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MANAGEMENT BY OBJECTIVES IN RELATION TO OPTIMAL EXPERIENCE IN THE WORKPLACE

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ABSTRACT

In order to discover whether Management by Objectives could be used to create optimal experience in the workplace, two tests were constructed. These were a measure of *Management by Objectives* (42 items) and a measure of *Optimal Experience* (24 items). First and second-order factor analyses were performed on both inventories to identify the true factors. Item analyses were performed to verify the reliability of both instruments. Pearson Product-moment correlations were computed to assess the relationship between the constructs. The implications are discussed.

OPSOMMING

Ten einde te bepaal of Doelwitbestuur gebruik kan word om optimale ervaring in die hand te werk is twee toetse gekonstrueer, naamlik 'n meetinstrument van *Doelwitbestuur* (42 items) en 'n meetinstrument van *Optimale Ervaring* (24 items). Eerste en tweedeorde-faktorontledings is uitgevoer op altwee meetinstrumente om die ware faktore uit te haal. 'n Itemontleding is uitgevoer om die betroubaarheid van albei instrumente te bepaal. Pearson Produk-moment korrelasies is bereken om die verwantskap tussen die twee konstrukte te bepaal. Die implikasies van die bevindinge is bespreek.

The question of why some people perceive the time spent at work as wasted, whereas others work because they enjoy it, is of great interest. People are more likely to take part in an activity, repeat a behaviour, or perform at their best when they enjoy what they are doing (Graef, Csikszentmihalyi & Gianinno, 1983). This is why so many people invest their energy in sports, hobbies and playing games. Csikszentmihalyi (1975) decided to identify why people repeatedly engage in an activity for its own sake. The value of this knowledge would assist in the changing of jobs so that work could become more enjoyable. A number of artists, poets, chess players, surgeons, rock climbers and industrial and agricultural workers were interviewed to find out how they describe their optimal experience of their specific type of activity (Csikszentmihalyi & Csikszentmihalyi, 1988).

All the interviewees described their experience of these activities in similar terms. It was so enjoyable, that they lost consciousness of their selves, they experienced a sense of freedom, and they became unaware of the normal passing of time. They were so involved in their activities that they became unaware of themselves as seperate from the activity (Csikszentimihalyi & Csikszentmihalyi, 1988). This is known as an autotelic experience. An autotelic activity or experience is one in which there is extensive energy output by the actor, with no conventional rewards for this output being offered (Allison & Duncan, 1988; Csikszentmihalyi, 1990). This is similar to intrinsic motivation (Deci & Ryan, 1985).

Further research into the nature of these autotelic activities highlighted a number of specific characteristics. *Clear, short-term goals* need to be set by the individual and *immediate feedback* on progress must be obtainable (Logan, 1985). The activity needs to be appropriately *challenging* and, when necessary, it must be possible to acquire the *skills* needed to assist in overcoming these *challenges* (Csikszentmihalyi, 1975). Most of the interviewees described their experiences as a feeling of "flowing". Csikszentmihalyi (1975) therefore decided to refer to "this holistic sensation that people feel when they act with total involvement" as Flow.

It is not the achievement of the result that promotes the action, but the enjoyment experienced when a person succeeds in keeping outside the parameters of anxiety and boredom (Csikszentmihalyi, 1975). It is possible, however, for a person to achieve positive results from working and not experience Flow and the associated enjoyment.

Optimal experience can only exist if there is a balance between the *perceived challenges* encountered and the *perceived skills* used. This balance will ensure that neither boredom nor anxiety is experienced (Massimini, Csikszentmihalyi & Carli, 1987). This is essential if optimal experience, also known as enjoyment, is going to take place.

When people are asked about what makes their lives rewarding, they describe events that they call: *enjoyment*. It is necessary to distinguish between enjoyment and pleasure, because enjoyment is the essential component of *happiness* whereas pleasure on its own does not result in happiness (Csikszentmihalyi, 1990).

> "Enjoyable events occur when a person has not only met some prior expectation or satisfied a need or desire, but also gone beyond what he or she has been programmed to do and achieved something unexpected. . ."

whereas pleasure comes from sleep, rest, food and sex which

> "provide restorative *homeostatic* experiences that return consciousness to order after the needs of the body intrude to cause psychic entropy to occur" (Csikszentmihalyi, 1990, p. 46).

