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THE HEALTHY LIFESTYLE CONSTRUCT OF MUNICIPAL/CITY HALL EMPLOYEES IN THE PROVINCE OF ILOCOS NORTE

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ABSTRACT

This study aimed to establish the healthy lifestyle construct in the Province of Ilocos Norte (PIN) based on the HL profiles of municipality/city hall employees (MCHE). This study is a descriptive research primarily utilizing the survey method involving 290 respondents (93.57%. Females are more exposed to moderate non-occupational work, walking activities, and more indulged in sitting activities for a typical work week while males do much vigorous work both at work and at home. Majority of the respondents are not currently and has never smoked. Average BMI of the respondents is near the upper range limit – which could dip to overweight and obesity. Gender, position level, and geographic location influence the frequency and intensity of leisure activities via outdoor endeavours. Respondents indulge in passive activities during their leisure timeThere is a significant difference existing between this and that of work locale and geographic domain. As the respondents age, the lesser they are involved in passive leisure activities. The pattern of physical activity in terms of frequency and intensity increases as one move away from the nerve center, or central lowlands. Incidentally, the mode of walking as a means of transportation also follows suit. Level of sitting activities increase as one goes away from the central lowlands, especially during weekends. The frequency and amount of alcohol consumed are influenced by all the variables across the study. Majority are not currently and has never been indulged into alcohol consumption. The respondents consume more vegetables than fruits. Banana, apple, and oranges are the preferred fruits; malunggay, saluyot, and camote tops are the vegetables most consumed. A similar relationship exists between the incidence of hypertension and age. One-third of the respondents have a familial history of hypertension, while another third do not have any history of hypertension, diabetes, and/or heart disease.

Keyword: Healthy Lifestyle

INTRODUCTION

Non-communicable diseases (NCD) are gradually becoming a threat to our health especially to those who are within the adult years. As of 2002 there was an obvious increase of about 20% in the mortality rate among males 15-29 years to 60-69 years, and about 16% in females at the same age ranges (World Health Organization, 2002). Such phenomenon has been observed as a general worldwide concern that the United Nations Organization (UN) through the World Health Organization (WHO) became a driving force in implementing programs and policies to address these "outbreaks". In context, the diverse but united thrusts of WHO in terms of NCD

prevention checks on the healthy lifestyle (HL) patterns of individuals, paramount of which are physical activities, diet, and smoking cessation (World Health Organization, 2002). With these factors considered, it is hoped that individuals would become more conscious and aware of their health, fitness, and wellness, which are keys to having a sound body to which resides a sound mind.

The state of being of individuals, especially their health, defines much of their efficiency in the disposition of their functions and their productivity in as far as quality service is concerned. It is a common knowledge that people or manpower is the greatest asset of any nation - to which endeavours, projects, and organizations rest on. Thus, we could say that manpower is indispensable for it spells the rise and fall of quality of goods and services given to the clientele. One of the vital organizations humans are usually concerned with is governance, which directs the state of affairs in a particular community. It is split into different levels, and in the Philippines, it would include the barangay, municipality/city, provincial, regional, and national tiers. Apparently, such political divisions were done based on some factors that justify such clustering, like geographical location and socio-cultural factors that are unique in a certain area which could be vital in influencing the lifestyle patterns of the inhabitants. These socio-political areas mentioned are led by elected government officials aided by appointed government employees working in municipal/city halls in as far as legislation and execution of projects and endeavours geared towards community benefits are concerned. These members of the "working" class are the ones who convert into sundry actions the intricate details of governance – being the arms and feet of the whole organization. They who are at the "first gear" level of the organizational charts are the ones who are constantly in close contact with the constituents – and as such, they are the prime indicators if the government is functioning efficiently or otherwise in the point of view of the common "tao". It is thus a requirement that the employees should keep up with fitness and wellness, for a fit public servant is expected to provide quality service, making their clientele satisfied. Better service provisions entail better and more fruitful interactions between the municipal/city government and the constituents, which could pave the way for progress and further development of the locality. Being mandated to render selfless public service, government employees are committed to minister expeditious service forged in the name of justice, equity, and impartiality, as well as to espouse the philosophy of genuine selfless public service as the true mark of performance and excellence (Civil Service Commission, 2008). In the context of Philippine politics and governance, the smallest unit which mimics that of the national government's routine mechanism is that of the municipalities or cities.

As far as our country's health agenda is concerned, the WHO through the Department of Health (DOH) aids in the formulation of healthy lifestyle programs to address the health conditions of the populace, in which government employees are included, since it is their vision to become the leader, staunch advocate and model in promoting Health for All in the Philippines. These aids take the form of guidelines to which concrete and structured plans and procedures in administering such programs are patterned, which is in consonance with the national objectives for health from 2005 to

2010. An interesting note is the fact that it is explicitly stated in the objectives of the health sector that healthy lifestyle and environmental health should be promoted (Department of Health, 2005). Guidelines such as these are then passed from that of the national level to that of the grassroots, where it is expected that programs concerning the former is efficiently managed. Albeit noble and sound in both objective and lay-out, these set guidelines fail to attain their goals when these reach the level of local governments. This lapse may be due to the lack of ample capabilities of the program implementers to assemble a plan that could fit well into the needs of the individuals to whom it is catered. At times, it is up to the implementers to dish out healthy lifestyle protocols which are according to the expertise of the former, thus putting the needs of the populace in the backseat. This could lead to a loss of interest in practicing such program, as manifested by the increasing number of dropouts attending every session. Also, it could be pointed out that the guidelines set fall short of the expected outcome in a particular target area since there is no concrete evidence of a need for such program to be implemented in the first place. As almost every endeavour nowadays relies on proof-based practices, it is clear that there should at least be baseline data existing to support claims of necessity and eventual effectiveness of a particular program which could be appreciated, re-assessed, and re-formulated as the need arises to obtain a more or less "customized" protocol. At this point, it would also be important to stress that the baseline data being mentioned should be related to aspects concerning an individual's social, economic, geographical, and cultural influences – aspects that could define uniqueness in the healthy lifestyle profile obtained. The said influences would drastically affect the life and living conditions of the people in a certain locality since these are indispensable parts of the environment to which the said people interacts. Being set as a backdrop that sets the stage for persons to mingle in their day-to-day affairs, it is but logical for us to deem that the aspects stated creates a great impact in the lifestyle choices of the subjects considered. Moreover, since the said aspects vary from one locality to the other, such would play an important aspect in considering provinces as areas of study like, in this case, the province of Ilocos Norte (PIN).

