

TITLE PAGE

Attributes for Effective Nurse Management within the Health Services of Western Australia, Singapore and Tanzania

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Abstract

Objective: To identify the perceptions of nurse managers in Western Australia (WA), Singapore and Tanzania regarding desirable attributes for effective management of their health services and identify and discuss the implications for health management education provided by Australian universities.

Methods: Nurse managers completed a questionnaire covering four key dimensions: Personality Characteristics, Knowledge and Learning, Skills, and Beliefs and Values. Each of 75 items were rated as to their effect on management effectiveness, according to a 5 point Likert scale.

Results: Skills were considered the most important for management effectiveness, by each country. Tanzanian respondents rated Knowledge and Learning almost as highly and significantly higher than WA. They also rated Personality Characteristics and Beliefs and Values significantly higher than WA respondents. No significant differences were found between Singapore and WA.

Conclusions: Participants desired a different relative mix of attributes in their nurse managers, with WA respondents most likely to indicate that transformational leadership contributed most to managerial effectiveness. Tanzanian nurse managers were most likely to advocate transactional leadership, whilst Singaporean nurse managers' views were located somewhere between. Given that these perceptions are valid, the content and curricula of management development courses need to be cognisant of the cultural backgrounds of participants.

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Key Questions

1. What is known about the topic?

Views differ as to the extent to which the criteria for management effectiveness are broadly universal or contingent on culture. This applies to the area of nurse management as it does to healthcare management in general.

2. What does this paper add?

It is demonstrated that each of three quite different countries/states considered identified a distinctive combination of attributes as desirable, with the nurse managers of Western Australia most likely to favour a transformational style of leadership, those from Tanzania a transactional leadership style and those from Singapore somewhere in between.

3. What are the implications for practitioners?

Given the country/state specific desire for a different relative mix of attributes in their nurse managers, management educators in Australia need to ensure that the content and curricula of their courses are cognisant of the cultural backgrounds of their students. There are also important lessons to be taken on board regarding recruitment of nurses into management positions in terms of each of the four dimensions considered, particularly in terms of desirable personality characteristics and beliefs and values.

Introduction

The environment in which health care is delivered is becoming increasingly culturally diverse. As health care systems are more closely tailored to meet the needs of patients, it is essential that health care leaders and managers understand cultural differences and their implications, related to the delivery of health services.

From examining the literature on national and international management theories, Mariner¹ identified two broad approaches which can be applied within a range of health management environments. The **universalistic approach** reflects a generalized criterion for managerial effectiveness, applicable in any cultural context. House and Aditya², examining managerial effectiveness in Britain and America took the same view, demonstrating a strong compatibility between these two countries in management traits perceived as successful. Similarly, considering leadership effectiveness in the National Health Service in the UK, Hamlin³ proposed generalised criteria of effective management, thus supporting the universalistic paradigm.

In contrast, the **contingent approach** emphasises the role of culture. Based on data collected from 2,276 managers and 4,941 students in the Asia-Pacific region, Jain, Boldy and Chen⁴ (1994) explored the way in which health management students understood effectiveness in terms of managerial and cultural attributes. They identified four cultural groupings related to the ten participant countries, namely:

- Western: USA and Australia
- Chinese: Hong Kong, China, Taiwan, and Singapore
- Indian: India and Bangladesh
- South East Asian: Indonesia and Malaysia.

Further, they demonstrated that each country identified a distinctive combination of attributes in its managers. This implies that what is considered important within one country's cultural context may not necessarily be the situation within another country, even within the same group. This creates an obvious dilemma for those Asia-Pacific countries whose students undertake health management studies overseas, e.g. in Australia. A key implication is that such overseas trained students may find at least some of their newly acquired knowledge and skills less relevant or important when they try to apply them back home. This provides further evidence that management education needs to increasingly take account of cultural variation.

