

DOES RISK PERCEPTION INFLUENCE THE ACCURACY OF DECISIONS IN THE ARAB CULTURE?

Marwan M. Abdeldayem¹ and Saad Darwish²

¹ College of Business Administration, Cairo University, Egypt and Applied Science University (ASU), Kingdom of Bahrain

² College of Administrative Sciences, Applied Science University (ASU), Kingdom of Bahrain

Abstract: The concept of risk in the Arab culture is influenced by a mixture of religious faith, norms and how people learn to deal with probabilistic issues. Also, limited access to sources of dealing with mathematical odds due to constraints on gambling may shed some ambiguity regarding making decisions in formulating assessment concerning different risks. A sample of university students from the Kingdom of Bahrain is surveyed using a five point Likert scale and a list of risks to be assessed according to the subjective judgments of the respondents. The data were analyzed using t-test and Chi-square test. The results reveal that (1) fatalism is a major factor for the decision making process in the Arab culture; (2) almost two thirds of respondents are having the risk avert attitude rather than the risk taking attitude; (3) Bahraini students that belong to the risk avert attitude group (RAAG)- unlike those belong to risk taking attitude group (RTAG)-tend to take extra precautions while taking their daily and routine decisions; and (4) the accuracy of decisions in the Arab culture depends on their risk attitude and perception. Consequently, the study concluded that risk perception does influence the accuracy of decisions in the Arab culture.

Key words: Risk, Risk Perception, Risk Culture, Fatalism

INTRODUCTION

Mankind is exposed to multiple risks depending on the nature of life and the circumstances surrounding it. When exposed to a particular risk they search for means to protect themselves from threat, also to gain the protection and peace of mind and to be able to live or deal with those threats easily, (Myoungsoon You & Youngkee Ju 2018).

The link of human life uncertainties brought the concept of risk as a major source for survival. The individual remains in the state of uncertainty or doubt as to the course of what is going to happen in the future. This is the subject of risk perceptions and the influencing factors inherent to the life and property. The future remains unknown to us unless cognition activates our heuristics to make the right judgment (Abrar, Naveed and Ramay, 2017).

The lack of the public awareness of risk is the fundamental problem to be addressed by this research

effort. The primary objective of this study is to identify and diagnose the most important factors affecting the risk perceptions of the research sample. Also, some cultural factors will be envisaged.

This study will address some of the shortcomings and weaknesses in the awareness of the Bahraini public regarding risks threatening them. Also, the study will identify the factors most influential in the understanding of the dangers resulting from dealing with those risks. It is imperative to take necessary measures to prevent and reduce the likelihood of the occurrence of these threats and increase the possibility of reducing the losses. This work would shed light on the patterns of risk perception in a culture that is conservative and religiously based. Some socio systems may have impact if this research investigates the deep-seated social values.

Since this study is exploring the relationship between risk perception and the accuracy of decisions in the Arab

culture, it is worth mentioning that there are 22 Arab countries that include more than 400 million inhabitants, and the Arabic language is their official and original language of the Islamic holy book (the Qura'an). Further, only few studies have attempt to investigate the relationship between risk perception and decision making in the Arab countries such as the study of Abdeldayem (2015, P.61) that examines "the impact of risk perception on portfolio management in the Kingdom of Bahrain" and concludes that "perceived risk is not only influenced by quantitative aspects such as profit and loss but also qualitative aspects such as worry and anxiety play a vital role in the perceived risk of Arabs". Therefore, this study can have a significant contribution in the area of risk management by exploring the relationship between risk perception and culture in the Arab world.

The rest of the paper is organized as follows: Section (2) presents the literature review to show the relation between risk perception and the accuracy of decisions. The research methodology, data sources, questionnaire, and procedure and sample are in section (3). Section (4) explains the empirical analysis and test results of the relation between risk perception and the accuracy of decision in the Arab culture. Section (5) provides summary and concluding remarks.

