Does mindfulness moderate the relationship between anxiety, uncertainty, and intercultural communication effectiveness of the students in Pakistan?

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Abstract

The current study tests key variables of anxiety uncertainty management (AUM), a well-known theory of interpersonal communication, within the context of Pakistan. Previous research has been more concerned with the extension of AUM rather empirically testing its major components; plus, previous studies were conducted primarily in Western cultural contexts. This study proposes a direct effect of anxiety, uncertainty, and mindfulness on intercultural communication effectiveness (ICE). In addition, interaction (moderating) effects are proposed for mindfulness on the relationships between anxiety, uncertainty, and ICE. This study incorporates a quantitative research design to address the relationships between the variables. Data were collected from a survey technique of students ($N = 549$) of the capital city of Pakistan through convenient sampling. Findings reveal that anxiety and uncertainty have a negative influence on ICE. However, mindfulness has a positive impact on ICE. Furthermore, mindfulness significantly moderated the relationship between anxiety, uncertainty, and ICE. Even though this study considered a new cultural context (Pakistan), still the findings were in accordance with the predictions of AUM. This study empirically validates the theoretical framework and axioms of AUM within the context of Pakistan. This study is useful for the policy makers of Pakistan to develop new policies regarding internationals. Furthermore, they can train their nationals how to manage anxiety and uncertainty and to be mindful during intercultural interactions to avoid problems and confusions among people.

Keywords Anxiety · Uncertainty · Mindfulness · Intercultural communication effectiveness · Pakistan

Introduction

Over the years, researchers from various disciplines have been considering the theoretical assumptions of an eminent theory of interpersonal communication, that is, anxiety uncertainty management (AUM) in their studies (Gudykunst, 1993, 1995, 1998, 2005). AUM is an expansion of uncertainty reduction theory (URT), though the communication process in both theories is not identical. URT stresses the reduction of uncertainty during the communication process and the development of intercultural relationships (Berger & Calabrese, 1975), whereas AUM explains that the management of anxiety and uncertainty are the potential factors for an individual to achieve effective communication. Interactants from intra/intercultural backgrounds are considered potential strangers in AUM (Gudykunst, 1993, 2005). In a simpler manner, when strangers are able to manage their levels of anxiety and uncertainty and they are mindful regarding arriving information then they can effectively communicate with culturally different others.

AUM is based on the efforts of Gudykunst in the field of intercultural communication in terms of developing, testing, and refining the theory (Gudykunst, 1993, 1995, 1998, 2005), and impacting researchers across the world (Logan, Steel, & Hunt, 2016; Ni & Wang, 2011; Presbitero & Attar, 2018). Like other theories, AUM has also faced criticism by the researchers regarding its core constructs and context (Yoshitake, 2002). This criticism was answered and clarified appropriately by Gudykunst in his research paper where he reexplained the focus and process involved in AUM (Gudykunst, 2003).

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Recent research has been more inclined towards the expansion of AUM (e.g., Nadeem, Mohammed, & Dalib, 2020a; Neuliep, 2012; Presbitero & Attar, 2018) rather than testing its core constructs empirically. It is also the case that the theoretical insights of AUM have been effectively incorporated by the researchers of multiple areas such as, public relations (Ni & Wang, 2011), intercultural communication (Neuliep, 2012), health services (Logan et al., 2016) and intercultural communication competence (Nadeem et al., 2020a). Furthermore, previous studies were conducted heavily in Western cultural contexts (Gudykunst, 2005; Neuliep, 2012; Ni & Wang, 2011) and a very few from other cultural contexts such as, China (Cao & Meng, 2020) and Malaysia (Nadeem et al., 2020a) regarding the validation of predictions lead by AUM. However, previous research has overlooked other understudied cultural contexts like Pakistan. In addition, it is very hard to find the testing of core constructs (such as, anxiety, uncertainty, mindfulness, and effective communication) of AUM for the validation of basic predictions of AUM.

The concept of mindfulness is key to the design of the study. Literature indicates that the concept of mindfulness is originated from the ancient Buddhist philosophy (Huang, 2020; Huang, Fay, & White, 2017). Mindfulness is a transcultural concept developed and transformed across time and space, cultures, and disciplines (Huang et al., 2017). The conceptualization of mindfulness remains incomplete without acknowledging its origin from Buddhism and understanding its development in the West: both sources of knowledge are so much crucial (Huang, 2020; Huang et al., 2017). Mindfulness has gained much attention from the academic researchers (Charoensukmongkol, 2016), and recent studies are evident that mindfulness has the potential to influence the behaviours (performance). For instance, Zeilhofer (2020) found that mindfulness meditation enabled students to increase their awareness and academic achievement. Further, Charoensukmongkol (2016) witnessed that trait and state mindfulness helped Thai students to reduce English language anxiety and subsequently increased performance. Charoensukmongkol and Suthatorn (2018) witnessed a positive correlation between trait mindfulness and resilience in a sample of salespeople. Lastly, Charoensukmongkol (2020) found a significant moderating effect of trait mindfulness on the positive association between cultural intelligence and adaptive selling behaviours of salespersons. Based on above mentioned studies, it is noted that mindfulness has tendency to shape the behaviours of the students as well as salespeople. Therefore, it can be argued that the current research will broaden the knowledge provided in discussed studies, concerning the role of mindfulness in intercultural communication.

Accordingly, this study addresses these gaps in the literature. First, the current study intends to empirically address the influence of basic causes (anxiety and uncertainty) and moderation process of mindfulness on intercultural communication effectiveness (ICE) of individuals as identified by AUM theory (Gudykunst, 2003, 2005). Since previous studies were focused on the extension of AUM rather than solely addressing the basic causes of ICE. Second, this research incorporates a different cultural context, explicitly, Pakistan to further test key variables of AUM. AUM is a Western based theory and most of the studies associated to AUM were conducted in Western cultural contexts and very minimal studies were done in other cultural contexts (Cao & Meng, 2020; Nadeem et al., 2020a). Therefore, the cultural context of Pakistan is a new place as compared to the prior investigations to conduct a study. The rationale behind this study is to further explain the systematic influence (as described by AUM theory) of anxiety, uncertainty, and mindfulness on ICE (Gudykunst, 1993, 1995, 1998, 2003, 2005) of the students in Pakistan.

