

Ministry of higher education and scientific research

Noble technical Institute

Medical laboratory technician department

Second Stage



Effect of Blood Pressure on Human Health-A Cross Sectional Study among Student in Noble Technical Institute

PREPARED BY:

Kawsar abdulla Kareem

Alan Talib

Medya Fadhil

Dlpak Yusuf Tahir

Rayan ghazi

Nehayat Star

Sumaya Nasr

Enas Farhad

Hori Mho

Supervisor by:

Dr. Rabar Mohammed Hussain

2023-2024

Abstract:

Hypertension affects nearly 1.3 billion people worldwide and results in the death of approximately 10 million people. Blood pressure can be the result of an unhealthy lifestyle, genetic, or due to environmental factors that can affect overall health and increase the risk of cardiovascular diseases. The risk of hypertension increases with respect to age, gender, or ethnicity. The study was conducted about the effect of blood pressure on human health on the other hand Noble Institute has provided 9 different departments We focused on nursing and business department. The following results were noted that 11% are between 20-29 years old and 9% are under 20 years old ,12 students had their blood pressure checked during fasting. The results were between 6/10 and 9/11.

پوخته:

پهستانی خوین به نژیکهیی ۱.۳ ملیار کس له جیهاندا تووشی دهبیت و سالانه نژیکهیی ۱۰ ملیون کس دهکوژیت ، دهکرت به هوی ههلیژاردنی شیوازی ژیانی ناتهندروست وهک نهنجامنه دانی چالاکیی جهستهیی ریکوپیک و پیویست یان بۆماوهییه وه یان ژینگهیان که دهتوانیت کاریگهیی لهسهه تهندروستییان و مهترسی تووشبوونیان بهو نهخوشیه زیاتر بکات ، ههروهها مهترسی تووشبوون به بهرزبوونهوهی پهستانی خوین به پشتبهستن به تهمن و رهگهز یان نهتهوه زیاد دهکات. بابتهی توژینهوهکه سهبارته به کاریگهیی پهستانی خوین لهسهه تهندروستی مروّف نهنجامدراوه ، لهلایهکی ترهوه پهیمانگای نۆبیل ۱۱ بهشی جیاوازی دابین کردوه نیمه گرنگیمان به بهشی پهستاری و بازرگانی داوه . نهو نهنجامانهی که دهستمان کهوت ۱۱% تهمنیان له نیوان ۲۰-۲۹ سالدایه و ۹% تهمنیان له خوار ۲۰ سالدایه ، ۱۲% خویندکار پیش نان خواردن پشکنینی پهستانی خوینیان بۆ کراوه، نهنجامهکان له نیوان ۶\۱۰ و ۹\۱۱ بووه.

الملخص:

يصيب مرض ارتفاع ضغط الدم ما يقرب من ١.٣ مليار شخص في جميع أنحاء العالم ويؤدي إلى وفاة ما يقرب من ١٠ ملايين شخص. يمكن أن يكون ارتفاع ضغط الدم نتيجة لنمط حياة غير صحي أو سبب وراثي أو بسبب عوامل بيئية يمكن أن تؤثر على الصحة العامة وتزيد من خطر الإصابة بأمراض القلب والأوعية الدموية ومنها ضغط الدم. يزداد خطر ارتفاع ضغط الدم قمنا بإجراء دراسة عن تأثيرات ضغط الدم على صحة الإنسان ومن منطقة مقارنة بالعمر أو الجنس أو الأمة أو عرق الشخص أخري قم معهد نوبل باتوفر ٩ قسم مختلف ركزنا على قسم التمريض و قسم إدارة الأعمال . ١١٪ تتراوح أعمارهم بين ٢٠- ٢٩ سنة و ٩٪ أقل من ٢٠ سنة ، تم فحص ضغط الدم لـ ١٢ طالباً أثناء الصيام. ونتائجك بين ٦/١٠ و ٩/١١.

