been done in industrial settings, with a very limited number being done in mental health settings. In measuring the effects of feedback (self-generated through self-monitoring) and goal setting on productivity in a mental health setting, Calpin, et al. (1988, p. 53) found that the mean level of performance was higher during self-monitoring than at the baseline and even higher during the self-monitoring plus goal setting phase. An important factor is that performance needs to be measured in terms of variables which are under the control of the staff and not in terms of variables which are affected by other factors.

The emphasis and need for accountability has promoted the development of elaborate information systems which are responsive to the program evaluation requirements of funding and government agencies. Kowalsky and Cohen (1984, p. 138) demonstrated, through their study of the differential effects of two types of performance

feedback (cueing or evaluative), that the distribution of feedback reports caused administrative and on-line staff to focus more on data collection, interpretation, and utilization than ever before. There are motivational effects which occur as a function of the goal setting which responds to the knowledge gained by the staff through feedback. Electronic monitoring systems are being developed as part of the evolving emphasis in industry on employee performance as a major element in a competitive work environment (Shell & Allgeier, 1992, p. 43). These systems can be utilized in mental health systems to provide data about worker performance in a positive way. Communication is the key to effective performance. There remains the challenge to the managers of programs to assure a reasonable level of productivity while maintaining effectiveness, equity, and efficiency.

SUMMARY

With the advent of funding reductions and an emphasis on managed care, even in the public sector, the need to measure productivity has increased significantly. Vague standards and data reports are not sufficient to determine the cost effectiveness of services and clinical time. Chapter III will discuss the methods and procedures used to gather the data for this study. The methods of data analysis will be provided and explained.

CHAPTER III

METHODS AND PROCEDURES

Chapter III contains a description of the methods and procedures used to obtain the needed information for this study. It describes the population of the study and the statistical data to be obtained from the community mental health center's substance abuse program. The analysis of how the data will be treated is described in detail.

POPULATION

Mental health clinicians trained in treating chemically dependent and substance abusers are the population for this study. The clinicians are employed by the City of Virginia Beach Community Services Board. They specifically work in the outpatient substance abuse program. The program usually employs ten full time professional clinical staff members. Of the ten staff potentially available for this study, one clinician left the center after a long illness, one staff serves as the case manager for the unit, and four were hired in October 1995 or later which does not allow for sufficient data collection. Of those clinicians included in this study, one is working toward licensure as a professional counselor in Virginia and certification as a substance abuse counselor, two are currently licensed and certified, and one is certified but not licensed. Three of the clinicians work predominantly with adult chemically dependent clients and one with adolescents. Two clinicians are white females in their forties; one is a white male in his fifties; and one clinician is a black female in her forties. The total population for this study was four clinical staff members.

PRODUCTIVITY FEEDBACK REPORTS

The productivity feedback reports used for this study were begun in the Outpatient Services Program of the Comprehensive Substance Abuse Program in November of 1995. The performance standards had been developed with the input of voluntary team's of clinicians from the program. The computation for the monthly reports includes a summary of the actual number of clients seen for a clinical service by the clinician during the month. This is translated into the number of billable clinical hours provided to clients, i.e., individual session equals an hour, a group session equals an hour and a half, etc. The billable hours is computed as a percentage of the actual available work hours. Available hours are the number of hours actually worked, so sick and leave time are not included. The number of hours is then translated into the revenue generated by all clinical services provided.

The Community Services Board is a public agency and receives funding from the federal, state, and city governments to allow citizens to access services on an ability to pay basis. Therefore clients pay at different rates for the same services. Using the actual amount billed to the clients would not allow for equity in determining revenue generated. The amount used for the report is the fee billed to the client at one hundred percent assessment. The reports are provided to the clinicians on a monthly basis. They have the opportunity to review their results each month. Each clinician sees the results of the other clinicians' reports, but no other results are identified by name.

RESEARCH DESIGN

This study will utilize a quasi-experimental design. There are three variables used to measure the monthly productivity levels for each clinician: percentage of billable hours per month, amount of revenue, and number of clients receiving a service. An interrupted time series design will determine if the implementation of performance goals and feedback reports has an impact on the productivity levels as measured by the three dependent variables. The data will be examined for a year prior to the implementation of the standards and reports and a year after. Multiple regression will be used to provide a statistical test for the results. To determine if a short term impact has occurred, two new variables will be created, a time variable and a program variable. To investigate a long term impact, a time variable will also be created as well as a variable which will be coded as 0 before the implementation of the productivity reports and as a counter variable (1, 2, 3, 4, 5, etc.) after the reports are in place.

