Effectiveness of Performance Appraisal System in Large and Medium Size Manufacturing Organisations

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Abstract: It has now been widely realized that effectiveness of performance appraisal system(PAS) depends on the extent to which the HRD components are a part of the system and how well it is being implemented in practice from the viewpoint of both the appraisers and appraisees. It was emerged form the study that a number of variables in all the three categories (vizPAS design content variables, PAS content variables and PAS outcome variables) were being taken care of the large extent in the study organizations. However the study also identified many variables (in all the three categories) were being taken care of only to the moderate extent. In the study, it was suggested that the "The moderately taken care of variables 'need special attention of the concerned managers in particular and HRD professionals. In general. intercorrelations between the various variables were also established in the study. In depth and empirically tested analysis in this context is being presented in paper

Key Words: Appraiser. Appraisee, Career Planning, Employee Satisfaction, Motivation

I. Introduction

Human Resources are vital assets for organizational Success. These are to be valued highly for achieving the competitive edge.In this direction, the HR policies and practices should be linked with the organizational goals. The impact of HRM practices can be source for sustained competitive advantage .Enhancement of organizational performance should be the focus for an organization Wright et.al.1999).studies have suggested that training,selection,appraisals,compensation,linking of HRM Practices index to both financial and market outcomes have linkage with organizational Performance (Russel,1985;Terpstraet.al1993; Macduffe,1995;Guest and Hoque,1994;Pfeffer,1994,

Different intangibles assets like customer loyalty, capacity to innovate and change, brand image intellectual capital leadership effectiveness aspects depend heavily on employee's capabilities and commitment. The reality for many organizations is that their human resources remain undervalued, undertrained and underutilized(A.S.Kohli & T.Deb,2008).Different models on HRM like Hayward Model By Michael Beer(1984), Wheeler and Sillanpa(1997), equally emphasize on the performance outcome of the employees and benefit to all the stakeholders interest including organizational effectiveness. The theoretical treatment provided by Jackson and Schuler (1995) discusses on the role and functional aspects of human resources to help developing the area of Human Resource Management .An Integrated Model on Human Resource Management (A.S.Kohli, 2008). It is difficult to trace the true antecedent of formal performance appraisal. But it seems that the performance appraisals of workers on annual basis began with the advent of the industrial revolution in the late Eighteenth century (Kohli, 2008)The basic purpose was to access the the productivity of the worker .The rating of the performance was introduced in the 1920s.The focus of appraisal changed to assessing the personality traits of workers after the Hawthorne studies. And it brought merit rating method for assessing the performance. However the method came under severe criticism as it focused more on the personality traits of workers. Morever traits measures were subjective and dubious in predicting the outcome of an employee(Napier & Latham,1986). Then MBO approach of appraisal advocated by Peter F. drucker gained popularity.But,too much subjectivity and inconsistency were the limitations of this approach .over time performance management as a concept evolved and gained attention (Beer and Ruh, 1976). The real concept of performance management aims for enhancing the performance of both individuals and the organization(Fletcher,1933). And in due course of time many performance management systems like pyramid(Cross and Lynch,1991)Balance scorecard (Kaplan & Norton,1992),Performance Prism(Neeley, 2000) have been developed providing a scope for appraising multiple dimensions of performance.

Performance management is s strategic

Tool integrated Approach for delivering sustained success to organizations by improving the performance of those who work in them and by developing the capabilities of teams and individual contributors. Development is perhaps the most important function of performance management .Performance improvement is not achievable unless there are effective processes of continuous development. Performance

management is concerned with outputs-the achievement of results and with outcomes the impact made on performance .But it is also concerned with the process required to achieve these results and the inputs in terms of capabilities (Knowledge ,skill and competencies) expected from the teams and the individuals involved .Effective appraisals begin with defining the job and its standards,however,the job description often isn't sufficient to clarify what you want your subordinates to do, because most are written not for specific jobs but for group for jobs. E

II. Literature Review

To get the most out of this resource of people, they must be motivated. However, Cole(2001) and Wright(2001) argue that people cannot be motivated .Cole and Wright go on to say that people motivate themselves and managers can provide the environment for them to be motivated. There are many ways to provide a motivational environment for employees and these included developing their skills ,giving them feedback and rewarding in ways that means something to them. Therefore performance appraisal can be used as a tool to assist managers in motivating their employees .Performance management includes any management activity aimed at improving performance through training and developing employees, establishing performance standards ,appraising performance ,setting performance plans and through managing career and mobility (Matheney, 2003). According to Baker (1988) performance appraisal can be most powerful tool that managers have for improving productivity. When designed and used properly, it can assist organizational decisions on reward and promotions assist employees in their development and career planning and may even increase employees motivation .commitment and satisfaction (Fletcher1993; Wiese and Buckley,1998; Wilson and Western 2001) especially if the performance appraisal process is aligned with the organization stated objectives (wright, 2002). However, this alignment tends not be emphasized and as such performance appraisal process is often seen as chore and pointless ,judging past performance against targets that are not always clear(Rudman, 2003). Further more , when managers felt ill-equipped to conduct effective appraisal it is a task they hate(Pettijohn, Parjer, Pettijohn and kent, 2001); Rudman 2003 and performance appraisal is also capable of stirring strong feelings (Fink and longneck ,1998). Sadly as pointed out by Simmons (2003) appositive performance appraisal experience tends to be due to the quality of the personal relationship between manager and employee ,where a good relationship creates a good appraisal experience

III. The Study

The present study was designed to make an in-depth study of effectiveness of existing performance appraisal system with reference to selected manufacturing organizations. The study was conducted with a view to achieve the following objectives

- 1) To explore the extent to which the various PAS "Design/Content Variables (DCV)", PAS"Process Variables (PV) and PAS "Outcome Variables (OV)" Could be taken care of by the selected organizations
- 2) To examine the cause and effect relationship of the DCV's PV's and OV's on the overall effectiveness of PAS in the study Organisations

IV. Methodology

Sampling Design

The present study was conducted with reference to Ten eight large and medium size manufacturing organizations belonging to private sector located within jurisdiction of Rewari, Gurgaon and Dharuhera in India. The selected organizations represent variety of Industries which manufactures different products belong to different business groups, fall in varying age groups and which also have different levels of profits, employees strength.

The study was mainly based on the cross-section perception analysis of the employees .However ,the study was confined to the perception analysis of the personnel in the managerial cadre, Senior and middle level managers in the role of the appraisers and middle and junior managers in the role of appraises were considered for such analysis.

Out of eleven hundred managers in the population ,three hundred seventy senior and middle managers were found to be in the role of appraisers and seven hundred thirty middle and junior managers were found to be in the role of appraisees. Out of three hundred seventy such appraisers one hundred fifty (Fourty percent of population) and out of such seven hundred thirty such appraises four hundred(fifty percent of population) were selected to respond to two specifically designed and well structured questionnaires as shown in Table –I. out of these two questionnaires one was framed for the appraiser 's response and the other was for appraiser's response .each questionnaire consisted of thirty seven statement with Likert type five point scale .Thirty one independent variable were considered for the study (as shown in Table –ii) out of which DCV's ,PV;s and OV's were fourteen ,eleven and six respectively. The overall effectiveness of the PAS was taken as the Dependent Variable divided into Five variables.

