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Research Article

Genetics, Lifestyle, and Work: Perceived Determinants of Health Problems in Employees

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ABSTRACT

In an institutional setting, understanding the causes of employee health problems is crucial to achieving organizational productivity and operational efficiency. While comprehensive research focuses on the health and wellness profiles of organizations, the determinants of health problems specifically, genetics, lifestyle behaviors, and workplace dynamics remain underexplored. To address this gap, the study focused on the causes of health problems as perceived by the Philippine Merchant Marine Academy (PMMA) employees. Using quantitative-descriptive design, a survey was conducted from March to April 2024 to gather data from 131 respondents selected through purposive sampling and were processed using descriptive statistics. Based on the results, lifestyle is the perceived primary cause of their illnesses, with a few of the respondents smoking, drinking liquor, having sleep problems, food and drinks choice issues and having inactive lifestyle. Some of the respondents also admitted having illnesses similar to the predisposed illnesses in their family like hypertension and diabetes. Work dissatisfaction, inequality, unacceptable workload, and unpleasant relationship were among the work issues identified by a few of the employee-respondents. This was a small percentage; however, this can still affect their performance, which could affect the overall performance of their team. Based on the findings, conduct of health-related seminars and distribution of pamphlets, review of the current institutional health-related policies, and replication of this research are recommended.

Keywords: *Employee Performance, Genetics, Health Problems, Lifestyle, Perceived Causes, Work*

Introduction

Illnesses among employees are caused by multifactorial, resulting from a complex interaction between genetic predispositions, personal choices, and workplace conditions. While lifestyle factors are often primary drivers, they may be developed or worsen due to

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working conditions, which in turn are moderated by an individual's genetic makeup.

According to Kanerva et al. (2017), unhealthy lifestyle and sleep problems had increased risk of health-related absences. This could mean that several unhealthy habits like smoking, poor sleep, poor nutrition, sedentary life or excessive alcohol contribute to several illnesses. Relatively, Garg (2025) identified diabetes, cardiovascular diseases, and obesity as lifestyle-related health conditions. He linked these to sedentary lifestyle, unhealthy dietary choices, and rising stress levels. Complementing these findings, Santos et al. (2025), in a study conducted at a Philippine University, emphasized that sedentary lifestyles and work-related demands may negatively affect both the physical and mental well-being of university employees. These studies highlight that lifestyle choices play an important role in employees overall health as unhealthy habits may increase the risk of illness and adopting healthier habits may promote better well-being.

On the other hand, family history has been considered one of the risk factors for diseases like cancer, cardiovascular disease, diabetes, autoimmune disorders, and psychiatric illnesses (Hernandez & Blazer, 2006). In the Philippines, health problems influenced or caused by genetics range from common chronic lifestyle-linked conditions with hereditary components to rare, life-threatening inherited metabolic and neurological disorders (Padilla & La Paz, 2016). Additionally, the research of La Paz et al. (2024) supports the idea that in Filipino families, inherited genetic variations can contribute to health problems. Complex, multigene inherited patterns can increase susceptibility to common chronic diseases (e.g., heart disease, diabetes), which may be activated or accelerated by work stressors). Having a genetic predisposition could make one more sensitive to toxins or less resilient to stress as compared to others. This underscores the importance of family medical history in identifying possible health risks and preventing complications associated with chronic diseases (Pasaporte & Tolentino, 2026).

On the other hand, the physical aspects of a workplace environment can directly affect the morale, comfort, concentration, health, and productivity of workers. Employee productivity can be negatively affected by an unsafe work environment in a health facility, including inappropriate furniture, poorly designed workstations, inadequate ventilation, excessive noise, inappropriate lighting, poor supervisor support, a poor work environment, poor communication, inadequate fire safety measures for emergencies, and a lack of personal protective equipment. Health professionals working in such an atmosphere have the possibility of contracting occupational diseases like heat stress, hearing loss, ergonomic problems, and breathing difficulties. Health workers' productivity and performance can decrease due to poorly planned workplace environments because this negatively affects them and may lead to poor motivation and lack of job satisfaction (Edem et al., 2017).

Adding long working hours to the equation could cause a catastrophe. As the World Health Organization (2021) and International Labour Organization jointly released the estimates of work-related Burden of Disease and Injury. Accordingly, the number of deaths from heart disease due to long working hours increased by 42%, and from stroke by 19%, between 2000 and 2016. This exposure is responsible for about one-third of the total estimated work-related burden of disease. This study concluded that working 55 or more hours per week is associated with an estimated 35% higher risk of a stroke and a 17% higher risk of dying from ischemic heart disease, compared to working 35-40 hours a week. Correspondingly, other work-related factors can also negatively impact employee's health. For instance, a study conducted by Villanueva et al., (2023) involving Philippine contact centre employees identified client demands and heavy workloads as major sources of their work-related stress. Prolonged work-related stress may negatively impact and increase the risk of developing health problem; therefore, Aust et al., (2023) stresses the importance of improving working conditions through certain organizational-level interventions to improve employee's health.

