ADHERENCE OF LEBANESE ADOLESCENT STUDENTS TO THE COPERNICAN THEORY OF MEDIOCRITY REGARDING ANTHROPOMETRY, ACTIVITY, AND SOCIAL PARTICIPATION

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Abstract
Governance entities that have tackled public participation for decades are now approaching more participatory democracies, throughout which citizens are directly involved in influencing decisions that matter to them. In Lebanon, young people’s disengagement from the sociopolitical realm demands a framework for youth dialogue on policy matters. In 2017, the Hariri Foundation for Sustainable Human Development designed, initiated and managed a youth-centered public participation approach in Saida, Lebanon, engaging young citizens in local research and development and empowering them to multiply their influences at the regional and national scales. This approach has been recognized on all levels as an effective methodology for urban youth participation and has been given attention for replication among other urban contexts. This paper takes an in-depth look into the literature of public participation. Onward, it outlines the theoretical and practical keystones of Saida’s case study, breaking it down into its chronological milestones and classifying tangible results into strategies. Intersections are derived to associate the local process with the five components of the Public Participation Spectrum, an existing contextrelevant scientific model. Finally, lessons learnt are developed from empirically-based practice as reference measures for mainstreaming youth-centered public participation elsewhere. The author argues that effective and sustainable youth engagement methods must be adaptive to the responsiveness of the youth engaged and the governance systems and communities for which they are designed.

Keywords
Public Participation, Youth Engagement, Governance Approach, Local Development, Policy

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ABSTRACT: Governance entities that have tackled public participation for decades are now approaching more participatory democracies, throughout which citizens are directly involved in influencing decisions that matter to them. In Lebanon, young people’s disengagement from the sociopolitical realm demands a framework for youth dialogue on policy matters. In 2017, the Hariri Foundation for Sustainable Human Development designed, initiated and managed a youth-centered public participation approach in Saida, Lebanon, engaging young citizens in local research and development and empowering them to multiply their influences at the regional and national scales. This approach has been recognized on all levels as an effective methodology for urban youth participation and has been given attention for replication among other urban contexts. This paper takes an in-depth look into the literature of public participation. Onward, it outlines the theoretical and practical keystones of Saida’s case study, breaking it down into its chronological milestones and classifying tangible results into strategies. Intersections are derived to associate the local process with the five components of the Public Participation Spectrum, an existing context-relevant scientific model. Finally, lessons learnt are developed from empirically-based practice as reference measures for mainstreaming youth-centered public participation elsewhere. The author argues that effective and sustainable youth engagement methods must be adaptive to the responsiveness of the youth engaged and the governance systems and communities for which they are designed.

KEYWORDS: Public Participation, Youth Engagement, Governance Approach, Local Development, Policy

1. INTRODUCTION

Physical therapy deals with assessing, planning and implementing rehabilitation programs to recover or enhance human motor function, alleviate pain syndromes and treat or prevent injury, diseases and other impairments (WHO, 2010). International Classification of Functioning, Disability and Health (ICF) is the World Health Organization’s (WHO) framework for measuring health and disability at both individual and population levels. This framework was officially endorsed by all 191 WHO Member States in the Fifty-fourth World Health Assembly on the 22nd of May, 2001 (resolution WHA 54.21). The ICF was endorsed for use in Member States as the international standard to describe and measure health and disability (WHO, 2001).

The domains of health and health-related issues are classified according to the ICF by means of two lists: “a list of body functions and structure, and a list of domains of activity and participation”. Since an individual’s functioning and disability occurs in a context, the ICF also includes a list of environmental factors (WHO, 2001). Luckily, anthropometry reflects both health and nutrition states of people, and at the same time it predicts performance, health, and survival. Therefore, it is used in selecting people and populations for health and nutrition interventions while monitoring them at the same time. It is the single most portable, universally applicable, inexpensive, and non-invasive method available to assess the proportions, size, and composition of the human body (WHO, 1995).

Since Lebanon is a member of the United Nations (UN) and therefore the WHO, it participated in workshops to improve disability statistics using the ICF framework (WHO, 2001). Yet, unfortunately, the last national population survey for Lebanon was held since the last census in 1932, and only sample studies
were conducted since that date for estimations of population’s size, demographical, educational, professional and health characteristics (Maktabi, 1999).