DATA COLLECTION

Data for this study was obtained from the Virginia Beach Community Services Board Comprehensive Substance Abuse Program for the time period of November, 1994, through October, 1996. The Virginia Beach Community Services Board approved the release of the data with the understanding that no information identifying the clinicians would be used. It was agreed that only numbers would be used to identify the staff.

STATISTICAL ANALYSIS

Utilizing an interrupted time series analysis to evaluate the impact of the performance standards and productivity reports, productivity measurements were

recorded for twelve months prior to the implementation of the new process and for twelve months after implementation. Multiple regression was used for the statistical analysis. In this analysis, the researcher tested for both a short-term and a long-term impact of the new program. It would be possible for the program to have an immediate impact on productivity but fail to change the productivity levels over time. Using multiple regression, three variables are created. Months (1 through 24), in which the productivity levels are reported, is the time trend variable (X1). Two dummy variables are created: one for short-term (X2) and one for long-term (X3). The short-term variable (X2), called the program variable, is coded 0 prior to the implementation of the program and coded 1 after the implementation. The long-term variable (X3) indicates a change in slope impact and is coded 0 prior to the program implementation and is coded as a counter variable (1, 2, 3, 4, 5, etc.) after the implementation.

A 2-tailed t-test was also computed to determine if the differences between the means of the dependent variables, pre and post implementation of the program, were statistically significant. This analysis would provide information about the impact of the performance standards and feedback reports implementation on the percentage of billable hours, the revenue generated, and the number of clients seen for the four clinicians as a group.

SUMMARY

The productivity levels of the mental health clinicians were examined to determine if the implementation of performance standards which clearly state productivity goals and the accompanying monthly reports would impact the productivity rates of the clinical staff.

The hypothesis of this study is that the rates would increase after the implementation.

Chapter IV discusses the findings of the study and data analysis.

CHAPTER IV

FINDINGS

The purpose of Chapter IV is to present the reader the findings of the information that was gathered for this study. The problem of this study was to determine if the implementation of performance standards and feedback reports has had an effect on the productivity of substance abuse clinicians at the Virginia Beach Community Services Board Comprehensive Substance Abuse Program.

DATA COLLECTED

The information that was gathered from the Virginia Beach Community Services Board Comprehensive Substance Abuse Program covered a twenty-four month time period from November, 1994, through October, 1996. The clinicians identified for this study have been employed by the Virginia Beach Community Services Board as substance abuse clinicians for a minimum of twenty-four months. Approval for the release of the data was obtained with the understanding that no information identifying the clinicians would be used.

In the following tables, the values and significance levels of the three dependent variables, percentage of billable hours, amount of revenue, and number of clients receiving a service per-month are illustrated. The findings initially discussed are presented in Tables 1-7.

Table 1 lists the values and significance levels of R2 for each dependent variable measured for each of the four clinicians in this study. The value of R2, the multiple coefficient of determination, indicates the total amount of variance in productivity

performance accounted for by all three independent variables: month, short term and long term. The results for Clinician 1 and 2 are mixed. For Clinician 1, only 6.7% (.067) of the variance in percentage of Billable Hours was explained by the program implementation, but 45.3% (.453) of the variance in Revenue and 58.3% (.583) of the variance in Clients were explained. Setting $p < .01$, the ANOVA test indicates significance at the .006 level for Revenue and the .002 level for Clients (see Table 1).

MULTIPLE REGRESSION COEFFICIENTS						
	BILLABLE HOURS	SIG. LEVEL	REVENUE	SIG. LEVEL	CLIENTS	SIG. LEVEL
CL1	.067	.703	.453	.006	.583	.002
CL2	.401	.015	.293	.069	.356	.029
CL3	.129	.454	.129	.419	.097	.552
CL4	.792	.003	.674	.003	.673	.003

p<.01
CL1,2,3 and 4 = CLINICIAN 1,2,3 and4
SIG. = SIGNIFICANCE

Table 1

The date indicates no statistical significance in the multiple regression coefficients of any of the dependent variables for Clinician 3. For Clinician 4, the variance explained by the independent variables for all three dependent variables is notable: 79.2% (.792) for Billable Hours; 67.4% (.674) for Revenue; and 67.3% (.673) for Clients. The significance level is .003 for all three categories.