It is important to note that the interaction between work, lifestyle, and genetics is often dynamic: a stressful job (work) may lead to smoking or poor eating habits (lifestyle),

which, in a person with a genetic predisposition to cardiovascular disease (genetic), results in a heart attack. Thus, effective prevention requires addressing lifestyle, work environment, and genetics to reduce long-term disease.

Currently, literature on health and well-being of employees exists; however, there is scarcity of data that analyze how lifestyle, genetics and workplace factors manifest as perceived causes of illness in an institution.

The completion of the health profiling of the employees of the Philippine Merchant Marine Academy (PMMA) made by the researcher prompted this research. This study aimed at identifying the determinants of the employees' health problems, focusing specifically on the perceived causes of the respondents' health conditions in terms of lifestyle, genetics and work-related factors. This is to promote awareness among the employees and help them realize how these three factors work together in suppressing illness risks or triggering them. Thus, the results contributed to the attainment of the United Nation's Sustainable Development Goal (SDG) 3, which is "Good health and well-being".

Framework of the Study

Self-awareness theory (Silvia, 2019) developed by Shelley Duval and Robert Wicklund in 1972 posits that an individual can focus either inward (self) or outward towards the environment. When attention is focused on the self, one compares itself to personal standards. On the other hand, if it is outward focused, then the basis becomes the external standards. Whichever standards is focused on, self-evaluation is performed. It specifies how one ought to think, feel, or behave. This process allows one to change behavior. Thus, self-awareness is a major mechanism of self-control.

Relative to the study, if an employee becomes aware of what causes a disease, he or she can decide on what to do. If one has inherited certain illness, s/he can perform self-regulation of his/her lifestyle to reduce its impact or find a work less stressful or learn to manage work demands to avoid its negative effect.

Methodology

Research Design

The study used a quantitative-descriptive research design to determine the health-related information. Descriptive research is a type of research that aims to accurately measure and describe an existing phenomenon or situation. Using survey, data were analyzed for frequencies, averages and patterns (McCombes, 2023).

The variables of the study are the perceived causes of health issues of the employees – lifestyle, genetics, and work.

Respondents

The 131 respondents of the study were the employees of the Philippine Merchant Marine Academy, regardless of age, sex, marital status, position, or employment status. They came from the different departments and units of the academy, which include clerical and administrative support (55), professional (32), service occupation such as security officer, food service, janitor (22), executive/management (14), and precision production and craft worker such as mechanic, carpenter, machinist (8). These respondents are those who participated in the recently completed health profiling study to ensure understanding and continuity. Purposive sampling was used.

Table 1. Main Job

Main Job	Frequency	Percentage
Clerical and administrative support	55	41.98
Professional	32	24.43
Service occupation	22	16.79
Executive/management	14	10.69
Precision production and craft worker	8	6.11
Total	**131**	**100.00**

Ethical Consideration

This study was carried out with the highest ethical standards. No respondent was forced to respond as they were given the decision to proceed only if willing to participate, and anonymity was assured in their responses. The respondents' personal information was treated with strict confidentiality, and all gathered data was used solely for research purposes. Furthermore, all the literature, studies, and references used in this study were correctly cited, acknowledged, and referenced. The manuscript also underwent similarity checking using Turnitin.

Limitation of the Study and Future Direction

The study is limited to the responses of the PMMA employees and their perceptions of what caused their medical conditions. The study also focused on lifestyle, genetics, and work-related factors, excluding other possible contributors to illness. A more in-depth inquiry was not performed, as the purpose is only to make the respondents become aware of what had possibly caused their illnesses, if any. Thus, the findings may not fully represent their actual health conditions and lifestyle practices.

Future studies may consider a larger and more diverse population to improve the generalizability of the findings. Further research may also explore additional health determinants to provide a broader understanding of the factors influencing employees' health. Additionally, workplace health programs may be developed and evaluated to promote employee well-being and prevent lifestyle-related illnesses.

Instrument

The instrument focusing on the causes of these illnesses as perceived by the respondents was a self-made survey questionnaire with various response formats. The questionnaire underwent face validation by the institution's medical doctor and the administrative officer to establish the logical relevance of the questions. The medical doctor validated the clinical accuracy of the perceived causes to avoid confusion in the statements, for example, the distinction between causes of hereditary condition and lifestyle issue are categorized correctly. On the other hand, the administrative officer validated the organizational context and feasibility of work-related factors, meaning statements under this category relate to workloads, schedules, office environment and the like. All comments for improvement were addressed to come up with the final instrument.

