

IDENTIFICATION OF LEADERSHIP POTENTIAL IN MILITARY CADETS

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One hundred forty military cadets were rated on a 5-point scale on 47 traits. The traits were prepared after a careful content analysis of data collected from nearly all the sources involved in the assessment of leadership potential in armed forces. The analysis identified the traits required for armed forces of Pakistan and differentiated the traits required for Army, Navy, and Air Force. Traits rated high for various Arms/Branches/Corps have also been identified which are in accordance with their job requirements. A factor analysis with varimax rotation of the data has identified four factors: Sociability, dominance, professional competence, and dynamism.

Most of the literature on military leadership, is based on the biographies and auto-biographies of great military leaders (Cook, 1983; Montgomery, 1961). Army officers have written books in which they have discussed those qualities and capabilities of an officer who can lead his men to success. In reviewing the literature pertaining to army leadership narrated by great war heroes, we will find that all of them have discussed the traits essential for a military leader when he himself is facing or has to prepare his men to face the iron and fire of war. Fleet and Yukl (1988) while discussing on content analysis of military research journals, concluded that they mostly contain review articles on leadership based on the same paradigm of discussing the capabilities essential for a military leader.

In Pakistan, Inter-Services Selection Board (ISSB) selects the candidates who possess basic leadership potential. The selected lot is sent to the academies for Army, Navy, and Air Force. The cadets are then given the required military training and to command and control the troops. Thus leadership training is the foremost aspect of military academies in Pakistan. They also have devised methods for assessing various leadership traits throughout the training tenure of a cadet. Though their system of assessment is being validated with time and experience of the instructors and administrators of the academies, a need remains to look for some scientific and precise method for

assessing various leadership traits in leaders of the future armed forces of Pakistan.

The present study was designed to develop a scale which can be helpful in identifying leadership potential in military cadets of Pakistan Armed Forces. It also identifies the traits required for Army, Navy, and Air Force separately. Traits preferred for the Arms/Corps/Branches of Pakistan armed forces are also indicated in the results. Factor analysis of the data indicated the factors operating in military leadership of Pakistan.

METHOD

The study was carried out in two phases:

Phase I

In the first phase a list of traits/characteristics/ qualities possessed by a military officer was prepared by collecting data from the books, research articles, and published papers on leadership and the organizations where leadership is assessed including, Inter Service Selection Board (ISSB), Pakistan Military Academy (PMA), Pakistan Naval Academy (PNA), Pakistan Air Force (PAF), United States Army, United States Marine Corps., Royal Military College Canada, Royal Air Force College England, British Royal Naval College Dartmouth. Data were also collected from a random sample of 90 military cadets (50 from Army, 20 each from Navy and Air Force), 40 Platoon/Division/Flight Commanders (20 from Army, 10 each from Navy and Air Force), 40 serving military officers with 8 to 20 years of commissioned services (20 from Army, 10 each from Navy and Air Force), and 9 senior military officers (5 from Army, 2 each from Navy and Air Force, who had actually taken part in the 1965, 1971, and Sino-Indian wars. All the subjects were asked to enlist the leadership qualities which they considered as the pre-requisites for a military officer in peace as well as in war.

A content analysis of the traits generated through the sources mentioned above revealed a list of 73 traits. The list was again given to 10 judges (6 psychologists of Armed Forces, 4 psychologists of National Institute of Psychology) having interest in studying and

assessing leadership. The task of the judges was to indicate unclear and repetitive traits. Finally, the 47 trait adjectives were left in the list.

Phase II

Sample

A total of 140 subjects (Military Cadets of final term) were randomly selected. Out of these, 70 were from Pakistan Military Academy (PMA), Abbotabad; 30 from Pakistan Naval Academy (PNA), Karachi; and 40 from Pakistan Air Forces (PAF) Academy, Risalpur. All of them were males with their ages ranging from 20 to 23 years. They had been selected by Inter Services Selection Board (ISSB), and were in the final term of military training in their respective academies.

Instrument

Instrument of the study consisted of a list of 47 trait adjectives prepared in the first phase of the study. Each item of the list was to be measured on a 5-point scale.

Procedure

After the random selection of cadets from an academy, their Platoon/Division/Flight commanders were identified and contacted. They were requested to judge the cadet. The instructions given to the subjects were, "Given overleaf are some leadership traits. You are requested to please evaluate Cadet No.— of your Platoon/Division/Flight on these traits. Each trait is presented on a 5-five point scale starting from 1 to 5. If a cadet is highly bestowed with the trait being judged please put a cross mark on No. 5. On the other hand if he is lacking grossly the trait being judged than put a cross mark on No. 1. The cadets who possessed the trait in between 1 and 5 should be marked at their appropriate position from 2 to 4.

