



# The Open Psychology Journal

Content list available at: <https://openpsychologyjournal.com>



## RESEARCH ARTICLE

# Psychological Diversity in the Workplace: Personality Types and Gender Differences within Ethnicities

Randa Diab-Bahman<sup>1,\*</sup> 

<sup>1</sup>Kuwait College of Science & Technology, Doha City, Kuwait

### Abstract:

#### Introduction:

In recent years, the process of hiring an employee has become an important part. New and innovative ways of assessing employees are continuously sought after, primarily to ensure the right person for the right job. Exploring under-studied psychological differences which may impact the workplace could shed light on this important topic.

#### Methodology:

In this research, personality test results from 119 participants from Egypt, India, Lebanon and Philippines, men and women working in the Food & Beverage industry in Kuwait were collected. Each participant was given the Myers-Briggs Type Indicator (MBTI) personality type questionnaire which identifies individuals into one of 16 personality types.

#### Results:

Each ethnicity cluster was tested individually for frequencies and correlations of specific personality types within their own groups, as well as an investigation on the possibility of gender correlations. It was found that the proportions of the personality types are the same among genders across both their ethnicity group as well as their personality type.

#### Conclusion:

The findings are significant in that they shed the light on hidden psychological elements which may have an impact on the workplace. They may also aid communication strategies amongst different ethnicities as well as give insight on motivational factors which may lead to more productivity.

**Keywords:** Ethnic Groups, Personality type, Workplace, Gender, Applied Psychology, Psychologists.

### Article History

Received: July 21, 2021

Revised: November 3, 2021

Accepted: December 08, 2021

## 1. INTRODUCTION

In recent years, the process of hiring an employee has become an important part of the overall value creation process [1 - 3]. Without a doubt, new ways of assessing employees are continuously sought after, primarily to ensure the right person for the right job [4, 5]. Online questionnaires are a dime a dozen; however, they help assess a wide range of aspects. Psychologists have long emphasized that determining one's personality traits using these questionnaires can help determine how well they do in a given task [6, 7]. Based on these recommendations, many personality-type questionnaires have been developed, some with little to no credibility [8 - 10]. One

of the most notable works, and the basis of the majority of questionnaires related to human behavior and psychology, is that of the psychologist Geert Hofstede [11]. In his work, he was able to classify cultural groups into clusters of 'types'. Building on his theories and experiments on dimensions of culture, perhaps there emerged a scientific way of answering questions like why do one type of ethnicity do better at a certain job or task than another [12, 13]. Hofstede's work is the inspiration behind this research, where the aim is to investigate possible correlations between ethnicity and personality type. Hofstede's work confirmed that people in different nations astoundingly had similar results when questioned about values [14]. Thus, he succeeded in dissecting the results and clustering them into groups of 'nations' and then placing these nations into one of the four quadrants he developed of 'perceived

\* Address correspondence to this author at the Kuwait College of Science & Technology Doha City, Kuwait; E-mail: [Randadiab5@gmail.com](mailto:Randadiab5@gmail.com)

values'. His empirical findings prove that national differences are evident in the way people think about values [15 - 17].

In the 1960's, Geert Hofstede created a structure designed to enable cross-cultural communications, known as Hofstede's Cultural Dimensions Theory [18, 19]. Essentially, by employing a factor analysis framework, it explores how the culture of a society can impact the values and behaviours of the people within it [20]. Many academics in a variety of disciplines have utilised Hofstede's theory for research purposes, however, it is most extensively employed in cross-cultural psychology, international management, and cross-cultural communications [21 - 24]. In 1991, Michael Harris Bond *et al.* carried out research on students from 23 various nations, employing a survey tool developed with Chinese managers and staff [25]. As a result of this study, Hofstede felt the need to include Confucian dynamism, better known as long term orientation (LTO) as a fifth element.

## 2. MATERIALS AND METHODS

### 2.1. Dimensions of National Cultures

Initially, the theory comprised of five distinct facets for evaluating cultural values. Due to this work by Minkov, Hofstede was convinced to add a sixth and final dimension to the framework, which is indulgence *versus* restraint.

- **Power Distance Index (PDI):** "Power distance is the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally". Some societies display high power distance, and it is recognised that there is a hierarchy which does not need to be rationalised. Others exhibit a low power distance, and in this case, attempt even power distribution [26]. Cultures embracing a lower power distance are usually more democratic in nature.
- **Individualism (IDV) vs. Collectivism:** "The degree to which individuals are integrated into groups". In societies with high degrees of individualism, personal accomplishments and individual rights are emphasised. Individuals are expected to support themselves and their families, and to make individual decisions regarding associations and relationships [27]. Conversely, in societies with high degrees of collectivism, group thinking and group behaviours are prevalent. It has been stressed that "the word collectivism in this sense has no political meaning; it refers to the group, not to the state". The population tends to be comprised of large extended families, which strike a bargain for protection and loyalty.
- **Uncertainty Avoidance Index (UAI):** "a society's tolerance for uncertainty and ambiguity". Essentially, this is a measure of how the members of a society try to manage anxiety by minimising uncertainty. Typically, a high uncertainty avoidance culturally equates to a more emotional population. They implement rules, laws, and regulations, in addition to meticulous planning in an attempt to minimise uncertainty. Conversely, a society with a low

uncertainty avoidance has a culture of acceptance and ease in ambiguous circumstances. Additionally, they tend not to have many rules [28]. Generally, the population is well equipped to cope with change, and is more practical.