Data Gathering Procedure and Analysis

The Google form was used, an online survey tool that can be sent out via email, mobile chat, web, and social media through a web link. Administered face-to-face data collection was also employed for 22 employees who were willing to participate but without computer and internet access. Data collection started in March and was completed in April 2024.

The data collected were processed using the Statistical Package for the Social Sciences (SPSS). The statistical tools used were frequency, percentage, and weighted mean.

Tables and graphs were used to present the data.

Results and Discussion

Possible Causes of Health Condition

Health conditions can be caused by different factors: lifestyle, genetics, and work-related. The purpose was not to generalize the causes, but to subtly promote awareness among the respondents of what possibly had caused their illnesses. This awareness could lead to realization that one's health is one's responsibility.

Lifestyle

The link between productivity and lifestyle was found by De Bortoli et al. (2021). Their study showed that exposure to various unhealthy lifestyle factors increase the chance of absence due to illness and poor performance at work. Thus, this study surveyed the respondents' lifestyle.

Smoking. Table 2 provides the information on the smoking habits of the respondents. The result shows a significant percentage of the respondents, almost 75% have never smoked cigarettes. A smaller percentage are current smokers or ex-smokers, and who only smoked a few times.

Of those who smoke (32), Figures 1 to 3 provide additional information.

Table 2. Smoking Habits

Response	Frequency	Percent
Never	98	74.81
Only smoked a few times	15	11.45
Currently	10	7.63
Ex-smoker	7	5.34
No Response	1	0.76
Total	**131**	**100**

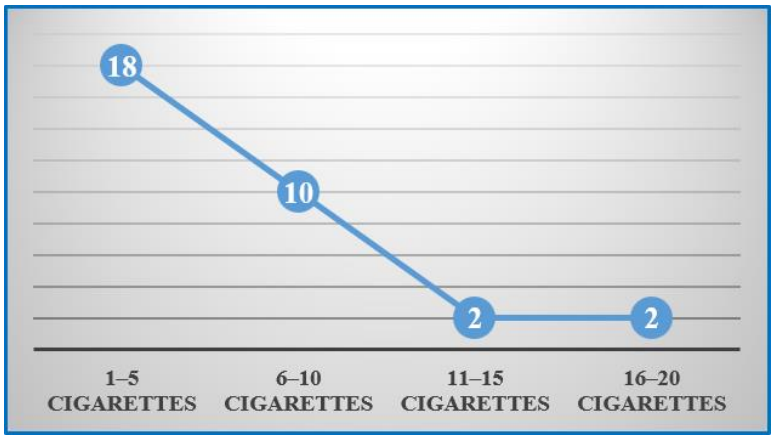


Figure 1. Number of Cigarettes Smoked on an Average Day

In can be noted from Fig. 1 that, majority of the respondents who smoke consume 1 to 10 cigarettes per day, with a few outliers smoking more, 15 or 20 cigarettes. The most common responses are 1 and 10 cigarettes per day. According to the Philippine Statistics Authority (2010), male daily smokers typically smoke 11 cigarettes per day, compared to seven cigarettes per day for female daily smokers. Additionally, Preciados and Carcajente (2017) found that prior to the Sin Tax Law, young smokers consumed more cigarettes on average than adults. Adult smokers consumed an average of 11 cigarettes per day, similar to PSA, whereas young smokers consumed approximately 21 cigarettes per day.

As to how long they have been smoking (Fig. 2), the finding shows a range of smoking durations, with a notable number having smoked for 1-5 and 16-20 years.

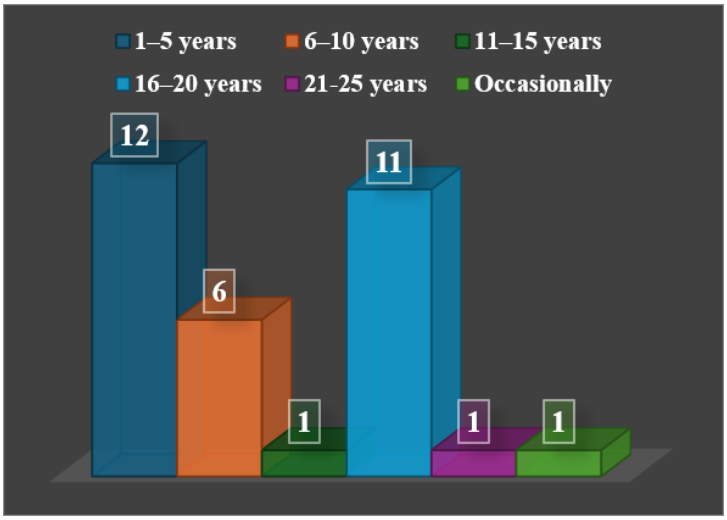


Figure 2. Number of Years Smoking

Majority of the smoker-respondents do not find it difficult to refrain from smoking in places where it is forbidden. However, a small number do find it challenging

