

An Empirical Assessment of Decision-Making Style (DMS) of Professional Institutions in Public Sector: A Comparative Study on Healthcare and Agricultural Administrators of India

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Abstract

Purpose – Understanding one's decision-making style is crucial for administrators to build their effective administration, problem-solving in various situations, and to know the gears of their decision-making engine to navigate the complex road of organizational challenges and opportunities.

Design/Methodology/Approach – The authors received 189 valid questionnaires from healthcare and agricultural administrators, working in their respective healthcare and agricultural institutions in Jammu & Kashmir, India, which were then put to statistical analysis by employing quantitative descriptive survey approach, using SPSS 26.0.

Findings – Results imply versatility among healthcare and agricultural administrators in their decision-making styles in different contexts. Also, significant variations on such styles between the two groups of administrators were found to exist.

Practical Implications – The outcomes of the study will not only ensure a match between an administrator's cognitive functioning and the characteristics of their work but also raise their awareness of their decision-making style (DMS). This self-awareness will enable them to evaluate the practicality of their DMS to take precautionary measures when their style may not be the most suitable for a given situation.

Originality /Value – Decision-making is one of the most critical duties of an effective administrator, however, little is known about their DMSs particularly in professional institutions, which may aid in their decision-making ability.

Keywords: Decision-making, Decision-making style, Professional institutions, Intuition, Rationality, Spontaneity, Dependence, Avoidance

Introduction

With a shift in the approach towards career-building, more & more resources for research and exploration are being made available to students, and various professional courses have started seeing an increase in demand thereby, a surge in the number of professional institutions in India. Professional institutes help future professionals to enhance their professional expertise, industry standards, technical

skills, and specialized knowledge to meet best quality standards in their fields to stay updated on the latest professional trends, advancements, and practices to make the society a better place to live in (Anagnou & Fragoulis, 2014; Gamage & Mininberg, 2003; Chevaillier, 2002). However, such institutes require administrators, who would be able to demonstrate effective and optimum level of decision-making abilities to analyze, prioritize, and interpret available information to deliver timely and efficient decisions (Skyrme, 2002). In fact, March & Simon, 1958; and Cyert & March, 1963, visualized the organizations as decision-making arenas, where administrators are required to make choices in many situations, with devastating variety of concerns, conflict of interests, complications, and challenges that require solid and consistent decision-making (Bina et al., 2014). Decision-making has been defined as a process of deliberately choosing an option from two or more alternatives in a proactive manner appropriate to the demands of the situation, under conditions of uncertainty, the state of being in flux between ends, and the symbolic logic involved with a non-linear situation with blurred options and outcomes in order to reach a specific objective with least amount of risk (Kreitner, 2008, p.206; Cervone, 2005; Scot & Bruce, 1995). Therefore, it is a crucial implement and a distinguishing feature of successful administrators, who do not only require versatility and prowess, but more adequate deliberation, assessment, and reason to involve the exchange of information, data review, generation of new ideas, and evaluation of alternative courses of action to implement policies (Johnson & Kruse, 2009; Obi & Agwu, 2017).

McLaughlin (1995) stressed that decisions are the core transactions of organizations, and successful institutes 'out decide' their competitors in at least three ways: they make better decisions, they make decisions faster, and they implement decisions more (p. 443). Also, Drucker, 1973; Certo, 2002; Maccrimmon & Wehrung, 1986; Johnson & Kruse, 2009, stated that decision to be effective must be first of all a quality decision, i.e., it should solve the problem best in the context given with an obvious psychological substrate that allows the manager to use their energies collaboratively to make quality decisions. However, making such decisions depends on administrators' decision-making abilities to utilise a variety of DMSs to influence and to lead all the systems of an institute successfully (Bursalıoğlu, 1975; Güçlüoğlu, 1985; Kaya, 1986; Lunenburg & Ornstein, 2013; Melman, 1958; Bruch et al., 2005; Ganster, 2005; Daft, 2015; Bedoyere, 1995; Kepner & Tregoe, 1965; Rogers & Blenko, 2006; Lunenburg & Orstein, 2013; Hammond et al., 2001; Tortop, 1990). Hunt et al., 1989 considered 'decision-making style' as a subjective characteristic, which reflects how an individual defines and perceives the problem to choose an alternative solution to it. Scott & Bruce, 1995, defined it as a 'learned way of approaching and processing the information exhibited by an individual when confronted with a decision situation. It is a habit-based propensity to react in ways in specific decision contexts' (Hunsaker & Hunsaker, 1981p. 23; Arroba, 1977). In fact, different personality traits along with diverse socio-psychological constructs generate different DMSs among individuals, which can be replaced after frequent failures or reinforced after successes (Williams & Miller, 2002; Hunsaker & Hunsaker, 1981; Bolman & Deal, 2008; Phadnis et al., 2014; Scott & Bruce, 1995).