THEORITICAL FRAMEWORK AND LITERATURE REVIEW

Risk Perception

The early work of Amos Tversky and Daniel Kahneman,(1974, P. 1126) indicates that there are three heuristics that are engaged in making judgements under uncertainty : "(i) representativeness, which is usually employed when people are asked to judge the probability that an object or event A belongs to class or process B; (ii) availability of instances or scenarios, which is often employed when people are asked to assess the frequency of a class or the plausibility of a particular development; and (iii) adjustment from an anchor, which is usually employed in numerical guess when an appropriate value is available. These heuristics are highly economical and usually effective, but they lead to systematic and predictable errors. A better understanding of these

heuristics and the biases to which they lead could improve judgments and decisions in situations of uncertainty". This work laid down the basis for further research in the area of risk perception (Tversky & Kahneman 1974; Slovic, Fischhoff & Lichtenstein, 1977; Chapman & Johnson, 1994, Fredriksson & Moro, 2014, Abdeldayem, 2015, and Darwish, 2016). Furthermore, humans use heuristics or fast-and-frugal reasoning strategies as mental shortcuts because of information processing limitations. The need to conserve limited mental resources was seen as the driving force in reasoning, judgment, and decision making (Gilovich, *et al.*, 2002) and the Global risk Report, 2017). It is clear that risk perception is subject to factors of bias and a decision maker at any level would fall into biased results. It can be assumed that this, somehow, is affected by the experience as well as cultural and social factors of individuals. On top of that, other factors may enter in the sphere of influence, such as socialization and environment-related gambling habits and religious faith within the society .Most research on risk perception indicated bias in judgment as a core issue. Biases would mean making erroneous decisions that will jeopardize the process of understanding the world around us. Thus, the investigation of risk comprehension leads to a safe environment for the public and rational decisions for managers competing in a changing business environment.

The definition of risk perception is the subjective assessment of the probability of a specified type of accident happening and how concerned we are with the consequences. To perceive risk means the evaluation of the probability as well as the consequences of negative outcomes (Sjöberg *et al.*, 2004 and Ohman, 2017).

It is believed that lay perceptions of risk are different from experts' perceptions; lay people inexperienced with probabilities seem to overestimate the frequency of low-probability. However, dramatic hazards (e.g., nuclear power plant accidents), as compared to expert risk estimates are significantly different (Johnson, 1993, and the Global Risk Report, 2017). Reaching such a conclusion would mean some indifference to the process of risk perception, deep-seated values and beliefs molded with cultural texture may create further distorted assessment of probabilistic judgment of risk.

Risk Perception and Culture

Dake and Wildavsky (1990) made a substantial statement regarding the variance and differences between people and how to measure risk in different cultures. The knowledge of what sorts of perceptions come from which kind of people may allow for practical applications of cultural theory in a variety of policy context (Dake & Wildavsky, 1990, and Oltedal *et al*, 2004). It is widely acknowledged that the aim of cross cultural studies is to investigate the cognitive construction of judgments about the extent and acceptability of risks to which individuals are exposed. (Burns, 2007). Further, Park and Kim (2014) in their study of risk and culture in South Korea argue that different cultures among different groups of people affect their perception of risk and also their preferences and selections of risk reduction behaviors. A comprehensive research regarding the issue of risk perception and culture shows that researchers have looked at cultural (sub-groups) within a country comparing the risk perception of people adhering to a particular world review. It concludes that it seems to be no risk perception research in African and Asian countries, while in South American countries this type of studies are still scarce (Renn & Rohrman, 2000, and Arlikattia *et al*, 2018).

In addition, in a conference regarding risk & culture, participants agreed that “cultural matters must be taken seriously in risk assessment, and disaster prevention and preparedness. People’s concerns, actions as well as the extent and value of local knowledge, are all linked to culture. Cultural norms and values influence the readiness to adopt, modify, or reject safety measures offered through outside assistance. However, caution was advised about misreading the real meaning of specific cultural traits or expressions. Some participants referred to economic, institutional, and political influences that can enter cultural systems and become the dominant factors influencing the risk perception process” (Arun, *et al*, 2008, P.6).

Therefore, the consequences of such attitude reflects on the public policies in denying the probability of another quake, ignore construction standards, relief, recovery and evacuation plans, and to forego a community-wide hazard education program, can mean catastrophe over again. This attitude is believed to put

influx on public awareness and the potentials of catastrophe is foreseen as inevitable. Research of the cultural theories confirmed the grid-group typology of Mary Douglas. This identifies five basic ways of life: hierarchy, egalitarianism, fatalism, individualism and autonomy, typified respectively in the comprehensive study of Douglas, (1982) (see also Darwish, 2015).

The research findings of the cross cultural differences between China & Australia demonstrate the “strong influence of socio-psychological variables and the cultural perspective on risk evaluations. However, the empirical bases for the findings gained so far are still small and generalizability is restricted. A wider range of cultures needs to be looked at in order to clarify further the influence of cultural factors on the cognition and evaluation of risks” (Rohrman & Chen, 1999, Abdeldayem, 2015, and Arlikattia, 2018, P. 309). Such research is still under way despite the fact that cultural differences of people and communities are crucial to explore the way they perceive risks. It is natural that these communities have different responses and attitudes towards different risks, ranging from high to weak awareness. In this respect, we believe that the ability of decision makers and policy-makers to build databases is capable of confronting the risks in the order of significance, and according to their impact becomes a substantial issue when the public is concerned about their safety. The accumulation of cultural and religious influences will affect the strategic plans taking into consideration the strengths and weaknesses of each society.