- **Masculinity (MAS) vs. Femininity:** In a society which is culturally masculine, emphasis is placed on competitiveness, assertiveness, materialism, ambition, and power. Conversely, a society which has a culture of femininity is more concerned with living standards and relationships [29]. Furthermore, in feminine culture, there is typically a gender balance in relation to values of humility and compassion for their fellow members, whereas in masculine cultures, there is a greater gap between the genders.
- **Long-term Orientation (LTO) vs. Short-term Orientation:** This category analyzes the time orientation of societies and how they perceive it. Long-term oriented societies attach more importance to the future, whereas in short-term oriented societies, values usually include steadiness, respect for tradition, preservation of one's face, reciprocation and fulfilling social obligations.
- **Indulgence vs. Restraint (IVR):** This dimension measures the extent to which members of society tend to control their desires and impulses. While indulgent societies have a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun, restrained societies have a conviction that such gratification needs to be curbed and regulated by strict norms [30].

### 2.2. Cultural Variances

The six-dimension's model, developed by Hofstede, enables international contrasts between different cultures to be examined by rating the country from 1 to 120. This is also referred to as comparative research. The power distance index displays elevated results for Latin, Asian and African countries, as well as Arab nations. At the same time, Anglo and Germanic countries show a low score using this index (Austria – 11, Denmark – 18). Using Hofstede's model, it can be seen that the United States, with a score of 40, sits between Guatemala's high power distance (95) and Israel's very low score (13). The power distance of European countries varies according to geographic location, with high scores in southern and eastern areas, and low scores in northern countries; for instance, Sweden (31), the United Kingdom (35), Poland (68) and Spain (57).

The individualism index highlights a distinct difference between developed, Western countries and less developed, Eastern countries. While North American and European countries can be regarded as largely individualistic, displaying high scores such as 80 for both Hungary and Canada, this cannot be said for Asian, African and Latin American countries. These exhibit clear collectivist beliefs, showing low scores, such as Colombia (13) and Indonesia (14). The degree of contrast that exists can be seen through an examination of two countries at opposing ends of the spectrum, with Guatemala scoring 6 and United States scoring 91. Japan and

Arab countries fall in the middle of this range. Southern and Eastern Europe, not excluding German-speaking countries, Japan and Latin America display the highest levels of uncertainty avoidance. The opposite is true for Anglo, Nordic and culturally Chinese countries. Vast differences can occur regardless of geographic location, which is highlighted through the scores for Germany (65) and Belgium (94), in comparison to Sweden (29) and Denmark (23). Very few countries, however, display an extremely low UAI.

The Nordic countries display low levels of masculinity, *i.e.*, Norway (8) and Sweden (5), while this is much higher in Japan (95) and certain European countries, predominantly those influenced by German culture, such as Hungary, Austria, and Switzerland. Anglo countries score quite highly in this area with the United Kingdom achieving 66. Latin America returns opposing scores from within the region; for instance, Venezuela has a high 73 compared to Chile's low 28. Regarding long-term orientation, the highest scores are returned by East Asia, for example, China (118), Hong Kong (96) and Japan (88). Eastern and Western Europe generally deliver medium scores while Anglo, Muslim, African and Latin American countries largely display the lowest scores, although there is much less information covering this dimension. Similarly, there is very little data available covering the sixth dimension, indulgence. What is known is the highest scores are shown in Latin American, Anglo and Nordic countries, and certain areas of Africa, while East Asia, Eastern Europe and Muslim countries show much lower levels [31].

### 2.3. Associations between Values

In order for successful cross-cultural communication to take place, it is necessary to have a good grasp of the cultural influences, since what is the norm in one country may be considered distasteful in another [32, 33]. This applies to communication at all levels: verbal (the words and language used), non-verbal (body language and gestures), and customs (clothing, gift-giving, dining, *etc.*). The dimensions in Hofstede's model provide recommendations to companies to build procedures that are culturally appropriate, which are expected in turn to increase employee satisfaction and ultimately impact productivity [34, 35]. As well, culture is rather complex and plays an important role in the various aspects of an individual's life. It also impacts an individual's way of understanding and communicating, as well as how they behave both in their professional and personal life. A lack of understanding of these dynamic issues has led to a lot of managerial issues for businesses [36 - 39]. The culture in any country holds the key to success in the workplace and has an effect on the overall bottom line [40 - 42].

### 2.4. Significance of Research

This research is significant in that it sheds light on psychological aspects in the workplace and how ethnicities, which are built upon social norms and values, can be impactful [43 - 45]. Moreover, although there is an abundance of research on the matter of applied psychology in the workplace as mentioned above, yet there is a dearth of studies that investigate possible correlations of ethnicity and workplace behavior [46 - 48]. In their recent research, Diab-Bahman [30]

found a possible correlation between ethnicities and personality types. From this and other studies mentioned above, it is expected that social conditioning and cultural dimensions are the pillars of behavior and, when clustered by ethnicity, commonalities are rather obvious to discover [49, 50]. Precisely from the Middle East, where a large number of workers migrate daily for work purposes, studies that dig into the cultural dimensions will prove to be beneficial for people in understanding and communicating with one another in the workplace [51].

### 2.5. Personality Tests

Several personality surveys are now available either for free or for purchase on the internet [52 - 60]. The one chosen for this paper was the Myers-Briggs Type Indicator (MBTI) due to its user-friendly interface and ease of reading the outcomes. The MBTI is a psychometric test, in the form of a questionnaire, which is typically used to understand the psychological predilections associated with the way individuals view the world and undertake the decision-making process [61 - 63]. Based on Carl Jung's *Psychological Types*, created during World War II by Isabel Myers and Katherine Briggs, this 16-type indicator test makes use of a number of factors [64]. The questionnaire consists of 64 5-degree Likert style forced-answer binary (yes/no) questions [65, 66]. This type of subjective approach enables psychology researchers to examine a variety of psychological characteristics and to group them into different cultural clusters [67 - 69].