The concept of 'leadership' provides a visionary and strategic context related to management. Two alternative styles discussed at length in the literature are 'transformational' and 'transactional'.⁵⁻⁷ Transformational leadership focusses on inspiring and motivating subordinates by developing their intellectual capacity, encouraging creativity and having confidence in subordinates' willingness to become self-led. In contrast, transactional leaders set clear goals and job descriptions and exert control over employee performance by using rewards for goal achievement, and the withholding of benefits for poor performance. Transformational leadership is believed to be more effective, both in Australia and overseas, including culturally distant countries such as China and Portugal⁷⁻¹². In healthcare it has been shown to be positively associated with job performance, resulting in increased efficiency, greater organisational commitment and higher levels of job satisfaction amongst staff.¹³ With regard to nursing, Mok and Au-Yeung¹⁴ have shown that transformational leadership promotes self-efficacy amongst staff, a finding supported and developed further by Nielsen and Munir¹⁵ and Nielsen et al¹⁶ in relation to its positive effect on the well-being of healthcare employees. Further, Michael¹⁷ stresses the importance of transformational leadership in generating successful future leaders in nursing.

Increasingly nurse migration from Africa and Asia has presented cultural challenges and diversity in the health workforce. In addition, growing numbers of nurses are enrolled in management courses offered by Australian universities, including the authors' own. These developments stimulated the idea of a cross-cultural study covering the three countries of (Western) Australia, an Asian country (Singapore) and an African country (Tanzania). These countries were chosen due to the strong association between the authors' university based in Western Australia and the National Health Departments of all three countries.

From our extensive collective experiences obtained from working in the three countries concerned, we consider that nurse management in each can be typified as follows: In *Western Australia* it forms one of the four streams of the nursing structure which consist of clinical practice, staff development, research and management. Nurse Managers play a pivotal role in clinical operational management including areas of workforce, resource allocation, financial management and health information. These responsibilities are performed in collaboration with other clinical leaders, such as educators, clinicians and researchers. *Singapore* has a tiered system to its nursing structure, with nurse managers central to staffing and the clinical allocation of resources. Nurse Managers are responsible for achieving key performance indicators related to health workforce and clinical outcomes and the scope of the nurse manager's practice is at the unit level. *Tanzania* has a traditional nursing management structure, with nurse managers taking on a supervisory role of daily clinical activities. Their interface with nurses in the clinical area principally relates to problem solving, patient allocation and bed management.

The **aim** of the study was to identify the perceptions of Nurse Managers in Western Australian, Singapore and Tanzania regarding those attributes that are desirable for effective

management of their health services and discuss the implications for health management education provided by Australian universities. The findings are presented in terms of the ratings given to individual managerial attributes by respondents in all three countries. Using the framework of transformational and transactional leadership, the broad differences in management styles perceived as being effective in each country are identified and described.

An obvious limitation is that *perceptions* may not represent *reality*. However, given the generally extensive experience of the group as a whole, one would expect a strong relationship between the two.

Methods

The research approach adopted follows that of Phase 1 of the International Project on Culture and Management, which is described in a number of papers (Boldy, Jain and Harris¹⁸; Boldy, Jain and Northey¹⁹; Jain, Boldy and Chen⁴; Boldy, Jain and Chen²⁰; Mensik and Boldy²¹). Jain Abubaker²² describe the conceptual basis, development and validation of the self-complete questionnaire, a modified version of which was administered to nurse managers in the three countries. The questionnaire covers four key dimensions identified in the literature, namely:

- Personality characteristics (30 items);
- Knowledge and learning (10 items);
- Skills (15 items); and
- Beliefs and values (20 items).

In addition, participant data were also collected regarding age, sex, years qualified as a registered nurse (RN), years as a nurse manager and number of staff responsible for.

Nurse managers were required to rate each of the 75 items according to the following five point Likert scale, ratings being scored as indicated:

<u>Rating</u>	<u>Score</u>
1. Will greatly help managerial effectiveness	200
2. Will help	100
3. Will neither help nor hurt	0
4. Will hurt	-100
5. Will greatly hurt	-200

Data Collection

Approaches to nurse executive leaders in each country were first made, including the Chief Executive Nurse Officers in the Department of Health Western Australia, SingHealth, Singapore and the Ministry of Health, Tanzania and all agreed to facilitate participation by their staff.