Nations advocate for healthy lifestyle to promote wellness especially in the workplace. Securing the health of those in the labor force not only ensures the productivity of this manpower resource; it can also help institutionalize the maintenance of healthy lifestyle among the rest of the populace. Those in government are especially mandated to maintain HL to help the agencies of the state to advocate wellness. With the advent of having worthwhile and sound healthy lifestyle guidelines and programs for the benefit of people in different subpopulations coming from the upper echelons, there are still instances where a program fails due to lack of ample capabilities of implementers in running the program and the apparent sense of tangible need for it. This poses a pressing need for enthusiasts in the field of health and wellness professions to investigate at the grassroots level about certain characteristics that could fill the gap between the healthy lifestyle programs and that of the need of people for such endeavour.

Studying how HL is actually carried out among municipal and city government employees in the province of Ilocos Norte can serve as baseline data. This investigation

METHODS

This study is a descriptive research primarily utilizing the survey method. Independent variables considered were the demographic profile (age, gender, civil status) as well as the position title and level of the respondents. Moreover, the outline of the environment in terms of economic classification of the areas involved, geographical location, and socio-cultural aspects were independent variables significant to the analysis of the research. The study was designed to gather pertinent data regarding healthy lifestyle patterns of the respondents in the areas of physical activity, nutrition, tobacco use, alcohol consumption, and leisure activities (dependent variables). Correlations among the variables were cross-matched with the other clusters and that of the national scenario. As far as the socio-cultural aspect is concerned, an informal focus-group discussion (FGD) was utilized to gather the different insights of the respondents about certain areas of the healthy lifestyle concept. The HL profile provided the baseline data on the establishment of the HL construct of PIN-MCHE. No in-depth data gathering was done for the nutrition parameter in terms of energy expenditure and caloric contents of foodstuffs, as such was confined to fruit and vegetable consumption only. Further, due to time constraints self-recorded physical measurements were made with only height, weight, waist circumference, and blood pressure considered as important in considering physical activity levels in this study. The respondents were municipal/city hall employees of the local government unit - those with plantilla items who have been employed for at least two (2) years regardless of age and gender. Their workplace was situated inside the municipal hall compound alone. Employees on leave and on field work most of the time were not considered as respondents. Also, employees from national offices (BIR, LTO, etc.) were not included in the study. In case a particular office was not located inside or within the vicinity of the municipal/city hall compound, it was not considered as a respondent area.

The study was confined to the local government units of the province of Ilocos Norte only. This did not consider the Provincial Government itself. The following Table (7) plots all the different towns/cities of the province, together with their distinct characteristics, before sampling was done.

The study adapted the STEPwise Questionnaire, which is an instrument used by the WHO. Prepared in 2001, this is the questionnaire for the public health surveillance thrust of the said organization that is based on both standardized data collection and sufficient flexibility to be appropriate in a variety of country situations and settings. The STEPwise approach encourages the development of an increasingly comprehensive and complex surveillance system depending on local needs. The questionnaire deals with the

gathering of data as to risk factors of NCD, namely: demographics, physical activity, tobacco use, alcohol consumption, nutrition, physical measurements, medical history, and leisure activities. This study, however, modified the questionnaire to make it more sensitive in gathering pertinent data regarding the study. Also, the translation of the questionnaire into the Ilocano vernacular was not deemed necessary since it was assumed that the English language comprehension of the MCHE was satisfactory enough to understand the basic questions in the questionnaire. Further, this modified form of the questionnaire has already been fielded using office workers in Metro Manila as subjects.

Aside from the questionnaire, the interview method using informal focus-group discussions (FGD) with the respondents were employed in order to substantiate the socio-cultural backdrop of the HL profiles gathered. Insights on pertinent issues and concepts about the data gathered from the questionnaire were the hub of the questions that were asked during the discussions. The data that was gathered through this instrument aided in the discussion of the HL profiles obtained throughout the study, together with relevant literature gathered. A letter of request was given to the Mayor of the town/city to conduct the study, through the Human Resource Management Officer (HRMO) which explained intent of the study. Upon approval, the researcher requested the HRMO for a list of all municipal employees, together with their age and gender. Most of the LGU's provided the researcher with a hard copy of the plantilla of personnel and classification of MCHE. After screening for possible respondents, the researcher submitted a list of screened respondents to the HRMO and set an appointed date for a meeting with the latter for the conduct of the study. The rank and file was informed of the intent, afterwhich a letter of thanks was also given. Originally the intention of the researcher was to contain the respondents in a room on the scheduled date, and then explain the nature and objective of the study together with the procedures that would be undertaken before answering the STEPWISE questionnaire afforded to them. However, this initial plan was not done in all the towns/cities considered for the study due to the fact that some of the representative towns have very large numbers of respondents that containing them in a room would prove impractical for it would, as the HRMOs claim, be hampering with the mechanism of the municipal/city government. The situation being as such, the researcher modified the gathering of data to the concerned areas by simply floating the questionnaires and gathering them after 2-3 days. To extract the socio-cultural dimension of the healthy lifestyle construct, the researcher was able to conduct informal focus-group discussions (FGD) to the following towns representative of each cluster: Currimao (Southern Coastal), Batac City and Marcos (Central Lowlands), Pasuquin (Northern Coastal), and Nueva Era (Eastern Interior). The questions for the FGD revolved around the insights of the respondents based on the contents of the questionnaire pertaining to their everyday living as far as their local beliefs and practices are concerned. The study was conducted from February 2008 to April 2008.