Acknowledgment:

First of all, we must highlight our greatest gratitude to Almighty Allah for his blessing who made our able to complete and perform this study with success. We would like to express our special appreciation and gratitude to our supervisor) dr. Rabar Muhammed (for all his effort in making this work possible: we highly appreciate his valuable scientific advice, patience and guidance throughout this long project.

We would like to thank colleagues at Noble institute for their kind and generous assistance.

Content

Introduction.....	1
Blood pressure related to Body	4
Effects of Blood pressure on parts of the body	5
Blood pressure in Turkey	6
Blood pressure in USA	7
Blood pressure in Uk	8
Blood pressure in Brazil	10
Blood pressure in Iraq and Kurdistan	11
Erbil History and Culture	12
Description of noble	13
Result	14
Discussion	18
Conclusion	19
Reference.....	20

List of figures

Figures, 1 Stethoscope
Figures,2 Taking blood pressure
Figures, 3 Turkey
Figure, 4 USA
Figure, 5..... UK
Figure, 6 Brazil
Figure, 7 Erbil
Figure, 8..... Noble Technical institute
Figure,9 Taking Blood Pressure inside the Noble Technical institute

List of tables

- Table,1list of blood pressure rates in Nursing department**
- Table,2list of blood pressure rates in Business Administration department**
- Table,3list of maximums, minimum and medium in Nursing department**
- Table,4maximum, minimum and medium in Business Administration department**
- Table,5 list of maximums, minimum and medium blood pressure in general**

Introduction:

Blood pressure is the measurement of the pressure or force of blood inside your arteries. Each time your heart beats, it pumps blood into arteries that carry blood throughout your body. This happens 60 to 100 times a minute, 24 hours a day. Arteries deliver oxygen and nutrients to your whole body so it can function and Blood pressure is measured in millimeters of mercury.

High blood pressure (hypertension) is a common condition that affects the body's arteries. It's also called hypertension. If you have high blood pressure, the force of the blood pushing against the artery walls is consistently too high. The heart has to work harder to pump blood, most people with high blood pressure have no symptoms, even if blood pressure readings reach dangerously high levels. You can have high blood pressure for years without any symptoms. A few people with high blood pressure may have: Headaches, Shortness of breath, Nosebleeds However, these symptoms aren't specific. They usually don't occur until high blood pressure has reached a severe or life-threatening stage.

Primary hypertension, also called essential hypertension, For most adults, there's no identifiable cause of high blood pressure. This type of high blood pressure is called primary hypertension or essential hypertension. It tends to develop gradually over many years. Plaque buildup in the arteries, called atherosclerosis, increases the risk of high blood pressure. Secondary hypertension: -This type of high blood pressure is caused by an underlying condition. It tends to appear suddenly and cause higher blood pressure than does primary hypertension. Conditions and medicines that can lead to secondary hypertension include: Adrenal gland tumors Blood vessel problems present at birth, also called congenital heart defects, Cough and cold medicines, some pain relievers, birth control pills, and other prescription drugs, Illegal drugs, such as cocaine and amphetamines, kidney disease. (Low blood pressure) (hypotension) Low blood pressure is a reading of less than 90/60mmHg. It does not always cause symptoms, but you may need treatment if it does. Get your blood pressure checked if you keep getting symptoms like: lightheadedness or dizziness, feeling sick, blurred vision, generally feeling weak, confusion, fainting, this might mean your blood pressure is too low.

If you get symptoms when you stand up or suddenly change position, you may have a type of low blood pressure called postural hypotension Many systems of the body, including organs, hormones, and nerves, regulate blood pressure. For example, the autonomic nervous system sends the "fight-or-flight" signal that, depending on the situation, tells the heart and other systems in the body to increase or decrease blood pressure. Problems with the autonomic nervous system, such as in Parkinson's disease, can cause low blood pressure. Other causes of low blood pressure include: Blood loss from an injury that causes a sudden drop in blood pressure, Dehydration, Diabetes, Heart problems such as arrhythmias (irregular heartbeat), Medicines to treat high blood pressure, depression, or Parkinson's Pregnancy. Systolic pressure. The first (upper) number is the pressure in the arteries, when the heart beats Systolic pressure is the top number in a blood pressure reading and represents the pressure in the arteries when the heart contracts to pump blood out

during a heartbeat. Diastolic pressure. The second (bottom) number is the pressure in the arteries when the heart rests between beats. Diastolic pressure is the bottom number in a blood pressure reading and represents the pressure in the arteries when the heart is at rest between beats, filling with blood. It's the minimum pressure in the arteries.