The tools of statistical analysis consisted of absolute numbers ,mean scores ,comparison of mean scores ,Pearson's Coefficient of Co-rrelation ,multiple regression analysis,ANOVA,t-test and Kolmogrov-Smirnov two sample Test

Table-ICoverage of the Managers (Respondents) in the Sample Survey

	T			T	T
Cadre	Univ	Number Senior and	Sample Size of	Number of Middle	Sample Size of
	erse	Middle Level	Appraisers	Level and Junior	Appraises
		Managers in the	selected From	Managers in the	selected from
		Role of	the Population	Rolae of	Population
		Appraisers(Populat	_	Appraises(Population	-
		ion Size)		Size)	
Senior Level	250	250	100(40%)	-	-
Managers					
Middle Level	250	120	50(42%)	130	130
Managers					
Junior Level	600	-	-	600	270(45%)
Managers					
Total	1100	370	150(40%)	730	400(54%)

Research Hypothesis

The following hypothesis have been tested in the present study

- (1) All the selected independent variablers are positively correlated to each other
- (2) There exists relationships between the effectiveness of PAS with (a) PAS Design/Content Variables ,(b) PAS Process Variables and (c) PAS outcome variables

Table-II List Of Variable Affecting The Overall Effectiveness Of Pas In The Organisation A. Performance Appraisal System "Design and Content Variables" ("DCV")

DCV-1	Employees have clear understanding of what is expected from them regarding their
	performance in the organization
DCV-2	Performance Appraisal System helps in planning employee's performance well
DCV-3	Performance Appraisal System provides an opportunity for supportive superior subordinate communication ,to facilitate the employee's Job Performance
DCV-4	The Performance Appraisal System provides scope for self appraisal and reflection to the employees
DCV-5	The Performance Appraisal System encourages common understanding between the superior and the subordinates of the factors affecting the employee's performance
DCV-6	Performance Appraisal System provides an opportunity for discussing the expectations achievements, failures, constraints and improvements needed between superiors and the subordinates
DCV-7	Performance Appraisal System provides scope for reflection and assessment of the employee's personality factors attributes required for their job performance
DCV-8	Performance Appraisal System encourages open communication between superior and subordinate through performance review discussions
DCV-9	Performance Appraisal system provide scope for employee's expression on their developmental
DCV-10	Performance Appraisal System provides an opportunity for the redressal of employees grievances
DCV-11	Performance Appraisal System aims at strengthening mutual understanding and relationship between superiors and subordinates
DCV-12	Performance Appraisal System helps employees to gain insights into their strengths and weaknesses
DCV-13	Performance Appraisal helps employees in discovering their potential for preparing themselves to take up future likely roles of higher level
DCV-14	Performance Appraisal System provides scope for communicating the overall business goals and plans to the employees

B .1 Performance Appraisal System "Process Variables"

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PV-1	The objectives of performance appraisal system are clear to both superior and
	subordinates
PV-2	Periodic orientation programmes on Performance Appraisal Systems are conducted
PV-3	Superiors spend time and discuss subordinates performance
PV-4	Superiors help their performance in planning subordinates performance in the
	beginning of the performance period
PV-5	Performance Review discussions on KPA's/KRA's Tasks/Targets are educative to
	both superiors and subordinates
PV-6	Superiors take performance appraisals seriously
PV-7	Employees work thoroughly on self appraisal in terms of reviewing ,reflecting and
	analyzing the factors affecting their performance
PV-9	Superiors devote sufficient time to performance review discussions
PV-10	Performance Review Discussions are of high quality and conducted with care
PV-11	Employees take active part in performance review discussions

B2 Performance Appraisal System "Outcomes Variables" ("OV")

OV-1	Superiors and subordinates take corrective actions for improvement based on the
	outcome of performance appraisal
OV-2	HRM/HRD/Personnel Department does follow up work on training needs as identified
	through appraisals
OV-3	HRM/HRD?Personnel department make use of appraisal data for taking a variety of
	developmental; decisions
OV-4	Appraisal Data are used for recognizing and encouraging high performers and desirable
	behaviour
OV-5	HRM/HRD/Personnel Department as well as the superiors take employee appraisals
	seriously and educate
OV-6	Performance Appraisal System facilitates the growth and learning of both superiors and
	subordinates in the organization

C Dependent variable

DV	Overall effectiveness of PAS in the study organization
DV1	Performance Appraisal System promotes Quality Drive in organisation by encouraging active participation of Employees
DV2	Performance Appraisal System promotes High Morale among Employees
DV3) Performance Appraisal leads to Improve Task Performance among Employees
DV4	Performance Appraisal Promotes leadership Among Employees
DV5	Performance Appraisal Promotes Learning Among Emplyees

TABLE-III Comparative Mean Values Of Appraisers Perception On Variables In Study Organisations

Descriptive Statistics

	N	Mean	Std. Deviation
DCV-1Employees have clear understanding of what is expected from them regarding their performance in the organization	150	3.17	1.323 LE
DCV-2 Performance Appraisal System helps in planning employee's performance well	150	3.17	1.325 LE
DCV-3 Performance Appraisal System provides an opportunity for supportive superior subordinate communication to facilitate the employee's job performance	150	3.16	1.342 LE
DCV-4 The Performance Appraisal system provides scope for self Appraisal and reflection in the employees	150	3.00	1.390 LE
DCV-5 The Performance Appraisal system encourages common understanding(between the superior and subordinates) of the factors affecting the employee's performance	150	2.98	1.358 M

DCV-6 Performance Appraisal System provides an opportunity for discussing the expectations, achievements, failures, constraints and improvements needed between superiors and the subordinates	150	3.05	1.338 LE
DCV-7 Performance Appraisal System provides scope for reflection and assessment of the employee's personality factors and attributes required for their job performance	150	2.91	1.343 M
DCV-8 Performance Appraisal System encourages open communication between superior and subordinate through performance review discussions	150	2.91	1.328 M
DCV-9 Performance Appraisal System Provides scope for employee's expression on their development needs	150	2.75	1.419 M
DCV-10 Performance Appraisal System provides an opportunity for the redressal of employee's grievances	150	2.93	1.344 M
DCV-11 Performance Appraisal System aims at strengthening mutual understanding and relationship between superiors and subordinates	150	2.99	1.331 M
DCV-12 Performance Appraisal System helps improves to gain insights into their strengths and weaknesses	150	3.18	1.366 LE
DCV-13 Performance Appraisal System helps employees in discovering their potential for preparing themselves to take up future likely roles of higher level	150	3.01	1.329 LE
DCV-14 Performance Appraisal System provides scope for communicating the overall business goals and plans to the employees	150	3.00	1.336 LE
PV-1The objective of Performance Appraisal System are clear to both superior and subordinates	150	2.99	1.344 M
PV-2 Periodic orientation programmes on Performance Appraisal System are conducted	150	3.01	1.326 LE
PV-3Superiors spend time and discuss subordinate performance	150	2.94	1.342 M
PV-4Superiors help their subordinates in planning subordinates performance in the beginning of the performance period	150	2.89	1.349 M
PV-5Performance Review discussions on Key Performance Areas (KPA's)/Key Result Areas(KRA's)/Tasks/Targets are educative to both superiors and subordinates	150	2.92	1.344 M
PV-6Superiors takes Performance Appraisals seriously	150	2.96	1.315 M
PV-7Employees work thoroughly on self Appraisal in terms of reviewing, reflecting and analyzing the factors affecting their Performance	150	2.97	1.308 M
PV-8Superiors take special efforts to be objective and unbiased while making their comments on subordinate's performance	150	2.96	1.310 M
PV-9Superiors devote sufficient time to performance review discussions	150	2.81	1.348 M
PV-10Performance review discussions are of high quality and conducted with care	150	2.79	1.339 M
PV-11 Employees take active part in performance review discussions	150	2.79	1.317 M
OV-1 Superiors and Subordinates take corrective actions for improvement based on the outcome of Performance Appraisal	150	2.77	1.333 M
OV-2HRM/HRD/Personnel Department does follow up work on training needs as identified through Appraisals	150	2.77	1.308 M
OV-3HRM/HRD/Personnel Department makes use of appraisal data for taking a variety of development decisions	150	2.73	1.300 M
OV-4Appraisal Data are used for recognizing and encouraging high performers and desirable behavior	150	2.63	1.319 M
OV-5HRM/HRD/Personnel Department as well as the superior take employees appraisal seriously and educate them to overcome their personal biases	150	2.72	1.306 M
OV-6Performance Appraisal System facilitates the growth and learning of both superiors and subordinates in the organization	150	2.47	1.197 M
OVERALL EFFECTIVENESS OF PMS-Performance Appraisal System is overall Effective	150	2.67	1.323 M
Valid N (list wise)	150		

Extent (Mean Scores>3),M=Medium Extent(Mean scores>2 and <3),Small extent(mean scores<2)