In this paper, the findings related to personality types from the Myer-Briggs test are evaluated for correlations within each ethnicity and gender. This may be an important realization for numerous reasons, as this can be a step towards the right direction in determining the right person for the right job. The aim of this study was to test correlations between employees of similar ethnicities and their individual personality types. Further, it aimed at examining the relationship between personality traits within the same ethnic group and gender. Finally, the paper presents a recap of the findings and how further studies could be possible.

### 2.6. Materials and Methodology

The study is quantitative in nature. It involves an exploratory research design and the relationships among the statistical personality tests were used to find the association between the MBTI personality, gender and ethnicity. Analysis was conducted with the help of SPSS to test the hypothesis of the study.

### 2.7. Sample

The study sample comprised 120 employees working in six different companies; as the study was exploratory in nature, the participants were randomly selected, with a total of 20 employees sampled from a group of companies contacted in the F&B world. The number of employees chosen from each company was minimal as the research was meant to simply explore the subject at hand on a macro level. Purposeful sampling was used to choose the companies as they were selected based upon the personal contacts available at the time

of this research. Each of the companies was asked to provide a list of available employees and their nationalities prior to an arranged meeting to engage them in this research. Initially, 120 subjects have been recruited from 6 companies affiliated with the Kuwait’s Food and Beverage industry. One employee withdrew after the results were obtained, bringing down the total to 119 participants. The participants, recruited on voluntary basis, varied in backgrounds, gender, age and education level. Raw data were used to generate descriptive analysis and draw conclusions to the initiatives of the research questions. The test was administered online in English. The study spanned a 2-month period due to timing and scheduling, as the researchers had to be present while the test was being administered in order to document the results. The employees were ensured regarding privacy and confidentiality of the information provided by them.

**2.8. Tools and Administration of Questionnaire**

This exploratory research followed a deductive reasoning approach as hypothesis testing was conducted after the

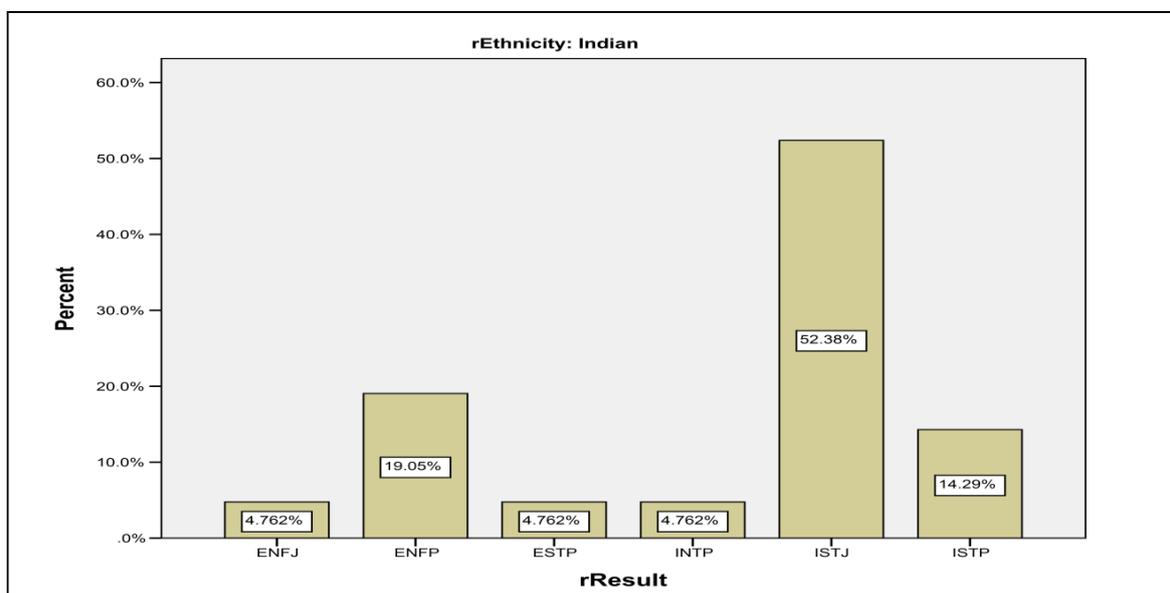
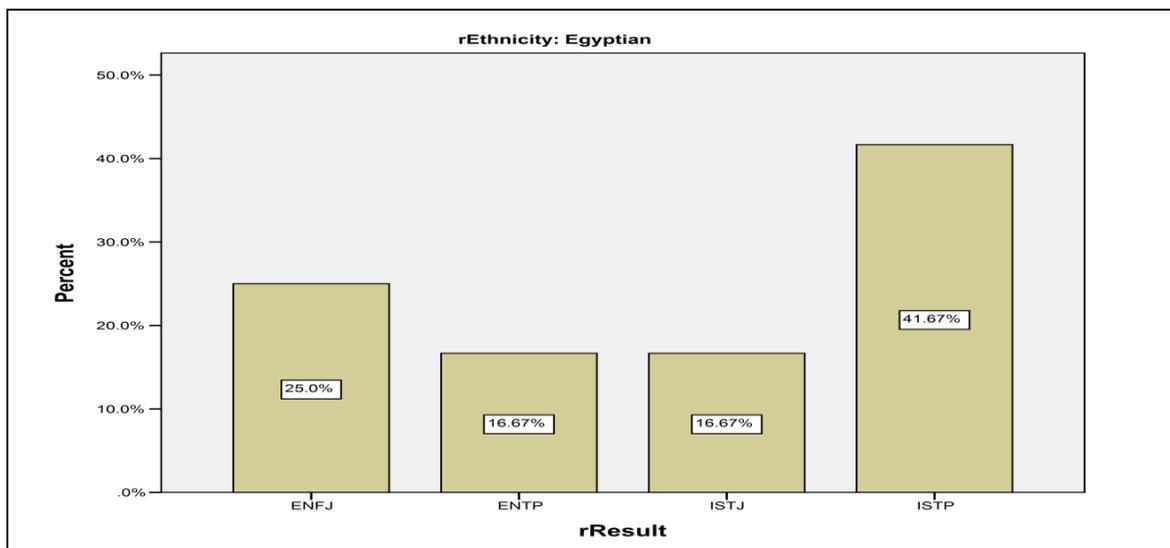
collection of data. Cross-sectional study design was undertaken for carrying out a macro-level scan of the topic of interest. The primary tool for this research was a questionnaire; each participant was given the Myers-Briggs Type Indicator (MBTI) personality type computer-based questionnaire to fill. The four-letter personality score was provided immediately after the questionnaire was completed. The questionnaire consisted of 64 forced-answer 5-degree Linkert style questions, which is accessible to be used for free online [70 - 72]. The reason for choosing the mentioned survey is that it was easy to administer and use by the employees chosen.