Literature reveals that lack of an organized DMS in institutes is one of the major problems faced by them due to the changing environmental conditions (Divjak, 2016; Machado & Taylor, 2010).

Also, the impact and magnitude of DMS vary across cultures, due to which it could be a useful area to look into. In other words, contextual factors have been argued to affect DMS although very little research has been conducted to study them in such frameworks (Scott & Bruce, 1995). Moreover, while there are decision-making models and styles being discussed and implemented in the context of industry

(Nooraie, 2014); no such serious effort appears to have been done in case of HEIs (Higher educational institutes) (Magd & Bindah, 2016). With this understanding, researchers thought it relevant to assess and compare the DMS of administrators of professional institutions in Indian context.

Background theory and development of research questions

Organisations and their decision-making styles (DMSs): Many empirical studies conducted in different institutional settings indicated that decisions are taken in organizations in different ways by using either intuition, data, collaboration or ad-hoc considerations (AIDhean, 2017). Moreover, Ireland & Miller, 2004, asserted that behaviours, psychological factors, and socio-political power are all important constituents and determinants of decision-making processes that influence decision maker's reaction to environmental, organisational, and task demands to make effective decisions. However, Koziol-Nadolna & Beyer, 2021 found that organizational factors are the most important among all. Other than that, complexity and degree of focus are two components, where decision-making process varies among people (Hunsaker, & Hunsaker, 1989). Where complexity is the amount of data and material they utilise to make decisions; whileas, degree of focus is the number of options / solutions an individual produces from the data. For example, there are some individuals who think intuitively; whileas others think logically; and still some other individuals prefer action against a prolonged reflection (Rowe & Mason, 1987). Some decisions may best be made using a logical, analytical and vigilant style; others would be better made using a novel and intuitive style (Chermack & Nimon, 2008, p.351). In other words, while some heads are planners, who rely on careful analysis before making a decision; others are creative, innovative, and take risks, depending more on intuition than on facts. So, creating effective decisions depend on the cognitive process of determining alternatives and selecting the best course of action to attain a better situation regarding the opportunities that exist (Carlisle, 1979; Harris, 1980; Harrison, 1999; Mondy, 1993). Moreover, the highly volatile and unpredictable nature of the environment in which decision-makers operate suggests that certain DMSs might be more productive and positively impactful over time than the other types (Chermack & Nimon, 2008, p.351). Also, it was being found that level of technology used in the organization, in addition to decision-maker's educational levels are good predictors of decision-making styles (Yousef, 1998). Kagathi, 2013, on the other, asserted that decision making, being the prominent task of senior managers, takes into account all the relevant environmental components having an impact on the organization. Thus, an important aspect of the decision-making process is the variety of ways / styles through which the decisions could be made based on the context and the situations in demand. As a result, the investigators came up with following research questions:

1. Are healthcare and agricultural administrators enough flexible and adaptable in their decision-making styles to handle situations?
2. Do institutes differ significantly in their decision-making styles?

Method

The study's participants were the administrators of Public Healthcare and Agricultural Institutions of Kashmir locale, who were presiding as Chairpersons, Directors, Principals, Vice Principals, Registrars, Executives, Deans of various Divisions / Faculties, Heads of the Departments, and other Coordinators. Quantitative research design with descriptive survey approach was employed to conduct the study. Since not everyone working in an institute is holding an administrative position, the researcher thought it to be

effective and pertinent to select all the public healthcare and agricultural institutions in Kashmir, with all the administrators working therein as the sample of the study. Moreover, when the area of investigation is relatively small, the census method of collecting data is held to enumerate data from the entire population.

After administering the questionnaires to 155 medical administrators, the number of valid responses returned back to the investigator was 113 with a response rate of 73%. The same scale was administered to 91 agricultural administrators, where after removing 15 faulty surveys, 76 valid replies were obtained, with a response rate of 83%. Table 1 & 2 displays the demographic profile of respondents. Besides that, permission was being granted by the concerned heads / administrators for data collection, and their data is confidential.