TABLE-IV Comparative Mean Values Of Appraisee's Perception On Variables In Study Organisations **Descriptive Statistics**

	N	Mea n	Std. Deviat ion
DCV-1Employees have clear understanding of what is expected from them regarding their performance in the organization	400	3.43	1.139 LE
DCV-2 Performance Appraisal System helps in planning employee's performance well	400	2.95	1.418 M
DCV-3 Performance Appraisal System provides an opportunity for supportive superior subordinate communication to facilitate the employee's job performance	400	2.98	1.390 M
DCV-4 The Performance Appraisal system provides scope for self Appraisal and reflection in the employees	400	3.05	1.358 LE
DCV-5 The Performance Appraisal system encourages common understanding(between the superior and subordinates) of the factors affecting the employee's performance	400	3.06	1.347 LE
DCV-6 Performance Appraisal System provides an opportunity for discussing the expectations, achievements, failures, constraints and improvements needed between superiors and the subordinates	400	2.96	1.394 M
DCV-7 Performance Appraisal System provides scope for reflection and assessment of the employee's personality factors and attributes required for their job performance	400	2.89	1.408 M
DCV-8 Performance Appraisal System encourages open communication between superior and subordinate through performance review discussions	400	2.91	1.404 M
DCV-9 Performance Appraisal System Provides scope for employee's expression on their development needs	400	2.91	1.401 M
DCV-10 Performance Appraisal System provides an opportunity for the redressal of employee's grievances	400	2.90	1.397 M
DCV-11 Performance Appraisal System aims at strengthening mutual understanding and relationship between superiors and subordinates	400	2.90	1.397 M
DCV-12 Performance Appraisal System helps improves to gain insights into their strengths and weaknesses	400	2.90	1.392 M
DCV13 Performance Appraisal System helps employees in discovering their potential for preparing themselves to take up future likely roles of higher level	400	2.91	1.395 M
DCV-14 Performance Appraisal System provides scope for communicating the overall business goals and plans to the employees	400	2.91	1.411 M
PV-1 The objective of Performance Appraisal System are clear to both superior and subordinates	400	2.86	1.414 M
PV-2 Periodic orientation programmes on Performance Appraisal System are conducted PV-3 Superiors spend time and discuss subordinate performance	400	2.85	1.409 M 1.410
PV-4 Superiors help their subordinates in planning subordinates performance	400	2.86	M
in the beginning of the performance period	400	2.86	1.412 M

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PV-5 Performance Review discussions on Key Performance Areas (KPA's)/Key Result Areas(KRA's)/Tasks/Targets are educative to both superiors and subordinates	400	2.84	1.413 M
PV-6Superiors takes Performance Appraisals seriously	400	2.84	1.410 M
PV-7 Employees work thoroughly on self Appraisal in terms of reviewing, reflecting and analyzing the factors affecting their Performance	400	2.88	1.386 M
PV-8Superiors take special efforts to be objective and unbiased while making their comments on subordinate's performance	400	2.90	1.344 M
PV-9Superiors devote sufficient time to performance review discussions	400	2.83	1.373 M
PV-10 Performance review discussions are of high quality and conducted with care	400	2.84	1.367 M
PV-11 Employees take active part in performance review discussions	400	2.89	1.355 M
OV-1 Superiors and Subordinates take corrective actions for improvement based on the outcome of Performance Appraisal	400	2.87	1.348 M
OV-2 HRM/HRD/Personnel Department does follow up work on training needs as identified through Appraisals	400	2.86	1.350 M
OV-3 HRM/HRD/Personnel Department makes use of appraisal data for taking a variety of development decisions	400	2.89	1.360 M
OV-4 Appraisal Data are used for recognizing and encouraging high performers and desirable behavior	400	2.86	1.358 M
OV-5 HRM/HRD/Personnel Department as well as the superior take employees appraisal seriously and educate them to overcome their personal biases	400	2.86	1.372 M
OV-6 Performance Appraisal System facilitates the growth and learning of both superiors and subordinates in the organization	400	2.85	1.384 M
OVERALL EFFECTIVENESS OF PMS- Performance Appraisal System is overall Effective	400	2.90	1.345 M
Valid N (list wise)	400		

Extent (Mean Scores>3),M=Medium Extent(Mean scores>2 and <3),Small extent(mean scores<2)

V. Results

- 1) Both appraisers and appraises perceived (as shown in Table-III and Table-IV) that the following two PAS variables (DCV) were found to be part of PAS to a large extent in the study organizations
- (a) Employees have clear understanding of what is expected form them regarding their performance in the organization(DCV-1)(Appraisers mean score=3.17,appraisee's mean score=3.43)
- (b) The PAS provides scope for self appraisal and reflection to the employees (DCV-4)(Appraiser's mean score=3.00 and appraisee's mean score=3.05)

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958(**)295(**	(*) 9	3 4 4	9 5 1 (* *)	3 5 (* *)	3 (*)	*) 8 8 3	- .3 3 9 (*	
341(**).966(**)	*) -	9 6 2 (*	3 2 4 (* *)	995(**)-	3 (* *) .	- 2 9	* * 1	(
917(**)263(**)	3 5 6 (*	9 2 8 (* *)	2 9 0 (* *)	1	*	*)2 9 3 (*	*
337(**).970(**)	*) -	. 9 6 9 (*	3 2 1 (* *)	1	0 (* *)	*) - .2 9	* *) .995(* *	(
9 8 8 (* *) 2 8 8 (* *	(* *)	3 4 4	1	3 2 1 (* *)	8 (*)	*) 9 2 8	*) 3 2 4 (*	*
3 4 5 (* *) . 9 4 4 (* *)		1	3 4 4 (*	9 6 9 (* *) -	6 (* *)	*) - 3 5	* *) .9 6 2 (*	(
1 3 0 4 (* *	(* *)	3 4 5	9 8 8 (* *)	3 3 7 (* *)	7 (* *) -	*) 9 1	*) 3 4 1 (*	*
3 0 4 (* *)	*)	9 4 4 (2 8 8 (* *	9 7 0 (* *) -	3 (*)	*) - 2 6	*) .966 (* *	(
8 3 (* *) 2 6 8 (* *	(*) 8	- 3 4 9	8 7 (* *)	2 8 6 (* *)	9 (* *) -	*) 9 4	*)2 8 7 (*	*
3 3 5 (* *) . 9 2 7 (* *)	*) -	8 8 0 *	· 3 1 9 (* *)	9 1 6 (* *) -	3 (* *) .	*) - .2 9	* *) .9 1 1 (* *	(
9 0 9 (* *) 2 1 9 (* *	(*) 9	. 3 0 9	9 1 3 (* *)	2 4 7 (* *)	9 (* *) -	*) 9 5 9	*) - .2 4 8 (*	*
3 1 5 (* *) . 9 2 3 (* *)	*) -	8 8 2 (*	2 9 8 (* *)	9 1 0 (* *) -	4 (* *) .	*) - 2 7	* *) .9 0 6 (* *	(
8 7 2 (* *) - 2 0 5 (*))	- 2 9 0 (*	8 7 7 (* *)	2 2 8 (* *)	9 (* *) -	*) 9 0	*) - .2 2 9 (*	*
· 2 4 6 (* *) · 9 0 8 (* *)	(* *)	8 6 4 (· 2 2 9 (* *)	8 8 (* *) -	9 0 (*)) - 1	* *) .886(* *	(
903(**)205(*))	- . 2 6 9 (* *	9 0 0 (* *)	. 2 3 1 (* *)	(* *)	*) 9 4 6	*)232(*	*
) (* *) .429 (* *)	4 2 6 (*	2 5 7 (* *	4 2 8 (* *)	(*)	*) - 2 7 9	* *) .4 2 7 (* *	(
8 5 6 ((***)) 2 0 7 ((**))	(* *) 8	- 2 8 6	8 6 0 (* *)	2 2 6 (* *)	9 (* *) -	*) . 9 1	*) 2 2 6 (*	*

