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The influence of organizational subcultures in health organizations

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ABSTRACT: This study investigates the mediating role of organizational subculture and its antecedents of organizational commitment namely leadership, culture and job satisfaction. Structural equation analysis is used to examine our model in which organizational subculture mediated the influence of leadership style and organizational culture on commitment, and in which job satisfaction is an antecedent of commitment. The results of this study highlight the important role of local leadership and subculture in determining employees' job satisfaction and commitment. The findings in this study could also provide managers with a new lens to examine organizational culture via three perspectives: bureaucratic, supportive and innovative. Furthermore, the results could renew interests in developing other organizational subculture models that could determine the relationship between organizational subculture and commitment

KEY WORDS: *Commitment, organizational culture, organizational subculture, leadership, job satisfaction*

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1. Introduction

Employee commitment has historically been considered as a core variable of interest in management/organizational studies as demonstrated by the plethora of studies seeking to explain its causal antecedents (Clugston, 2000; Meyer and Becker, 2004). Among the possible antecedents of commitment, organizational culture has received relatively low levels of empirical investigation in the past. For example, in a comprehensive meta-analysis and review of the antecedents and correlates of commitment, organizational culture was not mentioned (Mathieu and Zajac, 1990). Despite recent studies (Taylor et al 2008, Mathew and Ogbonna 2009) argued the link between organizational culture and commitment, the lack of empirical evidence in this area remains to be a significant challenge. Furthermore, studies of organizational culture in health-related organizations are limited (exceptions include Scott et al, 2001, 2003a, 2003b and 2003c). This identifies the gap in the literature as there is evidence from the health sector that culture affects organizational performance and effectiveness (Davies, Nutley and Mannion, 2000; Gerowitz, Mannion, Davis and Marshall, 2004). In addition, there is research evidence pointing to the importance of the necessity of organizational culture for the successful implementation of change initiatives in public health organizations (Gershon et al 2004, Enckell 1998; Huq and Martin 2000; Ingersoll, Kirsch, Merk and Lightfoot 2000; Vestal, Fralicx and Spreier 1997) in that, dynamically, such interventions may bring about a required culture change (Scott et al. 2003, Gerowitz 1998).

As organizational culture can influence employees' sense of engagement, identification, and belonging (Laschinger et. Al., 2001, Mathew and Ogbonna, 2009) such sentiments might reasonably be expected to impact on employees. A recent study on global multi-nationals (Taylor et. al., 2008) confirmed that high adaptability organizational cultures and HRM systems which promote high performance work practices could exert significant effects on employee commitment. However, the lack of research on the effect of organizational culture and subculture on commitment in previous studies highlights a significant research gap that requires further investigation.

There has been, however, a tendency to consider organizational culture monolithically which neglects to address the concept of organizational subcultures. Subcultures form on the basis of people's varied identification with different subgroups based upon factors such as occupational or professional identifications, work location/proximity, functional locus, or demographic factors such as age, ethnicity or gender (Hofstede, 1998). Subcultures impact on the attitudes and behavior of their members which may be independent of the main culture effects (Martin, 1992; Schneider, 1990). Although little attention has been given to the influence of organizational subculture on commitment, there is an increasing body of work which suggests that there are multiple foci for member commitment including: work groups, supervisors and occupational groups (Baruch and Winkelmann-Gleed, 2002; Becker, Billings, Eveleth and Gilbert, 1996; Gallagher and McLean Parks, 2001). Since organizational commitment has often been associated with key antecedents such as leadership and job satisfaction (Rowden, 2000, Mathieu and Zajac, 1990, Yousef, 2000) this study will explore the mediating role of organizational subculture between outcome variables such as job satisfaction, organizational commitment and its antecedents namely, leadership and organizational culture. The results of this study contribute to the clarification of the relationships of the antecedents of commitment, and highlight the important role of local leadership and subculture in determining employees' job satisfaction and commitment. The findings could equip managers with valuable insights in how to manage subcultures effectively.

2. Organizational culture and subculture

A key objective of this study is to investigate the relationship between organizational culture and subculture and their relations with commitment; there is broad agreement that organizational culture provides the 'social glue' that gives organizations coherence, identity, and direction. Whilst influential organizational culture writers (e.g., Deal and Kennedy1982, Peters and Waterman,1982) suggest that it exerts considerable influence on commitment, and a recent qualitative study by Mathew and Ogbonna (2009) links Martin's (2002) three cultural dimensions on organizational commitment, there is still little empirical research affirming this. We suggest that this may be because 'organizational culture' is

too abstract and amorphous and too distant from most peoples' mundane engagements with the day-to-day realities of their organizational lives. We expect aspects of the work context that are closer to these realities, such as the immediate leadership, work groups and sub-cultures, to have a more marked effect upon perceptions and sentiments associated with involvement, identification and loyalty, i.e. commitment.