In Lebanon, the adolescent age between fifteen and nineteen years of age is considered the largest age group present indicating the Lebanese population as a youthful one estimating twenty-one percent of the total population of Lebanon (UN, 2010). Knowing also that this stage of late adolescence manifests changes approximating adult status and there is an international need for adolescent reference data regarding anthropometric measures, this age group is ideal for study in the Lebanese population (De Onis & Habicht, 1996).

Having all that said, we aimed at setting up an inferential descriptive statistical study that assesses the adherence of the adolescent age group in the public schools of Beirut, Lebanon to the Copernican theory of mediocrity (heliocentricity) regarding anthropometry, participation, and activity levels.

Alas, in order to aid us in our dwelling of shedding light on the health standards of this neglected age group, we used standardized anthropometric measurements to measure height, weight, waist circumference (WC), hip circumference (HC), and skinfolds (triceps, subscapular). We also used the Physical Activity Questionnaire for High School to measure the level of physical activity and the Social and Environmental wellness screen to measure social and environmental participation.

2. MAIN TEXT

2.1 Materials and Methods

2.1.1 Study design
A cross sectional study design was utilized to assess adherence of Lebanese public school Adolescents to the Copernican Theory of Mediocrity regarding anthropometry, activity level, and social participation.

2.1.2 Study Location and Time Period
This study was conducted at 5 public schools in Beirut, Lebanon (Omar Faroukh School, Alayle School, Shakib Erslen School, Ashrafieye School, and Beirut Horoj School) in a one-month period beginning on the 31st of March and ending on the 14th of April, 2014.

2.1.3 Sample Size and Study Population
The study population included male and female students aged 14 to 18 years. All students, parents, and teachers were clearly informed about the purpose and content of the study. The sample size was calculated using the sample size calculator “G-power”, and was found to be 213 persons who are required for the achievement of a representable study. To be on the safe side, 226 students from grades 10 and 11 were taken under the supervision of the school supervisors.

2.1.4 Eligibility
Participants outside the intended age group (15-18 years) were excluded. Similarly, participants who had a previous history of a congenital anomaly of any of their upper or lower limbs were excluded from the study for their potential inability to perform the tests adequately. Participants with any disorders that may affect their balance and steady state standing ability were excluded as well.

2.1.5 Ethical Aspects
Prior to conducting our study, a formal approval (number 2818/3 dated 28/3/2014) was acquired from the Lebanese Ministry of Education and Higher Education to access students from public schools of Beirut. In addition, ethical approval was granted by the Institutional Review Board (IRB) of Beirut Arab University (reference number “2014H- 002-HS-R-0040”), which followed the Guidelines of Declaration of Helsinki on conduction of human research. Before participating in the study, all participants’ parents were required to read and sign a written human subject informed consent form.
2.1.6 Data Collection

Participants reported demographic data, medical and health statuses, as well as their mental and social wellness. In addition, physical activity in the last 7 days was documented for all participants. Subjects included were asked to fill a self-administered questionnaire covering data previously mentioned. “Mental and Social Wellness Screen” was used to assess mental and social health status, while “Physical Activity Questionnaire for High School (PAQ-A)” questionnaire was used to measure physical activity. PAQ-A is a well-established questionnaire designed to measure general moderate to vigorous physical activity levels during a typical week in school year (Crocker, Bailey, Faulkner, Kowalski, & McGrath, 1997; Fair, 2011; Janz, Lutuchy, Wenthe, & Levy, 2008). Data collection was followed by height and weight measurements and the other intended anthropometric measures.

2.1.7 Techniques Used for Taking Anthropometric Measurements

Height of participants was measured in accordance with procedures developed by Vallois technique (Vallois, 1965), using a metal stadiometer (in centimeters) adjusted to the appropriate level. Weight was measured using a digital scale (in kilograms). To ensure accuracy, the scale was calibrated before each major use. Body mass index (BMI) was later calculated by dividing the measured weight in kilograms by the measured height in meters squared.

Waist circumference was measured at the lower margin of the last palpable rib, while the hip circumference was measured at the top of the iliac crest, both using a tape measure (in centimeters). Later, waist-hip ratio and waist-to-stature ratio were calculated. Triceps and subscapular skinfolds were measured with a skinfold caliper.

2.1.8 Data Analyses

Statistical measures were performed using the IBM Statistical Package for Social science (SPSS) predictive analytics software version 20. The alpha level was set at 0.05.

2.2 Results

2.2.1 Demographic Data and Other Anthropometric Measures

The mean age of participants was 16.25 ± 0.84 years. The mean of each anthropometric measurement for the age group was considered as a standard (as indicated Table 1) for the means of each anthropometric measurements). Day-life habits measurements of study participants are indicated in Table 2.