In the Arab world the heritage of religious and cultural beliefs is related to the mechanisms faith where fatalism is somehow dominant in the strata of the society. However, the teachings of the Islamic doctrine urges planning for self-protection, but the collective mind abstraction, (especially for the lay people who are not able to access the complexities of the potential risk and how to confront it) their perceptions may be described as biased or not consistent.

Risk Perception and Fatalism

The definition of fatalism is best described as belief that “every event is predetermined and, irrespective of the attempts to influence it, could not have happened

otherwise. Fatalism does not recognize 'free will,' the humans are free in choosing and acting according to one's own judgment. Not to be confused with determinism which states that every event follows a cause-and-effect sequence and can be influenced by human actions" (Ngueutsa & Kouabenan 2017). We have some evidence in the Arabic culture regarding the way people perceive risks. For instance, in Morocco a common attitude regarding natural disaster questions concerning quake recurrence caused a prevalent refusal to answer, commonly with the reply of "Allahu alam" (God knows) (Paradise, 2008).

Referring to the Islamic Doctrine of (Qadaa Wa Qadar- Fate and Destiny) which reflect the will of God, we find some evidence of accidents causation such as recent incidents of collapse and the vulnerability of amenities in Syrian communities where no responsibility is pointed and incidents are referred to the fate and destiny without investigating the causes and reasons. You may get some disasters, but a few cases are recognized and responsibility is rarely spelled out (Colesa, Zhangb and Zhuangb, 2018). Another evidence from Oman where an official report states "It is undisputed that fate and destiny, good and evil from God Almighty. However, we cannot consider the road accidents, and the resulting tragedies, human and material losses to one's fate or to chance alone. The causes play a big role in that, as Almighty said, "do not throw yourselves into destruction" (Qura'an).

The question of how people perceive risk could be influenced by fatalistic attitude. If people are fatalistic they may make poor assessment of risk; those who are fatalistic might not be able to assess the dangers surrounding them in approaching potential hazards. Perhaps the inbuilt convictions that what they be subjected to is predestined by the will of the Lord. However, this is somehow difficult to explain, but the reference of this issue is mentioned as something that has persistent grounds in the Muslim society. The study of Atkine, (2004) explains the attitude toward safety precautions, where he mentions the possible reflection of a Qur'anic saying, heard in various forms, that "death will overtake you even if you be inside a fortress." Just observing how few Arabs use seat belts in their automobiles can be a revelation. This manifestation of

Arab fatalism is often misconstrued as a lesser value put on human life. However, we still need some empirical evidence that assures this attitude.

METHODOLOGY

The main purpose of this section is to provide an outline of the research methods used and to explain the procedures employed to collect and analyze the data.

Research problem

It is believed that culture has a relationship on risk perception among individuals and this is also related to religious beliefs and how people assess risk according to their beliefs. Being fatalistic or non-fatalistic have has its relation to the way people perceive risks. Also, personal experience has an impact on awareness of the risks and evaluation. Hence, the research question is what is the relationship between risk perception in the Arab culture and the accuracy of decisions?

Hypotheses

This study has two main hypotheses:

H01- There is no relationship between risk perception and the accuracy of decisions in the Arab culture

Statistically expressed: $H01: M \leq 3.0$

H02- There is no significant difference between risk taking attitude and risk avert attitude in the Arab culture

Statistically expressed: $H02: M \leq 3.0$

Since all the questions in the questionnaire are based on a 5 point Likert type scale (where 1 means strongly disagree (SD) and 5 is strongly agree (SA)), the null hypotheses (H0) can therefore be statistically expressed, as, the median (M) is less than or equal (\leq) to 3.0. The alternative hypotheses (H1) can be statistically expressed as the median (M) is greater than ($>$) 3.0.

Procedure and Sample

In this study a convenient sample of 60 students who are studying Business Administration in the Kingdom

of Bahrain were contacted by a questionnaire in order to examine the relationship between risk perception in the Arab culture and the accuracy of decisions. 11 questionnaires were excluded from the analysis due to incomplete answers resulting in a sample of 49 students. The questionnaire consists of 22 questions that are categorized into four sections: assessing fatalism, rational attitude of calculating the odds, risk taking attitude, and risk avert attitude.