(Figures, 1... Stethoscope)

Aims of the study:

This research aims to clarify the effects of High blood pressure. The study was also to determine blood pressure and it's associated with countries like Iraq, Turkey, Brazil, USA and UK. The research attempts to show causes and effects of blood pressure and its data in the world in general and Kurdistan in specific. Blood pressure profiles and hypertension in Iraqi primary school children, to elucidate blood pressure (BP) levels and the prevalence of hypertension (HT); as well as to address some epidemiological variables which contributes to BP and suggest certain primordial guidelines for control and prevention of childhood HT.

Literature review

Blood pressure related to Body:

Hypertension, another name for high blood pressure, can harm the body subtly for years before any symptoms show up. If left untreated, high blood pressure can result in death by heart attack or stroke, as well as disability and a low quality of life. Millimeters of mercury, or mm Hg, are used to measure blood pressure. Hypertension is generally defined as a blood pressure measurement of 130/80 mm Hg or more. In order to reduce the risk of potentially fatal medical disorders, high blood pressure can be controlled with treatment and lifestyle modifications. High blood pressure is When blood flows through blood vessels more forcefully than is deemed healthy, the condition is known as high blood pressure. (Sheps, 2003, p17) Over time, high blood pressure can harm the walls of arteries and blood vessels. If untreated, this might result in fatal consequences and other serious issues. Systolic over diastolic pressure is the method used to assess blood pressure. The term "diastolic" describes the pressure that occurs between heartbeats, whereas "systolic" describes the pressure that occurs during a heartbeat. When an adult's blood pressure is less than 120/80 mmHg, it is deemed normal. Until problems start to arise, high blood pressure has no symptoms. (Goldman, 2018).



(Figures,2... taking blood pressure)

Effects of Blood pressure on parts of the body:

Blood pressure has impact on the human's body differently. Includes 1- Damage to the Arteries Strong, elastic, and flexible arteries indicate good health. Because their inner lining is smooth, blood may flow easily, giving essential tissues and organs with oxygen and nutrients. The pressure of blood passing through the arteries rises with elevated blood pressure over time. This could result in:

- Arteries damaged and constricted: Elevated blood pressure has the potential to harm the inner lining of the arteries. Food-derived lipids can build up in the injured arteries when they reach the bloodstream. The arterial walls lose some of their elasticity over time. This restricts the body's ability to receive blood.

Methods: A cross-sectional study recruiting 1427 (46.1% boys versus 53.9% girls) school aged students (6-12 years) from 8 primary schools in Baghdad during the period November 2001 to May 2002. The BP readings were plotted adopting principles of the 1996 American Task Force on High Blood Pressure in Children and Adolescents.

Results: For both genders, the combined mean systolic blood pressure (SBP) was 106.66 ± 9.03 mm Hg and combined mean diastolic blood pressure (DBP) was 67.09 ± 7.98 mm Hg. There were no significant statistical differences noted with respect to SBP and DBP among boys and girls except at the age range of 10–12 years, where girls manifest higher SBP ($p < 0.01$) and DBP ($p < 0.05$) than boys. Obesity was reported in 7.3% of sample with significant girl's preponderance (3.2% for boys versus 4.1% for girls, $p < 0.05$). Hypertension was recorded 1.8

fold higher among obese (4.7%) than non-obese children (2.6%) ($p < 0.05$). Multiple regression analysis showed positive and significant correlation of age, weight, height and body mass index with each SBP and DBP. The overall prevalence of HT was 1.7% with significantly higher systolic HT (1.1%) than diastolic HT (0.6%) ($p < 0.05$) but with no significant gender distribution (0.8% for boys versus 0.9% for girls). For both genders in the hypertensive group, the mean SBP was 127.66 ± 5.46 mm Hg and DBP was 77.26 ± 6.19 mm Hg.