There is a natural connection between enjoyment and growth. Enjoyment requires the personal investment of psychic energy, thereby having a positive effect on the quality of *life experience* (Csikszentmihalyi, 1990).

According to Privette (1983) Flow is a combination of peak performance and what Maslow (Meyer, Moore & Viljoen, 1989) describes as peak experience. The enjoyment taken from peak experience and the behaviour taken from peak performance (productivity) combines to form optimal experience or Flow. Furthermore, Flow is related to Maslow's "self actualization" concept. However, achievement of a satisfactory goal is not essential to the experience of Flow.

Self-actualization on the other hand refers to becoming "all that one is capable of being" (Meyer, Moore & Viljoen, 1989, p. 363). Flow therefore is the *process* of being involved in an activity, whereas self-actualization refers to the *end product* of fulfilling one's potential.

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Organisations focus on providing external rewards (extrinsic motivation) to motivate employees to work harder. Csikszentmihalyi (1990) proposes that attempts should be made to redesign jobs to facilitate the experience of Flow to make work a more meaningful and enjoyable experience. This will allow organisations to capitalise on intrinsic motivation (Deci & Ryan, 1985). According to Reddin (1971) most people find intrinsic enjoyment in a job well done. A natural spin-off for the organisation would be an increase in productivity (Lefevre, 1988).

Those who do not have the ability to enjoy work can be trained to create opportunities to experience Flow. They would have to be taught how to set short-term goals, how to obtain feedback from the task immediately, and how to take control of their work (Delle Fave & Massimini, 1988; Lorch-Bacci, 1992) They would also require the ability to manage the ever-shifting balance between perceived challenges and skills.

This could not take place successfully unless the organisation culture supported the changed behaviour. The performance management system in the organisation plays a major role in setting the culture and would be an appropriate avenue for introducing a new approach. A performance management system like MBO seemingly has all the characteristics required to experience Flow in an organisation. The main thrust of Drucker's (1977) philosophy of management (MBO) is that the manager must be able to control his performance. He believed that self-control would result in stronger intrinsic motivation to work. When a person acts because she or he decides it is right, then she or he is acting as a free person. This freedom is also an important element of the experience of Flow.

Drucker (1977) proposed that if long-term goals are mutually set, feedback is available and work is self-controlled, then workers would be more productive. Humble (1965), Odiorne (1965) and Reddin (1971) have written extensively in support of these beliefs. This study therefore aims to discover whether it is possible to use MBO to create Flow in an organisation.

It is important to acknowledge that there are critics who argue that MBO cannot result in optimal experience occurring in the workplace (Kane & Freeman, 1986; Spangenberg, 1994; Wright, 1984). They do not believe that MBO is a successful performance management system. Levinson (1970) went so far as to call it a negative form of industrial engineering. MBO is seen to intensify hostility, resentment and distrust between superior and subordinate, and is often a mask for authoritarian management (Halpern & Osofsky, 1990). The subordinate does not have any form of appeal when faced with an abusive, arbitrary, insensitive and authoritarian superior. This type of superior can have a negative effect on the success of the system. This is not the environment in which enjoyment can be fostered.

Another weakness of the MBO approach is that not all employees react well to mutual goal setting or to feedback from superiors. The system can also prevent people from using their discretion to work beyond the boundaries of their goals, thus limiting their outputs and achievements (Levinson, 1990). A decline in productivity will be the result.

In view of these conflicting viewpoints, and the similarity in fundamental characteristics, this study aims to discover whether MBO does have the ability to provide Flow in an organisation.

The major objective of this study is the construction and evaluation of two inventories, which can respectively be used to measure the perception of MBO and the experience of Flow. The secondary objective of the study is to identify whether a correlation exists between MBO and Flow. This will be done in respect of the subgroups: race, gender, job grade and the evaluation score received during the performance review.