Reliability Test

Reliability refers to the extent to which an instrument or technique produces the same results each time it is used. Due to the difficulty of contacting the same person twice and using a test and retest method, the Alpha reliability method was used in this particular study to discover the reliability of the questionnaire. The questionnaire achieved Alpha reliability value of 0.71 and this value was found to be acceptable level according to the Alpha coefficient of reliability method.

RESULTS

In order to ascertain the Fatalism and Rational Attitude for calculating the odds, respondents were asked to indicate on a scale ranging from 1 to 5, where 1 means ‘strongly disagree’ and 5 ‘strongly agree’, the extent to which they agree or disagree with each of the items reported in table (1). Table (1) below displays the overall

mean scores and reveals no evidence for any extreme variations in responses. However, it is still possible to detect minor differences between the different Fatalism and Rational Attitude for calculating the odds (since the mean response of the entire sample only varies from 3.01 to 4.42). The first statement in table (1) is testing the fatalism among different students. It can be seen that the overwhelming majority of respondents (almost 98 %) either agree or strongly agree that “accidents happening to them or other people are by the will of God” with a mean of 4.57. This result indicates clearly that fatalism is a major factor for the decision making process in the Arab culture. Regarding the rational attitude for calculating the odds, the most important item reported by respondents was that “when they have an accident they search for the causes” with as many as 89.8% of the respondents indicating that they either agree or strongly agree (a mean of 4.42). The second highest score was that “before making any decision they consider the odds” with an overall mean of 3.45. The statement that “I like to practice games of mathematical nature” scored the third highest (mean = 3.01), with as many as 57.2 % of the respondents either agreeing or strongly agreeing.

The questionnaire respondents were also invited to indicate their risk taking attitude. Table (2) presents the extent to which they agree or disagree with each of the questions posed in this table. The questions in table (2) relate to elven potential risk taking attitude in the sample of the study.

Table 1
Fatalism and Rational Attitude for calculating the odds

<i>Items</i>	<i>Strongly Agree</i>		<i>Agree</i>		<i>Uncertain</i>		<i>Disagree</i>		<i>Strongly Disagree</i>		<i>Mean</i>	<i>SD</i>
		<i>%</i>		<i>%</i>		<i>%</i>		<i>%</i>		<i>%</i>		
Accidents happening to me or other people are by the will of God.	40	81.6	8	16.3	1	2	-	-	-	-	4.57	0.455
When I have an accident I search for the causes.	17	34.7	27	55.1	4	8.2	-	-	1	2	4.42	0.763
I like to practice games of mathematical nature.	12	24.5	16	32.7	12	24.5	5	10.2	4	8.2	3.01	1.208
Before making any decision I consider the odds.	19	38.8	15	30.6	13	26.5	1	2	1	2	3.45	0.968

Table (2) reveals that 69.4 % of the respondents either agree or strongly agree with the statement that “they feel that the environment around them has high degree of risks” (mean = 3.82). This reveals that almost two thirds of respondents are having risk avert attitude rather than the risk taking attitude. The second highest score related to the statement that “they love exploring the unknown”, with an overall mean of 3.65. This means that the majority of respondents (65.3 %) either agreeing

or strangely agreeing with their preferences and tendency to explore the unknown and hence they are risk takers. Gambling promotes the spirit of competition scored the third highest, a mean of 3.50, with as many as 63.2 % of the respondents indicating that they agreed or strongly agreed. In addition, “whatever plan I put still there are always sudden changes” and “when it is necessary I break the rules” would all appear to be a reflection to the risk avert attitude among a good number of respondents.