Conclusion: Despite the low prevalence of our childhood HT (1.7%) compared to some Arabian and foreign countries, careful approach to the problem deems crucial through routine recording of BP and constructing our own national nomograms, age, gender and height specific, inspired from our nutritional, cultural, ethnic and social backgrounds. Moreover, implementing school heart health curriculum seems tentative to interrupt or ameliorate progression of HT as our children enter adulthood.

Blood pressure in Turkey:

Background: Hypertension is an important public health problem, with some variability of its epidemiological properties in different populations. **Objectives:** The purpose of this study was to estimate the prevalence of hypertension and to determine the hypertension awareness, treatment and control rates in Aydın, a Turkish province. **Methods:** Of 1600 coincidentally, selected people aged over 18 years in Aydın, 1480 (92.5%) had their blood pressure (BP) measured and answered a standard questionnaire in 1995.

Results: Estimates of the prevalence of hypertension and its control were computed using two different criteria to define hypertension: BP 140/90 mm Hg or on treatment and BP 160/95 mm Hg or on treatment. Overall, the estimated prevalence of hypertension was 29.6% (for BP 140/90 mm Hg or on treatment). Hypertension prevalence increased progressively with age, from 9% in 18- to 29-year-olds to 70.6% in those 70–79 years of age. Women had a significantly higher prevalence than men (34.1% vs 26.0% respectively). Overall, 57.9% of hypertensive individuals were aware that they had high BP, and 82.1% of aware hypertensives were being treated with antihypertensive medications, but only 19.8% of treated hypertensives were under control (systolic pressure <140 mm hg and diastolic pressure <90 mm hg). In addition, housewives, unemployed, and the less educated individuals had greater mean systolic and diastolic bp. **Conclusions:** Our results indicate that hypertension is highly prevalent in Aydın, Turkey, and the detection and control of hypertension is unsatisfactory.



(Figures, 3 ... Turkey)

Blood pressure in USA:

Data from the US National Health and Nutrition Examination Survey are freely available and can be analyzed to produce hypertension statistics for the noninstitutionalized US population. The analysis of these data requires statistical programming expertise and knowledge of National Health and Nutrition Examination Survey methodology.

Methods: We developed a web-based application that provides hypertension statistics for US adults using 10 cycles of National Health and Nutrition Examination Survey data, 1999 to 2000 through 2017 to 2020. We validated the application by reproducing results from prior publications. The application's interface allows users to estimate crude and age-adjusted means, quantiles, and proportions. Population counts can also be estimated. To demonstrate the application's capabilities, we estimated hypertension statistics for noninstitutionalized US adults.

Results: The estimated mean systolic blood pressure (BP) declined from 123 mm Hg in 1999 to 2000 to 120 mm Hg in 2009 to 2010 and increased to 123 mm Hg in 2017 to 2020. The age-adjusted prevalence of hypertension (ie, systolic BP \geq 130 mm Hg, diastolic BP \geq 80 mm Hg or self-reported antihypertensive medication use) was 47.9% in 1999 to 2000, 43.0% in 2009 to 2010, and 44.7% in 2017 to 2020. In 2017 to 2020, an estimated 115.3 million US adults had hypertension. The age-adjusted prevalence of controlled BP, defined by the 2017 American College of Cardiology/American Heart Association BP guideline, among nonpregnant US adults with hypertension was 9.7% in 1999 to 2000, 25.0% in 2013 to 2014, and 21.9% in 2017 to 2020. After age adjustment and among nonpregnant US adults who self-reported taking antihypertensive medication, 27.5%, 48.5%, and 43.0% had controlled BP in 1999 to 2000, 2013 to 2014, and 2017 to 2020, respectively.



