Assessing Medical Scientific Forum from Participants' Satisfaction Perspective and Abstract Submission Process

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ABSTRACT

This paper intended to assess the medical scientific forum of King Abdullah International Medical Research Center (KAIMRC) concerning forum organizational characteristics and abstract submission process quality from participants perspective. The paper also aims to provide organizational leadership and research stakeholders with information that may improve future Forums.

Data were collected through a web – based survey immediately after the termination of the Forum. The results revealed that the reliability and convergent validity holds for the survey's instruments, indicating a prior accuracy of our data. Regression analysis suggested that the data are sensitive to model specifications and a probit model is well preferred. The overall satisfaction was negatively affected by participant profile (-0.284), suggesting the possibility of further improvement for future Forums. Regarding the findings of the abstract submission process, overall satisfaction was moderate ranging from 73% to 80%.

Key Words: Abstract submission, Data sensitivity, Quality, Scientific forum.

INTRODUCTION

The assessment of scientific meetings has been previously studied in the literature. Var *et al*. (1985) used data over the period 1968 – 1971 on attendance at conventions of the American Political Science Association held in various North American cities. They identified accessibility (measured by distance rather than travel cost) as the key factor of determining convention attendance. Other studies by Jago and Deery (2005), Server *et al.* (2007), Zhang *et al*. (2007), Mair and Thompson (2009), Borghans *et al*. (2010), and Terzi *et al*. (2013) found similar results. Witt *et al*. (1995) proposed a forecasting model to analyze factors influencing AIEST (International Association of Scientific Experts in Tourism) conference attendance. They concluded that conference tourism is a necessity good and conference attendance is much more susceptible to variation in conference fee than travel cost.

Later work by Rittichainuwat *et al*. (2001) examined the motivations, inhibitors, and facilitators that influence association members in attending international conferences. They used a mail – questionnaire for participants of the 2000 International Council of Hotel, Restaurant Industry Educators (CHRIE) conference. They found that "Sightseeing" which includes travelling to desirable places, outdoor recreation and a change of pace is a main dimension of the conference motivation. However, they also identified "Conference and personal constraints" and "Distance, time, and money" as the underlying dimensions of conference inhibitors. Meanwhile, "Affordability and availability of time," "Family/spouse," and "Distance and ease of access" were major conference facilitators.

In other disciplines, such as labor economics, Borghans *et al*. (2010) used data that covered the period 2001 – 2008, to analyze the preferences of members of the European Association of Labor Economists (EALE) by exploiting researches' decisions about hypothetical conferences. They found that keynote speakers and conference location are the most important attributes to attend a conference.

Terzi *et al*. (2013) used a quantitative method to measure the attitude of participants, regarding the contribution of conferences' Scientifics committee. They found multi ethnicity, ability to review, publications, and previous experience as the four most important evaluation criteria.

The King Abdullah International Medical

Research Center (KAIMRC) Annual Scientific Forum in 2012 was the third gathering of this forum. The forum was held over a two – day period and attracted over 450 attendees. However, it was only the first time to evaluate systematically the quality of the abstract submission process. In the absence of a questionnaire brief, the author discussed the questionnaire objectives and methodology with the stakeholders. During these discussions, four dimensions consistently arose relating to:

- Presenters' characteristics (5 items).
- Forum characteristics (4 items).
- Forum organization (3 items).
- The quality of abstract submission rocess (5 items).

Moreover, the discussions culminated in the identification of a general aim and three evaluation objectives. The general aim was to refine and improve the quality of future forums and address the concerns and needs of our participants. While the objectives were:

- To assess presenters and the forum characteristics and organization;
- To assess the quality of the abstract submission process; and
- To provide leadership and other research stakeholders (sections' head, scientific committee of the forum and, present and future forum organizing committees) with qualitative information.

This information will not only improve the quality of future forums, but also permit KAIMRC to benchmark itself across a wide range of other forums with similar aspiration that have a strong international reputation.