Table 2
Risk Taking Attitude

Items	Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree		Mean	SD
		%		%		%		%		%		
I like to drive my car at high speed.	3	6.1	14	28.6	11	22.4	12	24.5	9	18.4	3.20	1.224
I feel of utmost safety when I drive my car with high speed.	-	-	1	2	11	22.4	17	34.7	20	40.8	1.41	0.841
The degree of reliability in cars are so high therefore I do not worry for safety.	1	2	3	6.1	17	34.7	14	28.6	14	28.6	1.80	1.010
I like to play dangerous games.	5	10.2	6	12.2	12	24.5	7	14.3	19	38.8	2.84	1.383
I love exploring the unknown.	14	28.6	18	36.7	7	14.3	5	10.2	5	10.2	3.65	1.286
Taking risk is a correct practice in our daily life.	5	10.2	11	22.4	13	26.5	7	14.3	13	26.5	3.17	1.346
Gambling promotes the spirit of competition.	13	26.5	18	36.7	2	4.1	5	10.2	11	22.4	3.50	1.535
I love speculating in the stock market if I had the opportunity.	3	6.1	6	12.2	16	32.7	5	10.2	19	38.8	2.63	1.286
Whatever plan I put still there are always sudden changes.	6	12.2	17	34.7	17	34.7	6	12.2	3	6.1	3.38	1.051
When it is necessary I break the rules.	12	24.5	16	32.7	15	30.6	3	6.1	3	6.1	3.44	1.112
I will take risk if there is something in it for me.	15	30.6	19	38.8	6	12.2	7	14.3	2	4.1	3.82	1.159

When attention is turned to risk perception in the Arab culture and risk avert attitude, respondents were asked to indicate their opinion relating to the five statements reported in table (3). As can be seen from table (3) almost 86 % of the respondents either agree or strongly agree that “they are very careful when crossing the street”, with a mean of 3.95. The statement that “they feel that the environment around them has high degree of risks”, had the second highest score (mean = 3.30),

with as many as 53 % of the respondents either agreeing or strongly agreeing. These results can be interpreted as one would notice that there are some contradictions and concerns in the sample answers. This is may be due to the dominance of the fatalistic attitude as confirmed by their answers. We believe that such an attitude is associated with the fear of uncertain outcomes that people may have been exposed to.

Another interesting finding of the questionnaire survey was that as many as 42.8% of the respondents either agreed or strongly agreed with the statement that “their friends consider them cautious, “with a mean of 3.15. The lowest score was with the statement that “they always wear the seat belt even when they are in the passenger’s seat” (mean = 1.83). This result reflects the fact that the sample of the study has no respect to abide with regulations and they lack the sense of risk

associated with such an attitude. Further, 11% of the sample is indifferent and they were not able to decide where they belong. Also the overall mean for this question shows clearly that the sample is more fatalistic than one would expect. With reference to the study stated in *www.ncbi.nlm.nih.gov* seat belt noncompliance percentages in the GCC countries are significantly higher than in other high income countries (52% vs 14.5%).

Table 3
Risk Avert Attitude

Items	Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree		Mean	SD
		%		%		%		%		%		
I always wear the seat belt while driving my car.	11	22.4	7	14.3	9	18.4	10	20.4	12	24.5	2.81	1.503
I always wear the seat belt even when I am in the passenger’s seat.	6	12.2	9	18.4	5	10.2	12	24.5	17	34.7	1.73	1.445
My friends consider me cautious.	6	12.2	15	30.6	21	42.9	3	6.1	4	8.2	3.15	1.048
I am very careful when crossing the street.	28	57.1	14	28.6	3	6.1	2	4.1	2	4.1	3.95	1.044
I feel that the environment around us has high degree of risks.	13	26.5	13	26.5	15	30.6	4	8.2	4	8.2	3.30	1.208

We tested the two hypotheses of the study as follows: hypothesis 1 (There is no relationship between risk perception and the accuracy of decisions in the Arab culture) was tested by classifying the attitude of respondents into two groups namely “Risk Taking Attitude Group (RTAG)” and “Risk Avert Attitude Group (RAAG)”. Following previous studies and in particular the study of Abdeldayem (2016), the respondents whose risk attitude score was greater than median were classified as RTAG while those respondents whose risk attitude was either equal to or less than median were classified as RAAG.

Moreover, mean of risk attitude of respondents in the two groups was computed and compared using t-test as shown in table (4). This table presents the differences in attitude between risk taking and risk avert groups. Table (4) reveals that respondents in RTAG have higher risk

taking attitude for 11 statements out of the 16 statements displayed in that table. Further, according to the results of t-test, the risk attitude of Bahraini students was found to be statistically significant in some situations such as: “the degree of reliability in cars are so high therefore I do not worry for safety”, “I love exploring the unknown”, “taking risk is a correct practice in our daily life”, “gambling promotes the spirit of competition”, “when it is necessary I break the rules”, and “I will take risk if there is something in it for me”. Therefore, we reject the null hypothesis and accept the alternative one and we conclude that risk perception influences the accuracy of decisions in the Kingdom of Bahrain. Consequently, some conclusive remarks need to be highlighted here such as despite most of the sample (98%) are fatalistic; they showed some rational assessment of risk. This poses some light on the fact that cultural and religious beliefs were not always used or understood in abstract forms.