An Information Sheet, introducing the investigators and explaining details of the study, was included with the questionnaire and consent to participate was implied if participants returned a completed questionnaire. This was clearly stated in the Information Sheet, which also indicated that they could choose not to participate and could withdraw at any time without compromising their position.

The project was given ethical approval by the Curtin University Human Research Ethics Committee in Western Australia, and in Singapore by the Singapore General Hospital Nursing Ethics Committee. In Tanzania the project was approved by the Ethics Committee of the Hubert Kairuki Memorial University and the Commission for Science and Technology.

Distribution

Western Australia: Questionnaires and information sheets were distributed to senior nurse managers registered on an email list representing those who wished to stay informed regarding Department of Health activities. Of the 144 registrants, voluntary responses were received from 44, implying a response rate of 30%. Anonymity was not possible to maintain, but confidentiality was assured. Whilst the response rate is somewhat low compared to the other two countries, it probably reflects a less hierarchical nursing structure producing less 'pressure' to respond. If this is the case, then those responding would be the most interested in the research topic and hence perhaps more likely to provide perceptions closer to reality.

Singapore: The questionnaire and information was distributed by the Nursing Research Office to a random selection of 100 nurse managers employed at Singapore General Hospital. Of the 100 invited participants 89 returned the completed questionnaire. Anonymity and confidentiality was maintained as the questionnaire was distributed by an independent party.

Tanzania: A convenience sample of some 100 individuals fitting the description of 'nurse manager / senior nurse' was identified by a combination of government officials, hospital administrators, and the principal of an academic institution, ensuring a wide spread of backgrounds and work experience. Questionnaires and information sheets were distributed

and returned, voluntarily and confidentially, through each of the organisations concerned. A total of 78 completed questionnaires were returned.

Data Analysis

The data analysis schema essentially followed that used in Boldy, Jain and Harris¹⁸. Following a description of participant characteristics, average scores (absolute values) across each of the four key dimensions (personality characteristics, knowledge and learning, skills, beliefs and values) were calculated for each country. This identified the relative importance the respondents from each country attached to each dimension as a whole (positive or negative). Following this, separate average scores for each of the separate attributes within each key dimension were calculated and comparisons made between the scores for Western Australia and Singapore, and Western Australian and Tanzania, given that these are of most interest from a West Australian perspective. Given the categorical nature of the responses to each item (5 point Likert scale), the statistical significance (p value) of any differences between average scores was assessed by applying the non-parametric Mann-Whitney U test. The statistical package SPSS version 20 was used for all analyses.

Results

Characteristics of respondents

As can be seen from Table 1, respondents are widely spread according to age, with proportionately more from WA being in the younger age group (under 40) and proportionately fewer in the middle age group (40-49). About 90% of respondents from each country were female. Years qualified as an RN followed a similar pattern to age group, whilst Tanzanian respondents were more likely to have had 4 years or more practicing as a nurse manager and WA respondents less likely to have had 13 or more years. The only statistically significant ($p < 0.01$) difference between the three countries relates to 'number of

staff responsible for', with proportionately more of Singapore nurses being responsible for 80 or more staff. Overall, there is a wide spread of nurses in each country in terms of the characteristics illustrated in Table 1.

Importance of key dimensions

Average importance scores (absolute values) according to key dimension (i.e. averaged over all dimension items), indicate (Table 2) that the Skills dimension was considered to be the most important in terms of management effectiveness, by each of our three countries. Tanzanian respondents rated the importance of Knowledge and Learning almost as highly and significantly (statistically) higher than WA. Tanzanian respondents also rated both Personality Characteristics and Beliefs and Values as significantly (statistically) more important than did WA. No significant differences were found between Singapore and WA for any of the four dimensions.

However, these broad comparisons mask marked differences between the average scores for individual items (positive or negative) within each dimension and these will now be considered.

