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[3]*, [4]

A Study on Role and Function of the Medical Representatives

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Abstact

Background : Aim of this study is focussed on the analysis of the needed abilities of medical representatives resulting in building up the market and increasing sales. It is to propose methods to increase this ability ensuring continuous growth in market share and profit.

Methods : A survey was conducted between January 6 and May 31, 2003. Using SPSS(Version 10.0), the collected data was analyzed by Hotelling T2, factor analysis. Some hypotheses were selected to induce the conclusion. Some questionnaires for physicians working in hospitals or clinics and the medical representatives working in a pharmaceutical company were created and asked to them to either prove or reject those hypotheses. The results were analyzed to find the primary factors that effect the interactions between physician and the medical representatives. These factors were also studied along with the theoretical research based on published references.

Results : The results were as follows. The main reasons for the physician to meet with a medical representatives were collection of product informations needed for patient treatment and collection of informations on current medical issue and as well as personal interests. The main parameters by which physicians evaluate the medical representatives are human relationship including sincerity and manners and supply of accurate and unbiased information on products. Overall, the medical representatives' perception on the importance of medical knowledge and ability to deliver it are lower than that expected by physicians.

Conclusion : Medical and pharmaceutical companies' environment are changed rapidly. And those changes forced medical representatives to set new roles and competency. In order to drive away from the past 'rule of thumb ' and 'adaptation to circumstance', optimal method and systemic development to train and support the medical representatives should be equipped. They will help medical representatives to be specialists in medical knowledge and to understand the exact need of health care professions. Product competitiveness will be increased and eventually successful business can be achieved through it.

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Key words: MR(medical representatives), pharmaceutical company,
physicians

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(Medical Representatives :   MR)   .

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3)   (3; 7   )
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2)   (5; 5   )
3)   (6; 10   )
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<   3>, <   4>, <   5>, <   6>, <   7>   Hotelling T2
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		(%)
20	10	3.42
30 (35)	62	21.23
30	70	23.97
40	119	40.75
50	31	10.62
	241	82.82
	50	17.18
1	3	1.03
1~5	57	19.52
6~10	123	42.12
11	109	37.33
	97	33.22
	50	17.12
	17	5.82
	118	40.41
	10	3.42
	33	15.94
Senior Staff*	31	14.98
Junior Staff**	42	20.29
(Fellow)	14	6.76
	87	42.03
	114	44.88
	140	55.12

* Senior Staff :   10   ,
** Junior Staff :   10   ,

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18.32%   ,
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, 14.38%

DI

DI

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11.34%

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<　2> (Rotated Factor Matrix)

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
	0.74352					
	0.73444					
	0.66293					
	0.63208					
	0.53067					
	0.50374					
, ,	0.46125					
	0.43708					
/		0.77055				
		0.75633				
		0.72732				
		0.68182				
		0.42388				
			0.75868			
			0.73414			
(DI)			0.73262			
			0.58813			
,				0.75414		
,				0.61914		
, ,				0.47736		
					0.66192	
					0.57472	
,						0.86501
,						0.82607
Eigenvalue	5.52476	2.60758	2.04765	1.61486	1.37042	1.07176
Pct of Var	23.02%	10.86%	8.53%	6.73%	5.71%	4.47%
	38.81%	18.32%	14.38%	11.34%	9.62%	7.53%

2. 2

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<　3> 2

57.41%

14.61%

12.2%

8.7%

7.08%

	Factor1	Factor2	Factor3	Factor4	Factor5
	0.74778				
	0.73215				
	0.70834				
	0.69218				
	0.62461				
	0.53429				
	0.48624				
	0.44810				
	0.42287				
		0.76104			
		0.74143			
		0.72845			
		0.67744			
		0.65106			
		0.47338			
		0.41376			
			0.73746		
			0.73064		
			0.72170		
			0.66070		
				0.73789	
				0.58621	
				0.53853	
					0.84814
					0.82806
Eigenvalue	8.47490	2.15609	1.8005	1.28420	1.04515
Pct of Var	33.90%	8.62%	7.20%	5.14%	4.18%
	57.41%	14.61%	12.20%	8.70%	7.08%

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Hotelling T2   .
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1(   )   2.036E-16

0.357   . ,   1(

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2(   )   1.95E-17
0.082   .