<table>
<thead>
<tr>
<th>Anthropometric Measurements</th>
<th>Range</th>
<th>Mean of Total Sample (n = 226)</th>
<th>Mean in Males (n = 94)</th>
<th>Mean in Females (n = 132)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>15 – 18</td>
<td>16.25 ± 0.84</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Height (cm)</td>
<td>144.90 – 189.40</td>
<td>165.61 ± 9.18</td>
<td>173.26</td>
<td>160.04</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>40.1 – 121.1</td>
<td>64.57 ± 16.14</td>
<td>71.32</td>
<td>59.89</td>
</tr>
<tr>
<td>BMI* (kg/m²)</td>
<td>15.05 – 40.45</td>
<td>23.41 ± 4.92</td>
<td>23.69</td>
<td>23.31</td>
</tr>
<tr>
<td>Triceps Skinfold (mm)</td>
<td>5.0 – 42.0</td>
<td>21.97 ± 7.35</td>
<td>19.91</td>
<td>23.44</td>
</tr>
<tr>
<td>Subscapular Skinfold (mm)</td>
<td>6.5 – 40.0</td>
<td>16.58 ± 6.22</td>
<td>16.88</td>
<td>16.36</td>
</tr>
<tr>
<td>Waist Circumference (cm)</td>
<td>47.5 – 113.0</td>
<td>73.61 ± 10.72</td>
<td>77.24</td>
<td>71.38</td>
</tr>
<tr>
<td>Hip Circumference (cm)</td>
<td>60.0 – 128.5</td>
<td>84.99 ± 11.61</td>
<td>84.98</td>
<td>85.27</td>
</tr>
<tr>
<td>Waist to Hip Ratio</td>
<td>0.53 – 1.08</td>
<td>0.87 ± 0.07</td>
<td>0.91</td>
<td>0.84</td>
</tr>
<tr>
<td>Waist to Stature Ratio</td>
<td>0.27 – 0.65</td>
<td>0.44 ± 0.06</td>
<td>0.45</td>
<td>0.45</td>
</tr>
<tr>
<td>Activity Scale Score</td>
<td>1.12 – 4.48</td>
<td>2.29 ± 0.67</td>
<td>2.52</td>
<td>2.13</td>
</tr>
<tr>
<td>Participation Scale Score</td>
<td>4 – 16</td>
<td>11.44 ± 2.22</td>
<td>11.26</td>
<td>11.57</td>
</tr>
</tbody>
</table>

*BMI: body mass index.
Table 2: Day-life habits measurements of study participants (% is estimated to the nearest tenths)

<table>
<thead>
<tr>
<th>Habits Measurements</th>
<th>% of Total Sample</th>
<th>% in Males</th>
<th>% in Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug Users</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Alcohol Consumers</td>
<td>4%</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>Smokers</td>
<td>30%</td>
<td>27%</td>
<td>33%</td>
</tr>
<tr>
<td>Caffeine Consumers</td>
<td>40%</td>
<td>36%</td>
<td>42%</td>
</tr>
<tr>
<td>Fast Food Consumers</td>
<td>48%</td>
<td>56%</td>
<td>42%</td>
</tr>
<tr>
<td>Vision Aids</td>
<td>28%</td>
<td>19%</td>
<td>34%</td>
</tr>
<tr>
<td>Hearing Aids</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Medications*</td>
<td>18%</td>
<td>21%</td>
<td>15%</td>
</tr>
</tbody>
</table>

* Medications refer any type of medication ranging from pain killers to multivitamin tablets to disease modifying medications

2.2.2 Frequency Distribution of Anthropometric Measures with Normality Curves

The sample’s heights were centered at the level of the mean (165.61 cm) (as shown in Fig. 1A) while majority of the sample has a relatively low body weight of 64.57 kg (as shown in Fig. 1B) and normal body mass index of 23.41 kg/m² (as shown in Fig. 1C) (normal values internationally are 19-25).