Literature Review

Anxiety Uncertainty Management Theory

AUM is also considered an extension of URT. The theoretical assumptions of URT have been considered in AUM when the theory was not formally termed as AUM (Gudykunst, 1985, 1988). The focus of AUM and URT is similar; to address the influence of anxiety and uncertainty on effective communication. However, the process of communication is different in both theories. According to URT, the aim of communicators is to reduce the uncertainty (Berger & Calabrese, 1975). Furthermore, the axioms of URT indicate individuals adopt various communicative strategies to reduce uncertainty and URT is more inclined towards the development of intercultural relationships.

On the other hand, AUM, relocates the focus from *reduction* of anxiety and uncertainty to the *management* of anxiety and uncertainty (Gudykunst, 1993, 2005). For sure, the primary goal of the interactants is the *reduction* of uncertainty. Once they are able to reduce the levels of uncertainty, then they proceed to *manage* the anxiety and uncertainty during inter/intracultural interactions. AUM sets out that individuals have higher and lower levels of anxiety and uncertainty (Gudykunst, 1995, 1998). Individuals with higher levels of anxiety or uncertainty still think that they can predict the beliefs, attitudes, and behaviours of others. On the contrary, individuals on the lower levels of anxiety or uncertainty, become overconfident or unmotivated in predicting the behaviours concerning interaction. The effectiveness of communication is compromised, when the people are on the lower or higher levels of anxiety and uncertainty (Gudykunst, 1995, 2005). The effective communication demands that anxiety

and uncertainty should be in between higher and lower levels that is managed.

Stranger is a key attention of AUM. Gudykunst explains a stranger as someone who is apparently near and different in terms of mindset, at the same time. In addition, human beings are reluctant to disclose their group memberships with others. Therefore, everyone is considered as a potential stranger during initial interaction with others. According to AUM, the process of communication remains the same among individuals from same or different cultures who are strangers. These similar patterns of communication are refereed as *communicating with strangers* by Gudykunst (1993, 2005). Furthermore, the interaction with strangers is packed with anxiety and uncertainty.

The central idea of AUM is to explain the interrelationships between anxiety, uncertainty, and mindfulness and their impact on effective intercultural communication. AUM does not specifically focus on the management of anxiety and uncertainty, but rather considers the concepts of mindfulness and effective communication into its key concepts. Mindfulness refers to the proper consideration given to prevailing information by the individual (Neuliep, 2012). A person who is mindful is always open to new information as compared to mindless communicator. Gudykunst (2005) highlighted that individuals must acknowledge the strangers can consider various approaches to understand or explain interaction to be mindful. At times, when individuals are mindless, they think that their information is interpreted in a same way as it is delivered. Therefore, mindfulness means to create shared meanings with strangers. Effective communication refers to state in which the receiver is able to interpret the meaning of message similarly as intended by the sender (Neuliep, 2012). Maximum understanding is developed through effective communication. Conversely, Gudykunst (1993, 2005) pointed that communication is ineffective if communicators are not mindful.

The emphasis of AUM is effective communication; that is, to the extent that strangers can reduce and then manage anxiety and uncertainty, and be mindful, effective intra/intercultural communication can be achieved. The management of anxiety and uncertainty are labelled as *basic causes* influencing effective communication in AUM theory (Gudykunst, 2005). It is also highlighted that there are number of other factors (such as, self-concept, reaction to strangers, and respect for strangers etc.) that can influence the management of anxiety and uncertainty. These factors are labelled as *superficial causes* and these causes have potential to impact anxiety and uncertainty management which further leads to effective interaction (Gudykunst, 2005). At this stage, the importance of basic causes (anxiety and uncertainty management) besides the mindfulness of a communicator influencing effective communication should not be ignored. Therefore, this current study aims to explore the influence of anxiety and uncertainty management and mindfulness on effective

communication on the context of Pakistan, as explained by AUM. The following sub-sections entail a discussion concerning the variables and their interrelationships of the study.

Intercultural Communication Effectiveness

Culture can be studied through two different views: essentialist and non-essentialist. The essentialist view sees culture as a fixed attitudes and behaviours of the individuals which indicates the important features of a specific nation (large cultures). This view acknowledges the existence of sub-cultures which may have different characteristics under a single national culture but represents considerable national features (Holliday, 2000). On the other side, the non-essentialist view is more flexible in terms of culture, in which society is understood as a combination of human groups: can be specified and considered as small cultures (Holliday, 1999). Furthermore, it helps to understand the social behaviour of any grouping of the people (small cultures) and do not permit existing conceptions of national cultural features (Holliday, 2000). In simpler manner, one can argue that the essentialist view targets on the prominent features of a single national (large) culture and the non-essentialist view focuses on the social behaviours of a specific group representing a small culture.

A study on the notion of culture by Holliday (1999) relates small cultures with the specific social attributes or behaviours of a small group while ignoring the ethnic, national, or international conceptions. In addition, small culture does not refer to something that is relatively smaller in size as of large ethnic, national, or international cultures, but it indicates a perspective by which one can investigate the behaviours of a social groups. Holliday concluded that it is preferred to study small cultures due to its dynamic and flexible nature regarding the behaviours of cohesive social gathering as compared to large cultures. By considering this suggestion, the current study incorporated the non-essentialist view regarding the conception of small culture by Holliday (1999, 2000). For a reason, under a single national culture of Pakistan there is an existence of seven different small cultures (based on their areas) and this study targets to explore the communication patterns of these small cultures. Therefore, in this study, intercultural communication refers to the communication between two or more than two different small cultures.