The preliminary data was obtained based from on the Plantilla of Personnel (POP) for Fiscal Year 2008. For the whole province, there were a total of 659 males and 963 females serving the local government units, totalling 1,622 strong. From here, the

initial number of respondents (initial n) was computed based on the following formula:

$n_o=Z_{\alpha/2}^2 pq/e^2$; where:

$Z_{\alpha/2}$ = statistical constant requesting the value of the standard normal variate with $\alpha/2$ area to its right (in our case: $\alpha=.05$, $\alpha/2=.025$, $Z_{.025}=1.96$)

e= elected margin of error (in our case, it is equal to .05)

p= hypothesized proportion of respondents with healthy lifestyle; in the absence of prior information on "p", it was set at 50% as it was assumed that the respondents are equally likely to adhere to healthy lifestyle (in our case, it is equal to 0.5)

q= 1-p

After obtaining n_o, the samples were adjusted to the total population based on this formula: $n= n_o/1+(n_o/N)$

The preceding formula generated 311 employees as respondents. Adding a 10% buffer in case of drop-outs or incomplete answers, the considered number of samples for the study was pegged at 342 with the following allocations based on clusters determined by geographical characteristics:

Table 1. Allocated sample by weight and frequency per cluster.

CLUSTER	*POPULATION*	*WEIGHT*	*ALLOCATED SAMPLE*
Northern Coastal	209	12.89%	44
Southern Coastal	137	8.45%	29
Eastern Interior	239	14.73%	50
Central Lowlands	1037	63.93%	219
TOTAL	1622	100%	342

In determining the representative cities/municipalities per cluster, a table of random numbers generated from Microsoft® Excel 2003 computer software program, was utilized resulting to the following local government units (LGU) as the respondent areas, together with their allocation by sample weight (Table 2):

Table 2. Representative municipalities and cities per cluster with allocated and obtained samples.

MUNICIPALITY/ CITY	ECONOMIC CLASSIFICATION (M-municipality, C-city)	GEOGRAPHIC DOMAIN	DISTRICT	SAMPLE ALLOCATION (with 10% buffer)	OBTAINED SAMPLES
Pasuquin	M4	Northern Coastal	1	25	27
Pagudpud	M4	Northern Coastal	1	19	17
Solsona	M4	Eastern Interior	2	15	11
Vintar	M2	Eastern Interior	1	35	18
Laoag City	C3	Central Lowlands	1	163	50
Marcos	M4	Central Lowlands	2	16	11
Batac City	C5	Central Lowlands	2	40	38
Pinili	M3	Southern Coastal	2	18	17
Currimao	M5	Southern Coastal	2	11	11
Nueva Era*	M4	Eastern Interior	2	-	23
Bacarra*	M3	Central Lowlands	1	-	22
Paoay*	M4	Central Lowlands	2	-	45
TOTAL				**342**	**290**

*- replacement LGU

Given the sample allocation, the identities of the respective samples were then determined by assigning numbers opposite the names of the employees in the plantilla according to how the latter was arranged. A table of random numbers was again generated from the Microsoft® Excel 2003 computer software program for the choosing subjects from the plantilla roster.

During the initial wave of data gathering, the researcher only obtained 201 responses, representing 64.63% of the required sample size. This was due to respondent dropouts credited to their claim of not having time to answer the questionnaire, while some pointed out on misplacing the questionnaires as their excuse. The areas that manifested the lack in respondents were in the areas of the central lowlands and eastern interior. Nevertheless, the researcher sought for replacement LGU using the table of random numbers generated from Microsoft® Excel 2003 computer software program to augment the need for respondents and obtain a better result. The replacement LGUs were the towns of Nueva Era for the Eastern Interior, and Bacarra and Paoay for the Central Lowlands.

After gathering data from the replacement LGUs, the researcher obtained a total of 290 respondents or 93.57% of the required sample size (Table 10). The data gathered from the questionnaire was then organized into a master data sheet ready for statistical treatment (Appendix 10). Means and cross-tabulations were also generated for each of the variables under consideration. All of these are grouped and presented as results of the study.

The statistical methods used in the study were the Mann-Whitney Test for items with two categories (PA/gender, PA/economics, PA/position level, Leisure/gender, Leisure/economic, Leisure/position level) and the Kruskal-Wallis Test for 3 or more categories (PA/age, PA/civil status, PA/geographical domain, Leisure/age, Leisure/civil status, Leisure/geographical domain) to determine significant differences between categories for variables where scores are quantitative. For the categorical responses, like those for Tobacco Use, Alcohol Consumption, Nutrition, Physical Measurements, and Medical Background, the chi-square test was used to determine if there is significant relation in the response with a variable under consideration. All tests were done at α=0.05.

RESULTS AND ANALYSIS OF DATA

As far as that of physical activities are concerned, the percentage of the time dedicated by females on *mild occupational work* was significantly different from males (p=.006). The said observation is due to the fact that females are more attached to desk jobs than that of males. This pattern is also true for *mild non-occupational work* (p=.016) and *vigorous non-occupational work* (p=.002). We could observe that the physical activities of the employees are dictated by their familial roles after work: with the females doing their chores as mothers within the confines of the home/houseworks and that of males as fathers who does errands outside the house or tend the garden/farm if any. *Transportation mostly by walking* (p=.007) also reflected a significant difference between genders since most of the females have residences which are near their place of work. Especially the married ones, walking is vital to their function as "providers for the home" as they purchase goods in the market, in groceries, and other places of commerce. Usually, males go to work using vehicles of their own – most of the time, by motorcycle (which is a common trend nowadays). For *vigorous work done for the past 7 days*, a significant difference exist between the genders for *frequency of occupational* (p=.000) and *non-occupational non-chore* (p=.001) tasks, together with their respective per-day time allocations (p=.000 for both). On the other hand, observations on *moderate work done for the past 7 days* revealed that the only significant difference lie on *frequency of non-occupational non-chore tasks and per-day time allocations* (p=.000 for both). This was manifested because as far as nature of work is concerned, males do more vigorous tasks than females since most of the former are employed to do high energy jobs in the departments of engineering and agriculture: areas where strenuous activities are done, added to the fact that these same males also tend to their farms and gardens. Further, females differ from males in terms of *per-session time allotment for walking as a means of travelling from place to place* (p=.000) although no significant divergence exist for frequency of such activity per week. With *walking as a means of recreation and leisure*, both genders exhibit significant differences for both *frequency* (p=.034) and *per-day time allotment* (p=.037). In here, males usually walk for exercise more frequently and longer

than females. This could be deduced from the notion that in general, males are more inclined to structured exercises than females. Also, due to the apparent lack of time for doing such, females tend not to participate in such activity and divert their energy more on household chores, which is typical of the Ilocana homemaker. Finally, the *time spent* by females in *sitting* significantly differ from males during Mondays (p=.009), Tuesdays (p=.008), Wednesdays (p=.025), and Thursdays (p=.027). Obviously, this could be the case since females are more pressed on desk jobs than males. There was no sufficient evidence to conclude that there exists gender differences in all other variables in the list of physical activities considered in the study.