Skills

All but one of the Skill items achieved an average rating of 90 (where 100 = 'will help effectiveness' and 0 = 'will neither help or hurt') the exception being *Politicking*, which actually achieved an average negative rating from Singapore respondents (Table 3). On average, Tanzanian respondents rated five of the skill items (*Decision Making, Problem Solving, Organising, Conducting Meetings and Directing*) significantly more highly than did WA respondents and two skill items (*Conflict Resolution and Diplomacy*) significantly less highly. Singapore respondent ratings were more similar to those for WA, with only four items

receiving significantly different (in each case lower) average scores, namely *Conflict Resolution, Diplomacy, Negotiation and Politicking*. *Conflict Resolution*, which received the highest overall skills rating from WA respondents, was rated significantly lower by both Singapore and Tanzania.

Knowledge and Learning

Whilst all Knowledge and Learning items were considered of some value related to managerial effectiveness, in the case of WA only six of the ten items achieved an average score of 100 or more. In contrast, Tanzanian respondents rated all ten items in excess of 100 on average, this being true for seven of the items for Singapore (see Table 4). As many as eight of the ten items were rated by Tanzanian respondents as having significantly greater value than respondents in WA. *General Knowledge* was rated as the most important by both Singaporean and Tanzanian respondents, but was only rated as the sixth most important by WA respondents.

Personality Characteristics

Of the eight most highly rated WA items in the Personality Characteristics dimension, only one in each by Singapore (*Thoughtful* - higher) and Tanzania (*Courteous* - lower) was rated significantly different on average (see Table 5). Items scoring an average of 100 or more rated significantly higher than WA were: Singapore – *Thoughtful, Caring, Modest and Lively*; and Tanzania – *Self-confident, Caring, Competitive and Courteous*. Two items were on average rated negatively by each country, namely *Distant* and *Forceful*, other items rated negatively being: Singapore – *Impulsive, Reserved and Proud*; and Tanzania – *Hard – driving and Likes self*; WA – *Impulsive, Reserved and Informal*.

Beliefs and Values

In regard to the average Beliefs and Values item scores, there appear to be more differences between respondents of each country than those for the other key dimensions. Perhaps this is not surprising, given an expected relatively strong influence of culture on this dimension. Many of the items scored negatively (e.g. 13 out of 20 for WA) indicating that for such respondents, the items had been phrased negatively, as opposed to them being 'not important'. '*Happy employees are productive employees*' was the top rated item for WA and whilst not receiving the top rating by Tanzanian respondents (this being '*Information is power*') was scored more highly (but not significantly), as it also was by Singaporean respondents. Items scored as significantly more important than for WA by both other countries, included: '*Loyalty is the most important quality*', '*Information is power*', '*A manager's first concern should be with productivity*', '*Rules must always be obeyed*', '*An effective manager should be popular with employees*', and, '*Subordinates must be closely supervised*'.

Discussion

The strong relative endorsement of the importance of the Skills dimension by Australian respondents mirrors the same conclusion as that from Boldy, Jain and Harris¹⁸ based on health service managers in general, and which utilised the same assessment questions. Similar broad agreement with this earlier study as to the relative priorities attached to individual skill items was also found, with five out of the 'top six' items in the present study being the same. The exception related to *Interpersonal Relations*, which nevertheless received a higher average score than earlier.

Within the dimension of Knowledge and Learning, '*Pertinent Technical Knowledge*' and '*Social Forces impacting the Organisation*' were the two top items in both this and the earlier study, whilst three out of the five most desirable Personality Characteristics were the same and four out of the five least desirable. Six of the top seven most important Beliefs and Values items were the same in both studies. From the above comparisons, it would appear that the perceived qualities required of nurse managers in Australia to be effective, may have changed little over time.