Previous attempts have taken into consideration a solid, liquid, and Janusian approaches regarding intercultural discourses. However, insufficient attention has been given to the liquid approach in the mainstream discourses of intercultural communication. The existing approaches have not considered the complex nature of individuals and their communication processes (Dervin, 2011). Instead, these approaches are more inclined towards interaction of cultures rather than individuals. Baumann (1996) states that "culture is not a real thing

but an abstract and purely analytical notion. It does not cause behaviour, but summarizes an abstraction from it, and is this neither normative nor predictive" (p. 11). A liquid approach referred interculturality as the stance and communication of the persons who belong to various places and in different times instead of their (national) cultures. Dervin (2011) suggested that the researchers who are interested in critical and liquid approach about intercultural communication, they should not concern about the individual's culture, identity, or intercultural effectiveness rather how individuals develop their culture, identity, or intercultural effectiveness. Therefore, this study incorporated liquid approach to further examine how factors (anxiety, uncertainty, and mindfulness) influencing ICE of the individuals (students).

There are plenty of terms used in the intercultural communication for addressing the same phenomena of ICE with slightly different conceptualizations (Spitzberg & Cupach, 1989) by the researchers. These terms include intercultural effectiveness, intercultural competence, global competence etc. (Nadeem, Mohammed, & Dalib, 2020b). There is a consensus of experts regarding the conceptualization ICE that it is the performance of an individual that has to be appropriate and effective (Nadeem et al., 2020b; Spitzberg & Cupach, 1984). Communication is commonly denoted as the process of exchanging ideas, feelings, messages etc. with others to create a better understanding. This process appears effective when the receiver interprets the messages in relatively similar way as intended by the sender (Gudykunst, 1993, 1995). Effectiveness is well defined by Spitzberg and Cupach (1984) as "the accomplishment of valued goals or rewards relative to costs and alternatives" (p. 380). In other words, when the receiver is able to understand the messages in a comparatively similar way as transmitted by the sender, communication effectiveness is achieved. When the interactants are able to minimalize misunderstanding, communication tends to be more effective (Gudykunst & Nishida, 2001). For this study, ICE refers to the ability of the individuals to communicate appropriately and effectively while interacting with the people of different small cultures.

Anxiety

Anxiety is an affective phenomenon (Gudykunst, 2005). The feelings of individuals concerning interaction with strangers is affected by the anxiety. These feelings involve worrying, uncomfortableness, apprehensiveness, etc. Turner (1988) referred to anxiety as "generalized or unspecified sense of disequilibrium" (p. 61) It is evident that anxiety affects motivation of the individual to initiate or evade interaction (Gudykunst, 1993, 1995). Anxiety is a sort of tension that arises when the strangers predict the outcome of communication with the host members (Stephan & Stephan, 1985).

The negative expectations derive the individual to experience anxiety during the process of communication. Stephan and Stephan (1985) mentioned that individuals hold fears regarding the negative outcomes of communication. They may fear of negative evaluations; by others, of their self-concepts, by the members of their ingroup, and behavioural outcomes. Avoidance is one of the behavioural outcomes of anxiety (Stephan & Stephan, 1985). In order to manage anxiety, people mostly avoid others. If people cannot avoid others while experiencing anxiety, they often step back from the communication process as soon as possible for them. As a result, they cannot effectively communicate with others. On the other hand, strangers have tendency to decrease the anxiety as they get to know others. However, the levels of anxiety increase or decrease at any stage of relationship/interaction, depending upon the situation and how communicators are interpreting it (Gudykunst & Nishida, 2001).

Strangers have higher and lower levels of anxiety. When the strangers hold negative expectations about the host members in a communication process, they tend to face more anxiety. When strangers are on higher levels of anxiety, they infer host's behaviours based on their own cultural perspectives (Gudykunst, 1998). In higher states of anxiety, strangers feel uncomfortable in communicating with hosts. In lower states of anxiety, strangers are conscious about their interactions with others (Gudykunst, 1993) and sometimes they are less motivated to carry interaction. If their anxiety lies in both levels (higher and lower) then the communication effectiveness is compromised. For that reason, AUM suggests that being motivated for intercultural interaction the levels of anxiety are managed in order to attain effective communication.

H1: There is a significant relationship between anxiety and ICE.

Uncertainty

Gudykunst (2005) refers to uncertainty as a cognitive phenomenon. Individual's thinking regarding communication is directly affected by uncertainty. There are two types of uncertainty: predictive and explanatory. Predictive uncertainty includes the abilities of the individual to predict the values, beliefs, attitudes, and behaviours of others (Berger & Calabrese, 1975). On the other side, explanatory uncertainty refers to the uncertainty strangers encounter in explaining feelings, attitudes, and behaviours of others. A little portion of uncertainty does exist in every situation of interaction. Uncertainty varies from time to time and situation to situation of communication.

According to AUM, individuals have higher and lower levels of uncertainty (Gudykunst, 1993). The level of uncertainty is high when the individuals communicate with

strangers as compared to those whom they are familiar (Gudykunst, 1985). Strangers cannot accurately derive the meanings from the messages or predict the behaviours of the host member when they are on a higher level of uncertainty (Gudykunst, 1998). When people are on the lower level of uncertainty, they will become overconfident and every now and then bored while communicating with strangers. They think that they can easily predict the behaviours of others and holding maximum level of confidence. The maximum levels of predictability are directly linked with their boredom and overconfidence, which results emergence of misinterpretations because of their overconfidence. In both situations, either on higher or lower levels of uncertainty, people tend to face problems regarding effective communication (Gudykunst, 1993). Therefore, it is suggested to manage levels of uncertainty then one can have an adequate confidence to predict and interpret the behaviours of others.

H2: There is a significant relationship between uncertainty and ICE.