RESULTS AND DISCUSSION

Descriptive analysis indicated those traits which were rated high by the Platoon/Division/Flight commanders in the military cadets. Out of 47 traits, 31 were rated high with a mean of 3.50 and above, and standard deviation less than 1.00. This analysis also indicated those

traits which were rated high for a particular force. 23 traits were rated high for Army, 17 for Air Force, and 12 for Navy. Traits rated high for the Army, Navy, and Air Force branches (for which the cadets were recommended to join after their passing out were also identified.

The item-total correlations of the scale was also found to be high ranging from $r = 0.42$ to 0.77 , with alpha-coefficient of 0.973 .

When the data were analyzed with PCA (Table 1), the results indicated that all the variables loaded high on a single factor indicating a single composite scale, i.e., leadership. However a varimax rotation revealed four factors with factor loadings greater than 0.40 . The factors alongwith the variables and their factor loadings are given in Table 2. Tables 3, 4, 5, and 6 represent the cluster of traits in the above mentioned factors with respect to the services and their Arms/Branches/Corps. Means and standard deviations of traits are also shown. It is evident from Table 2 that factor 1 has the maximum number of traits loaded on it. The traits loaded high on this factor are loyal/sincere, disciplined, cooperative, religious, humble, patriot, trust worthy, and responsible. These traits reflect the social and interpersonal skills of a leader. Stogdill also reported after an analysis of fifty-two factorial studies on military and industrial leaders that social and interpersonal skills factor was identified in sixteen studies as the most prominent factor (cited in Bass, 1981), conclusion later substantiated by Posner and Kouzes (1988). Interpersonal activities also explained maximum variance when Air Force personnel work dimensions were factor analyzed by Cunnigham, Wimpee, and Ballentine (1990). The factor was named "sociability".

The traits loaded high on factor 2 are, communicative, confident, lively, dominant, original, daring/bold. Traits loaded on this factor have also been given prominence in various studies done in the military set up (Fleet & Yukl, 1988); hence, it was labeled "dominance."

With the recent changes in the warfare technology a leader is required to be technically skilful, professionally competent, task oriented, hard worker, and a good planner (Hunt, 1988). All these traits are loaded high on factor 3 which can be designated as "professional competence". A military leader should also be energetic, courageous, physically strong, and adventurous (Habib, 1990). It is evident from Table 2 that factor 4 reflects high loadings on each traits as physically strong, energetic, and courageous. This factor could be labelled as "dynamism". The above results indicate that the military leadership traits as understood in Pakistan are broadly composed of sociability, dominance, professional competence, and dynamism.

Table 1

Factor loadings of first four factors after PCA

Item No.	Variables	Factor loadings			
		F1	F2	F3	F4
1.	Smart physical appearance	.439	.382	.299	.031
2.	Energetic	.590	.339	.409	-.131
3.	Knowledgeable	.685	.225	-.405	-.159
4.	Insightful	.695	.284	-.360	-.205
5.	Communicative	.660	.360	-.273	.192
6.	Original	.730	.163	-.169	.185
7.	Consistent	.719	.356	-.033	.271
8.	Extrovert	.651	.399	-.112	.135
9.	Dominant	.663	.424	.076	.184
10.	Possesses initiative	.688	.393	.128	.034
11.	Persistent	.642	.180	.077	-.087
12.	Aggressive	.534	.328	.337	-.107
13.	Trust worthy	.625	-.280	.309	-.033
14.	Loyal/Sincere	.639	-.398	.316	.114
15.	Responsible	.711	-.223	-.006	-.078
16.	Technically skillful	.686	.020	-.267	-.221
17.	Socially skillful	.707	.155	-.235	.130
18.	Careful	.670	-.256	-.082	-.223
19.	Morally courageous	.761	-.273	.135	-.027
20.	Physically courageous	.693	.060	.426	-.152
21.	Decisive	.792	.078	.010	-.061
22.	Task oriented	.740	-.097	-.041	-.235
23.	Preserving	.714	-.015	-.017	-.374
24.	Physically strong	.569	.166	.485	-.338
25.	Emotional stability	.648	-.108	.233	.280
26.	Open minded	.719	-.111	.254	.195
27.	Tolerant/Patient	.693	-.222	.073	.393
28.	Desirous to excel	.690	-.110	-.132	-.104
29.	Self-assured	.757	-.024	-.133	-.074
30.	Caring	.737	-.100	-.113	.193
31.	Adventurous	.604	.259	.215	-.162
32.	Lively	.736	.299	-.044	.225
33.	Daring/Bold	.709	.304	.168	.167
34.	Good planner	.784	.048	-.146	-.113
35.	Effective	.705	.108	.026	-.140
36.	Humble	.587	-.495	.061	.146
37.	Disciplined	.712	-.473	.079	.079
38.	Considerate	.699	-.379	-.054	-.054
39.	Hard worker	.706	-.262	-.113	-.340
40.	Honest	.644	-.345	-.131	.230
41.	Professionally competent	.656	-.076	-.204	-.273
42.	Religious	.608	-.448	-.001	-.045
43.	Patriot	.649	-.247	.136	.158
44.	Optimistic	.697	.046	-.143	.021
45.	Cheerful/Humorous	.561	.124	-.207	.304
46.	Practical	.736	-.022	-.229	.054
47.	Cooperative	.619	-.386	-.105	.289
Percent of total variance		45.8	7.3	4.5	3.6