(Figure,4... USA)

Blood pressure in UK:

Blood pressure variability and cardiovascular disease: systematic review and meta-analysis Sarah L Stevens, Sally Wood, Constantinos Koshiaris, Kathryn Law, Paul Glasziou, Richard J Stevens, Richard J McManus by 354, 2016 Objective To systematically review studies quantifying the associations of long term (clinic), mid-term (home), and short term (ambulatory) variability in blood pressure, independent of mean blood pressure, with cardiovascular disease events and mortality. Data sources Medline, Embase, Cinahl, and Web of Science, searched to 15 February 2016 for full text articles in English. Eligibility criteria for study selection Prospective cohort studies or clinical trials in adults, except those in patients receiving hemodialysis, where the condition may directly impact blood pressure variability. Standardized hazard ratios were extracted and, if there was little risk of confounding, combined using random effects meta-analysis in main analyses. Outcomes included all cause and cardiovascular disease mortality and cardiovascular disease events. Measures of variability included standard deviation, coefficient of variation, variation independent of mean, and average real variability, but not night dipping or day-night variation.

Results: 41 papers representing 19 observational cohort studies and 17 clinical trial cohorts, comprising 46 separate analyses were identified. Long term variability in blood pressure was studied in 24 papers, mid-term in four, and short-term in 15 (two studied both long term and short-term variability). Results from 23 analyses were excluded from main analyses owing to high risks of confounding. Increased long term variability in systolic blood pressure was associated with risk of all-cause mortality (hazard ratio 1.15, 95% confidence interval 1.09 to 1.22), cardiovascular disease mortality (1.18, 1.09 to 1.28), cardiovascular disease events (1.18, 1.07 to 1.30), coronary heart disease (1.10, 1.04 to 1.16), and stroke (1.15, 1.04 to 1.27). Increased mid-term and short-term variability in daytime systolic blood pressure were also associated with all-cause mortality (1.15, 1.06 to 1.26 and 1.10, 1.04 to 1.16, respectively).

Conclusions: Long term variability in blood pressure is associated with cardiovascular and mortality outcomes, over and above the effect of mean blood pressure. Associations are similar in magnitude to those of cholesterol measures with cardiovascular disease. Limited data for mid-term and short-term variability showed similar associations. Future work should focus on the clinical implications of assessment of variability in blood pressure and avoid the common confounding pitfalls observed to date.



(Figures,5 ... UK)

Blood pressure in Brazil:

Prevalence: Mean values for prevalence of hypertension in 18 selected populations, varied between 15.7% (BP \geq 95 mm Hg) and 27.7% (BP \geq 90 mm Hg). In three Mall surveys in Salvador (n = 5093 volunteers), prevalence mean value was 33.7% (JNC VI criteria), being influenced by age (5.5 to 17.8% and 41.0 to 54.9% for the 25–34 and 55–59-year-old age groups, respectively) and socioeconomic class (24.7 and 39.6% for the highest and lowest social class, respectively, OR = 0.50 (0.26–0.95, P = 0.023). The national prevalence by the Ministry of Health is 20%

Mortality and morbidity: Mortality as a consequence of morbidity has increased, with stroke being a leading cause of death (11.3% of total deaths, 10.1% of all deaths in the 20–59 year-old age group, and 33.9% of cardiovascular deaths in Brazilian Capitals, 1994)

Cardiovascular risk factors: At comparable age groups, prevalence of other major cardiovascular risk factors are: smoking ~27%, total cholesterol \geq 200 mg/dl ~32.5%, glucose intolerance ~8.0%, diabetes ~7.5%, BMI 25–29 ~29.1%, BMI \geq 30~9.6%, and physical inactivity ~92%