O V - 5	O V - 4	V - 3	0 V - 2	O V = 1	V - 1 1	P V - 1 0
3 6 5 (* *) . 4	7 7 1 (* *	.395(**)	. 8 8 0 (* *)	- 4 1 5 (* *	8 8 2 (* *	- 4 4 2 (* *
) .831(**)	. 3 6 2 (* *)	8 7 7 (* *)	- 4 1 4 (* *	8 3 6 (* *)	4 3 3 (* *)) .865(**)-
- . 0 3 6	4 3 6 (* *	- 0 4 4	4 3 8 (* *	- 0 8 0	4 4 8 (* *	- 1 3 4
)	- 2 3 4 (* *	8 4 3 (* *	3 6 2 (* *	8 7 6 (* *	3 8 8 (* *) 8 4 4 (* *)
- 3 3 6 (* *) 4	8 2 8 (* *	3 5 7 (* *	8 4 4 (* *	- 3 7 3 (* *	8 4 9 (* *	- 4 3 0 (* *
) . 8 4 1 (* *)	- 3 2 5 (* *	8 4 9 (* *	- 4 1 6 (* *	8 3 4 (* *	- 4 3 6 (* *) . 8 7 1 (* *) .
- 2 9 4 (* *) 4	7 6 1 (* *	3 1 5 (* *	8 4 4 (* *	- 3 1 (* *	8 5 0 (* *	- 3 6 6 (* *
) .635(**)	- 3 8 4 (* *	6 8 1 (* *)	.399(**)	6 5 1 (* *)	- 4 1 4 (* *) .683(**)-
- . 2 2 9 (* *) . 4	. 9 0 8 (* *)	2 4 1 (* *	. 9 1 3 (* *)	2 4 0 (* *	. 9 2 1 (* *)	. 303(**)
) 8 8 4 (* *)	- 2 9 8 (* *	9 1 5 (* *	3 6 4 (* *	8 9 0 (* *	3 8 3 (* *)) .9 2 4 (* *)
- 2 6 1 (* *	8 7 3 (* *	2 6 6 (* *	8 8 9 (* *)	2 8 5 (* *	8 9 4 (* *	- 3 2 5 (* *
.8 2 2(**)	.3 0 1(**	.8 0 3(**)	.3 5 2(**	.8 2 6(**	.3 7 1(**	.7 9 1(**)
- . 2 5 4 (* *) . 4	8 3 7 (* *	2 7 5 (* *	8 5 1 (*)	- 2 9 5 (* *)	8 5 6 (* *	- 3 3 5 (* *)
.869(**)	- 2 1 7 (* *)	8 4 6 (* *)	2 8 8 (* *)	882(**)	309(**)) .855(**) -
2 3 8 (* *) . 4	8 4 7 (* *	2 4 3 (* *	8 6 2 (* *)	- 2 6 3 (* *	8 6 7 (* *	- 3 0 3 (* *)
) . 8 7 0 (* *)	- . 2 3 1 (* *	8 3 9 (* *)	- 3 0 4 (* *	8 7 5 (* *	3 2 5 (* *)) . 8 4 8 (* *)
· 2 3 2 (* *) · 4	8 8 6 (* *	2 2 9 (* *	906(**)	- 2 4 8 (* *	9 1 1 (* *	- 2 8 7 (* *
. 9 4 6 (* *)	- 1 9 0 (*)	9 0 9 (* *)	- 2 7 4 (* *	. 9 5 9 (* *)	· 2 9 3 (* *)) .949(**)-
- 2 3 1 (* * *) 4	8 8 (* *	2 8 (* *	9 1 0 (* *)	- 2 4 7 (* *	9 1 6 (* *	- . 2 8 6 (* *)
900(***)	· 2 2 9 (* *)	8 7 7 (* *	· 2 9 8 (* *)	9 1 3 (**	3 1 9 (***)) 8 7 (* *)
269(**).4	864(* *)	. 2 9 0 (* *)	. 8 8 2 (* *)	309(**)	888(**)	3 4 9 (**)
) .903(**)	2 4 6 (* *	8 7 2 (* *	3 1 5 (* *	9 0 9 (* *)	3 3 5 (**)) . 8 8 3 (* *) .
- . 2 0 5 (*)	908(*	2 0 5 (*)	. 9 2 3 (* *)	- 2 1 9 (* *	9 2 7 (* *	- 2 6 8 (* *
) . 9 2 9 (* *)	- 2 1 3 (* *	9 5 7 (* *)	- 2 8 9 (* *	946(**)	3 0 7 (* *	1
· 2 5 2 (* *) · 4	8 9 8 (* *)	· 2 5 3 (* *)	. 9 9 2 (* *)	· 2 6 5 (* *)	1	3 0 7 (* *
. 9 6 8 (* *)	- 1 5 7	9 4 7 (* *	- 2 4 7 (* *	1	. 265(**)) . 9 4 6 (* *) -
· 2 3 5 (* *) · 5	903(**)	2 3 5 (* *	1	- 2 4 7 (* *	9 9 2 (* *	- 2 8 9 (* *
. 9 3 1 (* *)	- 1 6 2 (*)	1	- 2 3 5 (* *)	9 4 7 (* *	- 2 5 3 (* *	. 9 5 7 (* *)
- 1 3 1	1	- 1 6 2 (*	9 0 3 (* *	- 1 5 7	8 9 8 (* *	- 2 1 3 (* *
1	- 1 3 1	9 3 1 (* *)	- . 2 3 5 (* *)	968(**)	- 2 5 2 (* *	. 9 2 9 (* *)
3 0 2 (* *)	4 3 4 (* *	3 1 4 (* *	. 5 1 2 (* *) -	- 2 8 9 (*)	4 9 2 (* *	- 3 2 3 (* *
. 9 5 2 (* *)	- 1 2 4	. 9 6 6 (* *)	- 2 3 8 (* *	9 3 8 (* *)	2 5 5 (* *	. 9 6 4 (* *) -

D V	6
- 3 9 4 (* *)	8 9 (* *)
) .836(**)	3 1 4 (* *
- 0 6 1	8
) .8 5 7 (* *)	3 1 5 (*
- . 3 3 6 (* *)	7 6 (* *
) .8 5 0 (* *)	3 7 8 (*
- 3 1 2 (* *	5 7 (* *
6 3 6 (* *	1 8 8 (*
- 2 1 5 (* *)	3 2 (* *)
) .897 (* *	3 5 (*
- 2 6 2 (* *	4 6 (* *
.7 6 4(**)	4 1(**)
- 2 7 0 (* *	0 8 (* *)
) . 8 3 1 (* *	2 3 9 (*
- 2 3 9 (* *)	2 4 (* *)
) . 8 2 5 (*)	2 5 4 (* *
- 2 2 6 (* *)	2 7 (* *)
) . 9 1 9 (* *)	2 7 9 (* *
- .226(**)	2 8 (* *)
) 8 6 0 (* *)	2 5 7 (*
- 2 8 6 (* *	2 6 (* *)
) . 8 5 6 (* *)	2 7 5 (*
- 2 0 7 (*	2 9 (* *)
) . 9 6 4 (* *)	3 2 3 (*
- 2 5 5 (* *)	9 2 (* *)
) .938 (* *)	2 8 9 (* *
- 2 3 8 (* *)	1 2 (* *)
) . 9 6 6 (* *)	3 1 4 (*
- 1 2 4	3 4 (* *)
) . 9 5 2 (* *)	3 0 2 (* *
- 3 2 7 (* *)	
1	3 2 7 (* *