Table 2

Factor loadings after varimax rotation

Factor 1	<i>a</i>	Factor 2	<i>a</i>	Factor 3	<i>a</i>	Factor 4	<i>a</i>
Trust worthy	.633	Communicative	.782	Knowledgeable	.570	Smart physical appearance	.497
Loyal/Sincere	.795	Original	.659	Insightful	.592	Energetic	.719
Responsible	.628	Confident	.755	Technically skillful	.676	Aggressive	.427
Socially skillful	.612	Extrovert	.665	Careful	.571	Physically courageous	.711
Morally courageous	.616	Dominant	.678	Task oriented	.566	Physically strong	.762
Emotionally stable	.447	Possesses initiative	.587	Preserving	.693	Adventurous	.647
Open-minded	.470	Decisive	.443	Self-assured	.514		
Tolerant/Patient	.589	Lively	.679	Good Planner	.532		
Desirous to excel	.460	Daring/Bold	.689	Effective	.443		
Caring	.584	Optimistic	.438	Hard worker	.651		
Disciplined	.707	Good Planner	.434	Practical	.520		
Considerate	.660	Persistent	.401	Professionally	.616		
Honest	.689			Competent			
Religious	.662						
Patriot	.645						
Cooperative	.703						
Cheerful/Humorous	.588						
Humble	.661						

'a' = Factor loadings

Table 3
Factor-wise distribution of traits for Army, Navy, and Airforce

Factor 1	Mean	S.D	Factor 2	Mean	S.D	Factor 3	Mean	S.D	Factor 4	Mean	S.D
Army											
Trust worthy	3.79	0.87	Confident	3.59	0.89	Knowledgeable	3.50	0.94	Smart phy. appearance	3.59	1.00
Loyal/Sincere	3.79	0.80	Optimistic	3.51	0.88	Hard worker	3.63	0.85	Energetic	3.57	0.88
Morally courageous	3.76	0.81			Prof. competent	3.57	0.92	Physically courageous	3.56	0.83	
Desirous to excel	3.50	0.97						Physically strong	3.50	0.88	
Cooperative	3.89	0.84						Adventurous	3.50	0.87	
Emotionally stable	3.66	0.81									
Open-minded	3.61	0.91									
Humble	3.60	0.91									
Considerate	3.67	0.91									
Disciplined	3.56	0.91									
Honest	3.69	0.97									
Religious	3.66	0.90									
Patriot	3.76	0.86									
Navy											
Loyal/Sincere	3.57	0.73				Prof. competent	3.57	0.83			
Responsible	3.57	1.00				Technically skillful	3.58	0.66			
Socially skillful	3.53	0.61				Self-assured	3.50	0.87			
Caring	3.53	0.86				Good planner	3.50	0.92			
Disciplined	3.52	0.98				Hard worker	3.50	0.95			
Religious	3.53	0.90									
Patriot	3.53	0.80									
Airforce											
Responsible	3.60	0.81	Persistent	3.53	1.00	Knowledgeable	3.65	0.83	Smart phy. appearance	3.98	0.86
Emotionally stable	3.55	0.93	Possesses initiative	3.50	0.91	Technically skillful	3.53	0.88	Energetic	3.65	0.71
Open-minded	3.63	0.93	Communicative	3.60	0.74	Hard worker	3.73	0.82	Physically courageous	3.65	0.89
Honest	3.68	0.92	Confident	3.65	0.70	Prof. competent	3.55	1.00	Adventurous	3.55	0.81
			Lively	3.50	0.88						

It would now be interesting to review the clustering of traits in various sectors of the armed forces along with the areas of which Pakistani military leadership comprises. Table 3 indicates factor-wise distribution of traits for the three services of armed forces that is Army, Navy, and Air Force. It reveals that the trait rated high for army ($Mean > 3.50$ and $SD < 1.00$) cluster on factors 1 and 4. This indicates that Army leaders are demanded for being sociable and should possess dynamic qualities, so that they are able to lead their troops in odd situation of the war and keep their morale high. As morale building has a direct link with the social and dynamic qualities of a leader (Haider, 1990), therefore, an Army leader should be cooperative, humble, considerate, courageous, energetic, and adventurous, so that he is able to make his men face bullets on the war fronts. With the change in technology, Army leadership also demands professional competence and knowledge about the latest technological advancements, hence, these traits are also rated high in factor 3.

