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Activity preference and level of physical activity participation of CIT university administrative employees

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Abstract
This study aims to identify the activity preferences and level of physical activity participation of the administrative employees of Cebu Institute of Technology – University. It uses a descriptive method of research, with a survey questionnaire and the International Physical Activity Questionnaire (IPAQ) long version as data gathering instruments. Means and percentages were computed and presented using tables and figures. The study revealed Zumba, Aero Dance, Yoga, Badminton, Bowling and TaeBo as the top 5 preferred activities of the respondents. Furthermore, the over-all mean level of physical activity participation in 4 dimensions, namely: Job-related, Transportation, Housework and Leisure -related is 5, which is categorically scored as "moderate" using the "Guidelines for the Data Processing and Analysis of IPAQ". Furthermore, the level of physical activity participation on a day per week level in aspects other than the 4 dimensions, such as sitting and sleeping, greatly exceeded the 4 dimensions with over-all mean percentage of 36%, and that the level of physical activity participation on minutes per day level in aspects other than the 4 dimensions extensively go above the 4 dimensions, even including sitting, with the highest over-all mean percentage of 66%. It is recommended therefore that CIT University Administrative employees be continuously given a fitness program, like Project CEXE, that would include Zumba and Aero Dance, to further enhance their leisure-related physical activity participation that would certainly promote a more active lifestyle that may either decrease or prevent occurrence of non-communicable diseases, and thus become more productive employees of the University.

Keywords: activity preference, level of physical activity participation, IPAQ, Job-related, Transportation, Housework, Leisure-related

Introduction
The advent of rising and continuous advancements in technology and progressive mass transportation brought more and more people to a level of physical inactivity, or lesser body movement. The ability to instantaneously and easily perform a physical activity without a quality amount of effort, which may substantially challenge the ability of the body to work physically, may be considered as the biggest deterrent for an individual to perform a regular physical activity nowadays. Indeed, "most of our technology had been designed to make life tasks physically easier" (Rink, 2008).

Generation Z or otherwise known as the "Digital Natives", are the people born from the year 2000/2001 up to present. They are described as the "highly 'connected' generation because of their extensive exposure to use of communication and media technology like the World Wide Web, instant messaging, text messaging, MP3 players, and mobile phones. The effect of advancements in technology can possibly cause more and more people to become highly dependent on use of technology instead of opting to use their body to move and therefore create a better fitness level. Thus, it is truly apparent that the present time largely contributes to deterioration in fitness level of people, resulting to occurrence and reoccurrence of problems of physical inactivity. This is clearly stated by our country's Health Secretary Enrique Ona when he stated that non-communicable diseases (NCD's), such as cardiovascular diseases, cancer, diabetes and chronic pulmonary disorder, are on the rise even if highly preventable because of Filipinos' failure to do regular exercise, improper diet, and excessive drinking and smoking (Crisostomo, 2013). He further stated that these NCD's account for 54% of deaths among Filipinos, and 30-32% of the ones affected are below 60 years old, and although life expectancy for Filipinos went to a higher 70 years from 50 years half a century ago, this only proves that many are getting older but unhealthy (Crisostomo, 2013)

However, such data simultaneously proves that there is also an accurate path in obtaining a better health, and one way is through a conduct of a regular exercise or physical activity.

As a matter of fact, in the United States of America, "Healthy People 2010", was developed to measure the health of a nation over the next 10 years. It is a set of health objectives for the nation to achieve over the first decade of the new century that may be used by different people, states, communities, professional organizations, and others, to help develop programs to improve health (Prentice, 2004). In this health program, physical activity is the first of the 10 leading health indicators to measure overall health of a nation. Locally, in line with the country's observance of World Hypertension day in May 17, 2012 with a theme "Healthy Lifestyle, Healthy Blood Pressure", four-partner stakeholders, namely Novartis Healthcare Philippines, the Department of Health (DOH), Philippine Society of Hypertension (PSH) and Philippine Heart Association (PHA), launched the Trabahustle Moves Online Video Contest to encourage participants and their family to choreograph and record on video mini-walkouts or short exercises that can easily be done at home or in the workplace (Cruz, 2012). This is a clear move, both by Philippine government agencies and private companies, to prove how beneficial exercise or a regular physical activity is, and that is for everyone, wherever and whenever. After all, adults who are healthy and who have the skills, knowledge, and dispositions to lead a physically active life have a far greater potential to enjoy life and be active participants in our culture (Rink, 2008).