TABLE-VI-CORRELATIONS OF APPRISEE

		D C V	D C V	D C V	D C V	(7 (C V	C	C (D (C 'V -	C V	C V - I	D C V - 1 3	D C V 1	P V -	P V - 2	P V - 3	P V -	P V - 5	P V -	P V - 7	P V - 8	P V -	P V - 1 0	P V - 1	0 V -	O V - 2	0 V - 3	O V - 4	0 V - 5	OV-	D V
C V	7		1	- 3 3 0 (* *	8 2 9 (*	7 9 4 (*	- 2 7 1 (*	8 6 1 (*	- 3 5 0 (*	.8 1 5 (*	- 3 4 9 (*	8 1 6 (*	- 3 5 8 (*	7 5 8 (*	- 3 5 4 (*	7 6 1 (*	- 3 2 2 (*	6 9 3 (*	- 3 1 6 (*	7 3 6 (*	- 3 0 9 (*	6 9 6 (*	- 3 1 4 (*	7 4 4 (*	- 3 5 3 (*	7 2 4 (*	- 3 4 1 (*	. 7 4 4 (* *	3 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	7 3 3 5 3 (* * *	7 3 5 (*	3 2 6 (.78 3(* *)	,
E C V	7		- 3 3 0 (*	1) - 4 6 0 (*) 6 3 6 (*) 9 4 3 (*) - 4 1 9 (*)	.4 8 2 (*) . 8 9 9 (* *) 4 8 6 (*) 8 7 7 (*) - 4 9 4 (*) 8 6 6 (*) - 4 8 2 (*) . 9 0 4 (*) - 5 8 5 (*) . 9 2 2 (*) - 5 7 7 (*) 9 2 6 (*) - 6 0 9 (*) 8 5 1 (*) - 5 0 1 (*) 8 4 1 (*) - 5 4 2 (*) 8 9 3 (*	- 5 3 7 (*	6 .	5 (1 4 3 (* * * *	5 6 0 (9 (*	50	1(* *)
D C V	7		*) . 8 2 9 (* *	- 4 6 0 (**	1	*) . 8 2 0 (* *) - 4 5 1 (*	*) .9 3 6 (* *) - 3 1 4 (*	.9 6 4 (* *) - 3 1 0 (*	*) .9 7 2 (*) - 3 2 0 (*	* 9 4 1 (*) - 3 1 4 (*	*) .9 4 6 (* *) - 3 5 7 (*	*) . 8 5 7 (*) - 3 7 0 (**	* 8 8 5 (*) 3 9 9 (* *	* 3 4 5 (* *) - 3 7 7 (*	* 9 3 4 (* *) 3 9 6 (* *	*) . 8 2 9 (*) - 3 1 1 (*) 9 2 4 (*	3 4 8 (3 3 4	9012) 3 7 4 (*	.942	(*
E C V	7) . 7 9 4 (**)) - 6 3 6 (*	8 2 0 (* *)	1) - 5 6 5 (*) . 7 5 5 (* *)) - 5 5 0 (*	.7 9 2 (* *)) - 5 5 1 (*) 8 0 0 (*) - 5 5 6 (*) . 7 8 6 (* *)) - 5 5 1 (*) .791(**)) - 5 9 3 (*) 8 3 6 (* *) - 5 9 6 (*) 8 5 8 (* *) - 5 9 3 (*) 8 6 0 (* *)) - 5 3 9 (*) 8 0 5 (* *) - 5 3 6 (*) . 8 2 8 (* *)) - 5 6 5 (*	8 2 9	0 2 (3 5 (. 8 8 4 5 (*	9 (*	.800	(*
E C V 5	7) - 2 7 1 (*) 9 4 3 (* *)	, 4 5 1 (*	- 5 6 5 (*	1) - 4 0 7 (*) 8 5 2 (* *	.4 6 8 (* *) 8 4 5 (* *) - 4 7 4 (*) 8 1 7 (* *) - 4 8 2 (*) 8 0 6 (* *) - 4 6 8 (*) 8 4 6 (* *) - 5 4 9 (*) 8 6 5 (* *) - 5 3 6 (**) 8 7 8 (* *)) - 5 6 2 (*) 8 2 2 (* *) - 4 8 5 (*) 8 0 0 (* *)	- 5 0 1 (*) 8 5 1 (* *	- 5 1 6 (*	8 . 6 4 9 (((* *)		- 3 . 5 5 3 2 7	4 (* *	.489	- (* *)

^{**} Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

D
(*************************************
(* *)
(* * *)
*) 8 1 7 (*
(* *) 3 5 5 5 (* *)
* * *)
6 (* *) . 9 6 5 (* *)
1 3 2 1 (* *
1 (* *)) 1
* * *) 3 2 1 (* * *)
5(**).989(**)-
6 (* *) 3 0 9 (* *)
65 (* * *)
0 (* *)
3 ((* * * * * * * * * * * * * * * * * *
* * * * * * * * * * * * * * * * * * *
8 (* *) . 8 4 7 (* *)
(* *) 3 1 9 (* *)
8 (***) . 8 3 2 (***)
(* * *) 4 0 8 (* * *)
4 (* *) . 9 4 0 (* *) .
(* *) 3 5 7 (* *)
4 (* * 9 1 5 (* *)
(* *) · · · 3 3 7 (* *)
6 (**) .9 2 6 (**)
(* *) 3 8 4 (* *)
· * * * * * * * * * * * * * * * * * * *
) -324(*)