When the traits rated high for Navy ($Mean > 3.50$ and $SD < 1.0$) are compared with Army, it is seen that a naval officer is also required to be sociable but on its loyalty, responsibility, and caring sectors. A naval officer also requires a greater degree of professional competence, as it is seen that the traits rated high for naval officer cluster more on factor 3. Contrary to army leaders, the navy leaders are not rated high on any of the traits belonging to dominance (factor 2) and dynamism (factor 4). This may be due to the fact that the naval officers have to keep their men sailing for months away from their families where they only interact with the men on board. Traits requiring dynamic qualities and a domineering attitude does not suit a naval officer (Deluga, 1991).

Airforce leaders have an even distribution of traits rated on all the four factors (Table 3). A pilot requires to be domineering and dynamic as he has to command the skies and play a vital role in winning a battle (Bloom, 1977); the engineers must have the technical skills, so that they can ensure the safe flight of the machines who have always turned the table of war in history.

Traits which rated high for the three main army corps ($Mea > 3.50$ and $SD < 1.0$) are shown in Table 4. Infantry leader apart being sociable also have to dominate the troops and have dynamic qualities such as smart physical appearance, physically courageous and due to their job requirement they also display strong physique (Habib, 1990). Traits rated high for artillery leader also cluster more in the sociability sector but their job requires them to be more technically skilful, careful, and self-assured (Afzal, 1990). Armoured Corps officers along with

their social characteristics also display a domineering attitude and a smart physical bearing.

When high rated traits of Naval branches were distributed (Table 5) along the factors, it was seen that the operations branch which is also known as the executive branch of navy had more traits clustered on the sociability, professional competence, and dynamism. As this branch is the commanding branch of navy, hence its officers are expected to be professionally competent, dynamic, and sociable, so that they are able to keep the men on ship in a safe and healthy atmosphere (McDonald, Beckett, & Hodgdon, 1991). The electric and engineering branch of navy has to look after the electrical and mechanical problems of a ship hence officers belonging to this branch have to be sociable but important for them is to be professionally competent and more task oriented, so that the electrical and mechanical operations of the ship remain functioning properly. Table 5 shows that traits rated high for these leaders cluster on professional competence and dominance along with sociability. Supply and services branch leaders are expected to be trust worthy and cooperative in nature so that they can deliver the goods to the sailors with honesty and diligence. It is also clear from Table 5 that cadets tipped for this group are rated high in sociability factor on traits such as trust worthy, disciplined, and cooperative and in dominance on being communicative and original.

Air Force branches distribution also goes in accordance with the job requirements of its branches. Table 6 is indicative that traits rated high ($Mean > 3.50$ & $SD < 1.00$) for General Duty Pilot (GDP) cadets, who have to remain very agile and active when they are in air. A small negligence can cause big disaster not only for them but for their country also. Hence traits such as emotional stability and desirous to excel are rated high in the "sociability" sector and traits such as confident, lively, possessing initiative persistence and optimism in the "dominance" sector with energetic and adventurous in the "dynamism" sector are rated high for commanders of machines in the air. Cadet of Aeronautical Engineering (CAE) have to look after the engineering set up of airforce. They maintain and even built planes which command the skies, so "professional competence" is the factor where their high rated traits should cluster. It is also evident that high rated traits cluster on "professional competence" factor and the only trait rated high of sociability is being responsible and on "dominance" are communicative and decisive. Engineering job not only requires a lot of responsibility but also has to properly communicate his work to his juniors for its proper execution. He requires a good decision power so that the

Table 6
Factor-wise distribution of traits for Airforce branches

	Factor 1	Mean	S.D	Factor 2	Mean	S.D	Factor 3	Mean	S.D	Factor 4	Mean	S.D
GDP												
Emotionally stable	3.90	0.72	Persistent	3.70	0.66					Smart physical appearance	4.25	0.64
Open-minded	4.10	0.91	Possess initiative	3.95	0.69					Energetic	3.75	0.64
Desirous to excel	3.70	0.66	Confident	3.75	0.64					Physically courageous	3.90	0.97
			Lively	3.90	0.79					Adventurous	3.60	0.68
			Optimistic	3.80	0.77							
CAE												
Responsible	3.80	0.94	Communicative	3.50	0.73	Knowledgeable		3.50	0.98			
			Decisive	3.55	0.76	Technically skilful		3.55	0.97			
						Hard worker		3.50	0.75			
						Prof. competent		3.55	1.00			

machine prepared to command the skies has a real hold over the enemy in air and plays a decisive role in winning the war.

The study has identified the traits essential for the three services, i.e., Army, Navy, and Air Force and their branches. Their implications and practical uses for the service in general and its Arm/Branch/Corps in particular is also highlighted in the study.

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