MATERIALS AND METHODS

The primary source of feedback from attendees for this evaluation was provided by an online survey, using Survey Monkey®. Although the organizing committee administrators provided an e-mail list of 460 attendees at the forum, only 300 attendees were retained to avoid potential bias results (i.e. excluding organizing committee, senior leaderships, incorrect e-mails, on site day 2 registrations, and people who registered but did not attend). We sent the survey once a week to non-respondents (from early December 2012 to mid-February 2013) in order to get a reasonable response rate that is worthy to be reported. Using the 300 number, the 178 completed – surveys represent a response rate of 59.3% (Figure 1). Participants only represent 39.3% while Abstract Submitters represent 20%, from which 70% submitted podiums abstract, 18.3% are posters abstract, and 11.7% are podiums and posters abstract.

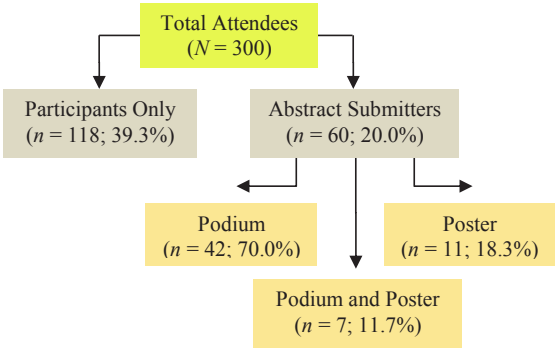

Figure 1. Response rate results by type of attendees

The methodology of this evaluation used quantitative method. First, for the survey questionnaire, attendees were asked to rate their responses in – Likert response categories – ranging from 1 (strongly disagree) to 4 (strongly agree). This allowed for the determination of responses within each category in addition to the average rate for each items and the overall rate for each dimension.

An ordered probit model estimation and a probit model estimation were used to check for data sensitivity. The ordered probit model is a generalization of the probit model to the case of more than two outcomes of an ordinal dependent variable. Both models estimates the effect of the exogenous variables on the predicted probability of participant satisfaction.

Finally, an external benchmarking analysis was used to determine the effectiveness of the forum planning and delivery, and the remarks that could improve future international events.

RESULTS AND DISCUSSION

The data revealed an overall rate of satisfaction of 74.25%; which is slightly less than the 2011 forum rate of satisfaction 75.0% (2011 KAIMRC Forum Report). This indicates that KAIMRC still has a lot to do in order to improve future forums. To be more specific, respondents rate the forum as poor (3%), average (17%), good (60%), and excellent (20%) (Figure 2).

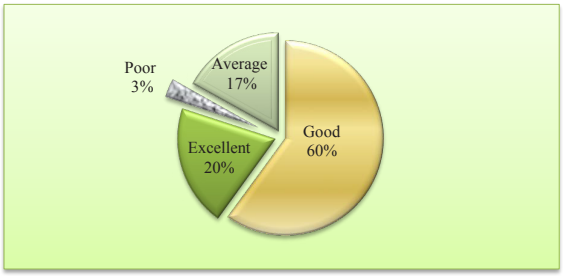

Figure 2. Overall rate of 2012 forum

In terms of dimensions (Table 1), close means were noted for all instruments, ranging from 2.813 (70.3%) to 3.213 (80.3%). For example, the profile of the keynote speakers indicates that participants, on the average, mostly prefer expertise in their respective field 3.100 (77.5%). Participants also identified the convenience of the forum location as the best instruments of the planning process 3.213 (80.3%). Finally, networking opportunities were found to be preferred the most.

The reliability of all instruments was determined using Cronbach's alpha method. The overall alpha scale was 85.4%, which is greater than the 70% acceptable criteria.

Table 1.Variables and Summary Statistics

Profile of the Keynote Speakers	Mean	*s. d.*	Min	Max	*N*
1. They gave highly advanced information during the forum	2.953	0.571	2	4	150
2. They demonstrated expertise in their respective fields	3.100	0.488	1	4	150
3. They provided highly quality exhibition	2.866	0.598	1	4	150
4. They created an excellent learning environment	2.986	0.612	1	4	150
Planning Process					
5. In terms of theme, the forum was well planned	2.966	0.659	1	4	150
6. The time was convenient	3.046	0.605	1	4	150
7. The location was convenient	3.213	0.619	1	4	150
8. I found the discussion environment very interesting and informative	2.866	0.609	1	4	150
9. The Forum provided me with opportunities to network	3.020	0.639	1	4	150
10. Based on this forum, I will make changes in my works/ studies	2.813	0.708	1	4	150
Forum Characteristics					
Overall Satisfaction					
Quality of the Abstract Submission	2.973	0.684	1	4	150
11. The abstract submission process	3.050	0.811	1	4	60
12. The acceptance process	2.933	0.841	1	4	60
13. The presentation assignment, either poster or podium	2.866	0.812	1	4	60
14. The forum theme	3.000	0.713	1	4	60
15. The forum content	2.950	0.768	1	4	60
Abstract Submission to Future Forum	0.900	0.302	0	1	60