P V -7	V -6	V -5	V -4	P V -3	V -2	V -1	D C V
3 1 4 (* *	6 9 6 (* *	3 0 9 (* *)	7 3 6 (* *)	3 1 6 (* *	6 9 3 (* *)	3 2 2 (* *) . 7 6 1 (* *)
8 5 1 (* *	6 0 9 (* *	9 2 6 (* *)	5 7 7 (* *	9 2 2 (* *)	5 8 5 (* *	9 0 4 (* *)	- 4 8 2 (***)
- 3 7 7 (* *	8 4 5 (* *	3 9 (* *	8 8 5 (* *)	3 7 0 (* *	8 5 7 (* *	3 5 7 (* *) . 9 4 6 (* *)
- 5 3 9 (* *)	8 6 0 (* *)	5 9 3 (* *)	8 5 8 (* *)	5 9 6 (* *)	8 3 6 (* *)	5 9 3 (* *)) . 7 9 1 (* * *) -
8 2 2 (* *	5 6 2 (* *	8 7 8 (* *)	5 3 6 (* *	8 6 5 (* *)	5 4 9 (* *	8 4 6 (* *	- . 4 6 8 (* *
3 4 2 (* *)	7 6 2 (* *	3 4 2 (* *	8 0 2 (* *	3 1 3 (* *	7 7 4 (* *)	3 0 5 (* *) 8 6 3 (* *)
8 1 1 (* *	4 4 0 (* *	8 4 9 (* *)	4 0 8 (* *	8 7 6 (* *	4 1 5 (* *	8 7 5 (* *	- 3 1 1 (* *
.4 0 4 (* *)	.8 3 9 (* *	.4 2 6 (* *)	.8 7 9 (* *	.3 9 7 (* *	.8 5 2 (* *	.3 8 2 (* *)	.9 4 2 (* *)
8 2 5 (* *	4 3 8 (* *	8 6 1 (* *)	4 0 6 (* *	8 8 8 (* *	4 1 3 (* *	8 8 7 (* *	- 3 1 1 (* *
- 4 0 8 (* *	8 5 3 (* *	4 3 0 (* *)	8 9 3 (* *)	4 0 0 (* *	8 6 6 (* *)	3 8 5 (* *) . 9 5 6 (* *)
8 4 7 (* *	4 3 9 (* *)	8 8 4 (* *)	4 0 6 (* *	9 1 1 (* *)	4 1 4 (* *	9 1 0 (* *)	- 3 0 9 (* *
- 4 1 1 (*	7 0 (* *	3 3 (* *)	8 9 0 (* *	4 0 3 (* *	0 4 (* *)	3 8 8 (*	9 8 3 (* *
8 3 7 (* *	4 3 2 (* *)	8 7 4 (* *	4 0 0 (* *	9 0 1 (* *	4 0 7 (* *	9 2 0 (* *	- 3 0 2 (* *
- 4 0 4 (* *	8 7 8 (* *	4 2 6 (* *	8 9 6 (* *)	3 9 7 (* *)	9 1 (* *)	3 8 2 (* *)	1
8 5 5 (* *	5 1 2 (* *	9 5 2 (* *)	4 8 0 (* *)	9 7 7 (* *	4 8 8 (* *	1	- 3 8 2 (* *
- 5 0 9 (* *	9 6 5 (* *	5 3 2 (* *	9 6 0 (* *)	5 0 3 (* *	1	4 8 8 (* *)) 9 1 1 (* * *)
8 6 6 (* *	5 2 7 (* *	9 7 2 (*)	4 9 5 (* *	1	5 0 3 (* *	9 7 7 (* *)	3 9 7 (***)
- 5 0 3 (* *	9 6 0 (* *	5 2 4 (* *	1	- 4 9 5 (* *)	9 6 0 (* *)	4 8 0 (* *)) . 8 9 6 (* *)
8 5 8 (* *	5 5 6 (* *	1	5 2 4 (* *	9 7 2 (* *)	5 3 2 (* *	9 5 2 (* *)	- 4 2 6 (* *
5 3 5 (* *	1	5 5 6 (* *	9 6 0 (* *	5 2 7 (* *	9 6 5 (* *)	5 1 2 (* *) 8 7 8 (* *)
1	5 3 5 (* *	8 5 8 (* *	5 0 3 (* *	8 6 6 (* *	5 0 9 (* *	8 5 5 (* *	- . 4 0 4 (* *
- 4 1 9 (* *	8 9 3 (* *	4 4 2 (* *	9 1 4 (* *)	4 1 2 (* *	9 0 5 (* *	3 9 6 (* *)) . 9 5 6 (* *)
, 9 5 1 (* *	5 5 7 (* *	8 1 5 (* *)	5 2 6 (* *	8 3 9 (* *)	5 3 0 (* *	8 2 8 (* *)	- 4 2 4 (* *
- 3 5 9 (* *)	7 8 1 (* *	5 2 8 (* *	8 2 1 (* *)	- 4 9 9 (* *)	7 9 0 (* *)	4 8 1 (* *) . 8 2 9 (* *)
8 6 1 (* *	4 5 5 (* *	8 8 0 (* *)	4 2 2 (* *	9 0 5 (* *)	4 3 0 (* *)	9 0 4 (* *)	3 2 1 (* *
- 4 5 8 (* *	9 0 8 (* *	4 8 0 (* *)	9 5 0 (* *)	4 5 0 (* *)	9 1 9 (* *)	4 3 4 (* *))
8 5 0 (* *)	4 9 6 (* *)	9 0 7 (* *)	4 6 3 (* *	9 3 2 (* *)	4 7 1 (* *	9 3 1 (* *)	- 3 6 1 (* *
- 4 3 1 (* *	8 7 9 (* *)	4 5 4 (* *	9 2 1 (* *)	4 2 6 (* *	8 9 1 (* *)	. 4 1 3 (* *)) 9 3 1 (* * *)
8 5 1 (* *	4 8 8 (* *	9 0 0 (* *)	4 5 5 (* *	9 2 7 (* *)	4 6 3 (* *	9 2 6 (* *	- 3 5 3 (* *
- 4 8 3 (* *	9 3 8 (* *	5 0 5 (* *	9 7 6 (* *)	4 7 5 (* *	9 4 6 (* *	4 5 9 (* *)) . 9 0 2 (* *)
8 8 5 (* *	5 3 5 (* *	9 1 4 (* *)	5 0 2 (* *	9 3 9 (* *)	5 1 0 (* *	9 2 7 (* *)	- 4 0 2 (* *
.425(**	.859(* *	.447(*	.901(*	.417(**	.873(*	.401(**	.938(*
	*						

V -4	V -3	V -2	0	V	P V - 1 0	P V -9	P V -8
3 5 3 (* *)	7 8 5 (* *)	3 5 0 (* *)	7 4 4 (* *)	3 4 1 (* *)	7 2 4 (* *	- 3 5 3 (* *	7 4 4 (* *
9 0 4 (* *)	5 1 3 (* *	9 0 6 (* *)	5 3 7 (* *	8 9 3 (* *)	5 4 2 (* *)	8 4 1 (* *	- 5 0 1 (* *
3 4 3 (* *)	9 3 1 (* *)	3 4 8 (* *)	9 2 4 (* *)	3 1 1 (* *)	8 2 9 (* *)	- 3 9 6 (* *	9 3 4 (* *
. 5 9 5 (* *) . 8	8 1 3 (* *)	6 0 2 (* *)	8 2 9 (* *)	. 5 6 5 (* *)	8 2 8 (* *)	5 3 6 (* *)	8 0 5 (* *
8 5 8 (* *)	4 9 0 (* *)	8 6 4 (* *)	5 1 6 (* *)	8 5 1 (* *)	5 0 1 (* *	8 0 0 (* *	- 4 8 5 (* *
3 2 9 (* *) 8	8 6 6 (* *)	3 2 0 (* *)	8 3 7 (* *)	3 2 1 (* *)	7 6 5 (* *)	- 3 6 9 (* *	8 4 7 (* *
9 3 1 (* *)	3 3 9 (* *	9 2 0 (* *)	3 5 9 (* *)	9 4 5 (* *)	. 4 0 9 (* *)	, 7 9 6 (* *)	- 3 2 1 (* *
- .3 5 3 (* *) .8 9	.9 4 0 (* *	.3 6 0 (* *)	1 (* *)	.3 2 0 (* *)	.8 3 7 (* *	.4 2 4 (* *)	.9 2 2 (* *)
9 4 6 (* *)	3 3 7 (* *	9 3 5 (* *)	3 5 7 (* *)	9 6 0 (* *)	4 0 7 (* *	8 1 1 (* *	3 2 1 (*
. 3 5 6 (* *) . 9	9 5 4 (* *)	. 3 6 4 (* *) .	9 2 6 (* *)	. 3 2 4 (* *)	8 5 1 (* *)	- 4 2 8 (* *	9 3 7 (* *)
9 2 6 (* *)	3 7 (* *	9 1 5 (* *)	3 5 7 (* *)	9 4 0 (* *)	. 4 0 8 (* *)	8 3 2 (* *	- 3 1 9 (* *
3 5 9 (* *) 8	9 2 7 (* *)	3 6 6 (* *	9 2 0 (* *)	3 2 6 (* *)	8 1 3 (* *	- 4 3 1 (* *	9 5 2 (* *)
· 9 1 6 (* *) - ·	· 3 3 0 (* *)	· 9 0 5 (* *) -	3 5 0 (* *)	9 3 0 (* *)	4 0 0 (* *	· 8 2 3 (* *)	- 3 1 2 (* *
. 3 5 3 (* *) . 9	9 3 1 (* *)	3 6 1 (* *	9 2 4 (* *)	. 3 2 1 (* *)	8 2 9 (* *)	- 4 2 4 (* *	9 5 6 (* *)
. 9 2 6 (* *)	4 1 3 (* *	9 3 1 (* *)	4 3 4 (* *	9 0 4 (* *)	4 8 1 (* *	8 2 8 (* *	- 3 9 6 (* *
. 4 6 3 (* *) . 9	8 9 1 (* *)	4 7 1 (* *)	9 1 9 (* *)	4 3 0 (* *)	7 9 0 (* *)	5 3 0 (* *	9 0 5 (* *)
9 2 7 (* *)	4 2 6 (* *)	9 3 2 (* *)	4 5 0 (* *	9 0 5 (* *)	4 9 9 (* *)	8 3 9 (* *	- 4 1 2 (* *
. 4 5 5 5 (* * *) 9	9 2 1 (* *)	. 4 6 3 (* *)	9 5 0 (* *)	. 4 2 2 (* *)	8 2 1 (* *)	- 5 2 6 (* *	9 1 4 (* *
9 0 0 (* *)	4 5 4 (* *	9 0 7 (* *)	4 8 0 (* *	8 8 0 (* *)	5 2 8 (* *	8 1 5 (* *	- 4 4 2 (* *
4 8 8 (* *) 9	8 7 9 (* *)	. 4 9 6 (* *) .	9 0 8 (* *)	. 4 5 5 (* *)	7 8 1 (* *	- 5 5 7 (* *	8 9 3 (* *
8 5 1 (* *)	4 3 1 (* *	8 5 0 (* *)	4 5 8 (* *)	8 6 1 (* *)	3 5 9 (* *)	, 9 5 1 (* *	- 4 1 9 (* *
3 6 6 (* *) . 9	9 6 9 (* *)	3 7 3 (* *	9 6 2 (* *)	. 3 3 2 (* *)	8 3 1 (* *)	- 4 4 1 (* *	1
8 2 3 (* *)	4 5 6 (* *	8 2 1 (* *)	4 8 0 (* *	8 4 4 (* *)	3 3 9 (* *)	1	- 4 4 1 (*
4 5 7 (* *) 8	8 5 5 (* *)	. 4 6 5 (* *) .	8 2 7 (* *)	. 4 2 3 (* *)	1	- 3 3 9 (* *)	8 3 1 (* *
9 7 8 (* *)	3 5 1 (* *	9 7 1 (* *)	3 7 1 (* *	1 -	4 2 3 (* *	8 4 4 (* *	- 3 3 2 (* *
. 4 0 5 (* *) . 9	9 6 8 (* *)	4 1 3 (* *)	1	3 7 1 (* *)	8 2 7 (* *)	- 4 8 0 (* *	9 6 2 (* *
9 8 8 (* *)	3 9 2 (* *	1	4 1 3 (* *	9 7 1 (* *)	4 6 5 (* *	8 2 1 (* *	- 3 7 3 (* *
3 8 4 (* *)	1	. 3 9 2 (* *)	9 6 8 (* *)	3 5 1 (* *)	8 5 5 (* *)	- 4 5 6 (* *	9 6 9 (*)
1 -	3 8 4 (* *	9 8 8 (* *)	4 0 5 (* *)	9 7 8 (* *)	- 4 5 7 (* *	8 2 3 (* *	- 3 6 6 (* *
4 3 (* *)	9 4 0 (* *)	4 4 0 (* *)	9 7 0 (* *)	. 3 9 9 (* *)	8 2 9 (* *)	- 5 0 6 (* *	9 3 (* *)
9 4 2 (* *)	4 3 2 (* *	9 4 9 (* *)	4 5 6 (* *	9 2 2 (* *)	· 4 6 4 (* *)	8 5 7 (* *	- 4 1 7 (* *
.371(**)	.977(* *)	.379(* *)	.949(* *)	.337(**)	.850(* *)	.446(* *)	.963(* *)
)						- *	