Description of the Respondents, their education level, and years of experience at Healthcare Institutions

Variables		n	Percentage
Respondents		113	73%
Gender	Male	82	72.6%
	Female	31	27.4%
Academic Level	Professor	93	83.2%
	Associate professor	17	15.04%
	Assistant professor	2	1.8%
Duration of service	less than 7 years	33	29.2%
	7 – 13 years	50	44.2%
	More than 13 years	30	26.6%
Table 1.			
Demographic profile of healthcare Administrators			

Source: Administrative Department & Human Resource division, 2019.

Variables		n	Percentage
Respondents		76	83%
Gender	Male	68	89.5%
	Female	08	10.5%
Educational Level	Professor	63	93.4%
	Associate professor	13	7.9%
Duration of service	less than 7 years	24	31.58%
	7 – 13 years	29	38.2%
	More than 13 years	23	30.26%
Table 2.			
Demographic profile of Agricultural Administrators			

Source: Administrative Department & Human Resource division, 2019.

Description of the Respondents, their education level, and years of experience at Agricultural Institutions

Measurement

Decision-Making Style (DMS): Decision-making style was measured by using Scott & Bruce’s (1995) General decision-making style (GDMS) scale, which has five subscales: rational, intuitive, dependent, avoidant, and spontaneous DMS. Each subscale contains five items. So, the questionnaire incorporates 25 items, on a 5 point Likert scale. As per the norms of the scale, a higher score on any of the five scales - indicates a higher presence of that particular DMS. Scott & Bruce (1995) validated the GDMS using a sample of 4 studies they had conducted and reported internal consistency of: Rational: 0.77-0.85, Intuitive: 0.78-0.84, Avoidant: 0.93-0.94, Dependent: 0.68-0.86, Spontaneous: 0.87.

Data analysis

To investigate the proposed research questions, descriptive and inferential statistical techniques like mean, SD (standard deviation), percentage, test of significance (Independent sample t-test), with the assistance of IBM, SPSS 26.0, were applied to analyse the data.

Moreover, the unit of analysis was not an individual administrator, i.e., the researcher did not study a particular administrator on the said variable, but the group of administrators administering a particular professional category – Medical & Agricultural institutions. Hence, each category of professional institutions was considered as units of observation, and the administrators working therein as a cluster unit.

Table 3: Evaluation and Comparison on the Styles of Decision-Making of Healthcare and Agricultural Administrators

Style	Group	n	Mean	S.D.	t-value
Rational	Medical	113	20.01	2.2	1.99*
	Agriculture	76	19.36	2.3	
Intuition	Medical	113	20.00	2.1	.473
	Agriculture	76	19.84	2.5	
Dependence	Medical	113	18.20	2.1	.485
	Agriculture	76	18.37	2.5	
Avoidance	Medical	113	11.70	2.2	2.73**
	Agriculture	76	10.83	2.1	
Spontaneous	Medical	113	15.26	2.9	2.80**
	Agriculture	76	14.14	2.3	
Composite Score	Medical	113	85.17	5.0	4.34**
	Agriculture	76	82.54	2.2	

*Significant at 0.05 level; **Significant at 0.01 level

Showing the mean scores, SD, and the Independent Sample t-test (significance of difference) of Medical and Agricultural Administrators on the Decision-Making Style

Findings

With respect to the proposed question no. 1, high composite mean scores have been found on GDMS construct of both healthcare (M=85.17) and agricultural administrators (M=82.54); however, former have relatively high overall mean scores than the later as shown in table 3. Moreover, the dominant styles / the decisions types most regular among healthcare administrators are 'rational' and 'intuitive' with high mean scores of 20.01 and 20.0 respectively. But their second most important or the back-up style is 'dependent', with a mean score of 18.20, followed by comparatively less preferred 'spontaneous and avoidant' decision types with mean scores of 15.26 and 11.70 respectively. On the other hand, the dominant or the style most regular among the agricultural administrators is 'intuitive' with a high mean score of 19.84, followed by 'rational' as their back-up or the second most preferred decision type with a mean score of 19.36. 'Dependent' has been found to be their third most important style, after 'intuition and rational', which is, in fact, more often used by them than the healthcare administrators, as indicated by its high mean scores (M=18.37) among agricultural administrators. Whileas, 'spontaneous and avoidant' are their least preferred decision types, with mean scores of 14.14 and 10.83 respectively. So, the results backed our Question 1 by affirming that both healthcare and agricultural administrators are enough adaptable in employing various DMSs for decision-specific contexts.