**3. RESULTS AND DISCUSSION**

**3.1. Major Findings**

*3.1.1. Personality Types within Ethnic Groups*

The differences are best shown in the descriptive bar charts presented in Fig. (1), which show the personality types observed in each ethnicity.



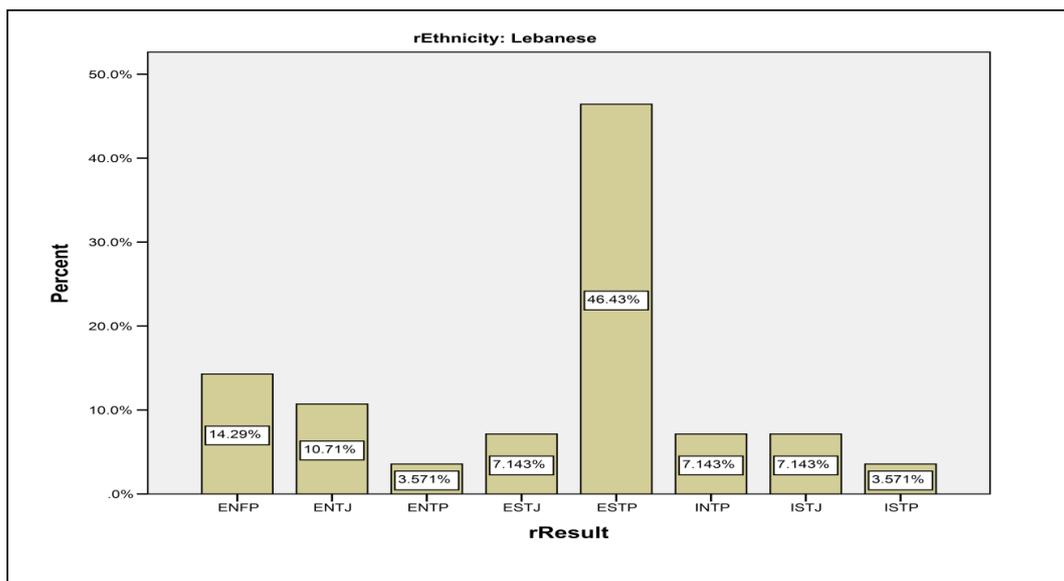


Fig. (1). Personality Type x Ethnicity.

- Egyptians are primarily (42%) Introverted/Sensing/Thinking/Perceiving (ISTP) and secondarily Extraverted/ iNtuitive/Feeling/Judging (ENFJ) accounting for 25%. Other types are ENTP and ISTJ with equal proportions. This ethnicity had the lowest number of personality types (four).
- Indians are represented by six types. The most frequent is the Introverted/Sensing/Thinking/Judging (ISTJ), with an occurrence of 52% (the maximum percentage observed in all ethnicities). The other types appear much lower, the Extraverted/iNtuitive/Feeling/Perceiving (ENFP) with 19%, the Introverted/Sensing/Thinking/Perceiving (ISTP) with 14%, and ENFJ, ESTP and INTP even lower, less than 5% each.
- Similar discrepancies are observed in Lebanese who involve 8 types. Lebanese are most frequently Extraverted/Sensing/Thinking/Perceiving (ESTP) (46%). The Extraverted/iNtuitive/Feeling/Perceiving (ENFP) type is observed in 14%, while Extraverted/iNtuitive/Thinking/Judging (ENTJ) appears in 11%. Other types with low occurrences are ENTP, ESTJ, INTP, INTJ, and ISTP.
- The most types (nine) are seen in Filipinos, where the Extraverted/iNtuitive/Feeling/Perceiving (ENFP) has the maximum occurrence in 31%, followed by the Introverted/Sensing/Thinking/Perceiving (ISTP) in 19%; after that, comes the Extraverted/Sensing/Thinking/Judging (ESTJ) and Extraverted/Sensing/Thinking/Perceiving (ESTP), each with 12%. Other types include ENFJ, ENTP, INTJ, INTP and ISTJ.

3.2. Differences between Genders

The next analysis involved the comparison between genders in the whole sample, regardless of ethnicity. Fig. (2) shows some differences (e.g., in ENFJ where five out of five are men; similarly, in ENTJ with three out of three being men,

and in INTJ with two out of two women), but these are based on small counts.

To see if there is an association of gender with personality type, a chi-square test was used as it can be used to find relationships between the two variables being studied. In this case, a Chi-square could serve the purpose of this research as it is a non-parametric test that is used to show an association between two qualitative variables, such as personality and gender. The test was used to determine the following:

- H: the distribution of personality types is the same between genders.

The alternative hypothesis:

- H<sub>A</sub>: the distribution of personality types is not the same between genders.