	D V	0 V -6
) 4 4 0 0 0 0	7 · 7 · 8 · 9 · 9 · 9 · 9 · 9 · 9 · 9 · 9 · 9	3 5 6 (0 0 * (* * * *) *) *) * 3 1 2 9 6 (* * * *))
) 4 0 0	9 4 2 (*	0 2 (* *)
) 4 0 0	8 0 0 (*	4 5 (***) 5 9 9 (***)
* 3 4 4 0 0 0 0 0	- . 8 4 8 7 9 (**	5 5 1 7 (
* 4 0	3 4 (5 (* * *) . 8 7 9 (* * *)
4	.9 4 7 (*	(*) .4 0 2 (*
*) 4 0	3 2 9 (8 3 (*) 8 9 4 (* *
) 4 0 0	9 6 7 (*	4 8 (4 * * * * * * * * * * * * * * * * * *
*) 4 4 0 0 0 0	9 4 0 (* (
*) 4 0 0		*) . 8 6 4 (*
) 4 0 0	9 3 8 (*	0 2 (* *) 4 0 2 (* *)
* 0 0	4 0 1 (4 5 9 (* *) 9 2 7 (* *)
) 4 0 0	8 7 3 (*	4 6 (** * 5 1 0 (** *)
*) 4 0 0	- 4 1 7 (*	4 7 5 (***) .9 3 9 (***)
) 4 0 0	9 0 1 (*	7 6 (***) 5 0 2 (***)
*) 4 0 0	- 4 4 7 (5 0 5 (***) . 9 1 4 (***)
) 4 0 0	8 5 9 (*	3 8 (* *) 5 3 5 (* *)
*) 4 0 0	4 2 5 (*	4 8 3 (* *) . 8 8 5 (* *)
) 4 0 0	9 6 3 (*	3 3 (** *) - 4 1 7 ((** *)
*) 4 0 0	4 4 6 (5 0 6 (***) . 8 5 7 (***)
) 4 0 0	8 5 0 (*	2 9 (* *) 4 6 4 (* *)
*) 4 0 0	3 3 7 (*	3 9 9 (* *) . 9 2 2 (* *)
) 4 0 0	9 4 9 (*	7 0 (***) 4 5 6 (***)
*) 4 0 0	3 7 9 (*	4 4 0 (* *) . 9 4 9 (* *) -
) 4 0 0	9 7 7 (*	4 0 (* *) 4 3 2 (* *)
*) 4 0 0	3 7 1 (*	4 3 3 (* *) . 9 4 2 (* *) -
) 4 0 0	9 2 0 (*	- 4 8 2 (* *
*) 4 0 0	4 2 3 (*	4 8 2 (* *)
400	1	.423(* *)
1		

^{**} Correlation is significant at the 0.01 level (2-tailed).

TABLE-VII-A-Relationship between the PAS Design/Content Variables and the overall effectiveness of PAS Regression-APPRAISER

Variables Entered/Removed

	Variables	Variables	
Model	Entered	Removed	Method
1	DCV ^a	-	Enter

a. All requested variables entered.

Model Summary

1			Adjusted	Std. Error of
Model	R	R Square	R Square	the Estimate
1	.934 ^a	.873	.872	4.91080

a. Predictors: (Constant), DCV

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24481.304	1	24481.304	1015.150	.000 ^a
	Residual	3569.162	148	24.116		
	Total	28050.465	149			

a. Predictors: (Constant), DCVb. Dependent Variable: OVERALL

Coeffi ci entsa

	Unstand Coeffic			Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	794	1.869		425	.672
	DCV	.965	.030	.934	31.861	.000

a. Dependent Variable: OVERALL

b. Dependent Variable: OVERALL

TABLE-VII-B-Relationship between the PAS Process Variables and the overall effectiveness of the PAS

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	PV ^a		Enter

a. All requested v ariables entered.

b. Dependent Variable: OVERALL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.957 ^a	.916	.915	3.99224

a. Predictors: (Constant), PV

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25691.646	1	25691.646	1611.978	.000 ^a
	Residual	2358.819	148	15.938		
	Total	28050.465	149			

a. Predictors: (Constant), PV

b. Dependent Variable: OVERALL

Coeffi ci entsa

	Unstanda Coeffici			Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	6.526	1.307		4.992	.000
	PV	.873	.022	.957	40.149	.000

a. Dependent Variable: OVERALL

TABLE-VII-C-Relationship between the PAS outcome variables and overall effectiveness of PAS

Variables Entered/Removed

	Variables	Variables	
Model	Entered	Removed	Method
1	OV ^a		Enter

a. All requested variables entered.

b. Dependent Variable: OVERALL

Model Summary

	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Г	1	.941 ^a	.886	.885	4.64526

a. Predictors: (Constant), OV

$ANOVA^b$

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24856.852	1	24856.852	1151.929	.000 ^a
	Residual	3193.613	148	21.578		
	Total	28050.465	149			

a. Predictors: (Constant), OV

b. Dependent Variable: OVERALL

Coeffi ci ents

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	11.986	1.390		8.624	.000
I	OV	.847	.025	.941	33.940	.000