According to Kandasamy et al. (2023), partial bans have no significant effect on smoking prevalence and may even increase smoking intensity among daily smokers. Furthermore, Figure 1.3 shows that 91% of smokers reported difficulty avoiding smoking in public areas where smoking is prohibited, such as mosques and libraries. Moreover, Catalano and Gilleskie (2021) found that comprehensive bans reduce national smoking rates over time, particularly among younger groups. However, these prohibitions had no substantial effect on the intensity of smoking among current smokers, indicating that they are just finding new places and times to smoke.

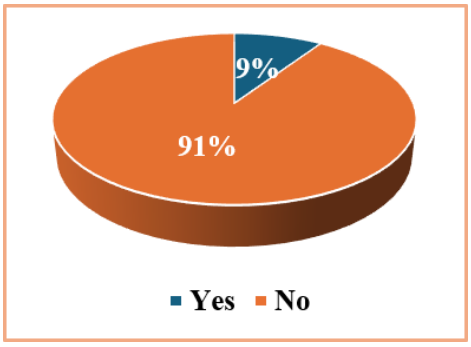


Figure 3 Can Refrain from Smoking in Places Where It Is Forbidden

Alcohol. Another area included under Lifestyle is *alcohol intake*. Sixty-nine employees (52.67%) responded that they consume beer or alcohol while sixty-two (47.33%) responded not consuming beer or alcohol. This indicates that most of the respondents consume beer or alcohol. Recognizing these habits can be important for health assessments and lifestyle considerations, particularly in contexts where alcohol consumption may impact health outcomes.

Around the world, people drink alcohol, especially young people. However, a number of health, social, and financial challenges have been linked to binge drinking (Wysokińska & Kołota, 2022). As interpreted by Griswold et al. (2018), drinking alcohol is a key contributor to health loss and a major risk factor for the worldwide disease burden.

The respondents were asked about how many drinks they usually have per day. As presented in Table 3.1, for both Wine and Beer, the majority of the employees responded consuming 1-2 drinks when they drink. Marcos et al. (2021) concluded in their study that moderate beer drinking is defined as an intake of about 10–16 g of alcohol per day for women (around one beer) and 20–28 g per day for men (one to two beers), assuming this consumption is spread throughout the week without heavy episodic or binge drinking, particularly on weekends. Based on this, it can be construed that most of the respondents drink moderately.

The distribution of responses for Wine and Beer is somewhat similar across all categories, with slightly higher percentages in the lower drink categories (1-2 and 3-4 drinks) for Wine compared to Beer. In the findings of Cravero et al. (2020), older adults may prefer wine over other alcoholic beverages while young people tend to favor sweeter options like sweet spumante, liquors, and whisky, whereas red wine, passito wine, dry spumante, and grappa are more appreciated as people age.

Table 3. Frequency of how many drinks the respondents have per day

	Wine (8-ounce glass)		**Beer (330ml bottle)**	
	Frequency	**Percent**	**Frequency**	**Percent**
1 - 2 drinks	52	75.36	48	69.57
3 - 4 drinks	12	17.39	19	27.54

	Wine (8-ounce glass)		Beer (330ml bottle)	
	Frequency	**Percent**	**Frequency**	**Percent**
5 - 10 drinks	3	4.35	2	2.90
10+ drinks	2	2.90	0	0.00
Total	**69**	**100**	**69**	**100**

Table 4provides the frequency of consuming 5 or more drinks per day among respondents. Varying patterns of alcohol consumption are noted. The majority of the respondents (46.38%) were drinking 5 or more drinks less than once a month. A significant number also reported drinking at these levels 1-3 days a month (18.84%) or 1-2 days a week (15.94%). Similarly, Moreno-Llamas and De La Cruz-Sánchez (2023) identified in their study that in terms of alcohol consumption, there were abstainers, ex-drinkers, and individuals who occasionally drink alcohol. Moderate beer consumption was more common, while high levels of drinking were less frequent. Among the various types of beverages, beer, wine, and mixed drinks were the most widely consumed.

Table 4. Frequency of drinking 5 or more drinks per day

Response	Frequency	Percent
Nearly everyday	1	1.45
Several days a week	5	7.25
1 – 2 days a week	11	15.94
1 – 3 days a month	13	18.84
Less than once a month	32	46.38
No response	7	10.14
Total	**69**	**100**

Sleeping habits. Another area taken into consideration is the sleeping habits of the respondents. Table 4 indicates the frequency of sleep problem experienced by respondents over the past twelve months of the 131 respondents, only 128 responded on this part.