In the aspect of age, obvious significant differences are seen on the *mode of transportation using part-walking and part-vehicle strategies* (p=.023). As one gets older, the more one comes to consider and practice this scheme. As claimed by the older respondents, walking as a means of transportation is vital physical activity for them in lieu of structured exercises since the former is obviously more practical and more convenient to do. *Moderate non-occupational chore* activities also pose a significant difference as far as *frequency per week* (p=.033) and *time allotment per session* (p=.047) are concerned: those at the age groups of 35-54 years old devote more time compared to the youngest and oldest age groups. This is due to the fact that it is in the mentioned age groups that the respondents have more defined roles as homemakers (that is, as fathers and mothers). It is noted that as far as the Ilocano society is concerned, and as claimed by the respondents, young professionals are considered by the Ilocano household as a trophy, a status symbol, and as an additional provider: someone to be cared for and pampered. As such, these age groups are exempted in working much at home. Patterns of *walking activities at home* also posit a significant difference across ages in terms of *frequency per week* (p=.040). It can be said that as the respondents age, they tend to increase their walking activities at home and then decline as they go through the elderly stage – as the latter age group considered is focused, this would be an obvious physiologic effect of aging. A striking significance which could further influence the pattern of physical activity across age groups is seen in the number of hours sitting per day: although there is not much difference in sitting hours for each day, it is apparent that the older the respondent is, the average sitting hours decrease. Some factors could be considered here: for one, younger employees tend to get strapped down in their seats doing clerical jobs. Also, these said young professionals tend to get more acquainted with modern technology in both work and leisure: a fact that increases sedentary activity.

The obvious significant differences between civil status and level of physical activity lie on *time allotment for vigorous, non-occupational household chores per session* (p=.047) and that of the *time allotted for sitting activities* during Sundays (p=.022). For the former variable, the widows/ers devote more time doing vigorous household chores (mean=1.85 hours/session), followed by those who are married (mean= 1.32 hours/session), and finally those who are single (mean=0.74 hours/session). Widows and widowers usually stay home alone, and so they are obliged to do the household chores all by themselves, not to mention their old age. As Ilocanos marry and build a new family, they tend to leave their parents. When either parent tends to get widowed, they

apparently man their abode alone should they not consider employing a househelp. Married respondents have partners to share with the household tasks, including that of their children. Respondents who are single typically stay with their parents and siblings still, and at times not pressed to do household chores as a "reward" for contributing to the household fund. The preceding finding goes well with that of sitting activities during Sundays, which could be interpreted as its "reverse". Thus, it could be deduced that due to the time allotment given for vigorous, non-occupational household chores per session, widows and widowers spend less time sitting during the "day of rest", while unmarried respondents spend the day being passive.

Relationship status was also significant, with single respondents reporting more days of vigorous physical activity than those divorced or separated. Being married and having children can have a significant impact on women's activity levels. The responsibilities incurred by having multiple roles, such as parent employee, and spouse, can result in limited time to engage in exercise programs. Childcare responsibilities can present a major barrier to women's participation in exercise (Marcus, 1995).

With respect to physical activity and the position level of MCHE as to administrative/clerical (Level 1) and technical/department head (Level 2) is concerned, Level 1 employees show a significant difference as to the percentage of *time allotted for mild* (p=.006) and *moderate* (p=.002) *occupational work* with that of Level 2 employees. This only shows that in the area of office work, it is obvious that the clerks exert more physical effort in relation to their jobs compared with that of their heads. However, as far as that of *non-occupational chore-like activities* are concerned, it is surprising to note that Level 2 employees significantly exert more effort than that of Level 1 employees, both in the *number of times per week* (p=0.44) and *allotted time per day* (p=.049). It could be discerned from these findings that the heads exert more energy tending to their households than that of the clerks, considering the fact that the former exerts less effort in the office. With more spare energy at hand, the heads could be able to dispose of their tasks as homemakers more. This data also reflects the picture of a typical Ilocano family: despite their hectic schedule, parents would still continue to attend to household needs, regardless of their roles in their place of work. They see to it that whatever the household needs are, they make sure that they personally handle it - household chores are of no exception. Apparently, they are able to "strip off" their occupational functions when at home and strap down to do their thing at home regardless of their position in their jobs. Significant differences also exist between the position levels in terms of *time allotted to walking as a means of travelling from place to place* (p=.030), which reflects the nature of work of some department heads on field as they monitor the affairs of their offices like that of the Municipal Assessor and the Municipal Agriculturist among others, and the *number of days walking as a sport or recreation per week* (p=.008), which manifests the luxury of time the heads have to indulge in such endeavor. For *daily sitting patterns*, important dissimilarities are seen in the *number of hours* devoted for such activity during Sundays (p=0.21), Mondays (p=0.30), and Thursdays (p=0.31). During these days, the department heads spend more time doing sedentary work than the Level 1 employees. It could be taken that during Sundays, department heads are already through with much of

their active household chores while the clerks are still active in doing such. Mondays start the working week and the heads are busy reviewing and signing paperwork in their offices, and the same holds true for Thursdays being the middle day of the week. As with other variables, there is no evidence to prove the association of such to position level.

Significant differences exist between city workers and municipality workers for both *vigorous and moderate non-occupational non-chore activity* in terms of *number of times per week* (p=.030 for vigorous and p=.006 for moderate) and *time allotment per session* (p=.019 for vigorous and p=.003 for moderate). Being in a more rural setting, municipal workers tend to do more vigorous manual, non-occupational work than that of city dwellers. On the other hand, city inhabitants tend to have more time doing moderate non-occupational activities, especially leisure activities, due to the amenities offered by their locale. Further, associations between the number of times the respondents use *walking at home* (p=.033) and *as a means of travelling from place to place* (p=.002) and their work locale are observed, although there is no significant difference as to their respective time allotments per session. This could be due to the fact that those in the city have more walking space due to the physical structure of the house where they live, which could be indicative of economic status. On the other hand, city dwellers have less time walking from place to place due to accessibility of important places to go and the presence of more and better public transportation vehicles. Finally, it is interesting to note that there is a significant difference between *work locale in terms of sitting* during Mondays (p=.008), Tuesdays (p=.038), Wednesdays (p=.036), and Thursdays (p=.020). Apparently, employees in municipal halls devote more time sitting than their city counterparts. This could be due to the verity that city affairs are more hectic and demanding due to the nature and scope of public service compared to municipality tasks as far as number of clientele and work complexity are considered. Other variables are deemed of no significant difference with work locale.