It is argued that particularly in large, complex organizations members are likely to identify with groups at a sub-organizational level, and be focused around a range of possible factors (Howard-Grenville, 2006, Bolinier and Chatman, 2002). Public sector health organizations are typically large, complex and pluralistic (Dawson, 1999; Degeling et. al.1998b) and demonstrate evidence of organizational subcultures. For example, pediatric ward culture could be different to oncology ward culture (Degeling et. al., 2001; Lok and Crawford 1999, Gershon et. al., 2004). Conceptually, a subculture is a subset of a culture and thus is defined in a similar manner as consisting of the shared assumptions, values and practices of an identifiable group of people within an organization but at a sub-organizational level; in practice, the relationship between an organization and its subcultures is likely to be complex. Although conceptually a subset, organizational subcultures need not in practice be isomorphic with the main culture. Subcultures may be extensions of the main culture and/or in alignment with it, but they may not; alternative and even antagonistic relations are feasible (Brown, 1995).

Subcultures may form around organizational groups on the basis of a range of possible factors that constitute organizational differentiation such as, occupation, profession, structural or functional location. In the contemporary health system context, for example, it is not uncommon for a sub-cultural differentiation to occur around different professional and occupational groups (Degeling et al., 2001, 1998a and b). Subcultures may also develop as a result of differential organizational practices and environmental and resource contingencies across large and complex organizations. More specifically, Prestholdt, Lane and Mathews (1987) suggest that nurses tend to identify more closely with their localized area of work (pragmatically, the ward) rather than the hospital as a whole and that such identification is more strongly related to important behavioral outcomes such as turnover. Nurses, then, exhibit greater identification, loyalty and involvement with their wards than the hospital itself and this, following Mowday (1999), relates to commitment. Thus, it can be seen that the perception of nurses' local working place and their fit with that environment should have a more direct effect on commitment than the hospital culture. Initially we presumed a relationship between organizational culture and subculture. If subcultures are a subset of organizational cultures we anticipate that the latter would help to shape the values of the former. We thus sought to operationalize cultural differences and to determine the relationship between different organizational cultures and their subcultures. Wallach (1983) conceptualized and operationalized three dimensions of culture, namely (1) supportive, (2) innovative, and (3) bureaucratic hospital cultures. Wallach's (1983) cultural dimensions were adopted because of the differentiation in managerial practices (bureaucratic, innovative and supportive) and its relevance to the health care setting. Hence, this model was adopted in this study to distinguish different organizational cultures and subcultures and the relationship between them leading to the first three research hypotheses as follows:

H$_1$:   Supportive hospital culture dimension has a positive relationship with supportive ward subculture.

H$_2$:   Innovative hospital culture dimension has a positive relationship with innovative ward subculture.

H$_3$:   Bureaucratic hospital culture dimension has a positive relationship with bureaucratic ward subculture.

Given that nurses identify more with their immediate work area than with the organization as a whole, and that subcultures impact more on member attitudes and sentiments due to immediacy and intensity of engagement, we propose that organizational culture will only have indirect effects on nurses' job satisfaction and commitment via their corresponding subculture dimensions of: (1) supportive, (2) innovative, and (3) bureaucratic ward cultures. That is, subcultures will mediate the effect of organizational cultures on commitment and job satisfaction. We present hypotheses related to these relationships shortly.

3.   Leadership style

It is suggested that leaders shape organizational cultures (and subcultures) through providing direction and coherence, and maintaining values and behavioral patterns. We maintain that ward leaders (supervisors) have an impact in shaping the values, expectations and behavior patterns that pervade a ward (local unit/team) culture through a more direct engagement with the sub-cultural group; and an enhanced capacity to influence salient values and behavior patterns on a more ongoing and meaningful basis. We argue that a consistently enacted leadership style with respect to a specific sub-cultural group imbues that subculture with the values, priorities, expectations and behavior patterns pertinent to that style. In other words, the subculture will receive an imprint of the leadership style. To examine these relationships, we adopt Stogdill's (1974) conceptualization of leadership into the dimensions of 'task-oriented' and 'consideration'. Stogdill's two dimensions framework was adopted over others because it reflects the bureaucratic nature of the hospital environment, is simple for participants to understand, and is a good reliability index which can be well related to situational leadership styles, job satisfaction and commitment.