Mindfulness

Literature of mindfulness is incomplete without highlighting and acknowledging the contribution of Buddhist wisdom into its conceptualization. Around 25 centuries ago, the concept of mindfulness is stemmed in old Oriental Buddhism (Huang, 2020). It is termed as *right* mindfulness instead of *mindfulness* alone (Bodhi, 1999). The Buddhist philosophy offers a set of attitudes and behaviours to guide individuals to deal with *suffering* and to attain comfort. In addition, ignorance of reality and demanding favourable conditions are denoted as *craving* which is a foundation of suffering. The *good* (such as, wisdom, love, and empathy) and *bad* (e.g., hatred, greed, and doubt) roots as an ethical lens are considered as to look into the root cause of all suffering in Buddhism (Huang, 2020). Further, teaches the individuals to prevent themselves from negative traits (bad roots) and to adopt positive traits (good roots) in order to defeat suffering (Stanley, Purser, & Singh, 2018). Buddhism also highlights the practice of eight interconnected *right paths* which indicate three key features: ethical conduct, mental discipline, and wisdom to effectively handle suffering and *right mindfulness* is one of these paths (Bodhi, 1999). Therefore, the understanding and practice of mindfulness could not be detached with Buddhist wisdom.

Over 200 years after the spread of Indian Buddhism, the religious conceptions of mindfulness started penetrating in Asia. Buddhism was officially established in China somewhere in the first century and became popular as well as followed by the masses. After China, this wave has gained the momentum and started making its ways to enter in other Eastern countries (Huang et al., 2017). By the twentieth century, the notion of mindfulness was gradually blurred due to some socio-economic concerns in China. In the late 1980s and early 1990s, mindfulness was first recognized and addressed by the intercultural (Gudykunst, 1993), educational (Langer, 1989), and psychotherapist (Kabat-Zinn, 1982) researchers of the West. Mindfulness is having strong ties with intercultural effectiveness (Gudykunst, 1993). In psychotherapy, Kabat-Zinn is known as the father of mindfulness in West, considered mindfulness in order to minimize the levels of depression, stress, and anxiety, and to attain positive states or desirable results (Huang et al., 2017). In addition, the Buddhist origin of mindfulness was acknowledged but it was claimed that it has nothing to do with Buddhism, for a reason, to make it appropriate for the context of West. In a similar manner, Langer clearly refused and throwaway the association of mindfulness with Buddhist philosophy and professed that its evolution is purely Western scientific (Huang, 2020). Majority of the information sources of West tend to underestimate Asian origins of mindfulness (Huang et al., 2017). It indicates that mindfulness has been detached from its origin and placed into Western perspective. Therefore, it can be concluded that a good interculturalist should respect and accept the coexistence both perspectives: Buddhist and Western through the processes of translation through time and space, across languages and cultures, and within domains and disciplines ways of thinking in conceptualizing mindfulness (Huang, 2020; Huang et al., 2017).

The latest discussions on mindfulness include a variety of studies that helps to understand the behaviours of the individuals. Charoensukmongkol (2014) conducted an interesting study regarding the advantages of mindfulness mediation on the individuals of Thailand. The findings demonstrated a positive correlation of mindfulness with emotional intelligence and general self-efficacy, and negative correlation with general perceived stress. Several studies on the trait mindfulness of the salespeople have come up with worthy findings. Such as, Charoensukmongkol and Suthatorn (2018) found that trait mindfulness was having a positive relationship with resilience. Another study (Charoensukmongkol, 2020) demonstrated the positive relationship between cultural intelligence and adaptive selling behaviour was significantly moderated by trait mindfulness. Therefore, it is confirmed that mindfulness meditation and trait mindfulness are having positive impacts on the behaviours of the individuals.

In terms of foreign language learning, a remarkable study conducted by Charoensukmongkol (2016) on the Thai students regarding English as a second language found that when the students are on the higher levels of state and trait mindfulness then they exhibit lower levels of anxiety during communication. Furthermore, the state mindfulness is having a strong influence on their second language anxiety which further indicates their better performance. A noteworthy research by Zeilhofer (2020)

considered mindfulness practices through meditation in the context of foreign language considering a quasi-experimental research design. The findings revealed that mindfulness practices increased the level of awareness regarding language learning of the students. In addition, students felt a pleasing experience through meditation and their academic performance was significantly increased. In general, the results showed that the students in treatment group indicated a significant effect of increased awareness and academic achievement as compared to control group. The discussed studies confirmed that mindfulness is having a significant influence on the performance (behaviours) of the students. Therefore, it can be assumed that mindfulness will have a strong effect on the communication patterns (behaviours) of the individuals, as it is already explained and validated by the AUM theory.

As indicated by AUM, when the strangers are able to manage their levels of anxiety and uncertainty, they are required to be mindful to have an effective intercultural interaction (Gudykunst, 1998). Langer (1989) mentions various features of mindfulness: openness of the individual towards the prevailing information, creation of new categories, and awareness regarding multiple perspectives. Strangers openness regarding upcoming information includes their focus on the process of communication rather than the product of communication process. In creation of new categories, strangers consider various categories such as, sex, ethnicity, culture etc. to predict the behaviours of others (Langer, 1989). Strangers must know that the interactant can use more than one approach to explain or understand the communication, it will lead them to be mindful (Langer, 1989). When the strangers think that the others are also using the same perspective as of them, it creates further complexities and problem in a communication process (Gudykunst, 1998).

A study by Gudykunst and Nishida (2001) highlighted the importance of mindfulness during the process of effective communication as the management of anxiety and uncertainty also demands the stranger should be mindful (intentionally present) of what is going on during an interaction in order to attain effective communication. During inter/intracultural interactions, it is evident that mindfulness of the strangers helps them to manage their levels of anxiety and uncertainty, which results intercultural adjustment or effective communication (Gudykunst, 2005). Another study by Neuliep (2012) pointed out that mindfulness of a stranger has a positive influence on effective communication. Based on these studies, it is evident that mindfulness has a relationship with effective communication.

> **H3:** There is a significant relationship between mindfulness and ICE.