Majority of respondents (56) had no trouble getting to sleep nearly every night. A significant number (68) did not experience waking nearly every night and taking an hour or more to get back to sleep. Many respondents (64) did not wake up nearly every morning at least two hours earlier than they wanted to. A substantial portion (45) did not feel sleepy during the day. Nevertheless, the combined one to 4 weeks responses, as well as the minimal number of those with sleeping issues in the last 12 months should not be taken for granted. As Caldwell et. al (2019) found, being tired and sleepy increases danger, much more getting little sleep has considerable negative effects on one's health. Additionally, less hours of sleep contribute to the issue on presenteeism. Also, as evidenced by the study results of Tavares and Kamimura (2014), employee productivity is significantly impacted by sleep. It is well known that getting too little sleep impairs one's ability to perform at work and is a major contributor to productivity levels.

Table 5. Frequency of Sleep Problem Experienced by Respondents Over the Past Twelve Months

In the past twelve months, how many weeks did you have problem?	**0 Weeks**	**1-2 Weeks**	**3-4 Weeks**	**5-8 Weeks**	**9-12 Weeks**	**12-26 Weeks**	**27-51 Weeks**	**52 Weeks**
Getting to sleep when nearly every night; it took you two hours or	56	42	13	7	4	4	0	2

In the past twelve months, how many weeks did you have problem?	0 Weeks	1-2 Weeks	3-4 Weeks	5-8 Weeks	9-12 Weeks	12-26 Weeks	27-51 Weeks	52 Weeks
longer before you could fall asleep?								
Staying asleep, when you woke up nearly every night and took an hour or more to get back to sleep?	68	35	12	4	4	2	1	2
Waking too early; when you woke up nearly every morning at least two hours earlier than you wanted to?	64	38	13	4	4	1	2	2
Feeling sleepy during the day?	45	43	18	10	7	0	3	2

Food and drink preferences. Food and drink preferences was also included in the survey.

Table 6 provide the results.

Most respondents (almost 88%) love fruits and vegetables, implying a strong preference for these healthy food options. Starchy foods are enjoyed by more than half of the respondents and about 41% like dairy products. A high percentage (76%) of respondents prefer protein-rich foods; nearly 44% enjoy fatty or sugary snacks. According to Tariga et al. (2021), the diets of many Filipino consumers are influenced by wellness, psychological factors, and social aspects. There is a growing interest of Filipinos in organic foods and self-cooking practices whereas health, quality, and safety are becoming increasingly important considerations in their food choices.

respondent's diet has wellness, social and psychological influence. Organi

Almost all respondents (95%) prefer water, which is consistent with the fact that water is essential for hydration and overall health. Coffee is a popular choice, with 69% of respondents enjoying it, which suggests it is likely due to its stimulating effects and social views. About half of the respondents (48.09%) like fruit juices, which indicates that they are favored alternatives to water and possibly perceived as a healthy drink choice. Over half of the respondents like milk and dairy drinks (56.49%). Soup and broths (38.17%), soda or soft drinks (36.64%) and tea, cocoa/hot chocolate (35.11%) are moderate preferences by the respondents. Energy drinks are the least favored (3.82%) indicating awareness of its potential health risks. In Turkey, younger people tend to prefer high-energy drinks with little nutritional value, while older people prefer traditional, healthful drinks like black tea and ayran (Nergiz-Unal et al., 2016). In Australia, the main sources of energy intake from beverages were alcoholic drinks, coffee, and soft drinks for adults. Coffee was also the largest contributor to calcium intake for adults. Fruit juice was the primary contributor to vitamin C intake for adults, followed by alcoholic drinks for adults (Riley et al., 2019).

Table 6. Food and drinks the respondents love

Food	Frequency	Percentage
Fruits and vegetables	115	87.79
Protein (beans, fish, shellfish, eggs, meat, etc.)	100	76.34
Starchy food (potatoes, bread, rice, pasta, etc.)	73	55.73
Fat (cakes, biscuits, savory snacks [salty or spicy] etc.)	57	43.51
Dairy (cheese, yoghurts, etc.)	54	41.22

Drinks	Frequency	Percentage
Water	124	94.66
Coffee	91	69.47
Milk and dairy drinks	74	56.49
Fruit juices	63	48.09
Soup and broths	50	38.17
Soda/softdrinks	48	36.64
Cocoa/hot chocolate	46	35.11
Tea	39	29.77
Vegetable juices	12	9.16
Energy drinks	5	3.82

Given this, it is still important to reiterate that excessive intake of any, including healthy food and drinks, may have a negative impact on health. Healthy eating is not just about knowing what to eat, it is also about understanding why people make certain food choices and finding ways to help them develop healthier eating habits. (De Ridder et al., 2017)

Therefore, balance is the key.