METHOD

In order to do research on the existence of a relationship between MBO and Flow, two inventories were constructed and suitable data collected. Before developing the inventories the most recent relevant literature was read so that the appropriate domains of behaviour could be identified. Once the domains of behaviour had been identified, appropriate items were designed and the inventories compiled. In the initial form the MBO inventory had 43 items and the Flow inventory had 46 items.

A sample of 262 respondents from a manufacturing organisation participated in the study. Once the inventories were completed, statistical analyses were carried out to determine whether they were appropriate and reliable measures. Each inventory will be explained separately.

Statistical Analysis

The inventories were developed to measure the perception of MBO, on the one hand, and the existence of Flow in an environment where MBO is used, on the other hand. Each inventory was factor analysed separately to determine the dimensionality of the item space.

When factoring items that are differentially skew there are invariably more factors than exist in the real test space. It is therefore necessary to compute second-order factors. Multiple factors are yielded by the first-order factor analysis. Some are artefactors (artificial factors) and other are real factors.

To remove the artefactors it is necessary to define subscores with respect to each of the first-order factors. These subscores are then intercorrelated and subjected to a second-order factor analysis (Schepers, 1992, pp. 136-143). Consequently a second-order factor analysis will be computed and the scales that emerge will be subjected to an item analysis in order to reject the poor items. Cronbach's coefficient alpha will also be computed as part of the item analysis. The NP50 programme of the NIPR will be used to carry out the item analyses.

In order to determine the degree and the direction of the relationship between MBO and Flow, Pearson product-moment correlation coefficients will be computed once the inventories have been developed. Separate correlations will be done with respect to the whole group, race, gender, job grade and performance review score. This will be done to determine if the cultural or ethnic group that a person belongs to, position or performance has an effect on the way in which either MBO or Flow is experienced.

The Sample

Employees of a manufacturing company using MBO as a performance management system were invited to participate in the study. Out of the 849 employees who were requested to participate, 280 volunteered. The number of completed an useable inventories is 262. Only employees who have worked for the company for one year or longer and whose grade fell between Peromnes grades two and fourteen, were eligible to participate in the study. The human resource personnel assisted in the administration of the questionnaires.

The sample consists of 200 males and 62 Females. The average age of the respondents is 36,39 years and the average years of service is 7,34 years (Table 1). The race groups comprise Indians, Blacks and Whites of both genders.The departments which were involved were: sales, distribution, production, buying, engineering, human resources, technical (laboratory) and head office (finance, marketing adminstration). The Peromnes grades were divided into management (grades 8-1) and workers (grades 9-14). The evaluation scores are 1, 2, 3 and 4 (1 being excellent performance and 4 being poor performance.

TABLE 1:
BIOGRAPHICAL DATA OF THE SAMPLE GROUPS

Group	sample size	mean age	mean years service	mean grade	management Grades 8-1	workers Grades 9-14
Males (Black)	67	38,42	10,28	10,51	7	60
Males (White)	93	37,33	6,27	7,49	65	28
Males (Indian)	40	36,61	8,10	9,02	17	23
Females (Black)	5	36,45	9,60	11,20	0	5
Females (White)	51	34,01	4,98	9,53	18	33
Females (Indian)	6	26,53	4,17	10,83	0	6
Blacks	72	38,29	10,24	10,56	7	65
Whites	144	36,15	5,81	8,21	83	61
Indians	46	35,29	7,59	9,26	17	29
Males	200	37,55	7,98	8,81	89	111
Female	62	33,49	5,27	9,79	18	42
TOTALS	262	36,39	7,34	9,04	107	155

RESULTS

The MBO Measuring Instrument
Based on Drucker's (1977) MBO theory, an inventory was created by identifying domains of behaviour (Table 2) from the literature. Drucker (1977), Humble (1965), Odiorne (1965) and Reddin (1971) were the main sources.

TABLE 2:
IDENTIFICATION OF MBO FACTORS

Category 1	The objective setting process
Category 2	The performance review process
Category 3	Personal experience of the MBO system

Based on these domains 43 items were created. The MBO inventory was constructed using questions and a seven point intensity scale. This scale in its final form with 43 items was administered to 280 subjects. Of these, 262 yielded usable data.