Moderating Effect of Mindfulness

Mindfulness is well defined by Gärtner (2013) as "a state of consciousness when people focus attention on what is happening here and now while adjusting the focus and content of awareness to accurately reflect on reality" (p. 55). In terms of intercultural communication, mindfulness refers to the individual's conscious attention, openness, and the development of new categories to the arriving information (Neuliep, 2012). A mindful person tends to focus more on the creation of shared meanings with culturally different others. The moderating role of mindfulness is well supported in the literature, generally on the relationship between different variables in diverse disciplines. For instance, Charoensukmongkol (2020) found that mindfulness moderates between cultural intelligence and adaptive selling behaviour of the salespeople. Further, Fisher, Kerr, and Cunningham (2019) showed that the association among workload and both mental and physical symptoms of strain moderated by mindfulness of the police officers. Lastly, Zhong, Goh, Li, Bao, and Xu (2020) demonstrated that mindfulness moderates the relationship between perceived stress and psychological symptoms of the patients. These discussed researchers have contributed well in terms of determining mindfulness as a moderating variable.

According to the theoretical framework of AUM, mindfulness is understood as the moderating variable (Gudykunst, 1993, 2005). AUM further explains that anxiety and uncertainty management are the basic causes, which further leads to mindfulness as moderating process to reach an outcome of effective communication or intercultural communication effectiveness or intercultural adjustment (Gudykunst, 1993, 1995, 1998, 2005). Thus, the moderating effect of mindfulness is already established from the literature as well as theoretical framework of AUM. Figure 1 represents the theoretical framework of this study as reflected from AUM. Based on discussed justifications, this study proposes that mindfulness has tendency to moderate the relationship between anxiety and uncertainty in approaching ICE and proposes the following hypotheses.

> **H4:** Mindfulness moderates the relationship between anxiety and ICE.
> **H5:** Mindfulness moderates the relationship between uncertainty and ICE.

Methodology

A quantitative research design was considered as more felicitous for the purpose of this research. Quantitative research is

Fig. 1 AUM Theoretical Model
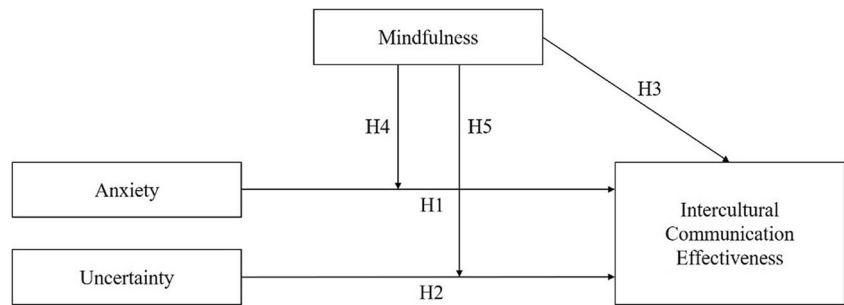
more suitable due to its systematic and formal processes. Besides, it enabled the researcher to check the predicted relationships of variables for this study. For descriptive research and hypothesis testing, the survey research is frequently considered. Therefore, the survey research design was considered as more appropriate to answer or achieve the intended research questions and objectives. Furthermore, this study adopted the cross-sectional research whereby data were collected, analysed, and summarized statistically while conclusions were also drawn at a single point.

In terms of cultural context, Islamabad is the capital city of Pakistan and often considered as the hub of higher education because it hosts some of the most eminent universities in the country. Due to this fact, most of students from different cultural backgrounds in terms of areas stay in the city for their higher education and they have frequent interactions with the individuals from other small cultures. For these reasons, students of the capital city of Pakistan (Islamabad) from various universities were recruited to participate in this study because they belong to seven culturally different areas of Pakistan. These students were considered as more appropriate compared to other students who live in remote areas (with less cultural diversity) to fulfil the requirements of the study.

According to the statistics of higher education commission (HEC) of Pakistan, there were around 550,892 students studying in the prominent public or private universities in Islamabad. The students from multiple universities of Islamabad were identified as the population of this study. Due to the huge number of students in Islamabad, it was considered an impossible task to collect data from the entire population. Therefore, the next task was to incorporate an appropriate sampling strategy for the maximum representation of samples from the population. Due to the time and financial constraints this study did not carry a random sampling. For a reason, this study considered convenient sampling, where all students were considered anyone met at the respective universities. This technique is appropriate and effective for a quantitative study as it ensures maximum participation of individuals in a limited time frame and convenient for the researchers.

A suitable sample size was determined to further approach the students. Based on the population of more than 500,000

the appropriate sample size according to Krejcie and Morgan (1970) was about 384 with the confidence level of 95% and an error margin of 5%. Thus, to meet the minimum threshold of sample representativeness, around eight hundred survey questionnaires were distributed to the students following a drop and collect strategy. The response rate of the current study was around 70% according to the 549 returned questionnaires from the participants while the total distributed frequency of questionnaires was around 800. To sum up, it can be concluded as the samples of the current study were representative of population. The demographic information of the participants is discussed in the following section.

Participants

A total of 549 students from multiple universities of Islamabad, Pakistan participated in this study. The participants living in Islamabad were from seven culturally different areas: 32.2% from Khyber Pakhtunkhwa (KPK), 22% from Islamabad Capital Territory (ICT), 19.7% from Punjab, 10.4% from Sindh, 8.6% from Azad Jammu and Kashmir (AJK), 5.1% from Baluchistan, and 2% from Gilgit-Baltistan. Most of the students were from KPK. The participants consisted of 357 males and 192 females. Table 1 presents the details of demographic information of the participants of this study. The participants fell into four categories of age: 18–25 ($n = 218$), 26–30 ($n = 156$), 31–36 ($n = 93$), and 36–40 ($n = 82$). The participants represented undergraduate (38.8%) and postgraduate programs (61.2%). The aim of this study was to ensure the maximum cultural representation in terms of areas. Therefore, the demographic details were evident that all (seven) culturally different areas represented in this study by the students of Islamabad. Previous line of investigations is evident that university students, even from a single university are enough to justify the cultural context. However, in this study, data were collected from the students of more than fifteen different universities. Therefore, it can be assumed that the students from various universities of Islamabad are enough to justify the cultural context of Pakistan.