Meal Schedule. Figure 4 shows that majority of respondents (61.83%) eat on scheduled meals indicating that meal timing is a structured part of their routine which could lead to more regular eating habits and potentially better overall health and productivity. A portion (11.45%) does not follow a meal schedule at all while 26.72% of the respondents have a mix of scheduled and unscheduled meals, indicating a flexible approach that can change based on daily needs, circumstances, and work schedule. According to Manoogian et al. (2019), meal scheduling optimization has several health advantages and has a lot of potential for future lifestyle changes.

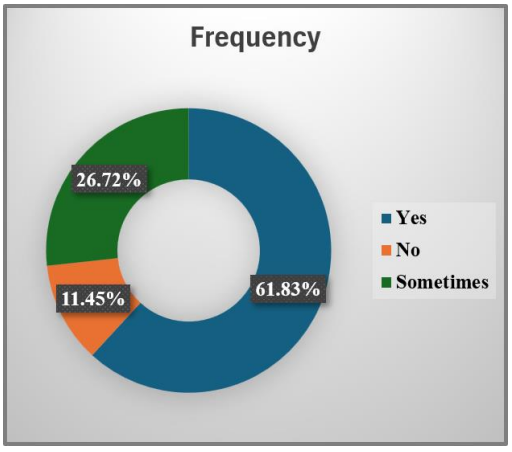


Figure 4 Scheduled Meals

Water Intake. Acceptable hydration, generally recommended as 8 glasses per day, was met by most respondents (59.54%), as presented in Table 7. However, attention may be needed for groups that cannot consume enough glass a day, which may result to higher risk of dehydration-related health problems. Various health problems, such as headaches, tiredness, and reduced concentration, may result from dehydration (Taylor & Jones, 2022). Additionally, dehydration negatively affects the mood, attention, memory and reaction. Therefore, proper water intake and rehydration are necessary (Zhang et al., 2019). Providing reminders on the health benefits of adequate hydration may help to educate and potentially improve the general well-being status among these respondents.

Table7. Number of Glasses (8 Oz Per Glass) of Water Consumed Per Day

Number of glasses	Frequency	Percent
8 glasses or more	78	59.54
6-7 glasses	30	22.90
4-5 glasses	21	16.03
2-3 glasses	2	1.53
Total	**131**	**100**

Exercise. Performing exercise is another way to stay healthy. The respondents were asked about this, and the results are presented in Fig. 5, Tables 8. and 9.

Most of the respondents said that they performed exercises in the last 12 months (80.15%) while 19.85% said that they did not perform exercises. This is a smaller percentage but still significant. Lack of exercise can contribute to an inactive lifestyle, which is linked to various health risks such as obesity, cardiovascular diseases, and overall reduced physical fitness (Park et al. 2020).

Table 8 shows that walking is the most common exercise among the employees, with 70.99% answered that they walk regularly. A little over twenty-nine percent (29.01%) of the respondents engages in chore-related exercises. This might include activities like gardening, cleaning, or other manual tasks. E et al. (2023) noted that, in addition to exercise, assisting with household chores has a distinct health-boosting effect on adolescents.

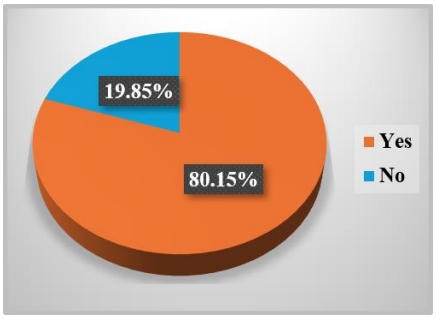


Figure 5 Percentage of respondents who perform exercises

Table 8. Kind of Exercises Perform

Exercises	Frequency	Percentage
Walking	93	70.99
Chore-related exercises	38	29.01
Extreme exercise	25	19.08
None	2	1.53

It is important to note that while a significant number of individuals incorporate exercise into their daily routines, it is not as common as walking. Respondents composed of 19.08% participate in extreme exercise, which might include high-intensity workouts or sports.

Generally, exercise recommendations suggest at least 150–300 minutes per week of moderate-intensity, 75–150 minutes per week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity (Yang, 2019). Based on the result (Table 6.2), almost one-third of respondents who perform exercise seem to meet or exceed this exercise recommendation, especially with 73.34% exercising for 30 minutes and beyond.

Physical activity may still be beneficial for the 26.67% who exercise for less than 30 minutes. However, this duration could be less effective for achieving more complete fitness

goals or health benefits if not performed at high intensity or with a high frequency. According to Khoury et al. (2019), although medical organizations have slightly differing recommendations about the ideal weekly exercise duration, regular aerobic activity improves cardiovascular health. Adults should generally try to get in at least 30 minutes of activity most days of the week.