Statistical analyses were carried out on the results of the 43 items. The 43 items were intercorrelated and subjected to a factor analysis. The intercorrelation matrix is of magnitude 43x43, and is therefore too big to be reproduced in this publication*. Kaiser (1961) postulates that one should extract those factors with an eigenvalue larger than one. In the first-order factor analysis of the items, six factors were extracted. Of the six factors, it is not clear which are artifactors and which are real factors.

The first three factors reflected the domains initially identified: the setting of objectives, the performance review process and the employees' personal experience of MBO (Table 2). Factors four and five had so few loadings, that they are not worth discussing. The sixth factor had no meaningful loadings and was discarded.

To identify which factors are real, a second-order factor analysis was computed according to the procedure described by Schepers (1992, pp. 136-143). According to this procedure, subscores were computed for each of the five factors and intercorrelated (Table 3).

The intercorrelations were subjected to a further factor analysis. A single factor was yielded by this analysis (Table 4). From Table 4 it is clear that most of the items load on the same factor. All 43 items span a single dimension and represent a single scale factor).

The first order factor analysis, the intercorrelation matrix and the factor matrix are too big to reproduce in the publication and are available from the authors on request.

TABLE 3:
MATRIX OF INTERCORRELATIONS OF SUBSCORES OF THE MBO INVENTORY.

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
FACTOR 1	1,0000				
FACTOR 2	0,6565	1,0000			
FACTOR 3	0,7688	0,6796	1,0000		
FACTOR 4	0,4745	0,5017	0,5035	1,0000	
FACTOR 5	0,5772	0,5881	0,5598	0,5510	1,0000

TABLE 4:
FACTOR MATRIX

	FACTOR 1
FACTOR 1	0,831
FACTOR 2	0,800
FACTOR 3	0,846
FACTOR 4	0,631
FACTOR 5	0,725

The single factor that emerged at the second-order level was subjected to an item analysis which was performed using the NIPR's NP50 item analysis programme. All the items were included in the item analysis to determine which items would be rejected during the iterative procedure (Table 5). The indices of reliability ($r_{gx}S_g$) range from 0,184 to 1,462. Item 39 was the only poor item and was rejected*. The range following rejection of item 39 was from 0,588 to 1,462. After two iterations, only one item was rejected. This resulted in 42 items being included in the scale. The test has an overall reliability, according to Cronbach's coefficient alpha, equal to 0,971.

The Optimal Experience (Flow) Measurement Instrument:
In the construction of the Flow inventory, three domains of behaviour (Table 6) were identified from Csikszentmihalyi's (1990) book, as well as work done by other researchers (Csikszentmihalyi & Csikszentmihalye, 1988).

Based on these domains 39 items were designed. Seven questions were extrapolated from the four theme questions in Csikszentmihalyi's Flow questionnaire (1993). The Flow inventory in its final form has a binary scale with 46 items. It was administered to 280 subjects. Of these 262 were satisfactory. Statistical analyses were then performed.

The 46 items were intercorrelated and subjected to a first-order factor analysis which yielded 13 factors. The intercorrelation matrix is of magnitude 46x46 and is therefore too big to be reproduced†. Kaiser (1961) postulates that one should extract those factors with an eigenvalue larger than one.

Following Schepers' procedure (1992), subscores were computed for each of the 13 factors. These subscores (factors) were intercorrelated and subjected to a second-order factor analysis (Table 7). The obtained factor matrix was rotated to simple structure using the Direct Oblimin procedure (Table 8). This yielded four second-order factors. Scale 1 correlates 0,406 with Scale 2 (16% common variance). There are low correlations with Scales 3 and 4 (Table 9). The last factor had only three loadings and was discarded.

The final inventory comprises three factors (Table 6). From inspection, Scale 1 (enjoyment) was identified as an adequate tool for measuring optimal experience. It will therefore be the only scale to be reported on‡.