Testing Hypotheses

Table 4
Differences in attitude between Risk Taking and Risk Avert Groups

	<i>Risk Taking Attitude (Mean)</i>	<i>Risk Avert Attitude (Mean)</i>	<i>t-Value</i>	<i>Sig.</i>
I like to drive my car at high speed.	3.77	2.25	.971	.050
I feel of utmost safety when I drive my car with high speed.	3.11	1.50	.655	.067
The degree of reliability in cars are so high therefore I do not worry for safety.	4.08	2.61	-2.77*	.003
I always wear the seat belt while driving my car.	2.21	4.40	-1.10	.448
I always wear the seat belt even when I am in the passenger's seat.	1.95	3.88	-2.65	.962
I like to play dangerous games.	3.10	2.21	-1.89	.443
I love exploring the unknown.	3.88	1.95	-2.11*	.000
Taking risk is a correct practice in our daily life.	4.12	1.25	-1.76*	.001
Gambling promotes the spirit of competition.	4.15	1.90	-2.81	.005
My friends consider me cautious.	2.28	3.78	-3.31*	.000
I love speculating in the stock market if I had the opportunity.	2.80	2.04	-1.73	.990
I am very careful when crossing the street.	3.10	4.33	-3.20*	.002
I feel that the environment around us has high degree of risks.	2.11	4.12	-2.99*	.005
Whatever plan I put still there are always sudden changes.	3.80	1.85	-1.95*	.008
When it is necessary I break the rules.	3.95	2.12	-2.64*	.004
I will take risk if there is something in it for me.	4.40	1.12	-3.11*	.002

Significant at 5% level

As far as the second hypothesis of this study is concerned, (i.e. there is no significant difference between risk taking attitude and risk avert attitude in the Arab culture) as mentioned earlier respondents were classified into two groups namely RTAG and RAAG. Table (5) displays the differences in risk perception between risk taking and risk avert groups. The results show that respondents in the risk taking attitude group (RTAG) reveal higher preferences for the statements that “taking risk is a correct practice in our daily life”, “I love exploring the unknown”, “I will take risk if there is something in it for me”, and “the degree of reliability in cars are so high therefore I do not worry for safety” as compared to those in the risk avert attitude group (RAAG). Respondents in risk avert attitude group express higher preferences for the statements that “I am very careful when crossing the street”, “I feel that the environment around us has high degree of risks”, “I always wear the seat belt while driving

my car”, and “I always wear the seat belt even when I am in the passenger’s seat”. This clearly proves that Bahraini students that belong to the risk avert attitude group (RAAG)- unlike those belong to RTAG-tend to take extra precautions while they are taking their daily and routine decisions. Further, Chi-square value of 13.25 which is statistically significant at 5% level denotes that accuracy of decisions in the Arab culture depends on their risk attitude and perception. Hence, we also reject the second null hypothesis and accept the alternative one and conclude that risk perception does influence the accuracy of decisions in the Arab culture.

CONCLUDING COMMENTS

This research effort has some limitations. The study was limited to its small sample size (49 university students from the Kingdom of Bahrain). A useful starting point for future research would be to incorporate the

Table 5
Differences in Risk Perception between Risk Taking and Risk Avert Groups

	<i>Risk Taking Attitude</i>		<i>Risk Avert Attitude</i>		<i>Chi Square</i>
	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>	
I like to drive my car at high speed.	18	65.3%	7	33.3%	13.25
I feel of utmost safety when I drive my car with high speed.	15	53.6%	5	23.8%	
The degree of reliability in cars are so high therefore I do not worry for safety.	20	71.4%	6	28.5%	
I always wear the seat belt while driving my car.	6	21.4%	18	85.7%	
I always wear the seat belt even when I am in the passenger's seat.	4	14.3%	17	80.9%	
I like to play dangerous games.	16	57.1%	9	42.8%	
I love exploring the unknown.	21	75%	8	30%	
Taking risk is a correct practice in our daily life.	22	78.6%	4	19%	
Gambling promotes the spirit of competition.	14	50%	6	28.6%	
My friends consider me cautious.	4	14.3%	16	76.2%	
I love speculating in the stock market if I had the opportunity.	14	50%	4	19%	
I am very careful when crossing the street.	6	21.4%	20	95.2%	
I feel that the environment around us has high degree of risks.	5	17.8%	18	85.7%	
Whatever plan I put still there are always sudden changes.	16	57.1%	9	42.8%	
When it is necessary I break the rules.	17	60.7%	5	23.8%	
I will take risk if there is something in it for me.	21	75%	1	4.7%	
Total Respondents	28		21		

Significant at 5% level

perceptions and experiences of a greater number of respondents in order to improve the results and enhance the generalizability of the study. This could be undertaken by distributing the questionnaire utilized in this study to a much larger sample of people from the Arab world. A greater understanding could then be obtained of the experiences of more Arab people. However, the Cronbach Alpha showed that the scale used in this study is a valid scale which will help us later to employ it into a larger sample.