Awareness, treatment, and control: Data are very scarce. In the total Mall population (n = 4613) in Salvador, a high blood pressure was present in 24.4% of those who either denied hypertension or ignored blood pressure. Of those who reported to be hypertensives, only 34.5% had their blood pressure <140/90 mm Hg. In a national inquiry including 2519 physicians, 88% would start treatment with drug monotherapy, diuretics (53%), and angiotensin-converting enzyme inhibitor (ACEI) (24%). If blood pressure control is not achieved, 55% will combine with another drug (diuretic + ACEI (46%) or + beta-blocker (24%)), and 33% will increase the dosage. Nonpharmacological treatment would be prescribed for every patient by 17% of the physicians, while 62% would prescribe it for 25% of their patients. Adherence is better for pharmacological (60%) than for nonpharmacological treatment (8%)

Final remarks: Three Consensus Documents (the most recent in 1998), the creation of the Department of Hypertension Leagues, the Fighting Hypertension National Day, the Confederation of Hypertensive Patients Associations, and the very recent launch of the National Plan for Reorganization of Hypertension and Diabetes Care are some measures being taken in a joint effort of the Ministry of Health and the Brazilian Societies of Cardiology, Hypertension and Nephrology, to strengthen and improve the fight against hypertension.



(Figure,5 ... Brazil)

Blood pressure in Iraq and Kurdistan:

Hypertension is the most common cause of primary care visits, and it is an independent and a reversible risk factor for cardiovascular diseases such as myocardial infarction, stroke and renal failure. It can even lead to death if not diagnosed early and treated appropriately (1). Worldwide, hypertension is considered to be a major public health problem (2). It is believed to be the leading cause of death and the most frequent cause of outpatient visits (3). Regarding its contribution to the growing global pandemic of cardiovascular disease, recently confirmed by the update of the Global Burden of Disease Study (2000), hypertension is estimated to be responsible for around 50% of cardiovascular diseases (CVD) worldwide (4). It is also considered to be one of the main risk factors for mortality from CVD, accounting for 20-50% of all deaths (5). Hypertension among the adult population is increasing, and its complications account for 9.4 million annual deaths worldwide. Unlike high-income countries, low-income countries have the highest prevalence of hypertension. The prevalence of hypertension is highest in the African Region at 46% of adults aged 25 and above, and this proportion is increasing (6). About three-quarters of people with hypertension are from low- and middle-income countries, as the access to healthcare, as well as the awareness of the disease, are inadequate. In general, The Middle Eastern countries have a high prevalence of hypertension. A study conducted in the Islamic Republic of Iran revealed that more than 57% of the people aging 60 years and above have hypertension, compared to 3.6% of those people younger than 30 years (7).

Moreover, it was reported that the number of deaths resulting from hypertensive cardiac diseases in the Middle East and North Africa region was 115 per 100 000 and that the number of disability-adjusted life years resulting from hypertensive cardiac diseases was 1389 per 100 000 in the same region (8). In 2006, a survey conducted in Iraq on chronic noncommunicable disease risk factors revealed that the prevalence of hypertension was 40.4% (9). The WHO Eastern Mediterranean Region health statistics published in 2008 revealed that the prevalence of hypertension in Iraq for both sexes was 29.4% (20.4-38.9%) (10). A household survey conducted in Thi-Qar Governorate in 2014, revealed that the overall prevalence of hypertension was 26.5% (11). In low- and middle-income countries, many people with hypertension are not aware of their disease and may not be aware of the necessity for regular blood pressure checks. They may also not have access to drugs which control their hypertension and reduce mortality and morbidity from complications such as heart disease and stroke. People may simply be unaware of the health consequences or indifferent to the risks of untreated hypertension (12). Therefore, this study aimed to find out the prevalence of hypertension in a population sample of older adults in Erbil city, Iraqi Kurdistan Region, and identify the risk factors associated with hypertension.