See TABLE 5 – item MBO 40

† *Information regarding the first order factor analysis, the intercorrelation matrix and the factor matrix are too big to reproduce in the publication and are available from the authors on request.*

‡ *Information regarding the complete test and the other factors are available from the authors on request.*

TABLE 5:
ITEM STATISTICS OF MBO INVENTORY

ITEM	$\bar{X}_g$	S_g	r_{gx}	$r_{gx}S_g$
MBO 1	5,397	1,547	0,614	0,951
MBO 2	4,115	1,668	0,671	1,119
MBO 3	4,634	1,639	0,695	1,139
MBO 4	4,954	1,590	0,658	1,046
MBO 5	5,156	1,709	0,631	1,078
MBO 6	5,260	1,284	0,555	0,712
MBO 7	4,630	1,927	0,758	1,462
MBO 8	4,573	1,853	0,732	1,357
MBO 9	4,809	1,552	0,689	1,069
MBO 10	4,416	1,783	0,785	1,399
MBO 11	4,794	1,606	0,640	1,027
MBO 12	4,779	1,795	0,535	0,960
MBO 13	6,496	0,782	0,358	0,280
MBO 14	4,958	1,534	0,503	0,772
MBO 15	4,439	1,824	0,661	1,206
MBO 16	4,584	1,787	0,646	1,155
MBO 17	5,107	1,774	0,755	1,338
MBO 18	4,416	1,815	0,746	1,354
MBO 19	4,981	1,469	0,618	0,908
MBO 20	4,947	1,627	0,739	1,202
MBO 21	4,397	1,624	0,747	1,213
MBO 22	5,408	1,625	0,720	1,170
MBO 23	4,798	1,652	0,784	1,296
MBO 24	4,344	1,814	0,743	1,348
MBO 25	4,019	2,123	0,643	1,365
MBO 26	4,706	1,671	0,751	1,255
MBO 27	4,172	1,939	0,750	1,454
MBO 28	4,099	1,909	0,702	1,341
MBO 29	5,576	1,486	0,723	1,074
MBO 30	4,305	1,811	0,760	1,376
MBO 31	6,019	1,267	0,445	0,563
MBO 32	5,607	1,226	0,480	0,588
MBO 33	4,962	1,656	0,756	1,251
MBO 34	5,328	1,611	0,543	0,875
MBO 35	5,443	1,450	0,523	0,758
MBO 36	4,947	1,662	0,709	1,178
MBO 37	5,099	1,672	0,746	1,247
MBO 38	4,511	1,508	0,671	1,011
MBO 39	3,885	1,629	0,113	0,184*
MBO 40	4,947	1,530	0,685	1,049
MBO 41	4,969	1,640	0,786	1,289
MBO 42	4,218	1,777	0,716	1,273
MBO 43	3,721	1,930	0,741	1,431

$\bar{X}_g$ =Average score for each item
S_g =Standard deviation of each item
r_{gx} =Correlation of each item with the total test score
$r_{gx}S_g$ =Index of reliability of each item

TABLE 6:
IDENTIFICATION OF FLOW FACTOR

Category 1	Optimal experience (enjoyment)
Category 2	Relationship to work and goal orientation
Category 3	Amount of challenge expereienced at work

TABLE 8:
ROTATED FACTOR MATRIX OF THE FLOW INVENTORY

	FACTOR I	FACTOR II	FACTOR III	FACTOR IV
FACTOR 1	0,536	0,034	0,510	-0,030
FACTOR 2	-0,014	0,098	0,530	-0,077
FACTOR 3	0,831	- 0,148	-0,137	-0,017
FACTOR 4	0,179	0,310	0,105	0,241
FACTOR 5	-0,010	0,027	0,047	0,753
FACTOR 6	0,575	0,118	0,195	-0,052
FACTOR 7	0,423	0,031	0,355	0,157
FACTOR 8	0,008	0,561	-0,085	0,085
FACTOR 8	0,591	0,176	0,041	-0,017
FACTOR 10	0,005	0,693	0,074	-0,140
FACTOR 11	0,017	0,447	0,097	0,234
FACTOR 12	-0,049	- 0,043	0,494	0,158
FACTOR 13	0,506	0,189	-0,157	0,182

TABLE 9:
MATRIX OF INTERCORRELATIONS OF ROTATED FACTORS

	FACTOR I	FACTOR II	FACTOR III	FACTOR IV
FACTOR I	1,000			
FACTOR II	0,406*	1,000		
FACTOR III	0,227	0,330	1,000	
FACTOR IV	0,227	0,346	0,219	1,000

An item analysis was performed using the NP50 programme, in respect of Scale 1 (enjoyment), with 24 items (Table 10). The indices of reliability ($r_{gx}S_g$) range from 0,130 to 0,307. None of the items was rejected during the iterative procedure. The scale has an overall reliability of 0,891 according to Kuder-Richardson 20.