Further, Experimental studies are needed in order to comprehensively understand the relationship between risk perception and decision making in the Arab culture. Face to face interviews might also be undertaken with officials holding strategic posts in many of the financial institutions, risk management companies and decision

makers in the Arab countries. This should lead to a broader understanding of the impact of risk perception on the accuracy of decisions in the Arab culture.

Moreover, a comparative research that covers the impact of risk perception on the accuracy of decisions in different Arab countries is needed. In particular, in the Middle East region and North Africa (MENA), as this part of the world seems to be much neglected in terms of research. A study, which compares this, would be extremely useful and would shed important light on the impact of risk perception on the accuracy of decisions in different Arab countries.

Overall, the findings of this research effort significantly support the argument of Wildavsky and Dake (1990, p. 42) that “the culture theory of risk is

capable to predict and explain what kind of people will perceive which potential hazards to be how dangerous". In addition, the findings of this study support the recommendation of Park and Kim (2014) that further research should be undertaken on the impacts of multiple dimensions of culture on individuals' perception of risk and their willingness to act for risk reduction behaviors.

In particular, the results of this study reveal that the overwhelming majority of respondents (almost 98%) either agree or strongly agree that "accidents happening to them or other people are by the will of God", with a mean of 4.57. This result indicates clearly that fatalism is a major factor for the decision making process in the Arab culture. Moreover, we found a clear discrepancy between rational and non-rational risk perception, which makes fatalism a question to be considered when making decision.

Regarding the rational attitude for calculating the odds, the most important item reported by respondents was that "when they have an accident they search for the causes" with as many as 89.8% of the respondents indicating that they either agree or strongly agree (a mean of 4.42). Although fatalism may hinder the process for investigation of accidents causes but actually what we found is somehow a different attitude of being fatalistic and hence look for investigation of causes.

More than two thirds of the respondents (69.4%) either agree or strongly agree with the statement that "they feel that the environment around them has high degree of risks." (a mean of 3.82). This reveals that almost two thirds of respondents are having risk avert attitude rather than the risk taking attitude. When attention is turned to risk perception in the Arab culture and risk avert attitude, 86% of the respondents either agree or strongly agree that "they are very careful when crossing the street", with a mean of 3.95.

We tested the two hypothesis of the study by classifying the attitude of respondents into two groups namely "risk taking attitude group (RTAG)" and "risk avert attitude group (RAAG)". Respondents in the RTAG have higher risk taking attitude for 11 statements out of the 16 statements displayed in that questionnaire survey. Further, according to the results of t-test, the risk attitude of Bahraini students was found to be statistically

significant for some situations such as: "the degree of reliability in cars are so high therefore I do not worry for safety", "I love exploring the unknown", "taking risk is a correct practice in our daily life", "gambling promotes the spirit of competition", "when it is necessary I break the rules", and "I will take risk if there is something in it for me". Therefore, we reject the null hypothesis and accept the alternative one and we conclude that risk perception influences the accuracy of decisions in the Kingdom of Bahrain.

In addition, the findings of this research effort reveal that Bahraini students that belong to the risk avert attitude group (RAAG) - unlike those belong to RTAG-tend to take extra precautions while they are taking their daily and routine decisions. Further, Chi-square value of 13.25 which is statistically significant at 5% level denotes that accuracy of decisions in the Arab culture depends on their risk attitude and perception. Hence, we also reject the second null hypothesis and accept the alternative one and conclude that risk perception does influence the accuracy of decisions in the Arab culture.