![Fig. 1. (A) Frequency histogram showing heights distribution with normality curve. (B) Frequency histogram showing weights distribution with normality curve. (C) Frequency histogram showing body mass index (BMI) distribution with normality curve](https://digitalcommons.bau.edu.lb/hwbjournal/vol1/iss3/58)

In addition, the majority of the sample has relatively normal triceps and subscapular skinfold thickness of 21.97 mm (as shown in Fig. 2A) (normal values internationally are 20-30 mm) and 16.58 mm (as shown in Fig. 2B) (normal values internationally are 10-20 mm), respectively, as well as a normal and healthy waist size of 73.61 cm (as shown in Fig. 2C) (normal values internationally are below 90 cm) and hip circumference of 84.99 cm (as shown in Fig. 2D). On the other hand, majority of the sample has a relatively high waist to hip ratio of 0.868 (as shown in Fig. 2E) (normal values internationally are below 0.8) and normal waist to stature ratio of 0.445 (as shown in Fig. 2F) (normal values internationally are below 0.5).
2.2.3 Frequency Distribution of Activity Level and Social Participation Scores with Normality Curves

The majority of the sample has a relatively low physical activity of 2.29/5 (as shown in Fig. 3A) (normal values internationally are above 2.5/5), yet relatively high social participation of 11.44 (as shown in Fig. 3B) (normal values internationally are above 8).
2.2.4 Comparison between Anthropometric Measures of Males and Females in Our Sample

Mean heights and weights for males in our sample are significantly higher than that of females (as shown in Fig. 4A and 4E). As for the body mass index (BMI), both genders have an acceptable mean value below 25 (as shown in Fig. 4I). Results of the frequency pyramids are validated by the Q-Q plots (as shown in Fig. 4B, C, F, G, J and K) and box plots (as shown in Fig. 4D, H and L).

Both genders have an acceptable mean value below 25 for the triceps skinfolds and below 20 for the subscapular skinfolds (as shown in Fig. 5A and 5E), validated also by the Q-Q plots (as shown in Fig. 5B, C, F, and G) and box plots (as shown in Fig. 5D and 5H).

Both genders have an acceptable mean value below 25 for the triceps skinfolds and below 20 for the subscapular skinfolds (as shown in Fig. 5A and 5E), validated also by the Q-Q plots (as shown in Fig. 5B, C, F, and G) and box plots (as shown in Fig. 5D and 5H).

Fig. 4. Frequency pyramids comparing the heights (A), weights (E), and BMIs (I) of both genders of our sample. Q-Q plots depicting the normal distribution of males and females in our sample in accordance to their respective heights (B, C), weights (F, G), and BMIs (J, K). Box plots comparing the distribution of both genders with respect to their respective heights (D), weights (H), and BMIs (L).

Fig. 6. Frequency pyramids comparing the waist circumferences (A) and hip circumferences (E) of both genders of our sample. Q-Q plots depicting the normal distribution of males and females in our sample in accordance to their respective waist circumferences (B, C) and hip circumferences (F, G). Box plots comparing the distribution of both genders with respect to their respective waist circumferences (D) and hip circumferences (H).
2.2.5 Comparison between Activity and Participation Scale Scores of Males and Females in Our Sample

The mean for male physical activity scores (2.6) was higher than that of females (2.16) (as shown in Fig. 8A and 8E), indicating that the males are overall more physically active than the females. However, the mean participation scale score for females turned to be higher than that for males indicating that the females are more socially and mentally active than the males, yet both have acceptable mean values.
Table 3: Table comparing Lebanese population to Iranian, Japanese, Emirates, and American populations as regards anthropometric measurements.