Erbil History and Culture:

Erbil is one of the oldest continuously inhabited cities in the world, dating back to 6,000 years B.C. It has been inhabited, over the millennia, by the Persians, Greeks, Romans, Mongols and Ottoman Turks. Today, the Kurds form the largest ethnic group in the city - estimates put the region's population between 1.5 and 2 million, of which approximately 93% are Kurdish. At the center of the city rests the Erbil Citadel, an ancient structure that dates back to 2,000 B.C. The oval-shaped structure has developed as generations on generations have built houses and homes upon one another. These homes were built out of mud clay bricks that were prone to disintegration in the sun and rain. You can read more about the Erbil Citadel by clicking the link above. Erbil has been the center of Kurdish culture in Iraqi Kurdistan, as well as Kurdish politics. The Kurdistan Regional Government is based in the city, and the affairs of the region are governed here.

Methods: A community-based cross-sectional survey based on household visits was carried out from April to June 2017. The study involved 1480 adults selected through a multi-stage sampling method. We used a specially designed questionnaire to collect sociodemographic and clinical data from the participants through direct interview with measurement of the blood pressure. Statistically significant factors associated with hypertension.

Conclusion: The prevalence of hypertension in Erbil city is relatively high with having a high prevalence of undiagnosed hypertension. Compliance with the treatment was relatively high, but access to drugs was primarily from private pharmacies. This high prevalence of hypertension in Erbil city necessitates effective preventive and control measures, including carrying out comprehensive health education and screening programs.



(Figures,7 ... Erbil)

Description of noble:

Noble Technical Institute, founded in 2014, has swiftly established itself as a prominent private higher education institution in Erbil, Kurdistan Region, Iraq. With a commitment to excellence in education and career advancement, the institute offers a range of diploma programs accredited by the Ministry of Higher Education and Scientific Research of the Kurdistan Region. These programs cover diverse fields such as pharmacy assistant, English language, information technology, business management, accounting, petroleum technology, nursing, and medical laboratory technician. Driven by a vision to become a beacon of educational excellence, the institute aims to nurture innovative minds, cultivate leadership skills, and instill ethical values in its students. Through continuous improvement, cutting-edge research, and a focus on diversity and inclusivity, Noble Technical Institute strives to empower graduates to become catalysts for positive change in the Kurdistan Region and beyond, embracing lifelong learning. The institute's modern campus, spanning four spacious floors, is equipped with state-of-the-art facilities including fully-equipped classrooms and specialized laboratories tailored to various disciplines such as medical, nursing, oil, media, and pharmacy. These facilities provide students with hands-on learning experiences, bridging theoretical knowledge with practical skills and preparing them for the professional world.

In addition to academic pursuits, Noble Technical Institute places emphasis on holistic student development. The campus features meticulously landscaped gardens and comprehensive sports facilities, providing tranquil spaces for study, reflection, and social interaction, while encouraging students to maintain a balanced lifestyle through physical activities. Furthermore, the institute's spacious seminar hall serves as a hub for hosting impactful events, seminars, and conferences, further enriching the academic atmosphere and fostering a vibrant learning community.



(Figure,8 ... Noble Technical Institute)

Result:

Gender	Department	Age	BP	Fasting	Postprandial	Heredity	smoke
Female	Nursing	19	12/8	✓			
Male	Nursing	21	11/7	✓		✓	
Female	Nursing	19	12/8	✓			
Female	Nursing	20	11/7		✓	✓	
Female	Nursing	21	10/7		✓		
Female	Nursing	18	9/6	✓			
Female	Nursing	20	10/7	✓			
Female	Nursing	19	11/8		✓	✓	
Female	Nursing	18	12/7		✓		
Female	Nursing	21	12/7	✓		✓	
Female	Nursing	21	9/7	✓			
Female	Nursing	20	12/8	✓		✓	
Male	Nursing	29	12/9	✓			✓
Female	Nursing	18	10/7		✓	✓	
Female	Nursing	18	10/6		✓	✓	
Male	Nursing	20	12/8	✓			
Female	Nursing	19	12/8	✓		✓	
Male	Nursing	21	14/10	✓			
Male	Nursing	23	12/8.5		✓		✓
Female	Nursing	19	12/8		✓		

(Table,1...List of Blood Pressure rates in Nursing department)