Cebu Institute of Technology - University, a private non-sectarian tertiary school in the Visayas Region, is just like any other private company that employs individuals, with the hope that employees work in the best way possible to help the students achieve their goals in life, as well as help their respective families enjoy a satisfying and convenient life brought about by their effort that is reciprocated monetarily by the administration. These things are achievable if it can be ascertain that these employees are physically fit enough to meet the demands of their everyday working routine by regularly participating in a physical activity that may be structured or as part of the demands of their daily living.

Purpose of the Study

The study is therefore aimed at identifying the preferred activities of CIT University administrative employees, and to determine their level of physical activity participation in terms of four (4) dimensions: work, transportation, housework and leisure.

Methods

The fifteen (15) respondents consisted of only two (2) males and thirteen (13) females, with a mean age of 47. They were the ones who decided to continue and finish the 7-month Project CEXE program (October 2012 – May 2013).

The first part of the questionnaire contained a list of physical activities that could be offered as part of the fitness program, alongside their degree of preference. This information would provide an accurate data on possible fitness-related activities that cater to the participants' interest. The second part of the questionnaire is an internationally known physical activity questionnaire, the IPAQ long version. IPAQ has been validated in 12 countries and 14 research centres (Benedetti,T. et al, 2007) and the long version has 27 physical activity-related questions performed in an ordinary week with varying intensities (vigorous, ordinary and mild), completed with a minimum continuous duration of 10 minutes that are further classified into 4 dimensions of physical activity: work, transportation, housework and leisure (Benedetti,T. et al, 2007).

The questionnaires were given to fifteen (15) employees who regularly participated two weeks before the end of the Project CEXE program.

Means and percentages were computed to determine the activity preferences, and categorical scores (low, moderate, and high) from "Guidelines for the data processing and analysis of the International Physical Activity Questionnaire" were used to establish the physical activity levels of the respondents.

Results and Discussion

In terms of the data gathered on activity preference, Table 1.a – 1.c show the respondents' preferences using the following scale: highly preferred, slightly preferred and do not prefer.

Table 1: a Top Highly Preferred Activities

Rank	Activity
1st	Zumba
2nd	Aero Dance
3rd	Yoga
4th	Badminton
5th	Bowling and TaeBo

Table 1.a presents the top 5 highly preferred activities of CIT University employees who participated in the Fitness Program "Project CEXE" from October 2012 to May 2013, the period where Zumba, "an exercise class that blends upbeat world rhythms with easy-to-follow choreography, for a total-body workout that feels like a celebration" (Learn About Zumba Fitness) was a considered a popular fitness dance activity, locally and globally. Hence, Zumba being featured in television shows and shown in DVD's gained its popularity to people of all genders and ages. Aerobic Dancing, on the other hand, has not lost its touch to fitness-enthusiasts, clearly associating exercise to Aero Dance and vice-versa. Anyone who wants to sweat it out with a group of people of all ages, either inside a local gym, or outside in fitness-centred areas provided for by local government units, would automatically think of Aero Dance as the right activity that would serve the purpose. Yoga is another popular fitness-related activity, but due to its silent nature of focusing more on flexibility and strength, and a bit pricey since it needs a certified instructor and a mat, it does not seem to be so appealing to the respondents.

Table 1: b Top Slightly Preferred Activities

Rank	Activity
1st	Hiphop and Karate
2nd	Soccer, Swimming and Volleyball
3rd	Ballroom Dance, Line Dance, Taekwondo, and Tai Chi Chuan,

Table 1.b likewise presents activities that are preferred but on a lesser strength. It may seem apparent that all activities, regardless of rank, showed extreme commonalities; either that they are played or performed individually, or in groups that would need an exact playing area such as a court or a swimming pool, and appropriate sports attire and equipment. Therefore, no matter how interesting the activities are, the respondents see these "requirements" as quite burdensome, hence, categorized as "Slightly Preferred" activities only.