The results showed no significant effect of gender on the personality type ( $X^2(9) = 9.9, p = .36$ ), therefore, we cannot reject the null hypothesis. The small differences mentioned indeed did not play a role.

3.3. Differences between Genders within Ethnicities

Finally, we repeated the procedure for the comparison between genders, but this time within each nationality (Egyptians, Indians, Lebanese, Filipinos) separately; thus, four hypotheses have been generated.

- H: The distribution of personality types is uniform in an ethnicity.

The alternative hypothesis:

- H<sub>A</sub>: The distribution of personality types is not uniform in an ethnicity.

The results (Table 1) do not show any significant association in any ethnicity. Thus, it was concluded that there is no significant effect of gender on the personality type in either ethnicity, and we cannot reject the corresponding four null hypotheses.

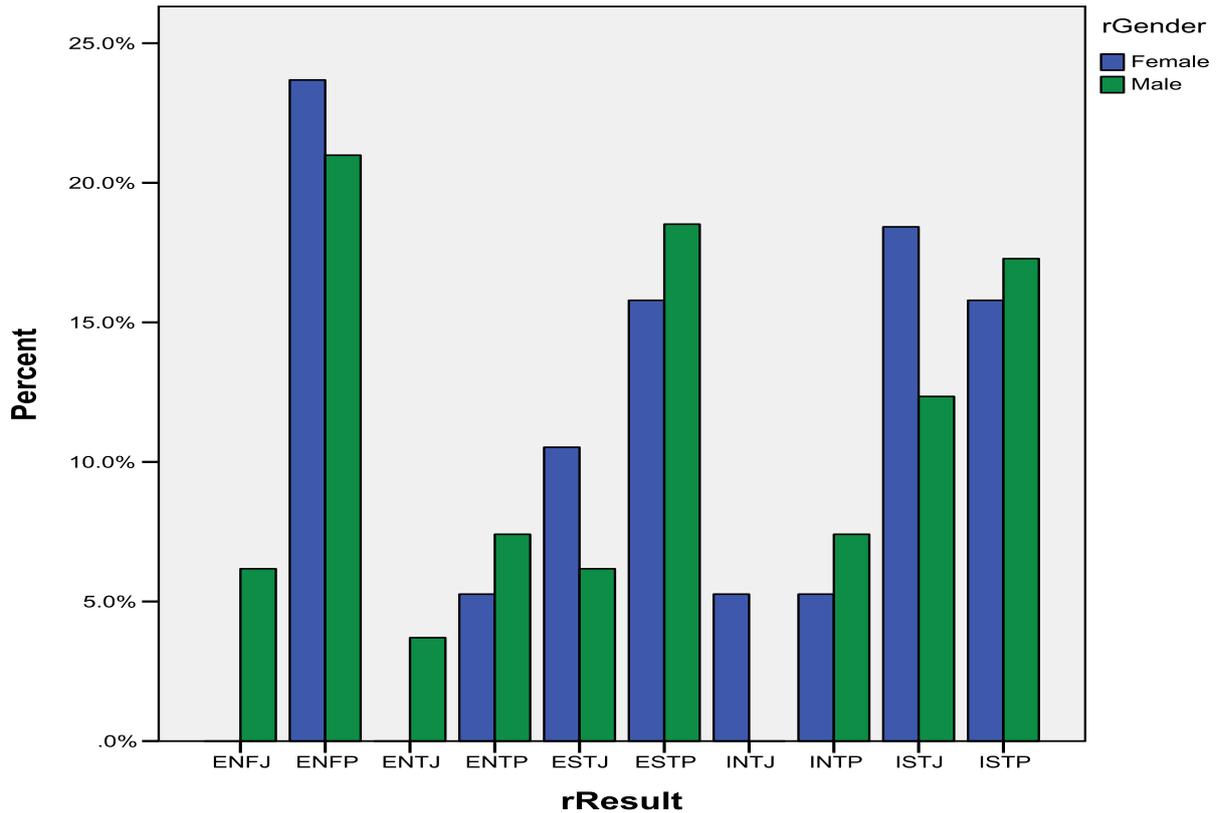


Fig. (2). Personality Type x Gender.

Table 1. Association between personality type and gender within ethnicities.

		Chi-Square Tests <sup>a</sup>		Monte Carlo Sig (2-sided)		
		Asymptotic Significance (2-sided)		99% Confidence Interval		
	Value	df	Significance	Lower Bound	Upper Bound	
Pearson Chi-Square	5.887 <sup>b</sup>	7	0.553	0.665 <sup>c</sup>	0.653	0.677
Likelihood Ratio	8.085	7	0.325	0.64 <sup>c</sup>	0.628	0.652
Fisher's Exact Test	5.741			0.683 <sup>c</sup>	0.671	0.695
N of Valid Cases	28					

a. rEthnicity = Lebanese.

b. 8 cells (100.0%) have expected count less than 5. The minimum expected is .33.

c. Based on 10000 sampled tables with starting seed 1335104164.

		Chi-Square Tests <sup>a</sup>		Monte Carlo Sig (2-sided)		
		Asymptotic Significance (2-sided)		99% Confidence Interval		
	Value	df	Significance	Lower Bound	Upper Bound	
Pearson Chi-Square	7.531 <sup>b</sup>	8	0.481	0.514 <sup>c</sup>	0.501	0.572
Likelihood Ratio	8.993	8	0.343	0.509 <sup>c</sup>	0.497	0.522
Fisher's Exact Test	6.562			0.617 <sup>c</sup>	0.604	0.629
N of Valid Cases	58					

a. rEthnicity = Filipino.

b. 8 cells (100.0%) have expected count less than 5. The minimum expected is .33.

c. Based on 10000 sampled tables with starting seed 1335104164.