It is apparent that much significant differences were observed between physical activity and geographic domain. *Occupational vigorous activity* (p=.007) occurred most in the eastern interior area (mean=22.35), followed by northern coastal (mean=20.57), central lowlands (mean=13.86), and southern coastal areas (mean=11.25). For *non-occupational vigorous activity* (p=0.13), almost the same trend with the preceding information is observed: only that of the northern coastal (mean=27.65) and the eastern interior areas (mean=27.25) switched places. The accessibility to modern technology that could ease the work burden of the respondents could be pointed out as the cause of this data: those near that of the nerve centre and the Manila North Road obviously have more access to the said amenities than that in the far-flung areas, making those in these areas readily reach and use such technological benefits. There is also a significant difference existing among the domains and that of *vehicle utilization as the prime means of transportation* (p=.036), which could also fall under the accessibility factor of domains. It could be discerned that those in the central lowland areas (mean=56.71) avail of this mode of transportation most of the time, followed by that in the eastern interior (mean=55.49), southern coastal (mean=45.89), and northern coastal (mean=43.86). *Non-occupational non-chore activities* in both *vigorous and moderate modes* also follow such

pattern in the considerations of *number of days done per week* (p=.002 for vigorous, p=.003 for moderate) and *time allotment per session* (p=.001 for vigorous, p=.006 for moderate). Significant differences are also observed between walking activities and the domains in terms of *time allotment per session for walking at work and at home* (p=.011 for both), as well as that of *number of days* devoted to *walking to travel from place to place per week* (p=.000). It could be deduced that necessity encourages the walking pattern of the respondents as far as domain is concerned: the proximity of their home to that of their work locale and other community edifices (church, market,etc.) as well as that of the scarcity of public transportation. Again, these are geographically dictated. Finally, an obvious difference that could be deemed as significant is seen on *sitting activities* during Saturdays (p=.016) and Sundays (p=.033): those in the eastern interior portions devote more time doing things that involve sitting than the other domains, and those at the central lowlands doing the least ones. This could be explained by the accessibility factor to other places and alternative modes of physical activity being offered by the domain, which is again linked to geographical considerations.

A significant difference exists when sport and leisure activities come into consideration in terms of number of times done per month (p=.001) and time allotment per session (p=.000) for gender. This goes to show that males significantly engage in sport and exercise activities more than females due to the existing social construct of males being exposed to these activities more than females. Further, an important disparity emerged from the time allotted for outdoor activities per session (p=.024). This could also tell us of the social construct that females typically stay indoors and that males usually engage in outdoor adventures like hiking, hunting, fishing, and farming.

In as far as gender is concerned, women and girls have historically been denied many of the leisure opportunities open to men and boys. However, the feminist movement has succeeded in urging colleges, school systems, and community recreation agencies to provide more support to female participants in a wide range of sports and physical activities. This also helps women to develop positive self-images and feelings of empowerment. In addition, many women have overcome barriers to professional advancement in various types of agencies in the leisure-service field. Women are also being admitted to business and social groups that had excluded females in the past. In the past, many men were pressured to adopt stereotypical "macho" roles in leisure activities. Today, they are being encouraged to play a more open, sensitive, and creative role in their recreational pursuits, as well as in domestic life and their relationships. (Kraus, 1998).

As far as age is concerned, youngsters devote more time to sport-related activities per session (p=.043). Passive activities decline in frequency per month (p=.019) and time allotment per session (p=.014) as they grow old. This is due to the claim that Ilocanos are by nature hardworking people, and that they tend to feel sicklier when they lounge around more often when they are old. This is in contrast with the study by De Vera (2003) on the most preferred leisure activities of senior citizens from Metro Manila which are those that require decreased exertion, group/family oriented, enhances special skills and talents, and acquires new or technical knowledge. In as much as the youngsters

are concerned, most of their leisure activities deal with sedentary modalities such as watching TV, surfing the Net, or playing portable on-line electronic games.

Widows obtained the highest mean values for all aspects of leisure in terms of activity, number of times done per month, and time allotted for the activity per session, although not deemed statistically significant. This could be attributed to the claim that this group of respondents have more time for themselves as they "enjoy being single again". There is no significant difference existing between civil status and leisure activities.

A significant difference is also manifested when outdoor activities come into consideration in terms of number of times done per month (p=.026) and time allotment per session (p=.030) as far as position level is concerned. Department heads apparently have more time and finances to spend with family and friends in going for outdoor undertakings than that of clerks.

Leisure activities engaged at by MCHE, as reflected in the data, are mostly passive activities like watching TV, reading, and napping (mean = 11.1 times per month, 1.36 hours per session) across all variables. There is a significant difference existing between this variable in terms of number of times per month and time allotment per session for work locale (p=.008 for both) and geographic domain (p=.019 and p=.037, respectively). City dwellers significantly allot most of their time doing passive activities due to better accessibility to different modes of entertainment such as cable TV. Also, the stress level that comes with city life and semi-urbanized environments in the central lowlands and the southern coastal areas are far greater than that of living in municipalities in the other clusters, thus city dwellers engage in passive activities more in order to unwind better. This is followed by household chores (mean = 4.13 times per month, 0.78 hours per session).

Incidentally, a significant difference is also shown between the clusters and that of outdoor leisure activities in terms of number of times done in a month (p=.001) and time allotment per session (p=.007): the same observation is attributed to both southern coastal and central lowland areas. An explanation that could be offered for such is the extent and diversity of choices that the concerned respondents are offered in terms of their environment. People in the central lowlands are offered more choices of spending their leisure with, although of a passive nature, than those living in the outlying clusters. The pattern of number of times household chores are done per month in terms of leisure activities are also significantly different across domains (p=.039): the more "demanding" the household is in terms of domain, the more likely the respondents use their spare time to do their household tasks. The term "demanding" implies the complexity of work offered in the home. This is applied to those at the central lowlands and southern coastal areas.