TABLE 7:
THE MATRIX OF INTERCORRELATIONS OF SUBSCORES IN RESPECT OF THE FLOW INVENTORY

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13
Factor 1	1,0000												
Factor 2	0,3310	1,0000											
Factor 3	0,3893	-0,0187	1,0000										
Factor 4	0,3585	0,1437	0,2043	1,0000									
Factor 5	0,1983	0,1081	0,0635	0,3613	1,0000								
Factor 6	0,5399	0,2702	0,4203	0,2979	0,1663	1,0000							
Factor 7	0,5635	0,2446	0,3440	0,4027	0,2650	0,4077	1,0000						
Factor 8	0,1990	0,0577	0,1069	0,2966	0,2028	0,2379	0,2059	1,0000					
Factor 9	0,4754	0,1353	0,4550	0,3415	0,1568	0,4841	0,4271	0,2314	1,0000				
Factor 10	0,3118	0,2237	0,0831	0,3637	0,1066	0,2556	0,2231	0,3512	0,2689	1,0000			
Factor 11	0,3028	0,1861	0,0809	0,2920	0,3326	0,2418	0,3331	0,3826	0,3007	0,3293	1,0000		
Factor 12	0,3191	0,2559	-0,0001	0,1716	0,1997	0,1268	0,2620	0,0771	0,0666	0,1103	0,1923	1,0000	
Factor 13	0,3659	0,0317	0,4300	0,2784	0,2909	0,4202	0,3015	0,2076	0,3858	0,2849	0,3018	0,0293	1,0000

TABLE 10:
ITEM STATISTICS IN RESPECT OF THE FIRST FACTOR OF THE FLOW INVENTORY

Item	PJ	PW	S_g	r_{gx}	$r_{gx}S_g$
FLOW 1	0,191	0,809	0,393	0,486	0,191
FLOW 2	0,240	0,760	0,427	0,557	0,238
FLOW 3	0,179	0,821	0,384	0,341	0,131
FLOW 4	0,057	0,943	0,232	0,527	0,122
FLOW 5	0,088	0,912	0,283	0,487	0,138
FLOW 6	0,248	0,752	0,432	0,629	0,272
FLOW 7	0,313	0,687	0,464	0,574	0,266
FLOW 9	0,538	0,462	0,499	0,568	0,283
FLOW 10	0,469	0,531	0,499	0,454	0,227
FLOW 11	0,332	0,668	0,471	0,632	0,298
FLOW 12	0,088	0,912	0,283	0,522	0,148
FLOW 14	0,229	0,771	0,420	0,485	0,204
FLOW 15	0,118	0,882	0,323	0,579	0,187
FLOW 16	0,156	0,844	0,363	0,607	0,221
FLOW 20	0,202	0,798	0,402	0,323	0,130
FLOW 25	0,233	0,767	0,423	0,467	0,197
FLOW 26	0,107	0,893	0,309	0,525	0,162
FLOW 27	0,263	0,737	0,440	0,683	0,301
FLOW 28	0,202	0,798	0,402	0,572	0,230
FLOW 33	0,191	0,809	0,393	0,505	0,198
FLOW 34	0,275	0,725	0,446	0,618	0,276
FLOW 35	0,286	0,714	0,452	0,661	0,299
FLOW 38	0,504	0,496	0,500	0,499	0,249
FLOW 42	0,347	0,653	0,476	0,644	0,307

PJ = Proportion of people endorsing the item
PW = Proportion of people not endorsing the item
S_g = Standard deviation of each item
r_{gx} = Correlation of each item with total test score
$r_{gx}S_g$ = Index of reliability of each item

The relationship between MBO and FLOW

A subsidiary objective of the study was to assess the interrelationships between Flow and MBO. Correlations were computed in respect of the following groups: whole group, race groups, gender groups, race group according to gender group and management versus worker groups. A final group was formed to differentiate between people who obtained different evaluation scores during the performance review discussion (1=excellent performance and 4=poor performance).