<table>
<thead>
<tr>
<th>Country</th>
<th>Height (cm)</th>
<th>Weight (Kg)</th>
<th>B.M.I.</th>
<th>Waist Circumference (cm)</th>
<th>Hip Circumference (cm)</th>
<th>Waist to Hip Ratio</th>
<th>Waist to Stature Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iranian Females (Mirmohammadi et al., 2013)</td>
<td>156.6</td>
<td>65.2</td>
<td>26.7</td>
<td>92.6</td>
<td>-</td>
<td>.90</td>
<td>.59</td>
</tr>
<tr>
<td>Iranian Males (Mirmohammadi et al., 2013)</td>
<td>170.9</td>
<td>71.5</td>
<td>24.5</td>
<td>88.4</td>
<td>-</td>
<td>.89</td>
<td>.51</td>
</tr>
<tr>
<td>Japanese Population (Míriam A Sampei, Novo, Juliano, &amp; Sigulem, 2008)</td>
<td>170.0</td>
<td>64</td>
<td>22.13</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>UAE Females (Abdulrazzaq, Moussa, &amp; Nagelkerke, 2008)</td>
<td>156.67</td>
<td>55.63</td>
<td>22.55</td>
<td>67.2</td>
<td>88.1</td>
<td>-</td>
<td>.43</td>
</tr>
<tr>
<td>UAE Males (Abdulrazzaq et al., 2008)</td>
<td>162.88</td>
<td>61.32</td>
<td>22.9</td>
<td>73.7</td>
<td>88.0</td>
<td>-</td>
<td>.54</td>
</tr>
<tr>
<td>USA Females (McDowell, Fryar, Ogden, &amp; Flegal, 2008)</td>
<td>163.4</td>
<td>86.4</td>
<td>32.4</td>
<td>94.4</td>
<td>114.3</td>
<td>.82</td>
<td>.58</td>
</tr>
<tr>
<td>Beirut Lebanon Females</td>
<td>160.04</td>
<td>59.89</td>
<td>23.31</td>
<td>71.38</td>
<td>85.27</td>
<td>.84</td>
<td>.45</td>
</tr>
<tr>
<td>Beirut Lebanon Males</td>
<td>173.26</td>
<td>71.32</td>
<td>23.69</td>
<td>77.24</td>
<td>84.98</td>
<td>.91</td>
<td>.45</td>
</tr>
</tbody>
</table>

2.3 Discussion

Due to the major lack of statistical evidence regarding the health characteristics of the Lebanese population. The year 1932 was the last time a health-related survey was conducted in Lebanon (Maktabi, 1999), the present study aimed at defining new standards for the adolescent age group in accordance to their anthropometric data, physical activity, social participation, and some of the factors influencing their lifestyle.

Comparing our population to others (Japanese (Míriam A Sampei et al., 2008), Emirate (Abdulrazzaq et al., 2008), American (McDowell et al., 2008), and Iranian populations (Mirmohammadi et al., 2013)), Lebanese adolescent males in Beirut are the tallest amongst the other populations and the second heaviest (as indicated in Table 3). The population in Beirut has the third highest B.M.I., and hip and waist circumferences. The population of Beirut has the least waist to stature ratio. However, when it comes to waist to hip ratio, males in Beirut have the highest measured value compared to all other populations, which is not a very good health status indicator for them. The females, on the other hand, have a reasonable waist to hip ratio ranking fourth out of the five compared populations (as indicated in Table 3).

As for anthropometry, none of the parameters signified that the study sample representative of the population are at risk of developing any of the following: peripheral nerve dysfunction (Ylitalo, Herman, & Harlow, 2013), non-communicable disease (Brambilla et al., 2006), type 2 diabetes (Seidell, Kahn, Williamson, Lissner, & Valdez, 2001), decreased productivity (Ulijaszek, 2006), decreased quality of life (Ulijaszek, 2006). However the measurements signified that the population is at risk of developing several other health related issue, such as: cardiovascular disease for the males and not females, overweight for males and females (Daniels, Khoury, & Morrison, 1997), and metabolic syndrome for males but not females (Al-Odat, Ahmad, & Haddad, 2012).

Noticeably, 21% of the total sample is beyond the normal range for acceptable B.M.I., which is not an alarming number. Along with a physical activity scale score mean value of 2.29/5 as a total, this becomes a matter to discuss because a B.M.I. and waist to hip ratio of such value are acceptable only if the population is aware of their health. Instead, we find an overall low physical activity score, which is a
bad indicator for wellness. What is more alarming is that females alone have an even lower activity scale score with only 34% of them above the average score. Males on the other hand have a higher mean for activity scale score yet they possess the highest measured waist to hip circumference when compared with the other populations mentioned in this study and to their Lebanese female counterparts. On top of that, 12% of males have a waist to hip ratio of more than 0.95, which means they have crossed the limit at which they no more remain on the healthy side.

Moreover, as the age of our sample increased from fifteen to eighteen years of age, which is not a very wide range to start with, the number of smokers and caffeine consumers increased indubitably (p<0.026 and p<0.046 respectively). Therefore, Lebanese adolescents living in Beirut are at an increased risk of heart diseases, lung cancer, decreased bone health, and even death (Sherman, 1991).