It is important to note that the highest alpha score was 82.8% for the overall satisfaction while the lowest alpha score was 73.3% for the profile of the keynote speaker (Table 2). Thus, all instruments exhibit high internal consistency at both total score and subscale levels. The validity of instruments is conceptually difficult to prove quantitatively

without a standard. One method is to check construct validity. The construct validity is supported by two evidences: (i) The high internal consistency mentioned above; and (ii) the criteria related validity which is assessed by the correlation matrix (Table 2) and the regressions displayed by Table 3. These instruments have the expected signs and statistically significant at 1% level with the dependent variable "overall satisfaction".

Table 2. Reliability and Correlation Matrix

	Alpha	1	2	3	4	5	6	7	8	9	10
Profile of the Keynote Speakers	0.733										
1. They gave highly advanced information during the forum	0.838	-									
2. They demonstrated expertise in their respective fields	0.853	0.546 (0.00)	-								
3. They provided highly quality exhibition	0.842	0.393 (0.00)	0.252 (0.00)	-							
4. They created an excellent learning environment	0.829	0.381 (0.00)	0.363 (0.00)	0.507 (0.00)	-						
Planning Process	0.749										
5. In terms of theme, the forum was well planned	0.844	0.298 (0.00)	0.135 (0.09)	0.447 (0.00)	0.530 (0.00)	-					
6. The time was convenient	0.848	0.277 (0.00)	0.256 (0.00)	0.313 (0.00)	0.417 (0.00)	0.457 (0.00)	-				
7. The location was convenient	0.845	0.255 (0.00)	0.128 (0.11)	0.294 (0.00)	0.378 (0.00)	0.477 (0.00)	0.563 (0.00)	-			
Forum Characteristics	0.745										
8. I found the discussion environment very interesting and informative	0.836	0.405 (0.00)	0.315 (0.00)	0.227 (0.00)	0.408 (0.00)	0.272 (0.00)	0.362 (0.00)	0.129 (0.11)	-		
9. The Forum provided me with opportunities to network	0.842	0.351 (0.00)	0.122 (0.13)	0.199 (0.01)	0.360 (0.00)	0.272 (0.00)	0.274 (0.00)	0.158 (0.05)	0.385 (0.00)	-	
10. Based on this forum, I will make changes in my works/ studies	0.849	0.326 (0.00)	0.151 (0.06)	0.368 (0.00)	0.411 (0.00)	0.374 (0.00)	0.145 (0.07)	0.121 (0.13)	0.377 (0.00)	0.437 (0.00)	-
Overall Satisfaction	0.828	0.476 (0.00)	0.289 (0.00)	0.449 (0.00)	0.409 (0.00)	0.636 (0.00)	0.375 (0.00)	0.393 (0.00)	0.409 (0.00)	0.384 (0.00)	0.459 (0.00)
Cronbach Coefficient for all items	0.854										

Convergent validity was proved for the profile of the keynote speaker, planning process, and forum characteristics. Moreover, the expected positive correlation of all instruments with the overall satisfaction was strongly supported in a statistical context. These correlations ranged from 0.289 to 0.476 with a highly significant statistical context (p – value < 0.00). It is important to mention that the three dimension scales exhibit an overall alpha coefficient which is higher than their correlation coefficients, suggesting that the reliability coefficient is in the upper limit of validity.