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3(   )   - 3.33E-17

0.126

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4(   )   - 1.76E-17,   - 0.098

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(=0.05   ),   1   .

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< 4>   MR   .
(Hotelling T2   )

		F		Error DF	
Hotellings	0.0240	1.20	6	300	0.3052

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
	2.04E-16	1.95E-17	-3.33E-17	-1.76E-17	-1.84E-16	1.47E-18
	0.3575	0.0827	0.1262	-0.0978	0.0585	-0.1639

Hypoth.SS	Error SS	Hypoth.MS	Error MS	F	
4.6332	295.93	4.6332	0.9703	4.78	0.0296
0.2479	289.98	0.2479	0.9508	0.26	0.6100
0.5778	286.49	0.5778	0.9393	0.62	0.4335
0.347	280.61	0.347	0.92	0.38	0.5396
0.124	290.99	0.124	0.9541	0.13	0.7187
0.9734	303.84	0.9734	0.9962	0.98	0.3237

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        < 4>, < 5>   2
Hotelling T2   .
< 5>

1(   )   -2.67E-16,   0.219   .

2(,   )   2.98E-17,   0.108

3(   )   1.37E-16,   0.134   .

4(   )   1.01E-16,   0.297

5(   )   1.37E-16,   0.6   .

                                Hotelling T2
                                    (=0.05   )   4,   5

< 5> MR (Hotelling T2)

		F		Error DF	
Hotellings	0.041	2.60	5	317	0.0255

	Factor1	Factor2	Factor3	Factor4	Factor5
	-2.67E-16	2.98E-17	1.37E-16	1.01E-16	1.1E-16
	0.2193	0.1082	0.134	0.2968	0.3852

	Hypoth.SS	Error SS	Hypoth.MS	Error MS	F	
	1.9315	312.74	1.9315	0.9743	1.98	0.1601
,	0.4704	312.12	0.4704	0.9723	0.48	0.4872
	0.7213	321.6	0.7213	1.0019	0.72	0.3968
	3.5386	304.85	3.5386	0.9497	3.73	0.0545
	5.9579	296.91	5.9579	0.925	6.44	0.0116

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Hotelling T2

< 6>, < 7>, < 8>

< 6> < 7>

< 6>

, 11
(Senior Staff), 10 (Junior Staff), 5 ( ) -0.208,
0.134, -0.109 . Senior Staff Junior Staff
. Senior Staff

, Junior Staff

< 7>

, / 0.238, -0.120 . /

< 6> MR (Hotelling T2)

		F			Error DF	
Hotellings	0.0805	1.72	12	396.7	0.0605	

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
5	0.0101	-0.0224	0.0882	0.1095	-0.1392	0.1089
10	0.0895	0.1431	0.0609	-0.0946	-0.0396	0.1346
11	-0.1041	-0.1451	-0.1155	0.0438	0.1202	-0.2079

	Hypoth.SS	Error SS	Hypoth.MS	Error MS	F	
	1.9703	262.03	0.9852	1.0001	0.99	0.3748
	4.3871	259.61	2.1936	0.9909	2.21	0.1113
	2.1712	261.83	1.0856	0.9993	1.09	0.3390
	1.8365	262.16	0.9183	1.0006	0.92	0.4007
	2.6839	261.32	1.342	0.9974	1.35	0.2622
	6.9671	257.03	3.4836	0.981	3.55	0.0301

		F		Error DF	
Hotellings	0.0458	1.97	6	258	0.0702

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
	0.1231	- 0.0037	0.0723	0.0721	0.2383	- 0.0632
	- 0.0622	0.0019	- 0.0366	- 0.0364	- 0.1205	0.032

Hypoth.SS	Error SS	Hypoth.MS	Error MS	F	
2.0299	261.97	2.0299	0.9961	2.04	0.1546
0.0018	263	0.0018	1.0038	0.00	0.9660
0.7002	263.3	0.7002	1.0011	0.70	0.4037
0.6957	263.3	0.6957	1.0012	0.69	0.4053
7.6066	256.39	7.6066	0.9749	7.80	0.0056
0.536	263.46	0.536	1.0018	0.54	0.4651