Table 9. Time Spent in Exercising

Time	Frequency	Percent
1 hour or more	37	35.24
30 minutes to less than 1 hour	40	38.10
Less than 30 minutes	28	26.67
Total	**105**	**100**

Biological/Genetics

The second considered factor that may affect the health conditions of the respondents was genetics. Several illnesses such as cancer, cardiovascular disease (CVD), diabetes, and autoimmune disorders may be caused by the genes inherited by a person (National Library of Medicine, 2006). Tables 10 and 11 provide the results.

Table 10. Similar Illnesses Run in the Family

Response	Frequency	Percent
Yes	41	31.3
No	68	51.9
No Idea	21	16
No response	1	0.8
Total	**131**	**100**

It is noted from Table 10 that 31.3% of the respondents indicated that their illness runs in the family. This means the respondents might be experiencing a condition with genetic or hereditary links. On the other hand, according to 51.9% of respondents, their illness does not have a genetic factor. This indicates that for more than half of the cases, the condition could be sporadic or connected to other factors instead of genetic predisposition. Johansson et al. (2023) stated that complex diseases result from a combination of genetic, lifestyle, and environmental factors, encompassing common noncommunicable diseases.

Additionally, the respondents were asked what are the illnesses that run in their family. As seen in Table 11, hypertension and diabetes are the most frequent genetically predisposed illnesses in the family/clan of the respondents. Asthma, allergies, heart disease, and cancer also affect a notable proportion of individuals. Many responded to none of these illnesses, indicating genetic diversity or possibly a lower prevalence of these conditions in some families/clans. According to the study of Hajar (2020), genetics significantly influence the cardio-vascular system; and family history can be a strong indicator of heart diseases, high blood pressure and high cholesterol.

Table 11. Genetically Pre-Disposed Illnesses (Hereditary)

Genetically pre-disposed illnesses	Frequency	Percent
Hypertension	58	44.27
Diabetes	41	31.30
Allergies	20	15.27
Asthma	17	12.98
Heart disease	13	9.92

Genetically pre-disposed illnesses	Frequency	Percent
Cancer	9	6.87
None	43	32.82

Work Related

Figure 6 shows that most of the respondents (127 out of 131) have not had work-related injuries due to unsafe equipment in the last two years. This implies that unsafe equipment has not been an issue regarding work-related injuries in the Academy. Although there were some (4 out of 131) who responded having experienced such injuries – three (3) and one (1) encountered minor cuts and second-degree burns respectively.

The low percentage of injuries might indicate effective safety measures related to equipment. However, it is important to maintain and review these safety protocols to ensure they remain effective and address potential hazards before they lead to incidents or accidents. As Lette et al. (2018) revealed in their study, limiting work overload, promoting the use of safety equipment, and controlling the use of specific substances at work can all help lower the number of occupational illnesses and job-related injuries.

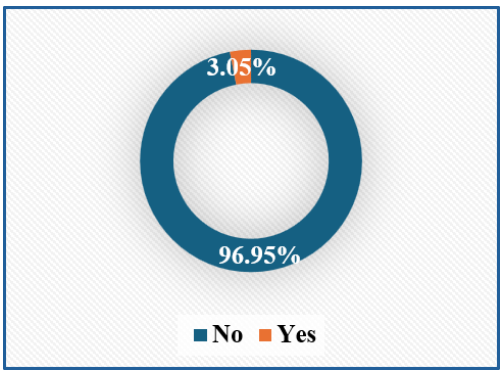


Figure 6. Frequency of Work-Related Injury in the Last Two Years Because of Unsafe Equipment in Work Environment (From 2021-2023)

Some other issues were asked from the respondents covering satisfaction, relationship, and others. According to Mj et al. (2017) unsafe working environment can affect workers' productivity and performance. World Health Organization (2017) also pinpointed that individuals working in stressful environments are more likely to smoke, exercise less, and eat less. It is, therefore, necessary to include this aspect of the employees' life.

Table 12 shows that most of the respondents are satisfied with their work status, workload, and work relationships, and perceive equality at work. However, few respondents were dissatisfied, and there was a noticeable impact on their health. Dissatisfaction is particularly high in areas where fewer people feel negatively (e.g. perceived equality and workload).

Job satisfaction is greatly impacted by employees' perceptions of work balance, especially when they compare their workloads with those of coworkers earning comparable or more money. Likewise, it was discovered that workers become more dissatisfied when they feel their burden is greater than that of their colleagues (Inegbedion et al., 2020). Oshio (2021) discovered that job dissatisfaction can contribute to health problems in middle-aged workers. Thus, he recommended that policymakers and managers monitor employee job dissatisfaction and adopt workplace adjustments to encourage improved occupational health.