### 3.4. Analysis

From the findings above, the following can be concluded:

- As for the first question, it was clear that the null hypothesis (H) that the distribution of personality types is uniform in an ethnicity was rejected for all four ethnicities. The findings showed Egyptians as primarily (42%) while Indians predominantly (52%) ISTJ, and Lebanese most frequently ESTPs (46%); also, Filipinos showed to be 32% ENFP.
- In the second question that tested whether there were any differences between the genders when considering the proportions of the personality types, the differences observed were too small; hence, the hypothesis could not be rejected.
- Finally, when testing the null hypothesis (H) that the distribution of personality types is uniform in an ethnicity, it was found that the 4 hypotheses were rejected as the gender differences amongst the four different ethnicities were rather small.

### 4. LIMITATIONS OF THE STUDY

In this research, there was only one method used to collect information. To achieve an overall better view, it is recommended to employ subjective, objective, and projective methods when possible (Blinkhorn *et al.*, 1988). Any future research on the matter could also benefit from incorporating both qualitative and quantitative methods to gain a broader perspective on the matter. The questionnaire administered has been established between the 1940s and 1960s (myersbriggs.org, 2016). Perhaps, a more up-to-date questionnaire could yield more optimal results. Moreover, the number of participants was small, and if increased, it could provide a more comprehensive idea of the subject matter and a more generalized view of the findings. Another limitation could have been resulted in terms of language barrier.

Since the employees were all second-language speakers of English, it could be possible that they did not understand some of the questions. This could also have caused some effect on the results. Finally, though conventional demographical data was collected, such as age, gender, and educational level, only gender was tested for an impact on ethnicity. Perhaps, in future research, more extensive correlations between the mentioned elements could be made. This could be beneficial as it could further reveal more hidden aspects of the perplexity of diversities in the workplace.

### CONCLUSION

In this study, we investigated the effects of ethnicity on the personality types of the Yung theory, as this was extended and improved by Briggs-Myers. We collected the test results of 119 individuals from four ethnicities (Egyptians, Indians, Lebanese and Filipinos), and conducted statistical tests on several hypotheses. We found significant variations within each ethnicity. On the contrary, gender was not significant, overall or within ethnicities, perhaps contrary to common belief.

### IMPLICATIONS OF RESEARCH

This research is necessary in that it adds to the already-existing wealth of applied psychology in the workplace as it sheds the light on the complex factors, which can come into play when exploring the notion of hiring the right person for the right job. The findings are important in that they give a clear indication that there are, in fact, significant relationships between the psychological diversities in the workplace and cultural diversity, both of which have an impact on employee's overall wellbeing and ultimately their satisfaction and productivity. Therefore, it is important to note these outcomes and take them into consideration when dealing within a multicultural environment. Policymakers and those interested in identifying best practice among groups of various diversities can surely benefit from the findings, as they can help form and align human resources policies and procedures to ensure a win-win situation for both the institute and the employee.

### FUTURE PERSPECTIVE

In this paper, the findings of Geert Hofstede and the questionnaire developed by Jung and Myers-Briggs constituted the basis of the thought process and hypothesis. Due to the success in finding a correlation in a small number of the population, a further study with more subjects could reveal more accurate results.

Lastly, it would be interesting to suggest further analyses with more controlling factors, for example, socio-economic status of parents, educational levels, years of professional experience, as well as the ones addressed here. There seems to be a dearth of information on such ethnic matters and how they impact the workplace; thus, it would be wise to consider them in a multitude of ways in the future research.

### ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The local Ethics board, which is part of the ministry of health, was consulted prior to the study, and they decided that this research did not need an ethics approval as nothing was physically administered.

### HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

### CONSENT FOR PUBLICATION

All patients participated on a voluntary basis and gave their informed consent.

### AVAILABILITY OF DATA AND MATERIALS

The author confirms that the data supporting the findings of this study are available within the article.

### FUNDING

None.

**CONFLICT OF INTEREST**

The author declares no conflict of interest, financial or otherwise.

**ACKNOWLEDGEMENTS**

Declared none.