We then hypothesize that different leadership styles generate different subcultures and that a 'consideration' style, through focusing on establishing effective relationships, signaling support and allowing greater flexibility than a task-oriented style is more likely to cultivate supportive and innovative cultures. Conversely a negative relationship is expected between consideration leadership and bureaucratic ward subculture. Task-oriented style, on the other hand, is predicted to positively contribute to a bureaucratic ward culture because of the emphasis on task, task accomplishment and the rules, and structures and procedures ensuring that happen; this results in the following four derived research hypotheses

H4:   Consideration leadership style has a positive relationship on supportive ward subculture.

H5:   Consideration leadership style has a positive relationship on innovative ward subculture.

H6:   Consideration leadership style has a negative relationship on bureaucratic ward subculture.

H7:   Task-oriented leadership style has a positive relationship on bureaucratic ward subculture.

4.   Job satisfaction

Previous organizational commitment and turnover studies (Price and Mueller 1981; Williams and Hazer 1986) have suggested that the effects of various antecedents on commitment are mediated through job satisfaction (Price and Mueller 1981, William and Hazer 1986, Iverson and Roy 1994, Gaetuer 1999). A study by Kirkman and Shapiro (2001) which explores the impact of cultural values on job satisfaction and organizational commitment also adopted this assumption.

In line with the majority of the latter studies, our model (Figure 1) contains the assumption that job satisfaction is a causal antecedent of commitment. However, given the uncertainty of whether satisfaction is a total or partial mediator of the effects of other antecedents on commitment, we examine job satisfaction as a potential mediator of the effects of organizational subcultures as well as examining the direct effects of subcultures on commitment.

Figure 1: Conceptual framework specifying antecedents of organizational commitment
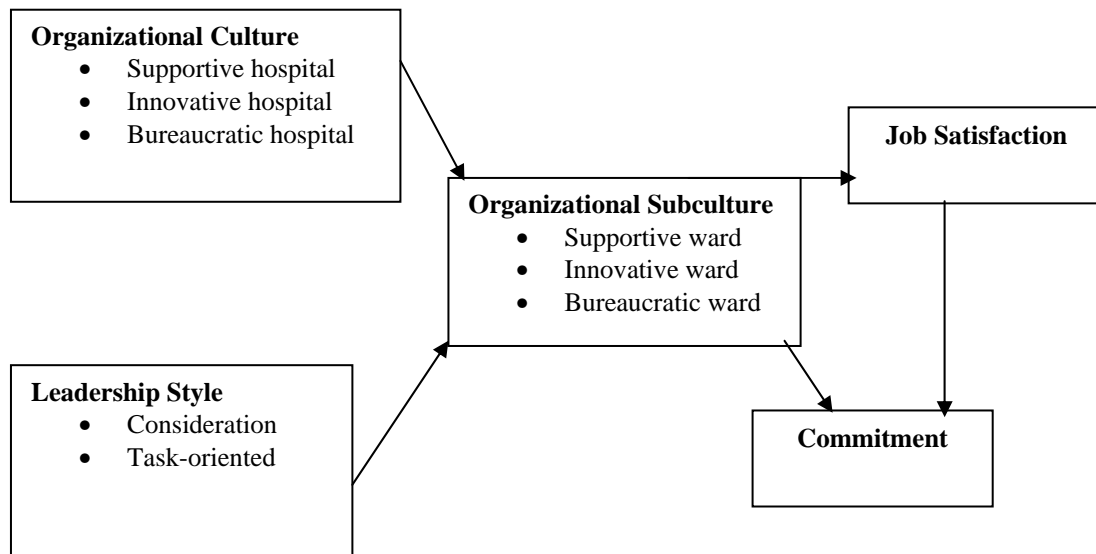
Brewer (1994) and Kratina (1990) concluded that bureaucratic practices often result in negative employee commitment while supportive work environments result in greater commitment and involvement among employees. Health service organizations and hospitals have frequently been represented as 'traditional' and bureaucratic institutions (Clinton and Scheiwe 1995) and nursing is subject to the significant rule-bound and bureaucratic forces. We therefore specifically propose that supportive and innovative ward subcultures have a direct and positive effect on commitment whilst bureaucratic ward subculture has a direct negative effect. In a similar vein, we expect positive relationships between supportive and innovative ward subcultures and job satisfaction and a negative relationship between bureaucratic ward subculture and job satisfaction. Job satisfaction is predicted to have a positive effect on commitment as shown consistently in previous research on the determinants of commitment (e.g., Allen and Meyer 1996; Williams and Anderson 1991).