This result can help identify areas where improvements can be made to improve employee satisfaction and well-being, particularly in extents where dissatisfaction is correlated to

health issues. Stress brought by inequality, imbalance work-life, work relationships can affect health conditions. As Akbolat et al. (2020) found in their study, an inverse relationship between workers' anxiety levels and working conditions and social conditions existed. Thus, the need to improve the working conditions to reduce anxiety levels.

Table 12. Work-Related Issues

Are you satisfied with your work status?	**Frequency**	**Percentage**	**Is it affecting your health?**	**Frequency**	**Percentage**
No	15	11.45	No	8	53.33
			Yes	7	46.67
Yes	116	88.55			
Total	**131**	**100.00**		**15**	**100.00**
Do you feel that there is equality at work?	Frequency	Percentage	Is it affecting your health?	Frequency	Percentage
No	24	18.32	No	8	33.33
			Yes	16	66.67
Yes	107	81.68			
Total	**131**	**100.00**		**24**	**100.00**
Do you feel that your workload is acceptable?	Frequency	Percentage	Is it affecting your health?	Frequency	Percentage
No	7	5.34	No	2	28.57
			Yes	5	71.43
Yes	124	94.66			
Total	**131**	**100.00**		**7**	**100.00**
Is your work relationship pleasant?	Frequency	Percentage	Is it affecting your health?	Frequency	Percentage
No	7	5.34	No	4	57.14
			Yes	3	42.86
Yes	124	94.66			
Total	**131**	**100.00**		**7**	**100.00**

Overall, the previous discussion shows the possible causes of the medical conditions of the respondents – lifestyle, biological, or work-related. It must be noted, however, that a more in-depth inquiry was not performed, as the purpose is only to make the respondents become aware of what had possibly caused their illnesses, if any.

To reinforce this awareness, their perception of what caused their medical conditions was asked, and Table 13 presents the results.

The primary perceived cause of illness among employee respondents is lifestyle with 39, suggesting a strong belief in the impact of personal habits and choices on health. This indicates that many respondents consider their illness to be primarily due to lifestyle choices such as diet, exercise, stress management, and daily habits. The findings of Velten et al. (2018) emphasized the significance of maintaining healthy lifestyle choices to enhance psychological well-being and reduce mental health challenges. Bayod and Arnosa (2021) advocate for promoting a healthy society by focusing on five key elements: physical activity, plant-based diets, avoidance of harmful substances, adequate sleep, and fostering deep connections with others and the environment. They emphasize that these components are essential for overall health and well-being.

Table 13. Cause of Their Illness as Perceived by Respondents

Indicators	Frequency	Rank
lifestyle	39	1
biological	24	2
work	23	3
Others	6	4

The second most common perception is biological factors, including genetics and inherent medical conditions (24) as a major cause of illness. Work ranked third as a cause of illness by 23 respondents. This implies that work-related factors, such as stress, workload, or job environment, are also seen as a contributor to their health issues. Other factors, ranked least, include external factors like stress, personal trauma and experiences with 6 respondents.

Saedpanah et al. (2022) found that workload has an impact on occupational stress, physical health, mental health, sleep quality, and personal and family concerns. Based on the empirical findings of Zhenjing et al. (2022) it can be concluded that a supportive workplace environment improves employee performance by encouraging achievement, motivation, and resilience in difficult situations. Furthermore, a favorable environment fosters dedication and loyalty, which leads to better task performance among employees who are dedicated to their organization. Finally, Hafee et al. (2019) concluded that the work environment has a major impact on employee performance and is critical to achieving organizational success.

Conclusion

Overall, the respondents identified lifestyle as the main cause of illnesses, followed by genetics and work-related factors. Contributing lifestyle factors include smoking, alcohol intake, sleeping difficulties, unhealthy food preferences, irregular meal schedules, and inadequate water intake, and inactive lifestyle. Meanwhile, genetics may have contributed to their current health issue with hypertension and diabetes as the most predisposed illnesses in their family. Although work-related concerns were reported by only a few respondents, issues such as work dissatisfaction, inequality, unacceptable workload, and unpleasant relationship still warrant attention.

Recommendations

Based on the findings and conclusions of the study, the following recommendations are hereby offered:

1. The GAD with the Medical Unit work together in giving seminars and distributing pamphlets on healthy lifestyle.
2. Review current health-related policies, if any. Relatively, to improve health through introduction of techniques such as, but not limited to circadian rhythm, monitoring tools, stress countermeasures and technologies.
3. Replicate this research to those who have not participated to come up with an institution-wide determinants of health problems.

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