Table 2 shows the partial regression coefficients for all four clinicians for Billable Hours. There are four statistically significant coefficients. The short term impact variable for Clinician 2 has a significance level of .005 with a value of -20.643. All partial regression coefficients for Clinician 4 are statistically significant: month is .004 with a value of 3.524; long term impact is .004 with a value of -1.862; and short term impact is .008 with a value of -14.553.

BILLABLE HOURS			
PARTIAL REGRESSION COEFFICIENT (B) / t TEST / SIGNIFICANCE			
	MONTH	LONG	SHORT
CL1	-.851 / -.718 / .481	1.545 / .921 / .368	-4.188 / -.360 / .723
CL2	.377 / .477 / .638	.409 / .366 / .788	-.20.643 / -2.660 / **.005**
CL3	1.317 / 1.549 / .137	-.695 / -.578 / .570	-10.593 / -1.269 / .219
CL4	3.524 / 6.103 / **.004**	-1.862 / -2.281 / **.004**	-14.553 / -2.568 / **.008**

P<.01

Table 2

In Table 3, Revenue, there are six significant values which are highlighted. All three coefficients are significant for Clinician 1. Clinician 2 and 3 do not have any significant values for the variables month, long and short term. The coefficients for the dependent variables for Clinician 4 are all significant.

REVENUE			
PARTIAL REGRESSION COEFFICIENT (B) / t TEST / SIGNIFICANCE			
	MONTH	LONG	SHORT
CL1	-329.524 /-3.598 / **.002**	470.245 / 3.631 / **.002**	395.036 / .439 / **.002**
CL2	-292.115 /-2.284 / .013	509.035 / 2.814 / .018	-71.509 / -.057 / .955
CL3	146.416 / .955 / .351	57.615 / .266 / .793	-2289.49 / -1.522 /144
CL4	464.615 / 5.605 / **.006**	389.203 / -3.320 / **.003**	-1828.73 / -2.248 / **.006**

P<.01

Table 3

In Table 4, The Clients variable indicate significance for month and long term impact for Clinician 1. The same is true for Clinician 2 and Clinician 4. There were no significant values for Clinician 3.

CLIENTS			
PARTIAL REGRESSION COEFFICIENT (B) / t TEST / SIGNIFICANCE			
	MONTH	LONG	SHORT
CL1	-8.836 / -4.293 / **.004**	12.248 / 4.208 / **.002**	.164 / .008 / .994
CL2	-5.538 / -2.381 / **.007**	10.853 / 3.299 / **.004**	-8.917 / -.391 / .700
CL3	3.643 / 1.262 / .221	-1.843 / -.451 / .657	-37.660 / -1.329 / .199
CL4	9.101 / 5.243 / **.005**	-8.580 / -3.495 / **.002**	-22.277 / 1.308 / .206

P<.01

Table 4

Table 5 provides a summary of findings. Clinician 3 had no significant values and Clinician 4's values were all significant except for the partial regression coefficient for the short term impact of the Client variable. The results for Clinician 1 and 2 are mixed. Both had two statistically significant multiple regression coefficients: Clinician 1 - Revenue and Clients; Clinician 2 - Billable Hours and Clients. The results for the partial regression coefficients for month and long term impact are statistically significant for the Revenue and Client variables for Clinician 1 and 2. For the short term impact variables, Clinician 1 had a statistically significant value for Revenue and Clinician 2 for Billable Hours. This table reveals that the variable, Billable Hours, had the least number of statistically significant coefficients and variables; Revenue and Clients had the highest frequency of statistical significance.

SIGNIFICANCE SUMMARY

PARTIAL REGRESSION COEFFICIENTS

	R2			MONTH			LONG			SHORT		
	B	R	C	B	R	C	B	R	C	B	R	C
CL1	-	.006	.001	-	.002	.003	-	.002	.003	-	.002	-
CL2	.005	-	.009	-	.003	.004	-	.001	.004	.005	-	-
CL3	-	-	-	-	-	-	-	-	-	-	-	-
CL4	.001	.003	.002	.004	.003	.002	.002	.003	.002	.018	.036	-

P<.01
B = BILLABLE HOURS R = REVENUE C = CLIENTS

Table 5

The pre and post program means for each of the dependent variables is provided in Table 6.