Table 1.c: Do Not Prefer Activities

Rank	Activity
1st	Basketball
2nd	Soccer
3rd	Chess and Scrabble

They may be considered by some as interesting, even widely popular due to its physical demands, but Table 1.c is a proof that not even global popularity would tickle the preference of the respondents. Ranked number 1 in the "Do Not Prefer" physical activity is surprisingly Basketball, a professional sport played here in the Philippines and in the United States of America and a leading competitive sports in various leagues, from the Olympics down to various Barangay level where players even look for uniform sponsors just to be able to make it and play in the league. Again, this may be due to the fact that the activity in itself is strenuous that it no longer appeals to mothers and women who were the majority of the respondents.

Respondents' level of Physical Activity in four (4) dimensions

Tables 2.a – 2.d present the level of physical activity of the fifteen (15) respondents in the four dimensions of physical activity as presented in the IPAQ Long version questionnaire, namely: Job-Related Physical Activity, Transportation, Housework, and Leisure-Time.

Table 2.a:.Job-Related Physical Activity

Question Number	Days Per Week	Minutes Per Day	Categorical Score
2	3		Moderate
3		16.82	Low
4	3.41		
5		41.36	Moderate
6	5.7		
7		34	
Mean	**4.04**	**30.72**	**Moderate**

Table 2.a shows a low average of 3 days per week for the respondents to have conducted at least 10 minutes of vigorous physical activity as part of work, while achieving a higher average of 5.7 days allotted for job-related walking for at least 10 minutes, hence, completing a mean of 4.04 days of physical exertion related to job. In terms of physical activity participation in minutes per day, performing vigorous activities related to job ranked the lowest at 16.82 minutes per day, while a higher 41.36 minutes per day were conducted for job-related activities that are only moderate, thereby getting a mean of 30.72 minutes per day of physical activity participation that is job-related. With these results, a categorical average score of "moderate" is given to the respondents' job-related physical activity participation.

Table 2.b: Transportation-Related Physical Activity

Question Number	Days Per Week	Minutes Per Day	Categorical Score
8	5.83		Moderate
9		54.58	
10	4.67		
11		18.33	Low
12	6.5		Moderate
13		42.14	
Mean	5.67	38.35	

As regards physical activity performed in line with travelling from place to place performed in a week, Table 2.b presents a high 5.67 mean of transportation-related physical activity. Lowest average of 4.67 days per week is given to riding a bicycle for at least 10 minutes as a form of transportation, while a high 6.5 days per week average comes from walking as a method in going from place to place. Concurrently, the time spent in a day in using a bicycle gets the lowest average at 18.33. The respondents who are administrative employees, mostly confined inside offices, appears to have used bicycle the least as their method of transportation from going from place to place, which is in complete

Table 2.c: Housework-Related Physical Activity

Question Number	Days Per Week	Minutes Per Day	Categorical Score
14	3.71		Moderate
15		22.14	
16	5		
17		24.62	
18	5.31		
19		41.15	
Mean	4.67	29.3	

In a tropical country such as the Philippines that do not naturally experience snow, or that most of the houses live in the woods, housework-related activity would not be that heavy in nature and therefore would not require tremendous amount of effort. This may be the case why a low average of 3.71 days per week is given to spending at least 10 minutes of performing vigorous activities that are part of house maintenance or caring for the family. However, moderate physical activities conducted at home, such as scrubbing and sweeping floors, which are more common in Philippine house setting, obtained a high average of 5.31 days per week. This coincides with the highest number of minutes at 41.15 minutes per day of physical activity related to performing household chores. A common categorical score of "moderate" is given to the respondents' physical activity level in terms of housework.

Table 2.d: Leisure-Related Physical Activity

Question Number	Days Per Week	Minutes Per Day	Categorical Score
20	4.58		Moderate
21		43.33	
22	2.92		Low
23		58.75	Moderate
24	3		
25		57.19	
Mean	3.5	53.19	

A fit individual requires enough amount of energy to perform and meet, not just daily activities and unforeseen emergencies, but must also include time for recreation or leisure activities (Robbins, et al., 2003). Thus, a high average of 4.58 days per week is allotted for walking as part of the respondents' leisure-related activities. However, vigorous activities such as swimming or aerobics only occupy an average of 3 days per week, which may even be attributed to their voluntary participation in the Tuesday and Thursday, 6:00 pm – 7:00 pm, offering of Project CEXE (Aerobic Dance/Zumba) from October 2012 to May 2013. At the same time, leisure physical activity participation in terms of minutes per day, that are vigorous in nature, like aerobic dance elicited an average of 57.1 9 to 58.75, a clear connection between number of days per week spent and number of minutes allotted in performing

the vigorous activity. A categorical score of "moderate" is given to physical activity participation related to leisure.