Table 3 reports the parameters estimates regarding the sensitivity of our data to

modelling change. These estimates should be interpreted with caution since they do not present information on exact changes in the probability of finding a significant or an insignificant estimate. However, the parameters estimates showed little discrepancies across the two models, in terms of magnitude and signs. All instruments have a positive sign except for the participant profile which exhibited a negative sign, suggesting that the forum must improve the quality such parameter in future forums. One way of improvement is to invite international speakers with respected reputations and accept papers from outside the Kingdom. It is important to mention that the cutoffs (Limits) for the ordered probit model are all significant at the 1% level and satisfying the relationship that Limit 1 < Limit 2 < limit 3, justifying no misspecification errors in both models (Maddala, 1983). The overall conclusion reached from Table 3 was that our data is sensitive to modelling change since the estimates *LL* and the *AIC* for the probit model are less than that of the ordered probit model.

Since the probit model outperformed the ordered probit model, we derived the estimates of the marginal effects (Table 3, last column). The marginal effects are interpreted as a change in the probability that the dependent variable equals a given level per unit change in the exogenous variables, holding everything else constant. It is important to mention that most effects were provided by participant profile (-0.284), followed by forum planning (0.003), and keynote speakers (0.003).

Table 3. Model Specifications Estimates

	Ordered Probit Model		Probit Model		
	Estimates	*p-value*	*Estimates*	*p-value*	*M. Effects*
Keynote speakers	0.056***	0.000	0.037*	0.065	0.003
Knowledge gained	0.008	0.275	0.017*	0.088	0.001
Networking	0.010	0.175	0.005	0.626	0.000
Changes in future work/study	0.019***	0.006	0.014	0.152	0.001
Forum planning	0.044***	0.000	0.041***	0.005	0.003
Participants profile	-5.919***	0.000	-3.509***	0.000	-0.284
Limit 1	1.227***	0.000	3.878***	0.000	-
Limit 2	3.069***	0.000	-	-	-
Limit 3	5.814***	0.000	-	-	-
LL.	-96.482	-	-51.396	-	-
AIC.	210.964	-	116.792	-	-
N	150	-	150	-	-

Finally, Table 4 summaries the findings of abstract submission process. All instruments showed a satisfaction ranging from 73% to 80% for a scale good and excellent. For example, abstract submission process showed the highest satisfaction (80%) while the presentation quality of the abstract was the lowest (73%). In terms of reliability and validity, the overall alpha scale was greater than 87%, which is greater than the 70% acceptable criteria. Convergent validity was also satisfied since the internal correlations are all greater than 0.480 and significant in a statistical context, suggesting a better construct validity for our instruments.

Table 4. Assessment of the Abstract Submission Process

	Poor *n* (%)	Average *n* (%)	Good *n* (%)	Excellent *n* (%)	*Overall Rating* (%)	*Alpha*	*Correlation Matrix*			
							1	2	3	4
Abstract submission	3 (5.0)	9 (15.0)	30 (50.0)	18 (30.0)	76	0.860	0.877	-	-	-
Acceptance process	4 (6.7)	11 (18.3)	30 (50.0)	15 (25.0)	74	0.855	0.650 (0.000)	-	-	-
Presentation quality	4 (6.7)	12 (20.0)	32 (53.3)	12 (20.0)	72	0.846	0.550 (0.000)	0.681 (0.000)	-	-
Forum theme	1 (1.7)	12 (20.0)	33 (55.0)	14 (23.3)	75	0.842	0.527 (0.000)	0.480 (0.000)	0.643 (0.000)	-
Forum content	2 (3.3)	13 (21.7)	31 (51.7)	14 (23.3)	74	0.851	0.520 (0.000)	0.492 (0.000)	0.532 (0.000)	0.804 (0.000)

Benchmarking Analysis: To enhance the findings stated above, benchmarking analysis was performed using peer internal and external organizations that represent potential best practices in the studied areas of organizational improvement. However, we did not find any peers or aspirational organizations in the medical science research area. Some published data do exist in other areas such as the European Association of Labor Economists Conferences (EALE). It represented an opportunity for KAIMRC to make reliable international comparisons, learn from other organizations, and most importantly shed light on the sources of the differences with this organization. The results of this benchmarking analysis focused on the planning process (period, venue, and fees), abstract submission, and conference attributes (Table 5).