In a systematic review of leadership styles related to nursing, Cummings et al⁸ reported leadership styles that focused on *people and relationships* (essentially *transformational*) were associated with higher nurse job satisfaction, whereas leadership styles that focused on *tasks* (essentially *transactional*) were associated with lower nurse job satisfaction. This broad dichotomy is particularly related to the Skills and Beliefs and Values dimensions in our study (and to a lesser extent the Knowledge and Learning dimension. Whilst respondents from our three countries appeared to favour a mix of transformational and transactional attributes, based on their relative average scores of items covered by both dimensions, it would appear that:

- Western Australian nurse managers as a group were the most likely to indicate that the transformational leadership style contributed most to managerial effectiveness; whereas
- Tanzanian nurse managers were the most likely to advocate the transactional leadership style; and
- Singaporean nurse managers' views were located somewhere in between the views of respondents from the other two countries.

As an illustration related to the Skills dimension, the highest scores for *conflict resolution*, *negotiation* and *diplomacy* (essentially transformational in nature) were obtained in Western

Australia, whereas the highest scores for *planning and evaluation, organising and conducting meetings* (essentially transactional in nature) were obtained in Tanzania (Table 3).

A further illustration can be seen in Table 6, where the relative scores for a number of Beliefs and Values items followed the order: 1. Western Australia; 2. Singapore and 3. Tanzania, for example:

- *Subordinates should have a strong voice in decision-making* (positive)
- *Information is power* (negative)
- *A manager's first concern should be with productivity* (negative)
- *Subordinates should be closely supervised* (negative)
- *Employees should be treated as one's own children* (negative).

A number of significant differences between countries have been identified related to desirable Personality Characteristics (Table 5) and these have particular relevance to considerations of recruitment, retention and promotion.

Conclusion

This study provides further evidence for the contingent approach, namely that our three countries demonstrate a desire for a different relative mix of attributes in their nurse managers. To the extent that these perceptions ('what is desired') mirror 'what is known to be effective', then the content and curricula of management development courses/workshops need to be cognisant of the cultural backgrounds of students/participants. These in turn should be linked to the testing of subsequent ability in key areas as part of a feedback loop. This is particularly relevant for Australian universities with

increasing numbers of nurses from overseas enrolled in their management courses and for those who deliver education programs internationally off shore.

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Table 1: Characteristics of Respondents

Variable	Singapore	Tanzania	Western Australia
Sample size	89	78	44
<u>Age group (%)</u>			
Under 40	26	25	8
40-49	31	30	50
50+	43	45	42
Female (%)	91	88	91
<u>Years qualified as RN (%)</u>			
Under 20	37	40	23
20-29	28	35	44
30+	35	25	33
<u>Years as nurse manager (%)</u>			
Under 4	31	17	37
4-6	22	31	29
7-12	22	25	17
13+	25	27	17
<u>No. staff responsible for (%)</u>			
Under 20	13	40	37
20-39	12	29	29
40-79	41	13	14
80+	34	18	20

Table 2: Average Importance¹ Scores by Key Dimension

Key Dimension	Singapore	Tanzania	Western Australia
Personality Characteristics	125	127*	118
Knowledge & Learning	114	145**	103
Skills	136	152	143
Beliefs & Values	101	123**	102

¹ 'Importance' is measured by the absolute values of responses

*Mann-Whitney U test, significant statistical difference at the 5% level (i.e. $p < 0.05$) when compared to Western Australia (WA)

** Mann-Whitney U test, significant statistical difference at the 1% level (i.e. $p < 0.01$) when compared to WA

Table 3: Average Scores for Skills

Skill	Singapore	Tanzania	Western Australia
Conflict Resolution	148**	158*	184
Planning & Evaluation	172	190	177
Decision Making	180	197**	175
Interpersonal Relations	168	183	170
Problem Solving	168	191**	168
Negotiation	108**	146	168
Organising	139	188**	164
Diplomacy	120*	95**	157
Forecasting	122	131	141
Attracting Resources	116	145	139
Public Relations	141	144	132
Directing	139	158**	123
Conducting Meetings	97	169**	105
Public Speaking	92	96	98
Politicking	-7**	36	55