From the above discussion, the following hypotheses are proposed:

H_8:   Supportive ward subculture has a positive relationship with job satisfaction.

H_9:   Innovative ward subculture has a positive relationship with job satisfaction.

H_{10}:   Bureaucratic ward subculture has a negative relationship with job satisfaction.

H_{11}:   Job satisfaction has a positive relationship with commitment.

5.   Organizational commitment

Organizational commitment is defined in terms of a member's identification and level of engagement with a particular organization. It reflects people's attitudes towards the organization's goals and values, a desire to stay with the organization, and a willingness to expend effort on its behalf. The latter has behavioral implications, but the conceptualisation focuses more on how people think about their relationship to the employing organization and the formation of attitudes based on that.

Meyer and Allen (1991) demonstrate that different antecedents are related to their three component commitment model. They further suggested that commitment should be conceptualised as a psychological state concerned with how people feel about their organizational engagements. Furthermore it has been demonstrated that the affective component impacts greatest on outcome variables such as absenteeism and turnover. Thus, affective commitment remains the dominant measure in commitment studies. Mowday et. al.'s (1982) conceptualisation of commitment as a

member's identification, involvement and loyalty with respect to the organization is consistent with this attitudinal perspective. That conceptualisation and its measurement through the Organizational Commitment Questionnaire (OCQ) continue to be widely accepted (Benkhoff 1997; Bridges and Harrison 2003; Mowday 1999) and is adopted in this study.

Whilst the bulk of the work on commitment adopts a global conceptualisation focused on the organization itself, such research has returned weak commitment-performance relationships (Benkhoff 1997) and increasingly attention has shifted to other points of identification such as professional groups, occupations or careers (Baruch and Winkelmann-Gleed 2002; Kirkman and Shapiro 2001, Gallagher and McLean Parks 2001; Cho et. Al. 2006, Wallace, 1995). Furthermore it has been demonstrated that employees exhibit commitment to different organizational coalitions such as, departments, collective labor bodies, management and supervisors. We suggest that organizational subcultures are likely to offer an additional point of identification, involvement and loyalty among their members thus exhibiting a relationship with affective commitment. Such relationships have not yet been explored in the literature research.

From the above discussion on subculture and commitment, the following hypotheses are proposed:

H_{12}: Supportive ward subculture has a direct and positive relationship with commitment.

H_{13}: Innovative ward subculture has a direct and positive relationship with commitment.

H_{14}: Bureaucratic ward subculture has a direct and negative relationship with commitment.

6. Conceptual framework

Figure 2 displays our conceptual model in terms of the above fourteen research hypotheses.

Figure 2: Conceptual model of organizational commitment and research hypotheses based on subcultures as the mediator
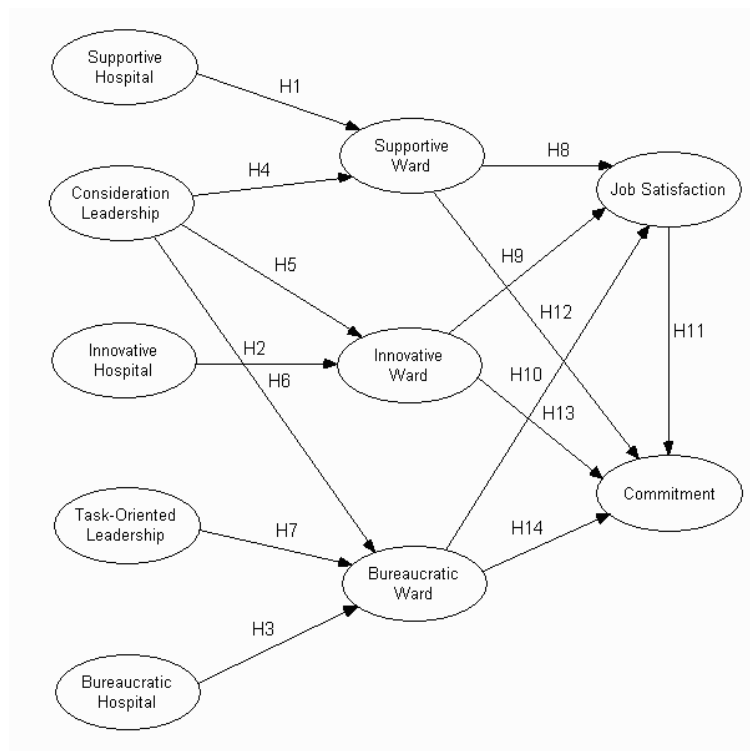
In addition to the testing of the above fourteen hypotheses, structural equation modeling will be used to examine the overall fit of this model and the testing of other alternate models to clarify the uncertainty of mediating effects of possible mediators from literature in the area of commitment research. The first of these is the direction of causation between job satisfaction and commitment. Although the majority of writers have adopted job satisfaction as an antecedent of commitment (e.g., Williams and Hazer, 1986; Price and Mueller, 1981, Kirkman and Shapiro, 2001), there are others who have questioned this assumption (Vandenberg and Lance, 1992). In this paper, alternative models will be examined in which commitment is a causal antecedent of satisfaction (Alternative model 1) and where there is simultaneous causation in both directions (Alternative model 2).