Duration of Physical Activity Participation

Figure 1 shows the level of physical activity participation of the administrative employees distributed among the 4 dimensions. Although categorical score for all is "moderate", it may still be worthwhile to note that the transportation dimension got the highest mean at 6 days per week, and job and leisure – related physical activities got the lowest but average score of 4 days per week. The figure clearly shows that average level of physical activity participation is almost equally allotted for all 4 dimensions.

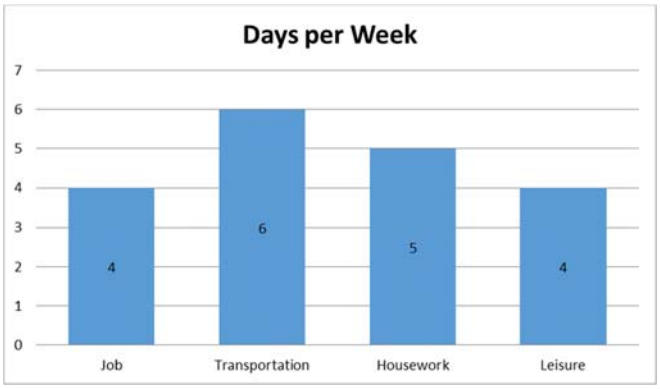

Fig 1: Physical Activity Participation on a Weekly Level

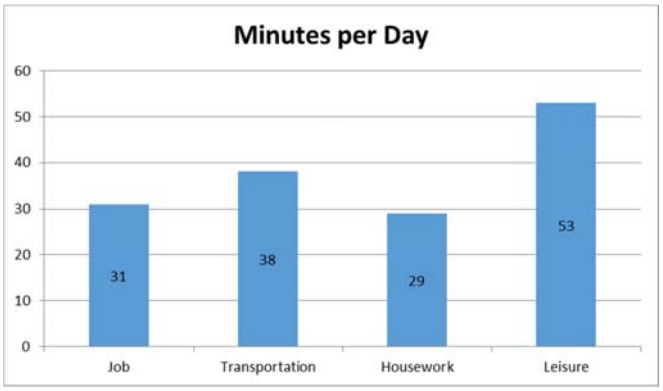

Fig 2: Physical Activity Participation on a Daily Level

In terms of time allotment in performing physical activities related to all the dimensions, it is clear that participation in leisure-related physical activities is given more minutes, with an average of 53 minutes per day as shown in Figure 2. Fifty-three (53) minutes may be directly associated to the one hour of Aerobic Dance or Zumba session that was offered to the Project CEXE participants on a Tuesday and Thursday from October 2012 to May 2013. The desire to become physically active via participation in Project CEXE could have motivated the participants to regularly attend the said sessions, thereby increasing their leisure-related physical activity participation to an average of 53 minutes per day. However, a shorter duration of 29 minutes per day is already meeting the suggested number of minutes prescribed by the World Health Organization (WHO) in encouraging the worldwide community into keeping a physically active lifestyle. According to WHO, recommended levels of physical activity for ages 18-64 should at least be 150 minutes per week of moderate intensity. This is translated to 209 (29 minutes x 7 days) minutes per week of moderate activity participation, clearly decreasing occurrences of musculoskeletal injury, and other forms of non-communicable diseases (NCD's).

Respondents' time spent sitting

Table 3: Time Spent Sitting

Question Number	Minutes Per Day	(Hours Per Day)	Categorical Score
26 (Weekday)	336.6	5.61	High
27 (Weekend)	327.6	5.46	High

Part of the IPAQ questionnaire is a mention on the time spent sitting on both weekdays and weekends. Table 3 shows the number of minutes, also converted to hours, spent on sitting. An almost the same time of 5-6 hours allotted for sitting on weekdays and weekends generated a "high" categorical score. This is an evident reason that the employees mostly do their job on a sitting position, and possibly spend their resting time at home on a sitting position as well.