		F		Error DF	
Hotellings	0.0236	0.87	6	222	0.5142

Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
0.0000	- 0.1062	- 0.0003	0.1133	- 0.0139	- 0.0695
0.021	- 0.0044	- 0.1314	- 0.0816	- 0.0241	0.1066

Hypoth.SS	Error SS	Hypoth.MS	Error MS	F	
0.025	232.3	0.025	1.0233	0.02	0.8759
0.5894	244.96	0.5894	1.0791	0.55	0.4606
0.9773	227.84	0.9773	1.0037	0.97	0.3248
2.1586	245.42	2.1586	1.0811	2.00	0.1590
0.006	251.09	0.006	1.1061	0.01	0.9416
1.7634	233.02	1.7634	1.0265	1.72	0.1913

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Hotelling T2 .

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1( ) 11 (Senior Staff) - 0.069, 10 (Junior
Staff) 0.0701, 5 ( ) - 0.016 . ,
Junior Staff Senior Staff .

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2(,   )   Senior Staff 0.019, Junior Staff - 0.017,   - 0.00007
          .   Senior Staff
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3(   )   Senior Staff - 0.059, Junior Staff - 0.019,   0.154
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4(   )   Senior Staff - 0.089, Junior Staff - 0.042,   0.26
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<   9>   MR   (Hotelling T2   )

		F		Error DF		
Hotellings	0.0378	1.01	10	400.76	0.4308	

	Factor1	Factor2	Factor3	Factor4	Factor5
5	- 0.0163	- 0.0001	0.1543	0.2607	- 0.0733
10	0.0701	- 0.0168	- 0.0197	- 0.0424	0.112
11	- 0.0689	0.0186	- 0.059	- 0.0897	- 0.0853

	Hypoth.SS	Error SS	Hypoth.MS	Error MS	F	
	1.0835	273.92	0.5418	1.0034	0.54	0.5834
,	0.0688	274.93	0.0344	1.0071	0.03	0.9664
	1.72	273.28	0.86	1.001	0.86	0.4247
	4.7909	270.21	2.3955	0.9898	2.42	0.0908
	2.5141	272.49	1.257	0.9981	1.26	0.2855

<   10>   MR   (Hotelling T2   )

		F		Error DF		
Hotellings	0.0779	4.21	5	270	0.0011	

	Factor1	Factor2	Factor3	Factor4	Factor5
	0.3034	0.1303	0.0283	0.0253	0.1893
	- 0.1493	- 0.0641	- 0.0139	- 0.0124	- 0.0931

	Hypoth.SS	Error SS	Hypoth.MS	Error MS	F	
	12.5005	262.5	12.5005	0.958	13.05	0.0004
,	2.3064	272.69	2.3064	0.9952	2.32	0.1291
	0.1085	274.89	0.1085	1.0033	0.11	0.7425
	0.0869	274.91	0.0869	1.0033	0.09	0.7688
	4.8661	270.13	4.8661	0.9859	4.94	0.0271

		F		Error DF	
Hotellings	0.0169	0.79	5	233	0.5583

	Factor1	Factor2	Factor3	Factor4	Factor5
	0.1501	0.0677	- 0.0139	- 0.0137	- 0.0691
	- 0.0204	- 0.0887	- 0.0371	0.0465	0.0258

	Hypoth.SS	Error SS	Hypoth.MS	Error MS	F	
	1.723	232.67	1.723	0.9816	1.76	0.1865
,	1.4517	229.43	1.4517	0.968	1.50	0.2219
	0.0317	252.55	0.0317	1.0656	0.03	0.8632
	0.215	236.75	0.215	0.9989	0.22	0.6431
	0.5338	256.1	0.5338	1.0806	0.49	0.4828

5(   )   Senior Staff - 0.085, Junior Staff 0.112,   - 0.073
                                    Junior Staff
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1(   )   /   0.303,   - 0.149   .
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2(,   )   /   0.303,   - 0.064   . ,
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3(   )   /   0.028,   - 0.013   .   4(
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