Another element to be examined is the mediating role of subculture as used in this study. Thus our model will be compared with an alternative model (Alternative model 3) in which the subculture variables do not have this role, but are exogenous variables, along with the organizational culture and leadership style variables.

The third issue to be examined is the role of job satisfaction as a mediator of the influences on commitment of the other antecedents. As noted, a number of writers (William and Hazer, 1986; Iverson and Roy, 1994; Mathieu and Hamel, 1989; Michaels, 1994) have suggested models in which the effects of various antecedents on commitment are totally mediated by their effect on job satisfaction. Consequently, the model in this study, in which satisfaction is a partial mediator, will be compared with an alternative model (Alternative model 4) in which effects of commitment is totally mediated by their effect on job satisfaction.

7. Method

7.1 Sample and data collection

A questionnaire survey was used to collect the data for testing the model and research hypotheses. A pilot study to evaluate the suitability of the questionnaire was carried out (n = 32 nurses from different organizational contexts) and analysis indicated that no significant change was necessary. The sample for the main study consisted of nurses drawn from seven large hospitals located in the Sydney metropolitan region. A variety of hospitals (general, private and psychiatric) were used to reflect the range of hospital environments and nursing staff practices in these hospitals. A sample of wards in each hospital were identified and included in the design. Because our research objectives included examining the relationship between leadership style and ward subculture, only wards in which the nurse unit manager had held that position for over twelve months were used in an attempt to ensure that the wards sampled were likely to have a more stable ward subculture and leadership style. A total of 61 wards satisfied this criterion. A random sample of 26 wards was taken which resulted in eleven general hospital wards, seven private hospital wards, and eight psychiatric hospital wards being selected for the final sample. All nursing staff in the selected wards were invited to participate in the survey. Questionnaires were sent out to the selected wards and a collection box was provided in each ward for their returns; questionnaires were collected after five days. Reminders and follow-up questionnaires were deployed with additional returns collected after another five days. A total of 258 returns were obtained from the 398 questionnaires distributed seven of which were incomplete and discarded leaving a total of 251 questionnaires available for analysis, representing a response rate of 63%.

7.2 Measures

Hospital and ward culture dimensions. Wallach's (1983) Organizational Culture Index describes organizational culture in terms of three distinct dimensions: (1) Bureaucratic, (2) Innovative, and (3) Supportive. Each of the three hospital culture dimensions was measured using six items on a four-point rating scale, ranging from zero being "does not describe my hospital" to four being "describes my hospital most of the time". Each of the three ward subculture dimensions were measured in a similar manner, using six items on a four-point scale, ranging from zero being "does not describe my ward" to four being "describes my ward most of the time". To minimize the potential problem of

cross-contamination in answering these questions, the two-versions of the Organizational Culture Index were presented in separate locations within the questionnaire.

Leadership style dimensions.   Stogdill (1974) developed the Leader Behavior Description Questionnaire to measure two leadership style dimensions: (1) Consideration Leadership and (2) Task-oriented Leadership. Consideration leadership was measured in this study by seventeen items and task-oriented leadership by six items, all adapted from Stogdill (1974). All items were measured on a five-point rating scale, ranging from one being "not at all" to five being "a great deal".

Job satisfaction and commitment. The eight-item abbreviated version of Mueller and McClosky's (1990) Job Satisfaction Survey (JSS) was used to measure job satisfaction on a five-point rating scale, ranging from one being "very dissatisfied" to five being "very satisfied". This instrument was adopted in this study because Mueller and McClosky (1990) used this tool in the health care setting. A standard ten-item abbreviated version of Mowdayet. al.'s (1979) Organizational Commitment Questionnaire was used to measure nurses' commitment to their wards on a seven-point Likert-type rating scale, ranging from one being "strongly disagree" to seven being "strongly agree". This instrument was adopted because it is in alignment with Meyer and Allen's (1991) notion of affective commitment.