Additionally, positive correlations were found between smoking and alcohol consumption (p<0.015), putting this population at risk of stroke, brain damage, increased blood pressure, mood swings, fatty liver, etc. (Maddalozzo et al., 2009) Caffeine was also found to be positively correlated with the consumption of fast food (p<0.003). Both consumed substances whether caffeine or fast food are known for their effect on insulin resistance (i.e. developing type 2 diabetes) and weight gain (i.e. developing obesity) (Pereira et al., 2005). Not only is smoking related to other bad habits like alcohol use and fast food intake, but it is also negatively correlated with participation (p=0.019), meaning that smoking decreases the social participation scores of the adolescents and therefore decrease their social and environmental wellness, which is an aspect not to be neglected.

In addition, hair color is found to be positively correlated with eye color for brightness (i.e. the brighter the hair the brighter the eye color). What can be deduced from this section of the study is the importance of some indicators of anthropometry and genetics on the lifestyle and health of the population. Height, weight, waist circumference, hip circumference, skinfold thickness, and the corresponding ratios of the previously mentioned measurements have proven to be tightly related. Knowing that every single measurement is a known worldwide indicator of some matter of health and wellness, the ties that bind these measurements is another factor that stresses the importance of having reference data for any population as a standard, let alone the Lebanese adolescents.

Last but not least, is the matter of the philosophical notion expressed throughout this study; the Copernican theory of mediocrity or heliocentricity. The theory was originally tested and validated on the solar system we dwell in. Nicolas Copernicus declares that our solar system is no special one, and that it does not differ from any other system out there in the spacious universe (Gingerich, 2004). His cosmological and philosophical revolution also states that planet Earth is a mere planet, a coincidence that just happens to house life, and that it is not privileged enough to be the center of the universe as it was formerly known by the entire world. This means that every single entity in this vast existence has its own axis around which it orbits, around which it moves, around which it exists (Gingerich, 2004).

If we shift from the purely physical fields of science to the biological aspects of existence, we see that every major group of beings have a large and attractive axis around which they exist (orbit). When a specie is taken into account, we see that almost all its major attributes is common for all creatures belonging to this specie. Many of our characteristics as human beings are shared, and those small and rarely occurring coincidences where there may be slight differences are but mutations not meant to be generalized, unless they grow in size.

Furthermore, what can be said about human beings in general can also be said about certain populations of human beings. As for populations, the variations amidst a given population are far less than amidst humanity as a whole (Greaves, Puhl, Baranowski, Gruben, & Seale, 1989; Roberge, 2010; Miriam Akemi Sampei, Novo, Juliano, Colugnati, & Sigulem, 2003; van Valkengoed, Nicolalou, & Stronks, 2011). What classifies a population is its morphological characteristics, its behavior, its history, its culture and lifestyle, its food, its politics, etc.

Hitherto, neither anthropological reference data has not been recorded for the relatively small population of Lebanon, nor have standards been set for any aspect of existence of the Lebanese population until today. This is saddening since the same type of reference data and standards are updated regularly for populations not very far from Lebanon. Now that we have at least clarified how the adolescent population in Beirut, Lebanon looks like morphologically, and how it acts physically and socially, we can test whether or not the theory of mediocrity applies to this population or not. Would the theory be inapplicable, it would mean that the population at hand is very diverse and that every subgroup orbits its own axis different from others in the same population. Would the theory apply, it would mean that the population at hand is very much alike and that it orbits the same axis uniformly across its measured characteristics.
In order to test for this theory, we tested for normality and distribution of this sample. As a result, we obtained an unnegotiable fact sheet that declares all the adolescent age group in Beirut, Lebanon to be very much alike in all their measured characteristics, proving the theory of mediocrity to be applicable upon this population.

Finally, being mediocre in its characteristics, the adolescent population of Beirut, Lebanon can be addressed uniformly by anyone who seeks to improve their quality of life, their wellness, and their strife to present a better future for this country and hence a better future for humanity.

3. CONCLUSIONS

Our world is ever-changing and continuously renewable, and so are we. Human development and evolution throughout the eras has proven to be nothing but brilliant. Alas, the Lebanese people seem to lack the evidence that shows their brilliance and shows their struggle throughout time, because of the lack of data collection and national surveys. The hypothesis being tested is the mediocrity principle of Nicolas Copernicus and how adherent are the adolescents in Beirut, Lebanon to this principle. The results have proven that they are in fact adherent to it in every measured aspect without exception. Furthermore, this study has statistically photographed the population at hand to be a calling for all those who are concerned in order for them to take action towards the fulfillment of the wellbeing of Lebanese adolescents. It has also been seen that the majority of the measured variables have a strong correlation between each other, a fact worthy to be noted, along with the reality that some indicators call for immediate action due to the impact they have on the future of this population.

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