MEAN	PRE	POST
BILLABLE	50.4548	50.0904
REVENUE	$6149.63	$6221.63
CLIENTS	129.00	112.96

Table 6

There is little difference between the means for all three variables. The t-Test results support this conclusion (see Table 7).

t-TEST			
	MEAN DIFFERENCE	t SCORE	SIGNIFICANCE (2 TAILED)
BILLABLE	.3735	.144	.886
REVENUE	-.72.0000	-.202	.840
CLIENTS	16.04	.984	.330

P<.01

Table 7

There is no statistical significance in the differences between the means of the pre-program and post-program dependent variables.

SUMMARY

This chapter reported the findings of the data collected and tabulated from the Virginia Beach Comprehensive Substance Abuse Program. The impact the implementation of performance standards and feedback reports from the data collected will be analyzed in the following chapter. Chapter V will also contain conclusions and recommendations for this and future research studies.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

SUMMARY

The problem of this study was to investigate if the implementation of performance standards and feedback reports has an effect on the productivity of substance abuse clinicians at a community mental health center. To accomplish this, information provided by clinical and administrative staff was collected and tabulated from the Virginia Beach Comprehensive Substance Abuse Program. The information that was gathered consisted of billable hours, revenue and clients from four clinicians. This information evaluated the monthly productivity levels for each clinician.

This study was significant because the utilization of goal setting and feedback procedures in the mental health services has been avoided for many years. Productivity and performance evaluation reports of employees have been applied extensively in the industrial setting to help establish a base line that can measure performance and productivity. Mental health agencies have been reluctant to establish productivity and performance evaluation reports that can help administrators establish a base line that can be used for the measuring of a individual clinician's productivity and performance. Administrators armed with this new information can evaluate each clinician individually to assure that each client is receiving the best possible treatment.

This study was limited to information derived from contact with the clinical staff and administrators at an urban community mental health center. The clinicians for this

study must have access to and have been trained in the performance evaluation process at the community mental health center.

The researcher then establish criteria that determined the population for this study. The population for the study was fixed by the individual clinician's length of employment. A twenty-four month period to include November 1994 through October 1996 was established as requirements for this study.

Data for this study was obtained from the Virginia Beach Community Services Board Comprehensive Substance Abuse Program for the time period of November, 1994, through October, 1996. Approval and release of the data was given by the Virginia Beach Community Services Board with the understanding that no information identifying the clinicians would be used.

Data for this study was compiled by the researcher. After organizing and tabulating the data, a quasi-experimental design was used to determine the impact of the performance standards and productivity reports had on the research hypothesis.

Virginia Beach, Virginia, established a community mental health center for the treatment of substances abuse clients. Virginia Beach's population size may be relatively small and the demographics may not be totally representative of the nation. With this in mind, one can only speculate on whether this study will have any impact in other areas of the country.

CONCLUSIONS

The research hypothesis for this study was: H1: The implementation of performance standards and monthly measurement reports will improve the productivity of mental health clinicians in a community mental health facility.

The results of this study, which included four of the ten full-time staff, are mixed. The comparison of means between pre- and post-program implementation indicates there were no statistical significance in the differences in any of the variables measured. The implementation of the performance standards and feedback reports did not impact the productivity rates for the four clinicians in this study. The multiple regression analysis indicates there was statistical significance depending on the dependent variable and particular clinicians. There was no statistical significance for Clinician 3 and mixed results for Clinicians 1 and 2. For Clinician 4, there was statistical significance in almost all areas but the direction was negative for both the long and short term impacts. This widespread range of values calls for an investigation of other factors which are impacting the productivity rates of the clinical staff.

RECOMMENDATIONS

Based on the information gathered, it is recommended that further studies investigate the impact of other variables on productivity rates of mental health clinicians. There are factors which are within the control of the clinicians, i.e., how they schedule their time, number of groups they facilitate, number of hours they work per month, but there are certain factors which are not within their control, i.e., show rate of the clients scheduled and number of clients needing services. The types of clients seen may impact

productivity. Chronic clients who are severely dysfunctional demand much time beyond scheduled sessions. The professional level of the clinician may also influence productivity levels.

The inconsistent results of this study call for a re-evaluation of the application of the productivity report. More intensive training of the clinical staff who are evaluated annually with an emphasis on productivity levels may allow for a better understanding of the purpose of productivity measurement and goal attainment. Accountability has significantly increased because of the decreasing funding sources and managed care and this will continue throughout the twenty-first century. Clinicians struggle with the concept of productivity as a measurement of their value and the paradigm shift has been difficult for this profession.

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