**REFERENCES**

- [1] Katzenbach JR, Smith DK. The discipline of teams. *Harv Bus Rev* 1993; 71(2): 111-20. [PMID: 10124632]
- [2] Myers-Briggs I, Myers PB. *Gifts differing: Understanding personality type*. Davies-Black Publishing 1995.
- [3] Batenburg R, van Walbeek W, in der Maur W. Belbin role diversity and team performance: is there a relationship? *J Manage Dev* 2013; 32(8): 901-13. [http://dx.doi.org/10.1108/JMD-08-2011-0098]
- [4] Van Dierendonck D, Groen R. Belbin revisited: A multitrait-multimethod investigation of a team role instrument. *Eur J Work Organ Psychol* 2021; 20(3): 345-66. [http://dx.doi.org/10.1080/13594321003590580]
- [5] Scott Spenser. The history of the process communication model in astronaut selection. Cornell University 2000.
- [6] Myers Briggs. Available from: <http://www.myersbriggs.org/my-mbti-personality-type/mbti-basics/c-g-jungs-theory.htm>
- [7] Myers-Briggs Type Indicator (MBTI). 2014. Available from: <https://www.cpp.com/products/mbti/index.aspx>
- [8] Arendasy M, Sommer M, Herle M, Schützhofer B, Inwanschitz D. Modeling effects of faking on an objective personality test. *J Individ Differ* 2011; 32(4): 210-8. [http://dx.doi.org/10.1027/1614-0001/a000053]
- [9] Ashton MC, Lee K. The prediction of Honesty-Humility-related criteria by the HEXACO and Five-Factor models of personality. *J Res Pers* 2008; 42(5): 1216-28. [http://dx.doi.org/10.1016/j.jrp.2008.03.006]
- [10] Jackson DN. The dynamics of structured personality tests: 1971. *Psychol Rev* 1971; 78(3): 229-48. [http://dx.doi.org/10.1037/h0030852]
- [11] Burisch M. Approaches to personality inventory construction: A comparison of merits. *Am Psychol* 1984; 39(3): 214-27. [http://dx.doi.org/10.1037/0003-066X.39.3.214]
- [12] Cohen Y, Ornoy H, Keren B. MBTI personality types of project managers and their success: A field survey. *Proj Manage J* 2013; 44(3): 78-87. [http://dx.doi.org/10.1002/pmj.21338]
- [13] Belbin RM. *Management teams: Why they succeed or fail*. London: Butterworth Heinemann 1981.
- [14] Hofstede G. "Dimensionalizing Cultures: The Hofstede Model in Context". *ScholarWorks@GVSU. Online Read Psychol Cult* 2001.
- [15] Adeoye B, Tomei L. Effects of information capitalism and globalisation on teaching and learning. 2014. [http://dx.doi.org/10.4018/978-1-4666-6162-2]
- [16] Lachman R. Toward measurement of entrepreneurial tendencies. *Manag Int Rev* 1980; 20(2): 108-16.
- [17] Goldberg LR. The structure of phenotypic personality traits. *Am Psychol* 1993; 48(1): 26-34. [http://dx.doi.org/10.1037/0003-066X.48.1.26] [PMID: 8427480]
- [18] Hofstede G. Who is the fairest of them all? GalitAilon's mirror. *Acad Manage Rev* 2009; 34(3): 570-1. [http://dx.doi.org/10.5465/amr.2009.40633746]
- [19] Doll EA. *The measurement of social competence: a manual for the Vineland social maturity scale*. Educational Test Bureau, Educational Publishers 1953. [http://dx.doi.org/10.1037/11349-000]
- [20] Blinkhorn S, Johnson C, Wood R. Spuriouiser and spuriouiser: The use of ipsative personality tests. *J Occup Psychol* 1988; 61(2): 153-62. [http://dx.doi.org/10.1111/j.2044-8325.1988.tb00279.x]
- [21] Carlson, Neil R. *Psychology: The Science of behaviour United States of America: Person Education*. 2010; 464.
- [22] McCrae RR, John OP. An introduction to the five-factor model and its applications. *J Pers* 1992; 60(2): 175-215. [http://dx.doi.org/10.1111/j.1467-6494.1992.tb00970.x] [PMID: 1635039]
- [23] Coelho F, Augusto M, Lages LF. Contextual factors and the creativity of frontline employees: The mediating effects of role stress and intrinsic motivation. *J Retailing* 2011; 87(1): 31-45. [http://dx.doi.org/10.1016/j.jretai.2010.11.004]
- [24] McGhee RL, Ehrler D, Buckhalt J. *Manual for the Five Factor Personality Inventory — Children* Austin, TX (PRO ED, INC). 2008.
- [25] Diab-Bahman R, Al-Enzi A. The emotional impact of COVID-19 on undergrads. *Clin Schizophr Relat Psychoses* 2021; 15 (2). Available from: <https://www.clinicalschizophrenia.net/articles/the-emotional-impact-of-covid19-on-undergrads-69585.html>
- [26] Krueger RF, Derringer J, Markon KE, Watson D, Skodol AE. Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychol Med* 2012; 42(9): 1879-90. [http://dx.doi.org/10.1017/S0033291711002674] [PMID: 22153017]
- [27] Costa PT Jr, McCrae RR. *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources 1992.
- [28] Hofstede G. Culture's Consequences: Comparing values, behaviors, institutions, and organizations across nations. In: *Colleg Aviat Rev*. 2001; 34: p. (2)108.
- [29] Schacter D, Gilbert D, Wegner D. *Psychology 2nd*. New York. Worth Publishers 2008; 2009: 18.
- [30] Diab-Bahman R. The impact of dominant personality traits on team roles. *Open Psychol J* 2021; 14(1): 33-45. [http://dx.doi.org/10.2174/1874350102114010033]
- [31] Lynam DR, Widiger TA. Using the five-factor model to represent the DSM-IV personality disorders: an expert consensus approach. *J Abnorm Psychol* 2001; 110(3): 401-12. [http://dx.doi.org/10.1037/0021-843X.110.3.401] [PMID: 11502083]
- [32] Field H. Oxford University Press 2016. *Science without numbers*. [http://dx.doi.org/10.1093/acprof:oso/978019877915.001.0001]
- [33] Goldberg LR, Johnson JA, Eber HW, et al. The International Personality Item Pool and the future of public-domain personality measures. *J Res Pers* 2006; 40(1): 84-96. [http://dx.doi.org/10.1016/j.jrp.2005.08.007]
- [34] Baron-Cohen S, Knickmeyer RC, Belmonte MK. Sex differences in the brain: implications for explaining autism. *Science* 2005; 310(5749): 819-23. [http://dx.doi.org/10.1126/science.1115455] [PMID: 16272115]
- [35] Harrington R, Loffredo DA. MBTI personality type and other factors that relate to preference for online *versus* face-to-face instruction. 2010; 12: pp. (1-2)89-5.
- [36] Dlugoborskýté V, Norvilaité V, Petraité M. Creativity and innovation management: team performance peculiarities. *Entrepreneurship and Sustainability Issues* 2015; 3(1): 25-38. [http://dx.doi.org/10.9770/jesi.2015.3.1(2)T]
- [37] Schultz SE, Schultz DP. *Psychology and Work Today*. New York: Prentice Hall 2005; p. 116.
- [38] Chapman LJ, Chapman J. *Test results are what you think they are*. Kahneman, Daniel; Slovic, Paul; Tversky, Amos *Judgment under Uncertainty: Heuristics and Biases*. Cambridge, UK: Cambridge University Press 1982; pp. 238-48.
- [39] Aiken LR. *Psychological Testing and Assessment*. New York: Allyn & Bacon 2002.
- [40] Gregory RJ. *Psychological Testing: History, Principles, and Applications*. 5th ed. Boston: Pearson Education 2007.
- [41] Ayoubi RM, Ustwani B. The relationship between student's MBTI, preferences and academic performance at a Syrian university. *Educ Train* 2014.
- [42] Diab-Bahman R, Al-Enzi A, Sharafeddine W, Aftimos S. The effect of attendance on student performance: implications of using virtual learning on overall performance. *J Appl Res High Educ* 2021. [http://dx.doi.org/10.1108/JARHE-04-2021-0135]
- [43] Belbin. *Method, Reliability & Validity, Statistics & Research: A Comprehensive Review of Belbin Team Roles* 2014.
- [44] Birkman RW. *Who is Birkman?*. Birkman International. Birkman International 2013.
- [45] LeBron, Michelle. *Negotiation styles* Archived 13 April 2011 at the Wayback Machine>. 2003.
- [46] Adér HJ, Mellenbergh GJ. *Advising on research methods: A consultant's companion*. 244.
- [47] Tzeng GH, Huang JJ. *Multiple attribute decision making: methods and applications*. CRC press 2011. [http://dx.doi.org/10.1201/b11032]
- [48] McPeck RW, Breiner J. Convergent validity of the MBTI® and