With respect to question no. 2, it has been found that the two groups differ significantly at 0.01 level on the overall GDMS scale, where the composite mean scores of medical administrators are found to be relatively high than the composite mean scores of agricultural administrators as shown in table 3. Additionally, the two groups differ significantly at 0.01 level on 'avoidant' and 'spontaneous' DMSs, where relatively high mean scores among healthcare administrators have been found as compared to the mean scores of agricultural administrators. However, the calculated t-value in case of the 'rational' DMS is significant at 0.05 level, with relatively high mean scores found among medical administrators compared to the agricultural administrators. It is also apparent that there is no significant mean difference between the two groups on 'intuitive' and 'dependent' decision types as the calculated t-values came out to be insignificant here. So, the results backed our Question no. 2 by asserting that both healthcare and agricultural administrators differ significantly in their styles of decision-making.

Discussion

Making decisions is one of the most indispensable, basic, toughest and risky tasks of administrators, where it influences all the sub-systems of an institute (Lunenburg & Orstein, 2013; Hammond et al., 2001; Tortop, 1990). In fact, the success in all the roles orchestrated by administrators reflects the decisions that they made as they must first be good decision-makers before they could be good planners, organisers, staffers, leaders, and controllers.

The results suggest that healthcare administrators, administering highly structured and complex institutions, are relatively more flexible and adaptable in utilising DMSs than agricultural administrators, as indicated by their high mean scores (Scott & Bruce, 1995). In this respect, Kidholm et al., 2015, found that healthcare managers, in addition to health technology assessment, consider clinical, economic, organizational, political and the strategic aspects of decision-making. Also, results reveal that

medical administrators utilise ‘rational’ and ‘intuitive’ decision types in combination, which indicates that they are both ‘data sensitive’ and ‘data filterer’ type of administrators, who rely on concepts and logics from the outside world, and also apply previously established cognitive patterns to balance data to give it a holistic look. The results are in line with the assertions of Scott & Bruce, 1995, Simon, 1991, Sinnaiah et al., 2023, who found that the decision-making of highly structured organisations is likely to be constrained under the norms of rationality and expertise both. Additionally, Kuziemy, 2016; Baghbanian et al., 2012 stated that, under conditions of complexity and uncertainty, healthcare administrators most often employ experience, heuristics (rules of thumb) and accumulated knowledge (intuition and judgment) with structured analysis. Moreover, Scott & Bruce, 1995, p.820, asserted that the decision-making contexts encourage administrators to use different DMSs either taken singly or in different combinations to achieve most desirable alternative outcomes (Jamian et al., 2013). Although both the groups are least to ‘avoidant and spontaneous’ DMSs, however, healthcare administrators have been found to be relatively more in need of speedier decisions, where, based on their instincts, they sometimes embrace risk-taking, seize opportunities, and due to ambiguity and uncertainty, make decisions at the spur of the moment. Also, displaying relatively more ‘avoidant’ decision-making tendency, than the agricultural administrators, suggest that they tend to avoid decisions when they are faced with difficult or challenging situations or feel uncertain about the potential outcomes of their choices. These finding are supported by Khasawneh et al., 2011, who indicated that department chairs comparatively neglect to use the ‘avoidant and spontaneous’ DMSs, than the other dominant DMSs.

In contrast, agricultural administrators have been found ‘intuitive’ (data filterer) type of decision-makers, who use iterative or repeated solutions predominantly to rely more on instincts to give a holistic view to their decisions, followed by ‘rational’ as their back-up or the second most important decision style. This finding is in line with Al-Abbasi & Masso, 2020, who found that managers of agricultural departments carry out their work to the fullest extent by applying rich experiences and skills in their field. Whiting, 2005; Yousef, 1998; Behzadpur, et al., 2011 found that executives have more tendency to ‘intuition’, where they rely on their own experiences and previously established cognitive categorisations to make decisions, and use rationality and logic to back-up their decisions. In fact, intuition and rationality have been found to be the crucial aspects for decision effectiveness, and to the institute itself (Aldhean, 2017). Besides that, it is being found that agricultural administrators are relatively more ‘dependent’, than their counterparts, to back-up their decisions by gathering information, and seeking advice and opinion from others. This is in line with the host of studies like, Baghbanian et al., 2012; Khasawneh et al., 2011; Yousef, 1998; Kagathi, 2013), who found that department chairs utilise ‘dependent’ DMS to back-up their decisions. This approach allows them to delve into more diverse perspectives, additional expertise, and well-rounded decisions by seeking insights from colleagues, subordinates and experts in the field. Hence, we can conclude that administrators of each professional category led with different decision-making styles, and switch to different decision types without a clearly predominant one (Bayburin, et al., 2015).