8.   Results of the measurement model

Exploratory factor analysis and reliability analysis were initially used to assess the psychometric properties of the above measures. Table 1 revealed satisfactory Cronbach alphas ranging from 0.746 to 0.961.

Table 1: Means, standard deviations, and intercorrelations of constructs (n = 251)

Constructs	Mean	S.D.	01	02	03	04	05	06	07	08	09	10
01. Commitment	5.054	1.139	(0.861)									
02. Job satisfaction	3.334	0.763	0.535	(0.818)								
03. Consideration leadership	3.460	0.997	0.489	0.640	(0.961)							
04. Task-oriented leadership	3.227	0.785	0.168	0.175	0.240	(0.752)						
05. Supportive ward	1.940	0.654	0.510	0.516	0.517	0.101	(0.835)					
06. Innovative ward	1.768	0.598	0.587	0.451	0.485	0.215	0.635	(0.789)				
07. Bureaucratic ward	2.049	0.528	0.092	0.216	0.213	0.365	0.230	0.296	(0.746)			
08. Supportive hospital	1.479	0.669	0.231	0.320	0.171	-0.012	0.363	0.182	0.192	(0.848)		
09. Innovative hospital	1.660	0.626	0.310	0.335	0.191	0.055	0.284	0.376	0.204	0.616	(0.807)	
10. Bureaucratic hospital	2.196	0.522	0.114	0.151	0.109	0.172	0.079	0.199	0.469	0.292	0.459	(0.752)

Notes: Cronbach alpha reliability coefficients are shown in parentheses on the diagonal. Correlations greater than 0.124 are significant at the 0.05 level and correlations greater than 0.162 are significant at the 0.01 level.

Following standard psychometric scale assessment procedures (Anderson and Gerbing 1988) confirmatory factor analysis was used based on recommended practice (e.g., Bagozzi, Yi and Phillips, 1991; Bentler and Chou, 1987) of these four sets of measures: (1) measures of hospital culture dimensions, (2) measures of ward subculture dimensions, (3) measures of leadership dimensions, and (4) measures of job satisfaction and commitment. The adequacy of the measurement models is evaluated on the criteria of overall fit with the data, convergent validity, and discriminant validity. The results revealed that there is an overall fit of the four measurement models at acceptable levels. Although the chi-square statistics were statistically significant, this is not unusual with large sample sizes (Bagozzi, Yi and Phillips, 1991). The Tucker-Lewis (1973) index (TLI), and comparative-fit

index (CFI, Bentler, 1990) all exceeded the recommended cut-off value of 0.90. The values of the root mean square error of approximation (RMSEA) were either close to or below the value of 0.08 recommended by Browne and Cudeck (1993), and the norm chi-square values (χ^2/df) were all less than 3. The above findings suggest that the hypothesized measurement models fit reasonably well with the data.

Regarding the convergent validity for our measures, the exploratory factor analyses indicated each item loaded highly on its hypothesized factor. No high cross-loadings were observed. Second, the factor loadings from the confirmatory factor were all highly significant (p < 0.01). These results suggest that the measures appear to have adequate convergent validity. To assess discriminant validity, we used a procedure recommended by Bagozzi, Yi and Phillips (1991). A chi-square difference test was used to test compare the original measurement models with alternative models in which pairs of constructs were combined. In all cases it was found that the changes in chi-square were highly significant (p < 0.01), thus providing evidence for the discriminant validity of the measures. As recommended by Anderson and Gerbing (1988) we used structural equation analysis of the covariance matrix to test our hypotheses in this study.

Table 2 presents the structural equation modeling results for our model and the overall fit is excellent (Chi-square = 24.474, df = 19, p-value = 0.179; TLI = 0.986; CFI = 0.994; RMSEA = 0.034). Twelve of the 13 paths in the revised model are significant at the 0.01 level and the remaining path (task-oriented leadership $\rightarrow$ innovative ward) is significant at the 0.05 level. Furthermore, the model explains a substantial amount of the variance for each of the five endogenous constructs, as the squared multiple correlations (SMCs) reveal: (1) SMC for supportive ward = 0.456, (2) SMC for innovative ward = 0.449, (3) SMC for bureaucratic ward = 0.510, (4) SMC for job satisfaction = 0.627, and (5) SMCs for commitment = 0.618.