- MMTIC® assessments. *J Psychol Type* 2013.
- [49] Personality Test. Available from: <http://www.humanmetrics.com/cgi-win/jtypes2.asp>
- [50] Al Rashidi F, Diab-Bahman R, Al-Enzi A. The impact of socio-economic factors on human capital investments. *Int J Entrep* 2021; 25: 1-14.
- [51] Diab-Bahman R. VLEs in a Post-COVID World: Kuwait's Universities. Challenges and Opportunities for the Global Implementation of E-Learning Frameworks. *IGI Global* 2021; pp. 265-83. [<http://dx.doi.org/10.4018/978-1-7998-7607-6.ch016>]
- [52] Karson W, O'Dell JW. A guide to the clinical use of the 16PF. University of Michigan Press 1976.
- [53] Simply Psychology. Available from: <http://www.simplypsychology.org/carl-jung.html>
- [54] The Open University. Available from: <http://openlearn.open.ac.uk>
- [55] Get2logo. Available from: <http://get2test.net/enterprise/index.htm>
- [56] Myers Briggs. Available from: [http://www.dec.co.th/mbti\\_explanation.htm](http://www.dec.co.th/mbti_explanation.htm)
- [57] Gosling SD, Rentfrow PJ, Swann WB Jr. A very brief measure of the Big-Five personality domains. *J Res Pers* 2003; 37(6): 504-28. [[http://dx.doi.org/10.1016/S0092-6566\(03\)00046-1](http://dx.doi.org/10.1016/S0092-6566(03)00046-1)]
- [58] Gutenberg. Available from: [http://www.gutenberg.us/articles/personality\\_testing](http://www.gutenberg.us/articles/personality_testing)
- [59] Belbin RM. Team roles at work. Routledge 2012. [<http://dx.doi.org/10.4324/9780080963242>]
- [60] Marston WM. Why 100,000,000 americans read comics. *Am Scholar* 1943-44; 13(1): 43.
- [61] Goldberg Lewis R. A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models 1999. 1999.
- [62] Nettle D. Daniel. A test of character. *The Guardian* (London) 2001.
- [63] Garner D. New York Times Her Past Unchained 'The Secret History of Wonder Woman,' by Jill Lepore. 2014.
- [64] Petrakis PE. Culture, Growth and Economic Policy. New York, Heidelberg: Springer 2014; p. 250. [<http://dx.doi.org/10.1007/978-3-642-41440-4>]
- [65] Harkness AR, McNulty JL. The Personality Psychopathology Five (PSY-5): Issue from the pages of a diagnostic manual instead of a dictionary Differentiating normal and abnormal personality. New York: Springer 1994.
- [66] Dlugoborskytė V, Norvilaitė V, Petraičė M. Creativity and innovation management: team performance peculiarities. *Entrep Sustain Issues* 2015; 3: 25-39. [[http://dx.doi.org/10.9770/jesi.2015.3.1\(2\)T](http://dx.doi.org/10.9770/jesi.2015.3.1(2)T)]
- [67] Porter EH. Strength Deployment Inventory. Pacific Palisades, CA: Personal Strengths Assessment Service 1971.
- [68] Larson CE, LaFasto FM. Teamwork: What Must Go Right, What Can Go Wrong. Newbury Park, CA: Sage 1989. [<http://dx.doi.org/10.1037/0021-843X.110.3.401>] [PMID: 11502083]
- [69] How to Build The Perfect Batter. As published in GQ September 2006 Issue GQ Magazine. 2006.
- [70] Krueger RF, Derringer J, Markon KE, Watson D, Skodol AE. Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychol Med* 2012; 42(9): 1879-90. [<http://dx.doi.org/10.1017/S0033291711002674>]
- [71] McCrae RR, John OP. An introduction to the five-factor model and its applications. In: *J Pers*. 1992; 60: pp. (2)175-215. [<http://dx.doi.org/10.1111/j.1467-6494.1992.tb00970.x>]
- [72] Myers Briggs. Available from: <https://www.myersbriggs.org/my-mbti-personality-type/mbti-basics/>

© 2022 Randa Diab-Bahman

This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International Public License (CC-BY 4.0), a copy of which is available at: <https://creativecommons.org/licenses/by/4.0/legalcode>. This license permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.