In the aspect of tobacco use, it is noted that majority of the respondents do not currently smoke (90%) and has never smoked (89.4%). However, there is a significant difference between gender and being a current (p=.000) or past smoker (p=.000), respectively: females tend to smoke lesser than males. In contemporary Ilocano society, females who smoke are ill-regarded by people around them, and even tagged as "bad

women" who are not worthy of emulation. Also, most of Ilocano males do not encourage their wives to smoke due to the above mentioned notion. Further, it is also noted that there is a significant difference between genders as to quantity of smoked items: males tend to smoke more than females. All other variables are not significant based on gender.

In terms of other factors considered in the study, there is no significant relationship between age, position level, work locale, civil status, and geographical domain with that of being a current or past smoker. The same holds true with that of type of item smoked, age of commencement/cessation of tobacco use, and quantity of item smoked.

For alcohol consumption, it was observed that there is a significant gender difference existing among the respondents for drinking during their entire lives as well as that of the past year: men tend to be acquainted more of the enumerated kinds of beverages than women (p=.000 for most of the variables considered, except for wine and other drinks). However, there is no significant difference existing as to the frequency of drinking is concerned since almost all of the respondents who have a history of current alcohol consumption answered "occasionally". Beer and wine emerged as the "drink of choice" of MCHE. It is interesting to note that only one respondent claimed to drink "basi", which is the Ilocano indigenous drink. This was apparently due to decreased production of the said beverage, as well as the increased accessibility of commercial alcoholic drinks. It is also the notion that drinking basi is a practice of "old men". For the typical Ilocano, "basi" is now regarded as a "ritual" wine for funerals and offerings to spirits. There are significant differences between males and females when it comes to age when they began taking alcohol, and alcohol intake on a daily basis (p=.000 for both). Just like that of tobacco use, females are not well-regarded when they drink the way men do, due to the social stigma of being recognized as ill-reputed, not only by society but also by their own family members. Also, the respondents claim that consuming alcohol, together with smoking, are a "boy's thing". Among males, however, alcohol consumption is a part of social interaction with other men and also as a "break" from everyday routine. Just like in other places in the country, a male who drinks is "magaling makisama", while a man who does not is regarded as effeminate or "mabait" most of the time.

In the case of age, a significant difference exist on the choice of beverage across the groups, especially on beer (p=.004) and wine (p=.000). Apparently, these are the most preferred drinks of the younger age groups. This could be due to the fact that although these beverages relatively cost more than the other drinks in the market, the youngsters apparently have more money to spend for themselves due to their being single. Again, this reverberates from the fact that single adult MCHE in the province still live with their parents, who oftentimes still provide free accommodations, food, utilities, and even services (laundry, etc.) for them. Also, the younger respondents tend to go to bars in the locality which primarily serve beer and wine, among others. Frequency of brandy intake (p=.042) significantly increases as respondents age. The most striking observation is seen on the frequency of drinking alcohol per week. It is seen that regardless of day of the week, Ilocano employees tend to drink more often as they age. This could again be linked to the social behaviour of the Ilocano male as far as interacting with peers are concerned.

The incidence of consuming beer during one's entire life is associated with position level (p=.037). The same is also observed with brandy (p=.000) and whiskey (p=.016). The probability that one has consumed brandy (p=.002) and whiskey (p=.016) is also associated with the variable under consideration. With these, it could be deduced that department heads have the tendency to have consumed the said alcoholic beverages more than that of the clerks. Alcoholic beverages are regarded as status symbols in Ilocano society, as claimed by the respondents: the more costly the drink consumed, the higher is one's status in society is. With this, it is obvious that department heads are more exposed to more kinds of beverages than the clerks due to the increased capability of the former to purchase and consume such beverages: both in time and finances. Also, brandy and whiskey are considered social drinks, which are at times reserved for people with utmost importance and regard during public functions and gatherings – in which the municipal and city hall bosses are included. It is discerned in the data, however, that most of the respondents who drink only does so occasionally. By far, it is also observed that the age when the respondents started consuming alcohol (p=.0.14) and the daily intake of such beverage (range of p-value from 0.11 during Fridays to 0.24 during Saturdays) bears a significant difference to position level. As far as age is concerned, it could be attributed with the social dimension of Ilocano boys being initiated to drinking earlier by their peers and relatives who are older than them after a long day's work or during special occasions, especially those who are at the lower income bracket. The amount of drinks consumed per day could be pointed out to the social bonding the rank-and-file employees usually have after working hours and during weekends as a form of unwinding from everyday concerns.

The only significant difference between work locale and the consumption of alcoholic beverages is with respect to drinks other than those on the list (p=.008 for intake during one's entire life and during the past year). Since city dwellers apparently have better access to goods and services, it is but natural for them to be exposed to more varieties of intoxicating drinks, from tequila to "basi", than their municipal hall counterparts.

Alcohol consumption and that of civil status significantly generate a pattern difference to those of frequency of beer-drinking (p=.001), wine-drinking for the past year (p=.019), gin-drinking for the past year (p=.049), whiskey-drinking for the past year (p=.033), and consumption of other alcoholic beverages during one's entire life and during the past year (p=.031 for both). While most of the respondents drink occasionally (71.7%), widows and widowers consume beer twice a day (33.3%) more than the married and unmarried ones (0% for both). On all other frequency measures, married respondents tend to drink most often, followed by singles. This shows that the preceding respondents engage more in drinking as part of their unwinding as well as their socialization with others. Singles have the most probability of drinking the other enumerated alcoholic beverages mentioned above for the past year and during their entire life. Again, this is attributed to social factors.

Significant points to be considered under alcohol consumption as crossed with geographical domains are frequency of wine-drinking (p=.001), gin-drinking (p=.001),

brandy-drinking (p=.001), and whiskey-drinking (p=.033). It is observed that those at the northern coastal areas engage more frequently in drinking than that of the other domains. This could be attributed with the apparent cold weather in the place due to the cool breeze coming from the north-western side of the province for most of the year. Apparently, this is a means of heating their systems up, especially during cold nights, as the respondents claim.