Table 1 Participants' demographic information

	Frequency	Percentage
Area		
Punjab	108	19.7
Sindh	57	10.4
Khyber Pakhtunkhwa (KPK)	177	32.2
Baluchistan	28	5.1
Azad Jammu and Kashmir (AJK)	47	8.6
Gilgit-Baltistan	11	2.0
Islamabad Capital Territory (ICT)	121	22.0
Gender		
Male	357	65.0
Female	192	35.0
Age		
18–25	218	39.7
26–30	156	28.4
31–35	93	16.9
36–40	82	14.9
Education		
Undergraduate	213	38.8
Postgraduate	336	61.2

Measurement

This study used a survey technique for data collection. The survey form was in English. Demographic information of participants was acquired through area, gender, age, and education. The instruments of the variables were adopted and adapted from previous studies of intercultural communication. The responses of participants against every item were measured on a Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree). The details regarding instrumentation of variables are stated in the upcoming sub-sections. Pre-testing and a pilot study were conducted before the final data collection.

Anxiety

Anxiety was measured by using 11-items adopted from Gudykunst and Nishida (2001). It consisted of items, such as, "Whenever I'm communicating with people from different cultures, I feel frustrated … I feel insecure … I feel relaxed (reversed coded)". The Cronbach's alpha reliability coefficients of this scale in United States and Japan were 0.88 and 0.84, respectively (Gudykunst & Nishida, 2001).

Uncertainty

Uncertainty was measured by adopting the short form of Intolerance of Uncertainty Scale (IUS) with 12-items

developed by Carleton, Norton, and Asmundson (2007). Examples include "Unforeseen events upset me greatly" and "I should be able to organize everything in advance". This instrument had an excellent reliability coefficient of 0.91 (Carleton et al., 2007).

Mindfulness

Mindfulness was measured by adopting the Langer Mindfulness Scale (LMS) of 14-items developed by Pirson, Langer, Bodner, and Zilcha (2012). Examples of items include, "I make many novel contributions" and "I find it easy to create new and effective ideas". A high internal consistency value ($\alpha = 0.90$) was represented by this scale in the recent study regarding scale development and validation (Pirson et al., 2012).

Intercultural Communication Effectiveness

ICE was measured by adapting 5-items from Gudykunst and Nishida (2001). Examples include, "I communicate effectively when I engage in intercultural communication" and "I communicate appropriately when I engage in intercultural communication". This instrument depicted a reliability coefficient of 0.82 in United States and 0.71 in Japan, individually (Gudykunst & Nishida, 2001).

Results

Descriptive Statistics

For this study, the descriptive statistics of all variables were measured using the descriptive analysis in statistical package for social sciences (SPSS). The statistical values of the independent, moderating, and dependent variables were calculated in the form of minimum and maximum responses, mean, and standard deviation (SD). The results indicate that the minimum and maximum scores of all variables of the study lied between 1 to 5. However, the mean and SD scores of the anxiety (M = 3.35 and SD = 0.921), uncertainty (M = 3.47 and SD = 1.003), mindfulness (M = 3.52 and SD = 0.683), and ICE (M = 3.20 and SD = 1.155) were different from each other.

Reliability and Validity

In the present study, the instruments were confirmed of its reliability and validity. Reliability of the instruments were assessed through the determination of Cronbach's alpha values. The alpha values of all variables of the study were good which indicates that all the instruments were reliable and could be considered for further analysis. The alpha values

were: 0.92 for anxiety, 0.85 for uncertainty, 0.87 for mindfulness, and 0.93 for ICE. On the other side, a principal component analysis was performed in order to address the validity of the variables of current study. All 42 items loaded, specifically on their respective variables. However, the loading of few items (UY2, UY6, UY8, UY10) were too low and did not meet the threshold value. For that reason, these items were deleted from the variable. The factor loadings of all variables are presented in Table 2.

Hypothesis Testing

Multiple regression analysis was used to address the direct effects of anxiety, uncertainty, and mindfulness on ICE. Results revealed a significant and negative relationship between anxiety and ICE ($\beta = -.212$, t = −3.649, $p < .001$) and uncertainty and ICE ($\beta = -.254$, t = −4.466, p < .001). In addition, a significant and positive relationship exists between mindfulness and ICE ($\beta = .264$, t = 3.121, $p < .01$). Table 3 contains the details of every proposed paths. The results supported all three proposed hypotheses (H1, H2, and H3) regarding direct effects.

In terms of moderating effects of mindfulness, the hierarchical regression technique or hierarchical linear modelling (HLM) was employed in this study (Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004). The HLM approach was carried out in three different steps. In the first step, the direct effect of an exogenous variable on the endogenous variable was calculated. In the second step, the moderating variable was introduced in the model to calculate the direct effects of both variables. In the third step, the interaction term was incorporated in the model to examine the significance of the interaction term. When the interaction term is statistically significant, then the moderating hypothesis is accepted (Baron & Kenny, 1986). Table 4 indicates the findings of the hierarchical multiple regression about the interaction effect of mindfulness on the relationship between anxiety and ICE. It is also witnessed that when the interaction term (Anxiety × Mindfulness) was introduced in the model, it reveals a significant and positive effect ($\beta = .130$, t = 2.984, $p < .05$) of mindfulness on the relationship between anxiety and ICE. Therefore, H4 was supported. On the other hand, when the hierarchical multiple regression was performed regarding the interaction effect of mindfulness (Uncertainty × Mindfulness) on the relationship between uncertainty and ICE, it depicts a significant and positive effect ($\beta = .136$, t = 2.950, p < .05) of mindfulness on the relationship between uncertainty and ICE (see Table 4). Therefore, H5 was supported by the findings of this study. To sum up, two hypotheses were proposed about the moderating effect of mindfulness, both hypotheses (H4 and H5) were supported and revealed that mindfulness significantly moderated the relationship of anxiety and uncertainty on ICE.