NB. Skills are listed in descending order by average score for WA

*Mann-Whitney U test, significant statistical difference at the 5% level (i.e. $p < 0.05$) when compared to WA

** Mann-Whitney U test, significant statistical difference at the 1% level (i.e. $p < 0.01$) when compared to WA

Table 4: Average Scores for Aspects of Knowledge and Learning

Aspect	Singapore	Tanzania	Western Australia
Pertinent Technical Knowledge	111*	136	141
Social Forces impacting the Organisation	116	109	127
Theories of Human Behaviour	132	144*	116
Management Theories and Techniques	116	158**	114
Scientific and Technological Developments	98	171**	114
General Knowledge	149**	192**	102
History of the Organisation	100	142**	75
Socio-Economic-Political Developments in the Country	99	133**	70
Developments in Other Countries	80	101**	61
Theories of Social and Political Behaviour	101**	108**	55

NB. Aspects are listed in descending order by average score for WA

*Mann-Whitney U test, significant statistical difference at the 5% level (i.e. $p < 0.05$) when compared to WA

** Mann-Whitney U test, significant statistical difference at the 1% level (i.e. $p < 0.01$) when compared to WA

Table 5: Average Scores for Personality Characteristics

Characteristic	Singapore	Tanzania	Western Australia
Supportive	166	178	168
Courteous	160	100**	164
Patient	163	158	164
Practical	149	173	164
Open-minded	156	168	157
Thoughtful	172*	144	152
Tolerant	135	123	143
Cheerful	155	130	141
Caring	169**	165**	139
Energetic	142	107	136
Friendly	138	106	136
Intuitive	74**	40**	136
Self-confident	129	168**	120
Likes self	20**	-3**	100
Ambitious	99	114	100
Businesslike	53*	46*	89
Lively	120**	105*	82
Fun-loving	94*	53	61
Modest	124**	92**	43
Competitive	95**	152**	32
Idealistic	72*	88**	30
Proud	-63**	19	26
Risk-taking	55	53	23
Authoritative	21	86**	9
Hard-driving	33	-18	0
Informal	52	49	-9
Reserved	-72	43	-41
Forceful	-6**	-49	-61
Impulsive	-108	18**	-114
Distant	-94**	-34**	-155

N.B. Characteristics are listed in descending order by average score for WA

*Mann-Whitney U test, significant statistical difference at the 5% level (i.e. $p < 0.05$) when compared to WA

** Mann-Whitney U test, significant statistical difference at the 1% level (i.e. $p < 0.01$) when compared to WA

Table 6: Average Scores for Beliefs and Values

Belief/ Value	Singapore	Tanzania	Western Australia
Happy employees are productive employees	166	158	152
Subordinates should have a strong voice in decision-making	76*	-51**	107
People are basically good	88	103	105
Loyalty is the most important quality	102**	136**	57
Information is power	143**	169**	43
A manager's first concern should be with productivity	64**	136**	41
Rules must always be obeyed	61*	144**	25
An effective manager should be popular with employees	90**	71**	-16
An effective organisation should run like a machine	-85**	27**	-37
Taking risks is unwise	-32	-13	-39
A manager should maintain distance from subordinates	-88*	-45	-45
Poor performance by employees is caused by poor management	-16	-10	-50
Trade unions are important only in poorly managed organisations	-15**	-16*	-61
Subordinates must be closely supervised	59**	130**	-64
What you know is not as important as whom you know	-9**	4**	-66
Employees should be treated as one's own children	118	57	-91
Each person should place self-interest above all other considerations	39**	8**	-102
Money is everything	-59**	14**	-116
Trust nobody but yourself	-53**	-34**	-139
Work must come before everything else	-11**	88**	-140

N.B. Beliefs/ Values are listed in descending order by average score for WA

*Mann-Whitney U test, significant statistical difference at the 5% level (i.e. $p < 0.05$) when compared to WA

**Significant statistical difference at the 1% level (i.e. $p < 0.01$) when compared to WA