There is no association between gender and fruit and vegetable intake: whether male or female, their pattern of consumption of the following foodstuff is the same. Thirty-seven point two percent of the respondents consume 1 serving of fruit per day, while 35.5% of them do not eat fruit everyday. The preferred fruits consumed by both genders were a combination of banana, apple, and orange (13.8%). On the other hand, 63.8% of the respondents eat 2-4 servings of vegetables per day. The vegetables consumed were a combination of malunggay, saluyot, camote tops, and squash (8.3%) and together with ampalaya (7.2%). The same relationship holds true with age, position level, work locale, civil status, and geographical domain. As far as weather and terrain are concerned, Ilocos Norte is not a preferable place to grow fruits with, and so most of it would come from other places and are readily purchased in the market. This also goes true with banana in which the said fruit consumed is not the indigenous variety, but rather the Cavendish type. Much of the land is utilized to grow rice, garlic, tobacco, and corn among others. Further, fruits are regarded more as a luxury and as a dessert for a typical Ilocano. A different scenario, however, exists as far as vegetable consumption is concerned. Ilocanos literally love malunggay and saluyot, and are main ingredients to their regional dish which is "dinengdeng" – a vegetable stew flavoured with "bagoong" and usually mixed with fried or roasted fish. Reflective of their hardy and independent character as they survive their hostile environment, malunggay and saluyot are a natural part of the Ilocano landscape – they exist in almost every yard. Camote tops are enjoyed best as a salad and dipped with "bagoong". Ampalaya is a mainstay dish for "pinakbet" – together with okra, eggplant, stringbeans, patani seeds, and tomatoes. This vegetable is already gaining favour from the Ilocanos due to their anti-diabetic properties. Squash is by far regarded as a favourite due to their belief that it contributes to good eyesight when consumed.

The main physical characteristic that is considered in the study is that of body mass index (BMI) – which is one of the indicators for overweight and obesity. It is deemed that there is a significant difference existing between genders for this preceding variable: males have a slightly higher BMI value (24.32) than females (23.38). Both values, incidentally fall under the normal range of BMI but near the upper limit (normal BMI range: 18.5-25.0).This goes to show that MCHE, whether male or female, is at risk of being obese or overweight if they would not consider healthy lifestyle patterns. As far as waist circumference is concerned, which is also an indicator of obesity since it indicates the extent of abdominal fat in the respondents, it is noted that Ilocano males and females are still far from the clinical threshold, having an average of 32.47 inches and 30.5 inches, respectively. The said threshold is pegged at ~40 inches for males and ~35 inches for females. Among others, it was found out that BMI and waist circumference are

not associated with age, position level, work locale, civil status, and geographic domain.

For medical history, it is noted that 69.2% of the respondents do not suffer from hypertension for all variables considered. Most of them also had their most recent BP reading just this year. Thus, we could say that they have increased awareness on the importance of having a regular BP monitoring and work-up. The incidence of having hypertension is not significant with gender, position level, work locale, civil status, and geographical domain. It is significant, however, in terms of age (p=.001), for it is seen that those at the 45-54 year-old age group suffer more of this disease (42.7%). The pharmacological management of hypertension also poses a significant difference: most of those who have the said condition take antihypertensive drugs (83.1%) for all variables across the study. The significant difference lie in the incidence of taking the said drugs for work locale (p=.043) and geographic domain (p=.010). This shows that respondents in the cities and central lowlands most likely take drugs than that of those in municipatities in the other domains. It could be said that the respondents in these areas have better access to drugs (availability and cost) and information regarding drug use. Also, 33.1% of the respondents have a family history of hypertension while 35.9% claimed that they have no familial inclination to hypertension, diabetes, and/or heart disease. This is true for all variables across the study. It is noteworthy that the enumerated health conditions are the mainstays of hypokinetic disease, and that it could be seen in the data that MCHE have a low incidence for such.

In the course of seeking for pertinent national data to be compared with the obtained facts in the study, the researcher came across the results of the 2003 National Nutrition Survey established by the Food and Nutrition Research Institute – Department of Science and Technology (FNRI-DOST). Significant data on physical activity, nutrition, physical measurements, and hypertension were extracted from the said report, and was related with the findings of this study.

Physical activity patterns of MCHE in PIN follow the general trend of that in the national data. As far as gender is concerned, females show more inactivity than males in both occupational and non-occupational aspects. Further, it is shown that as MCHE in PIN increases in age, inactivity increases. This result also mirrors that of the Philippine trend. An important point to be focused, however is the fact that as an LGU employee in Ilocos Norte reaches middle age, there is a slight increase in physical activity in terms of both occupational and non-occupational aspects.

The intake of vegetables is 111 grams including 31 grams green leafy and yellow vegetables and 80 grams of other vegetables. The intake of fruits is 54 grams per capita per day, which includes 12 grams of vitamin-C rich foods and 42 grams of other fruits. In a regional perspective, the Ilocos area emerged as the highest consumer of vegetables by weight, pegged at 171 grams. As far as fruit consumption is concerned, however, the region is the 4th lowest at 41 grams. This coincides with the consumption of the said foodstuffs in the province, which takes in 180-360 grams (2-4 servings) of vegetables and 30 grams (1 serving) of fruit per day. It is noted, however, that people in Ilocos Norte prefer to have more green leafy and yellow vegetables than other varieties. Vitamin-C rich fruits continue to be less consumed by the said group of respondents.

In the aspect of self-recorded physical measurements, the average Ilocano male MCHE is taller by .03 cm than the average Filipino of the same gender. For females, those in Ilocos Norte are .05 cm taller than the average Filipina. For weight, Ilocano males are heavier by 8.49 kg than average Filipino males, while Ilocano females are heavier by 5.52 kilograms than the average Filipina. As far as BMI is concerned, the respondents fall under the moderate-risk values for the Asian population, which differs from the majority of Filipinos having low-risk range values (52.7% of males and 41.5% of females, respectively). For waist circumference, the Ilocanos are in consonance with majority of the Filipinos falling below clinical thresholds for obesity (that is, ~40 in for males and ~35 in for females, respectively).