Secondly, their significant mean differences on the ‘rational, avoidant, and spontaneous’ decision types as well as on the overall DMS asserts that the healthcare administrators are relatively more flexible and diverse in their decision types than the agricultural administrators. However, an insignificant mean difference between the two groups on ‘intuitive’ and ‘dependent’ decision types suggests that both the groups of administrators are equal on such styles, who rely on their previously established cognitive patterns and categorizations, and seek input and feedback from the members of the institute. In fact

seeking advice and opinion from others before making decisions is in line with the findings of Shipper et al., 1998; & Shoemaker et al., 2010; Kayode et al., 2014).

Overall, the high mean scores on the styles of decision-making of both the groups of administrators signify that they apply various decision types strategically based on the nature of the decisions, time constraints, available information, and the potential impact on the institution. In fact, each and every DMS has its own strengths and limitations, and administrators who can employ a range of styles are better equipped to use them judiciously to handle diverse challenges and occurrences based on the context and desired outcomes. Baghbanian et al., 2012; Omotola, 2012; Sinnaiah et al., 2023, reported that the decision-making varies greatly across the systems as it is highly dependent on the operational context in time, place and purpose. In fact, they found that administrators incorporate networks and collectives of people, and no instance of individual decision-making was reported. Koutouzis & Malliara, 2017; Amazt & Idris, 2011, affirmed that administrator's flexibility and adaptability allow them to employ most appropriate style as DMSs are contingent and situational. In nutshell, the study asserts that administrators exhibit all the five decision-making styles, however, 'rational', 'intuitive' and 'dependent' DMSs are more frequently demonstrated by them (Harren, 1979; & Driver et al., 1990).

However, the common problems faced by them while taking-up the decisions include uncertainty resulting from the lack of information and data, time, and availability of resources. The study observed a need to introduce or improve an information management system to ameliorate the decision-making process, particularly when considering the challenges of information scarcity as the biggest hurdle in making decisions. Also, to improve decision-making approaches, administrators of various institutes must adopt Complex Adaptive Systems (CAS), ERP (enterprise resource planning) systems, CRM (Customer relationship management), databases and data visualization, and other software so that they could have the understanding of how the system works with respect to contexts and the relationships before they can model various decision approaches. So, system understanding should be done as a precursor to all decision-making to understand the inter- and intra-complexities of the processes to mitigate unintended consequences (Kidholm et al., 2015).

Limitations

This study possess some limitations in that the data's generalizability may be questioned given that it was undertaken within healthcare and agricultural institutions, especially with the officially designated administrators. However, to enhance applicability, future studies should apply these findings to other public and private sectors as well as other academic and industrial organisations. Moreover, to provide more robust evidence for causal linkages, researchers may also take into account longitudinal experimental designs, in which both qualitative and quantitative data should be gathered through repeated observations. Finally, the socio-demographic factors – such as age, gender and other academic qualifications – that can have an impact on the findings were not taken into account in the investigation. So, such demographic information along with work performance collected from various sources should be included in future studies. In addition, upcoming scholars are encouraged to gather more extensive datasets utilizing a variety of sampling strategies.

Conclusion

In summary, this study examined the DMS of healthcare and agricultural administrators; and also enquired their differences on such styles. Through their mean scores and t-test values, we came to know

that both the groups of administrators vary significantly, and also display considerable fluidity and diversity in their decision-making styles, which they choose depending on decision situations they confront. Moreover, both the groups of administrators relatively make more use of their dominant decision types than the other less or least preferred ones.

In fact, the study's findings have certain ramifications for both current research and practice. As institutional heads are not all alike, an understanding of their decision-making styles may help to probe the psychological structure of their mind; and display how their perceptions, values and cognitive preferences work simultaneously with contextual circumstances in different types of institutions (Muthulakshmi, 2015). Also, the study would help administrators to configure their DMSs according to a series of decision-making factors, which is probably the most important part of their work - the part that justifies their authority and access to information because the correctness of decision-making process is crucial for their efficiency, the human and material resources committed, and the precedents set - a means for institutes to move forward from troublesome situations. Therefore, administrators must possess appropriate skills and competencies for effective decision-making because decisions made and implemented by managers carry inherent risks, as they may be challenging to reverse once in effect. It is an inbuilt function upon which is based the survival and permanence of an organization, because its role in determining the policies, counter the problems, seek opportunities and formulating the organizational goals to be achieved cannot be over-emphasized (Liphart, 2014). So, this underscores the necessity of cultivating a robust decision-making process that yields well-informed decisions capable of withstanding changes in the environment without requiring frequent reversals.

To conclude, we can say that the decision-making is one of the most important pillars of the administrative functions, due to its importance being the heart and soul of administration (Simon, 1957).

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