Discussion

The current study aimed to further explain the interrelationships between the principal components of AUM on the context of Pakistan. Previous studies were concerned about expanding AUM in different areas. Furthermore, the cultural context of those studies was primarily Western. However, an insufficient attention was given to the other cultural context (like, Pakistan) as well as testing the key variables of AUM by the researchers. Therefore, this current study targeted to address the impact of anxiety, uncertainty, and mindfulness on ICE as the key contributors of AUM on a new cultural context of Pakistan. The primary purpose of this study was to validate the theoretical assumptions and framework predicted by AUM on the context of Pakistan.

Five different hypotheses were proposed by considering the axioms of AUM regarding the direct and interaction (moderating) effects. The findings of the study supported all five proposed hypotheses (H1, H2, H3, H4, and H5). Findings revealed that anxiety and uncertainty are having negative significant influence of ICE of the stranger. In addition, mindfulness is having a positive significant impact on ICE. Lastly, mindfulness appeared as a significant moderator among the relationships between anxiety, uncertainty, and ICE. Figure 2 represents the path model of AUM along with significance values. The findings have also confirmed and validated the predictions described by AUM regarding the communication patterns of strangers.

The findings of this current study demonstrate that the issues of anxiety and uncertainty during communication are not culturally biased. Anyone other than students can also experience these problems when they are engaging in intra/intercultural communication. In other words, during an initial interaction the strangers are anxious and uncertain about the outcome of their interaction with strangers. The same thing is witnessed among the students of Pakistan when they interact with culturally different others. The levels of anxiety and uncertainty may differentiate from person to person and culture to culture. But it cannot be argued that these issues did not exist during the communication process. Indeed, strangers can overcome these problems with the passage of time and frequent interaction with culturally different individuals. This case could not be considered as the case of any specific cultural context (West or East), in fact, this scenario can be experienced in the whole world, where the strangers interact.

By closely looking into the context of Pakistan, it is witnessed that anxiety and uncertainty of Pakistani students are having an inverse relationship with ICE. It means that when they are on higher levels of anxiety and uncertainty then their effective interaction is compromised and when they can manage their levels of anxiety and uncertainty then they can exhibit ICE. These results support the predictions of AUM and are consistent with the explanations of the theory. On

Table 2 Factor loadings of all variables

Item	Statement	Loading
Anxiety		
Whenever I am communicating with people from different cultures,		
AY1	I feel calm	.806
AY2	I feel frustrated	.775
AY3	I feel in control	.753
AY4	I feel insecure	.716
AY5	I feel composed	.802
AY6	I feel anxious	.767
AY7	I feel relaxed	.784
AY8	I feel irritated	.780
AY9	I feel worried	.736
AY10	I feel impatient	.722
AY11	I feel awkward	.717
Uncertainty		
UY1	Unforeseen events upset me greatly.	.829
UY3	One should always look ahead to avoid surprises.	.882
UY4	A small, unforeseen event can spoil everything, even with the best of planning.	.849
UY5	I always want to know what the future has in store for me.	.906
UY7	I should be able to organize everything in advance.	.768
UY9	When it is time to act, uncertainty paralyses me.	.789
UY11	The smallest doubt can stop me from acting.	.860
UY12	I must get away from all uncertain situations.	.861
Mindfulness		
MD1	I like to investigate things.	.619
MD2	I generate few novel ideas.	.685
MD3	I make many novel contributions (e.g., conversations, discussions, to society, public welfare etc.).	.754
MD4	I seldom notice what other people are up to.	.610
MD5	I avoid thought provoking conversations.	.647
MD6	I am very creative.	.780
MD7	I am very curious.	.682
MD8	I try to think of new ways of doing things.	.634
MD9	I am rarely aware of changes.	.764
MD10	I like to be challenged intellectually.	.752
MD11	I find it easy to create new and effective ideas.	.764
MD12	I am rarely alert to new developments.	.744
MD13	I like to figure out how things work.	.744
MD14	I am not an original thinker.	.777
Intercultural Communication Effectiveness		
CE1	I communicate effectively when I engage in intercultural communication.	.895
CE2	My intercultural communication has always been successful.	.892
CE3	I feel competent when I engage in intercultural communication.	.898
CE4	My intercultural communication has always been a failure.	.876
CE5	I communicate appropriately when I engage in intercultural communication.	.887

Table 3 Direct effects

Path			β	S.E.	t	ρ	Status
Anxiety	➔	ICE	−.212	.058	−3.649	***	Significant
Uncertainty	➔	ICE	−.254	.057	−4.466	***	Significant
Mindfulness	➔	ICE	.264	.085	3.121	.002	Significant

ICE: Intercultural Communication Effectiveness; ***$\rho < .001$

the other hand, AUM does suggest that strangers must be mindful to attain ICE. The findings of this study revealed that students were mindful to achieve ICE. The results of positive association between mindfulness and ICE are consistent with the previous studies that have revealed that mindfulness helps the individuals to represent positive attitudes and behaviours (Charoensukmongkol, 2014; Zeilhofer, 2020). Particularly, this finding is in line with earlier investigation that has found that the better performance of a person is predicted by the mindfulness (Charoensukmongkol, 2016). It indicates that the students of Pakistan were not rigid or conservative regarding the arriving information from the strangers. Rather they were open and welcomed the upcoming information to form new categories. The discussed direct effects have validated the axioms of AUM from the context of Pakistan.