Use was made of Pearson's product-moment correlation to identify the degree and the direction of the relationship between MBO and Flow. The two scales were intercorrelated, in respect of each of the subgroups. The coefficients are shown in Table 11. All the coefficients are statistically significant at the 5% level or less. It is clear that there is an inverse relationship between MBO and Flow for all groups. It can be surmised that MBO prevents optimal experience or Flow from occurring in the workplace. From inspection of Table 11 it is apparent that whatever group a respondent belongs to, he/she is still likely to have a negative experience of MBO.

DISCUSSION

An inspection of the findings shows that the first objective was achieved. Two reliable inventories were constructed. The MBO inventory has a reliability of 0,971 for 42 items, according to Cronbach's coefficient alpha. The Flow inventory has a reliability of 0,891 for 24 items, according to Kuder-Richardson 20.

The subsidiary objective of the study was to identify whether there is a relationship between MBO and Flow with respect to a variety of subgroups. The result of the correlations indicates that MBO has an inverse relationship with Flow, Regardless of race, gender, job grade or evaluation score received during the performance discussion. This suggests that MBO will

TABLE 11:
CORRELATION COEFFICIENTS OF THE MBO INVENTORY WITH THE FIRST FACTOR OF THE FLOW INVENTORY, IN RESPECT OF THE VARIOUS GROUPS.

Group (sample)	Sample size	Correlation Score
Whole group	262	-0,387
Males	200	-0,394
Females	62	-0,354
Blacks	72	-0,335
Whites	144	-0,406
Indians	46	-0,420
Females (White)	51	-0,359
Males (White)	93	-0,440
Males (Black)	67	-0,331
Males (Indian)	40	-0,442
Evaluation score (1 & 2)	156	-0,365
Evaluation score (3 & 4)	103	-0,388
Management (8-1)	107	-0,418
Workers (9-14)	155	-0,391

diminish the level of optimal experience (Flow) for everyone in the organisation. However, one should be careful to generalise the results as the study was conducted in one organisation only.

A key difference between MBO and Flow seems to be the level of control that the individual has over the achievement of goals. Where MBO is implemented the control tends to be in the hands of the manager. For Flow to exist, it is essential that the individual has personal control over the achievement of goals (Csikszentmihalyi, 1990). Further research is therefore necessary to ascertain whether employees having control over their work would result in MBO being experienced more positively. It is important to reiterate that Drucker's model (1977) proposes that the control is owned by the individual.

However, it may not be feasible for all people to be given control. If so, to whom can control be given and to whom must control not be given? A possible solution would be to assess the locus of control that an employee has. It could be postulated that those who have an internal locus of control can be given control over the design of their goals and the achievement of their goals. Once differentiation is made between those who can be given control and those who cannot, it might be possible to provide training for those who cannot, so that they too can learn to take control. As MBO is a process of goal setting where the ultimate control lies in the hands of management, it would be useful to carry out research to ascertain whether total control given to employees would result in MBO being experienced more positively.

Another difference between MBO and Flow is the difference in time periods between goalsetting and goal achievement, and when the feedback on progress takes place.

MBO focuses on long-term goal-setting, linked to the strategic objectives of the company, where feedback is planned on a quarterly basis. Whereas Flow requires short-term goals that are linked to personal ability and motivation and where feedback is immediate and obtainable during the activities of goal achievement. Individuals need to be able to derive the feedback themselves and to adjust their actions accordingly.

The achievement of goals is an essential component of MBO. The result is that managers can be so goal-orientated that they forget about the processes at work. Flow, on the other hand, suggests that he achievement of goals is not as important as the process followed.

This study has indicated that MBO was experienced negatively by all the groups investigated. This, however, does not mean that MBO is redundant. It may be possible to adapt MBO by using some of the Flow characteristics to make it more

meaningful for employees, Further research would be appropriate to ascertain whether other performance management systems would fare any better when correlated with Flow.

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