The results obtained in the study as far as hypertension is concerned compared to the national data are very interesting: Ilocos Norte have more prevalence of hypertension compared to the whole of the country by 8.3%, although it coincides with the fact that the prevalence of hypertension increases with age. It could be said that while there is one in every five Filipino adults suffering from hypertension, being an Ilocano MCHE increases the risk by approximately one-half.

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

The study generated the following observations:

- The average MCHE in Ilocos Norte is a 44 year-old married female, who is working in a Level 2 position at the central lowland, city area.
- Females are more exposed to moderate non-occupational work and walking activities, while males do much vigorous work both at work and at home. However, females are more indulged in sitting activities for a typical work week than their male counterparts.
- Those at the middle-age group devote more time doing moderate non-occupational chores than those of the young and elderly brackets. As age increases, the likelihood of doing part-walking and part-riding modes of transportation increases. Sitting activities decline as age increases.
- Level 1 employees exert more effort in the office, while those at Level 2 apparently do more work at home. Walking patterns are more manifested by Level 2 employees as they dispose of their work and sweating out as a form of exercise. Sitting activities are more obviously seen to be done by Level 2 employees during Sundays, Mondays, and Thursdays.
- City dwellers are more inclined to moderate non-occupational non-chore activities, while that of municipal inhabitants do vigorous non-occupational non-core work more. Further, city dwellers walk more at home and in travelling from place to place. They also sit more during weekdays as they go about their work.
- Widows/widowers do more vigorous non-occupational household chores than that of their married and unmarried counterparts. They obviously have a lower sitting activity especially during Sundays.
- Respondents in the eastern interior and central lowlands have much significant

differences as far as physical activity and geographic domain are concerned: the pattern of physical activity in terms of frequency and intensity increases as one moves away from the nerve center, or central lowlands. Incidentally, the mode of walking as a means of transportation also follows suit. Level of sitting activities apparently increase as one goes away from the central lowlands, especially during weekends.

- Across all variables, respondents indulge in passive activities during their leisure time, adding to the fact that there is a significant difference existing between this and that of work locale and geographic domain. As the respondents age, the lesser they are involved in passive leisure activities.
- Gender, position level, and geographic location influences the frequency and intensity of leisure activities via outdoor endeavours.
- Widows and widowers indulge more in leisure activities, regardless of type, than their other counterparts.
- Gender is a critical factor in determining smoking behaviour. In the context of the respondents, majority of them are not currently and has never smoked.
- The frequency and amount of alcohol consumed are influenced by all the variables across the study. It is noted that majority of the respondents are not currently indulged and has never been indulged into alcohol consumption. Overall, no binge drinking exists among the respondents.
- Across all variables, the respondents consume more vegetables than fruits. Banana, apple, and oranges are the preferred fruits taken in. Malunggay, saluyot, and camote tops are the vegetables most consumed.
- Gender influences the BMI of the respondents. However, the average BMI of the respondents are near the upper range limit – which could dip to overweight and obesity.
- Majority of the respondents do not suffer from hypertension, but those who do have one take in medications. The incidence of having hypertension is not significant with respect to all variables across the study. However, it is apparent that there is a significant difference between drug intake and work locale - geographic domain variables. A similar relationship exists between the incidence of hypertension and age. One-third of the respondents have a familial history of hypertension, while another third do not have any history of hypertension, diabetes, and/or heart disease.

This study has revealed certain trends pertaining to the different factors that may influence the HL profile and construct of MCHE in the context of Ilocos Norte.

- Physical activity is influenced by demographic, sociocultural, economic, and geographical factors.
- Leisure activities are influenced by demographic, sociocultural, economic, and geographical factors.
- Tobacco use is influenced by demographic and sociocultural factors.

- Alcohol consumption is influenced by demographic, sociocultural, economic, and geographical factors.
- Fruit and vegetable consumption is influenced by geographical and economic factors.
- Physical characteristics are influenced by demographic factors.
- Medical background is influenced by demographic, geographical and economic factors, especially in the aspect of drug compliance for hypertension.

With these, it could then be concluded that **the assumption of the study *"the HL construct of MCHE in PIN is demographically, economically, geographically, and socio-culturally determined"* is accepted.**

The following implications related to the study are noted:

- Majority of employees in Ilocos Norte are under the high-risk age for NCD onset.
- Decreased physical activity is observed in the young adult.
- Women continue to assume the "housekeeper" role.
- Geographical location is crucial in the delivery of goods and services.
- The influence of personalities rather than positions in the facilitation of thrusts and projects are of great impact in Ilocano bureaucracy.

Based on the findings of this study, the following recommendations are forwarded:

- Encourage females and Level 1 employees to indulge more in physical exercises and sports activities to provide an alternative to routine, day-to-day physical activity.
- Come up with workplace programs that encourage smoking cessation and alcohol intake moderation to decrease the level of current tobacco use and alcohol consumption profile of MCHE. Inculcate in the minds of smokers that majority MCHE are NOT smoking and therefore they should consider quitting.
- Come up and comply with an office physical activity protocol to decrease the incidence of passive behaviour, or prolonged sitting during work hours.
- Although MCHE satisfactorily comply with acceptable fruit and vegetable consumption patterns, it is recommended that they should be open with other plant-based foodstuff alternatives without compromising their current consumption phase. Fruit consumption should be increased, though, especially that of Vitamin-C rich ones.
- Weight watching is a must to ensure that BMI levels are contained within the healthy range. Moderation, variety, and balance in nutrition, as well as that of regular physical activity should be observed.
- The self-reported physical measurements of the respondents in the study should be validated with existing data, preferably extracted from the Municipal/City

Health Offices.

- Information dissemination regarding the nature of hypertension and the importance of taking in maintenance drugs should be given full blast to the municipalities. On top of this, the concept of hypokinetic disease should be shared to MCHE to increase their awareness about 'diseases of choice'.
- Leisure should be given more emphasis in the parlance of sociocultural factors. Leisure alternatives that are indigenous to the place that promote physical activity and a holistic approach to recreation should be considered.
- Further study should be pushed through to:
    - Verify the relationships among the healthy lifestyle correlates
    - Apply the study to other sectors of the populace (elderly, children, other locale, etc.)
    - Consider the use of the Food Frequency Questionnaire to have an in-depth study of the relationship between nutrition and physical activity in Ilocos Norte.