REFERENCES

- Abdeldayem Marwan M. (2015). "The Impact of Investors' Perception of Risk on Portfolio Management: Evidence from the Kingdom of Bahrain". *Research Journal of Finance and Accounting*, Vol. (6), No. (12), PP 61-79.
- Abdeldayem Marwan M. (2016) "Is There a Relationship between Financial Literacy and Investment Decisions in the Kingdom of Bahrain?" *Journal of Management and Accounting Studies* Vol. (4), No. (2), PP 73-85.
- Abrar K., Naveed M. and Ramay M. I. (2017), "Impact of Perceived Risk on Online Impulse Buying Tendency: an Empirical Study in the Consumer Market of Pakistan", Vol. (6), No. (3).
- Chapman G. & Johnson J. (1994). "The Limits of Anchoring", *Journal of Behavioral Decision Making*, Vol. (7), No. (4), pp. 223-24.
- Dake, K. and Wildavsky, A. (1990). "Theories of Risk Perception: Who Fears What and Why?" *JJSTR*, Vol. (119), No. (4), pp.41-60.
- Darwish, S. (2016), "The Understanding of Probability in the Iraqi Culture", *International Journal of Mainstream Research Social Science*. Vol. (5), No. 1-2: Spring & Fall, pp. 11-22.

- Darwish, S. (2015). "Risk and Knowledge in the context of Risk Management", *European Journal of Business and Management*, Vol. (7), No. (15).
- Douglas, M. and Wildavsky A. (1982). "Risk and Culture", Berkeley, CA: University of California Press, USA.
- Eldman, L. (2007). "Social and economic factors associated with the risk of burn injury". College of Nursing and Department of Surgery, University of Utah Health Sciences Center, Vol. (33), No. (8), pp.958-65.
- Fischhoff, B., Slovic, P., and Lichtenstein, S. (1977), "Knowing with Certainty: The Appropriateness of Extreme Confidence", *Decision Research, A Branch of Perceptronics*, Eugene, Oregon.
- Fredriksson, A., and A. Moro. (2014). "Bank-SMEs relationships and banks' risk-adjusted profitability". *Journal of Banking and Finance*, Vol. (41), pp. 67-77.
- Gilovich, T., Griffin D., & Kahneman, D. (2002). "The Psychology of Intuitive Judgement", Cambridge University Press, UK.
- Arun B. S., Syed H. S. and Karim R., (2008). Resource Manual on Flash Flood Risk Management: Module, International Centre for Integrated Mountain Development (ICIMOD).
- John B. Coles J. B., Zhang J. and Zhuang J., (2018). "Partner selection in disaster relief: Partnership formation in the presence of incompatible agencies", *International Journal of Disaster Risk Reduction*. Vol. (27), pp. 94-104.
- Lennart, S., B., N., Torbjørn, R., (2004). "Explaining Risk Perception. An Evaluation of the Psychometric Paradigm In Risk Perception Research", Rounde Publisher, No. (84), Norwegian University of Science and Technology, Department Psychology, Trondheim, Norway.
- Myoungsoon You & Youngkee Ju (2018). "Interaction of individual framing and political orientation in guiding climate change risk perception", *Journal of Risk Research* Vol. (21), No. (2).
- Ngueutsa IR. And Kouabenan D. R. (2017). "Fatalistic beliefs, risk perception and traffic safe behaviors", *Revue Européenne de Psychologie Appliquée*, Vol. (67), No. (6), pp. 307-316.
- Öhman S. (2017), "Previous Experiences and Risk Perception: The Role of Transference", *Journal of Education, Society and Behavioural Science*, Vol. (23), No. (1), pp. 1-10.
- Paradise, T. R. (2012). "The Influence of Islam on the Assessment of Earthquake Hazards and Seismic Risk", *Open Journal of Earthquake Research*, Vol. (1), pp.1-12.
- Park, S. and Kim, J. G. (2014). "Risk and Culture: variations in dioxin risk perception, behavioral preferences among social groups in South Korea", *Environmental Health and Technology*, Vol. (28), pp. 1-11.
- Rohrmann, B. & Chen, H. (2011), "Risk perception in China and Australia: an exploratory cross-cultural study", *Journal of Risk Research*, Vol. (2), No. (3), pp. 219-241.
- Slovic, P., Fischhoff, B. & Lichtenstein S. (1977). "Human Perception and Performance", *Journal of Experimental Psychology*, Vol. (3), No. (4), pp. 552-64.
- Sudha Arlikattia S., Maghelalb P., Agnimitrac N. and Chatterjeed V. (2018). "Should I stay or should I go? Mitigation strategies for flash flooding in India", *International Journal of Disaster Risk Reduction* Vol. (27), p. 48-56.
- The Global Risk Report (2017). 12th edition, World Economic Forum.
- Tversky, A., Kahnman, D., (1974). "Judgment under Uncertainty: Heuristics and Biases", *Science, American Association for the Advancement of Science, New Series*, Vol. (185), No. (4157), pp. 1124-1131.
- www.rcbi.nim.nih.gov: accessed on 25th January, 2018.