Percentage of Means on Physical Activity Participation

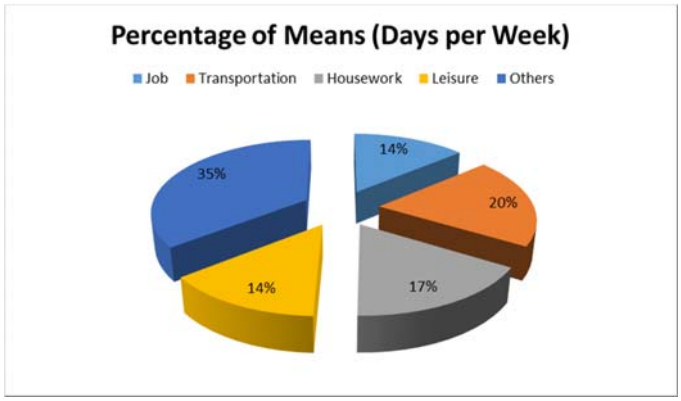

Fig 3: Percentage of Means on Physical Activity Participation on Days per Week Level

Taken as a whole, means' percentage allotment of physical activity on a day per week level is presented in Figure 3. Job and leisure-related activities share the smallest percentage at 14% each, while "others" occupy the biggest at 36%. "Others" in this figure include activities done in a sitting position, and may even include sleeping, which probably accounts for a steady allotment of time on a daily basis. Transportation-related activity and housework activities, share a bigger percentage at 20% and 17%, respectively.

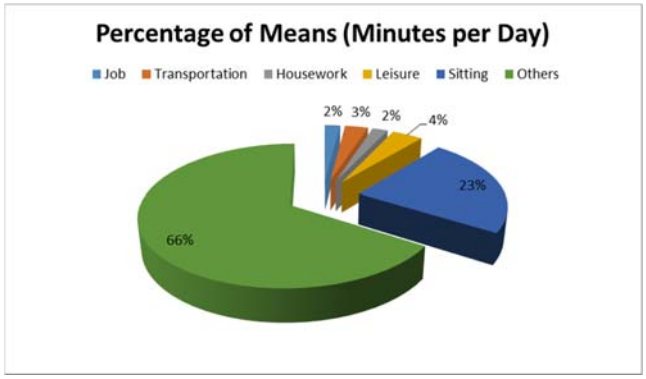

Fig 4: Percentage of Means on Physical Activity Participation on Minutes per Day

Time allotment for sitting during weekdays and weekends, which has been clearly asked in the questionnaire, shares a major percentage of means in time allotment on minutes per day as shown in Figure 4. Regardless of the nature, sitting percentage occupy 23% of the time the respondents allocate per day. All four (4) physical activity-related dimensions as presented in the IPAQ long version only occupy a meagre 2% - 4%. The highest at 66% is for activities that are not part of time allotment for sitting and the 4 dimensions.

4. Conclusion

Findings of the study conclude that Zumba, Aerobic Dance, Yoga, Badminton, Bowling and Taebo are the preferred activities for people approximately 47 years of age. The level of physical activity participation of the respondents is categorically scored as "moderate" in 4 dimensions, namely: Job-related, Transportation, Housework, and Leisure, and that the level of physical activity participation, in terms of days per week and minutes per day, in aspects other than the 4 dimensions, such as sitting and sleeping, considerably exceed the time spent in the 4 dimensions.

Based on the results of this study, it is recommended that CIT University Administrative employees be continuously given a fitness program, like the Project CEXE that would include Zumba and Aero Dance, to further enhance their leisure-related physical activity participation, at least in the workplace. Active participation in such activities coupled with their daily activities, at work and at home, will greatly promote for a more active lifestyle that may either decrease occurrence of non-communicable diseases, or prevent further development of such diseases. As suggested by the Physical Fitness Association of Hong Kong, China and the Department of Sports Science and Physical Education of the Chinese University of Hong Kong when they conducted a Physical Fitness Test for the Community Project in the year 2005-2006, "*Physical activity and fitness promotion campaign should be strongly encouraged and supported because of its strong association with health maintenance, disease prevention, enhancement of the quality of life and healthcare cost reduction.*"

(Community Sports Committee and Leisure and Cultural Services Department, 2005).

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