Based on the result in Table 1, the correlation results showed that H1 to H5, H7 to H9, and H11-H13 are accepted because they all provide positive relationship between the tested variables. However, H6, H10 and H14 are all rejected. The above conclusion was also confirmed from the result stated in table 2.

Table 2: Structural paths of the present model

Structural Path		Standardized Estimate	t-value	p-value
H_1	Supportive hospital to supportive ward	0.386	6.719	0.000
H_2	Innovative hospital to innovative ward	0.373	6.139	0.000
H_3	Bureaucratic hospital to bureaucratic ward	0.537	7.361	0.000
H_4	Consideration leadership to supportive ward	0.486	8.486	0.000
H_5	Consideration leadership to innovative ward	0.417	6.628	0.000
H_7	Task-oriented leadership to bureaucratic ward	0.362	4.930	0.000
H_8	Supportive ward to job satisfaction	0.241	3.305	0.001
H_{11}	Job satisfaction to commitment	0.355	4.699	0.000
H_{13}	Innovative ward to commitment	0.574	6.948	0.000
H_{14}	Bureaucratic ward to commitment	-0.184	-2.842	0.004
N_1	Consideration leadership to job satisfaction	0.538	8.418	0.000
N_2	Task-oriented leadership to innovative ward	0.154	2.545	0.011
N_3	Innovative hospital to job satisfaction	0.212	3.495	0.000

Model Goodness-of-Fit Statistics

|	
Chi-square (degrees of freedom)	24.474 (19), p-value = 0.179
Tucker-Lewis Index (TLI)	0.986
Comparative-Fit Index (CFI)	0.994
Root Mean Square Error of Approximation (RMSEA)	0.034
Akaike Information Criterion (AIC)	96.474
Parsimonious Normed Fit Index (PNFI)	0.411

Note: N_1, N_2, and N_3 represent the three new structural paths in the revised model.

Based on the results shown in Table 3, relative to all of the four alternative models tested above, the best fit structural model showed that job satisfaction remained to be the antecedent to commitment and subcultures, as a mediator, have a significant influence on commitment. Figure 3 showed the effects and paths of the present model of employee commitment mediated by organizational subculture.

Table 3: Summary of testing alternative models

Measurement Model	Chi-square	Df	p-value	TLI	CFI	RMSEA	AIC	PNFI	BSP
(1) Present Structural Model	24.474	19	0.179	0.986	0.994	0.034	96.474	0.411	0.158
(2) Alternative Model 1	37.616	19	0.007	0.951	0.979	0.063	109.616	0.405	0.010
(3) Alternative Model 2	24.370	18	0.143	0.982	0.993	0.038	98.370	0.390	0.125
(4) Alternative Model 3	3.464	6	0.749	1.000	1.000	0.000	101.464	0.133	0.760
(5) Alternative Model 4	71.802	19	0.000	0.860	0.941	0.105	143.802	0.390	0.001

Notes: df = Degrees of freedom; TLI = Tucker-Lewis Index; CFI = Comparative-Fit Index; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike Information Criterion, PNFI = Parsimonious Normed Fit Index, and BSP = Bollen and Stine Bootstrapping Test P-Value
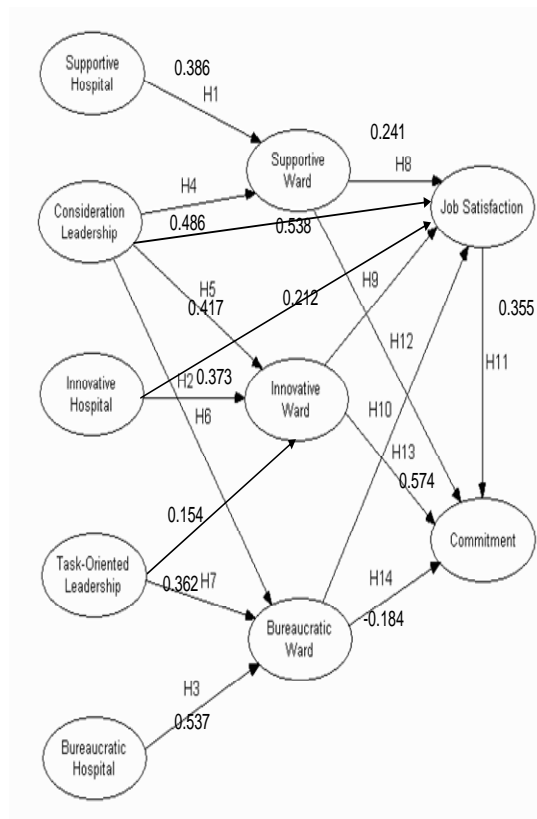
All beta are significant p<0.01 except H8,H14 and Task leadership to innovative ward