Table 5. Benchmarking Analysis

	KAIMRC Forum (2012)	European Association of Labor Economists Conferences (EALE) (2001 – 2008) [a]
Period	September/October	September
Venue	University	University
Fees	€24 - €118	€184 - €325
Submitted Papers (Acceptance Ratio)	30.0%	53.3%
Share of Survey Participants	39.3%	33.4%
Importance of Conference Attributes (most preferred)	Planning Process (76.9%)	Keynote Speakers [b]
Number of Survey Participants	118	437
Total Participants	300	1310

[a] What makes a good conference? Analyzing the preferences of labor economists. Journal of labor Economics, 2010.

[b] Based on probit / OLS / and random effect models (page 872).

By looking at the planning process, it appears that both organizations have the same period and venue but they differed significantly in registration fees. EALE conference fees are, indeed, much higher than that KAIMRC, perhaps as a result of the geographical location. The most important finding identified from the benchmarking analysis is the differences between the two organizations in the choice of the most

preferred conference attribute. EALE chose keynote speakers, while KAIMRC chose planning process.

This finding indicates that KAIMRC participants are not satisfied with keynote speakers.

Two points stand out for a successful KAIMRC forum. First, keynote speakers should be selected from top-notched speakers, recognized nationally and internationally. Second, KAIMRC forum should be strengthened with a variety of specific types of events that are planned to achieve other objectives. Such events may include roundtables, dialogues, training events, and plenary sessions. However, considerable care also needs to be taken regarding the benchmarking analysis results because of the differences in subjects and objectives.

CONCLUSION

This paper intends to assess the medical scientific forum of King Abdullah International Medical Research Center (KAIMRC) concerning the forum organizational characteristics and abstract submission process quality from participants' perspective. The paper also aims to provide organizational leadership and research stakeholders with information that may improve future Forums.

The target population was King Abdelaziz Medical City staff, in Riyadh, which includes National Guard for Health Affairs (NGHA), KAIMRC, and King Abelaziz University for Health Sciences (KAU-HS). It is important to acknowledge the limitation of the data and the potential bias encountered in cross-sectional data (Bland, 2002).

The findings of this study indicated that reliability and convergent validity holds for the used instruments, indicating a prior accuracy of data. Regression analysis suggested that the data are sensitive to model specifications and that the probit model is well preferred. The overall satisfaction was negatively affected by participant profile (-0.284), suggesting possible improvement of future forums. Regarding the findings of the abstract submission process. The overall satisfaction was moderate ranging from 73% to 80% for a scale good and excellent.

It is important to mention that although the model is parsimonious and uses a small data set, the results may stimulate immediate strategic actions from the Forum organizers. This could include increased investment, not only in finding top – notched keynote speakers, but also in abstract submission system development to increase participants' satisfactions.

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تقييم منتدى العلوم الطبية من منظور رضا المشاركين وتقديم الملخصات

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الملخص

هدف هذا البحث إلى تقييم خصائص المنتدى العلمي من منظور المشاركين، وجودة عملية تقديم الملخصات للمشاركين في منتدى "مركز الملك عبد الله الدولي للبحوث الطبية" (KAIMRC). كما هدف هذا البحث إلى توفير القيادة وغيرها من أصحاب المصلحة للبحث عن معلومات مهمة لتحسين المنتديات المقبلة.

تم جمع البيانات من خلال "موقع إلكتروني" استنادًا إلى استبانة بعد نهاية المنتدى. وكشفت النتائج أن البيانات ثابتة وتحمل صلاحية متقاربة للأدوات المستخدمة؛ مما يدل على دقة البيانات المتوفرة. أما نماذج الانحدار فقد بينت حساسية البيانات لاختيار النموذج، وأن نموذج probit هو المفضل، وأن إجمالي الرضا تأثر سلبيًّا بشخصية المشاركين (-0.284)؛ مما يشير إلى زيادة فرص تحسين المنتديات المقبلة.

وفيما يتعلق بالنتائج التي توصلت إليها عملية تقديم الملخصات، كانت نسبة الرضا متوسطة عمومًا وتتراوح بين 73% و80%.

الكلمات المفتاحية: تقديم الملخصات، الجودة، حساسية البيانات، المنتدى العلمي.