- a. Dependent Variable: OVERALL
- 2. Both appraisers and appraisees perceived (as shown in Table-III AND IV) That the following two PAS process variables(PV) were found to be followed by the employees in the process of PAS to Medium Extent in the study organizations.
 - (a) Employees work thoroughly on self appraisal in terms or reviewing, reflecting and analyzing the factors affecting their performance(PV-7)(Appraiser's and Appraisee's mean score>2 and <3)
 - (b) Employees taker active part in performance review discussions(PV-11)(Appraiser's and Appraise's mean score>2 and<3)
- 3 Both the appraisers and appraisees perceived (as shown in the Table-III AND TABLE -IV) that one PAS outcome variable(OV),viz HRM(HRD) Personnel Department does follow up work on Training needs as identified through appraisals(Appraisers and appraisees mean score>2 and <3) was found to be taken care to a medium extent in the study organization
- 4 Both the appraisers and the appraisees perceived that the PAS Design/Content variables (viz ,DCV-7,DCV-9,DCV-10,DCV-11,)(Reference: Table II for full version of these variables) were found to be part of the performance appraisal system to the moderate extent in the study organizations.
- 5 both the appraisers and the appraisees perceived that the PAS process variables (viz PV-1,,PV-4 and PV-5)(Reference:TableII for full version of these variables) were found to be part of performance appraisal system to the moderate extent in the study organizations.
- 6 Both the appraiser and the appraisees perceived that the PAS outcome variables (Viz.OV-3,OV-4 And OV-5)(Reference:TableII for full version of these variables) were found to be taken care to the moderate extent in the study organizations

Regression

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	DCV ^a		Enter

- a. All requested variables entered.
- b. Dependent Variable: OVER ALL (pas)

Model Summary

Mo	del	R	R Square	Adjusted R Square	Std. Error of the Estimate
1		.978 ^a	.957	.957	2.78143

a. Predictors: (Constant), DCV

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68877.866	1	68877.866	8903.147	.000 ^a
	Residual	3079.068	398	7.736		
	Total	71956.934	399			

a. Predictors: (Constant), DCV

b. Dependent Variable: OVER ALL (pas)

Coeffi ci entsa

		Unstand Coeff		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	3.270	.599		5.460	.000
	DCV	.924	.010	.978	94.356	.000

a. Dependent Variable: OVER ALL (pas)

Regression

Variables Entered/Removed

	Variables	Variables	
Model	Entered	Removed	Method
1	PV ^a		Enter

- a. All requested variables entered.
- b. Dependent Variable: OVER ALL (pas)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.947 ^a	.897	.897	4.30663

a. Predictors: (Constant), PV

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64575.190	1	64575.190	3481.688	.000 ^a
	Residual	7381.743	398	18.547		
	Total	71956.934	399			

a. Predictors: (Constant), PV

b. Dependent Variable: OVER ALL (pas)

Coeffi cients^a

	Unstandardiz Coefficients			Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	2.772	.964		2.874	.004
	PV	.970	.016	.947	59.006	.000

a. Dependent Variable: OVER ALL (pas)

Regression

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	OV ^a	•	Enter

a. All requested variables entered.

b. Dependent Variable: OVER ALL (pas)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.961 ^a	.924	.924	3.70443

a. Predictors: (Constant), OV

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	66495.262	1	66495.262	4845.607	.000 ^a
	Residual	5461.671	398	13.723		
	Total	71956.934	399			

a. Predictors: (Constant), OV

b. Dependent Variable: OVER ALL (pas)

Coefficients^a

		Unstand Coeffi		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	7.516	.752		9.997	.000
	OV	.883	.013	.961	69.610	.000

a. Dependent Variable: OVER ALL (pas)

7 None of the PAS Design/ content variables (DCV), PAS process variables (PV) and PAS outcome variables (OV) were perceived by the appraisers and appraises to be taken care to small (low) extent

8 Except a few variables as seen from Table –V and Table-VI ,the PAS Design/Content variables ,PAS process variables and PAS Process Variables and PAS Outcome Variables were found to be positive and significantly correlated (at=.01) with each other. Therefore the first hypothesis stating" All the selected independent variables are positively correlated to each other ".is by and large accepted

9 The relationship between PAS process variable viz (i) "Supervisors take performance appraisals seriously" (PV-8) and (ii) "Performance Review discussions are of high quality and conducted with care" (PV-9) was found to be high and positively correlated (r=0.951)

10 It is observed from Tables VII A That PAS Design/Content Variables were found to be high and positively correlated (r2=0.957) to the overall effectiveness of the performance appraisal system in the study organizations. It is further revealed that the relationship is significant (at 0.01 or .o5). Significant impact of the following PAS Design/Content variables were found to be there on the overall effectiveness of PAS viz DCV-2,DCV-4,DCV-5,DCV-6,DCV-8,DCV-9,DCV-10,DCV-11,DCV-12 and DCV-13 (Reference: Table-ii for full version of these variables)

11 It is found form Tables VIIB that PAS Process variables have high and positive correlation (r2=0.897) to the overall effectiveness of the PAS in the study organizations. It is further revealed that these relationship is significant(at a= 0.01 or 0.05) Further significant impact of the following PAS Process variables were found on the overall effectiveness of PAS viz PV-2,PV-5,PV-6,PV-7,PV-8,PV-10 and PV-11(Reference: Table II for full version of these variables)

12 It is observed form Tables VIIC to VIIC That PAS Outcome Variables were found to be high and positively correlated (r2=0.886) to the overall effectiveness of the PAS in the study organizations. The relationship was found to be significant(at=0.01 or 0.05). It is further found that except OV-6 all other PAS outcome variables have significant impact on the overall effectiveness of PAS

(OV-6:Perormance Appraisal System facilitates the growth and Learning of both superiors and subordinates in the organization)

Discussion

It has now been widely realized that in order to have an effective performance appraisal system in the organizations, the system should be made HRD oriented .The effectiveness of a performance appraisal system depends on the extent to which the HRD components are a part of the system (Design and Content Variables) and how well it is being implemented in the study organizations form the view point of the appraisers and the appraisees .

It was emerged form the study that both the appraisers and appraisees perceived by and large invariably following variables that the (1) Employees have clear understanding of what is expected from them regarding their performance in the organization (DCV-1) (ii) The performance appraisal system provides scope for self appraisal and reflection of the employees (DCV-4)(iii) Employees work thoroughly on self appraisal in terms of reviewing reflecting and analyzing the factors affecting their performance (iv)Employees take part in performance review discussions and (v) HRM/HRD/Personnel Department does follow up work on training needs as identified through appraisals are taken care to a large extent in the study organizations. Such a positive perception is probably due to having self appraisal system by the majority(six out of eight selected organizationsi.e seventy five percent of selected organizations) of the selected organizations and also due to exercising mechanism of Performance Review discussions by the majority(five out of selected organizations i.e. sixty percent of the selected organizations

Further ,it emerged form the findings that the appraiser's mean score as compared to the appraisee's mean score pertaining to all the variables is higher which means the appraisers , in a sense are marginally more satisfied than the appraisees with the existing performance appraisal system and practices .ahmed's study(1998) which was conducted with reference to two public sector enterprises revealed the same finding but in case of only a few variables Keeping the nature of relevant roles in mind, such a finding may be due comparatively more involvement of the appraisers in the process of designing and implementing the PAS

The appraisers and appraisees perceived that there does not exists a strong relationships (1) among the Design/Content variables (ii) Among process variables and (iii) among outcome variables which means that various factors affecting the effectiveness of PAS were not being equally taken care of by the employees of study organizations. Further ,it was emerged form the study that the managers (both the appraisers and the appraisees) perceived that in order to have an effective performance appraisal system, equal weightages is to be given to Design/Content Variables and outcome Variables
Implications

• The findings of the present study clearly indicate that there are variables in all the three categories (viz,Design/content variables, Process variables and Outcome Variables) which are perceived invariably by both the appraisers and the apprises to be taken care of only to the moderate extent, it is therefore obvious that these variables need special attention of the managers in general and HRD departments of the study organizations in particular so that the same may be taken care of to larger extent in future.fortunately,identification of training needs and career planning and development have been claimed invariably by both the appraisers and the appraisees as the prime objectives of the performance appraisal system. This mutual understanding between the appraisers and the appraisees may be used as momentum in fostering to make continous improvement in the matter as it easier to ensure deep involvement of all the concerned managers in such processes. Of course, a number of variables in all the three categories are being taken of to large extent in the study organization. However the study organizations cannot afford to leave these variables unattended in future. Constant attention, continous review and considerable efforts to take corrective action with full commitment of the top executives is amust. Organisations may be better served by using a combination of different performance improvement measures to capture high performance of its employees. And an improved performance appraisal system regardless of the potential solutions certainly generates necessary support in his direction.

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