Figure 3: Effects of variables on organizational commitment in revised structural model

9. Discussion and limitations

Table 2 showed that among the three ward subculture dimensions, innovative ward subculture was found to have the largest direct relationship with commitment (standardized estimate of total effect size = β = 0.574) while bureaucratic ward subculture had a significant negative direct relationship with commitment (β = -0.184). Supportive ward subculture had a small but positive indirect relationship with commitment via job satisfaction (β = 0.086). In contrast, of the three hospital culture dimensions, none had any direct effect on commitment, and only innovative hospital culture had an indirect relationship with commitment (β for innovative hospital = 0.289, β for supportive hospital = 0.093, and β for bureaucratic hospital = -0.099).

This is an important finding offering a substantial contribution to theory testing with respect to organizational commitment. Previous research suggested that organizational culture and subculture could have differential effects on individuals in the work place (Brown 1995; Krausz et al. 1995). Our results reinforce the view of Prestholdt (1987) and Brewer (1994) who argue that nurses tend to identify more closely with their ward subculture than the culture of the hospital as a whole. This could have significant implications in managing human resources in organizations as it suggests that greater attention and resources should be given to the cultivation of subcultures as well as the general organizational culture. Commitments, and possibly other work-related attitudes, are impacted more by things occurring in the immediate context of the organizational subcultures and a monolithic organization-wide approach may not be the most viable strategy. These findings are important for the management of change since different subcultures may interpret and react differently to change initiatives.

The results of this study confirm earlier findings on the relationship between leadership style and commitment (DeCotiis and Summers 1987). As expected (Table 1), a consideration leadership style (r = 0.489) was found to have a greater correlation than a task-oriented leadership style (r = 0.168) on commitment. As demonstrated in Table 5 consideration leadership style differs from task-oriented leadership style not only in size, but also in the way in which it influences commitment. Except for innovative ward subculture, their mediating constructs are different. Table 2 indicated that consideration leadership style relies on supportive ward subculture and job satisfaction while task-oriented leadership links commitment via bureaucratic ward subculture. Our results (Table 2) also confirm the positive relationship (β = 0.355) between job satisfaction and commitment found in previous research (Allen and Meyer 1996; Lok and Crawford 1999, Michaels, 1994; Williams and Anderson, 1991; Vandenberg and Lance, 1992). Finally, the results from this study confirmed the direction of relationship being from satisfaction to commitment. This supports the general accepted view.

Certain limitations of this study provide opportunities for further research. First, the results of this study may not be transferable outside the national context. Various cultural dimensions in different nations may affect organizational commitment differently (Vandenberghe, 1999). For example, the negative effect of a bureaucratic culture on commitment may not be present in high power distance countries. Second, the present study was carried out in a hospital environment where nurses tend to spend relatively long periods in one ward. In organizations where employees are more mobile within the organization, there may not be time to form a well-defined subculture that can have a significant impact on commitment. Furthermore, it was assumed that a ward would constitute a subculture but subsequent research may empirically determine that rather than assume it. The literature also suggests that subcultures can form around a number of possible dimensions so future research might consider other types of subcultures formed around, for example, professions, occupations and management practices (Hofstede 1998). Also, similar models in the health care setting can be tested under different national culture environments to determine the effect of national culture on the variables adopted in this study. Finally, this study employed a cross-sectional design. In any model in which a causal relationship is suggested longitudinal studies provide for stronger inferences. Thus, the model developed and tested in this study could benefit from being tested in a longitudinal design.

Conclusion

In conclusion, one of the main findings of our model was the role of subculture as a mediator of the effects of leadership style and organizational culture on job satisfaction and commitment. The results revealed that innovative subculture (as the mediator) had the greatest association with organizational commitment (B=0.574). Furthermore, as shown in Figure 3, the effect of consideration leadership had the biggest association with commitment when mediated by innovative subculture (that is: 0.417 x 0.574 = 0.239). The effect of consideration leadership had the second biggest association with commitment when mediated by job satisfaction (0.538 x 0.355 = 0.189). Finally, the findings in this study could provide management with better insight to manage their resources effectively in order to focus on innovative subculture activities for greater employee commitment.

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