In terms of moderation process, AUM stipulates that after managing the levels of anxiety and uncertainty, one has to be mindful for the attainment of ICE. The findings of this current study reveal that anxiety and uncertainty of students impact negatively on their ICE. In addition, it also sheds light to the phenomenon that when Pakistani students are mindful then they can manage their levels of anxiety and uncertainty, which gives a positive impact on their communication (ICE). Therefore, we argue that mindfulness is a vital force behind every intercultural interaction. The findings of the present

research supported the earlier findings of various studies (Charoensukmongkol, 2020; Fisher et al., 2019; Zhong et al., 2020), who found that mindfulness has the capacity to moderate the association among various variables in diverse streams. Specifically, the findings of this path are consistent with a study by (Charoensukmongkol, 2016), who found that mindfulness reduces the anxiety of the students which results their better performance. In addition, the results this research also validates the findings of a recent research (Charoensukmongkol, 2020), who witnessed that mindfulness moderates the relationship between cultural intelligence and adaptive selling behaviours of salespeople. In the current study, mindfulness helps the individuals to manage their levels of anxiety and uncertainty to reach towards effective communication. To sum up, due to the existence of mindfulness, the communication patterns of Pakistani students with strangers were effective.

The current study has contributed theoretically by enriching the understanding of the vital constructs of AUM on the context of Pakistan. Even though the cultural context of this study was not similar to the existing and previous line of research, still, it provides important results. In the beginning, it was assumed that the findings may differ from the central assumptions of AUM. However, the findings remain similar to what was claimed by the theory. The findings provide evidence that communication process is filled with anxiety and uncertainty in the strangers regarding the outcome. This study further validated the basic assumptions and theoretical framework of AUM within the cultural context of Pakistan. In fact, it can be argued that the interaction between the strangers from different cultural backgrounds is having anxiety and uncertainty in it. Furthermore, this existence will remain same in every culture and person, but its levels may fluctuate in different parts of the world.

Practically, this study demonstrates that students of Pakistan are effective in their intercultural interactions and they have potential to manage anxiety and uncertainty by keeping themselves mindful. This study will be fruitful for the policy makers of Pakistan in terms of hosting more Chinese individuals associated to China Pakistan Economic Corridor (CPEC). It is predicted that Pakistan will host thousands of Chinese in the country regarding to the CPEC project in the upcoming years. The Pakistani nationals as well as the students will likely to interact with the huge population of China in their country. Therefore, importance of ICE of their nationals should not be neglected in this regard. Policy makers should make further policies

Table 4 Moderating effects of mindfulness

Variable	ICE (β)		
	Step 1	Step 2	Step 3
Direct Effect			
Anxiety	−.238***	−.269***	−.233***
Mindfulness		.102 (n.s)	.229**
Interaction Effect			
Anxiety × Mindfulness			.130**
Direct Effect			
Uncertainty	−.235***	−.299***	−.248***
Mindfulness		.182**	.314***
Interaction Effect			
Uncertainty × Mindfulness			.136**

ICE: Intercultural Communication Effectiveness; n.s = not significant; **$\rho < .05$; ***$\rho < .001$

Fig. 2 AUM Path Model
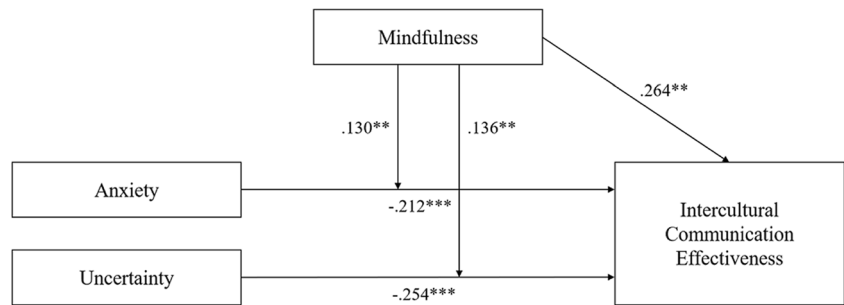
concerning CPEC by considering the findings of this study to further train their nationals regarding ICE based on managing levels of anxiety and uncertainty. If they are able to develop effective communication between Chinese and Pakistani nationals, then the Chinese will likely to adjust in Pakistan, which can help to achieve their economic goals linked with CPEC. Towards this end, the current study offers valuable theoretical and practical contributions.

Conclusion

This study highlights the importance of core components of AUM and validates its assumptions along with theoretical framework from a unique cultural context. Pakistan's cultural context was considered as more appropriate to fulfil the objectives of the study, in this regard. The researchers from diversified areas were targeted to further explore AUM by adding variables in its framework and ignored to test its basic variables for the validation of theory on different cultural settings. Due to this fact, the current study incorporated the potential variables of AUM (anxiety, uncertainty, mindfulness, and ICE) and addressed on the context of Pakistan. The findings revealed that mindfulness positively contributes ICE. In addition, mindfulness helped the students to manage their levels of anxiety and uncertainty to have a positive impact on ICE. On the contrary, anxiety and uncertainty were having a negative impact on ICE. The overall findings of this study were in accordance with the predictions of AUM. Even the shifting of cultural context did not significantly affect the claims of AUM. Therefore, it can be argued that this current study has confirmed and validated the theoretical framework and axioms of AUM from the context of Pakistan.

This study contributes important insights to theory as well as practice. In terms of theory, the findings indicate a relationship between the core variables of AUM from the context of Pakistan concerning the validation of central assumptions of AUM. In terms of practice, Pakistan has a great cultural diversity of seven different small cultures in its different regions and every culture is unique and beautiful in its nature. The findings indicate an extent of intercultural communication when the students (from different small cultures) of Pakistan engage in a

communication process. On the other side, the perception of the other segments of population in Pakistan could have been different from students who are more open and educated. Future research should address the framework of AUM in other cultural contexts to make the theory and its variables to confirm the cultural relevance of this theory. Future research should also adopt this framework and further expand it with the *superficial causes* as described by AUM because this current study could not consider these causes in its theoretical framework. The addition of multiple superficial causes into the current framework will give more insights to AUM.

Declaration

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