Gender	Department	Age	BP	Fasting	Postprandial	Heredity	smoke
Female	Business Administration	35	12/9		✓		
Female	Business Administration	21	11/7		✓	✓	
Female	Business Administration	24	10/8		✓		
Male	Business Administration	29	11/8	✓			
Male	Business Administration	21	10/8		✓	✓	✓
Female	Business Administration	24	10/6	✓			
Female	Business Administration	21	10/7		✓		
Male	Business Administration	25	19/8		✓	✓	
Female	Business Administration	26	10/8	✓		✓	
Male	Business Administration	28	11/7		✓	✓	
Male	Business Administration	27	10/8		✓	✓	
Male	Business Administration	23	11/7	✓			
Female	Business Administration	25	10/8		✓	✓	
Female	Business Administration	30	9/7		✓	✓	
Male	Business Administration	21	11/9	✓			
Male	Business Administration	24	10/6		✓		
Male	Business Administration	23	12/8	✓		✓	✓
Male	Business Administration	22	12/9	✓		✓	
Male	Business Administration	29	10/7		✓	✓	
Male	Business Administration	20	11/6		✓	✓	✓

(Table,2... List of Blood Pressure rates in Business Administration)

Nursing	maximum	medium	minimum
Female	-----	12/8	9/6
Male	14/10	12/8.5	11/7

(Table,3... List of Maximums, Minimums and medium in Nursing department)

Business Administration	maximum	medium	minimum
Female	12/9	-----	9/7
Male	19/8	12/8	10/6

(Table,4... List of Maximums, Minimums and medium in Business Administration department)

Department	maximum	medium	minimum
Nursing & Business Administration	19/8	12/8	9/6

(Table,5... List of Maximums, Minimums and medium of Blood Pressure in general)



(Figures ,9... Taking Blood Pressure inside the Noble Technical Institute)

Dissection:

- Kurdistan region because of its border is divided into four parts of southern Kurdistan which consists of many cities ,governorates ,and districts and Erbil is considered as the capital of Kurdistan region That's why many residential ,rehabilitation ,and educational development projects have been implemented ,so the Ministry of Higher Education and Scientific Research has opened a role for the last bright day.
- Therefore, it has provided educational opportunities for many colleges and special institutes. That's why the Nobel Institute has provided 11 different departments for the purpose of continuing education,so we benefited from both nursing and labor administration for collecting the data for our research.
- According to the results we obtained in both departments out of 40 students 23 girls and 17 boys.
- Of the 40 students ,20 are in the nursing department ,and 11% of them are aged between 20 - 29 who have been tested for That 12 students were tested for blood pressure during the time of the test ,which was between 10/6-10/9 ,but out of this ratio ,8 students were at random when they were tested.
- Out of 20 students ,three were smokers and the results were 11/6/12/8. The test result was 7/11-10/12. 18% were between the ages of 20 - 29 and 2% were between the ages of 30 - 35. Of these students ,7 were tested for hypertension ,and the results were 10/6-8/12 ,but 12 were random ,with 7/9-8/12. Out of 20 students ,three were smokers and the results were 11/6-12/8
- All of these results were based on each patient who was tested for blood pressure ,but we can say that the Age, life cycle, food, and smoking vary from person to person.

Conclusion:

- Noble Institute has provided 11 different departments We used both nursing and business administration departments to collect data for our study.
- 11% are between 20-29 years old and 9% are under 20 years old
- 12 students had their blood pressure checked during fasting. The results were between 6/10 and 9/11
- students who were randomly tested had test results between 7/11 and 10/11
- However, two students' smokers were tested and the results were 8/12 to 9/11
- 18% of the students in the Department of Labor Administration were between 20-29 years old and 2% were between 30-35 years old
- These students had their blood pressure tested. Seven students had their blood pressure tested during fasting. The results were from 6/10 to 8/11
- 12 students were random with test results between 7/9 and 8/11
- 3 students were smokers and their test results were between 6/11 and 8/11
- Check blood pressure according to life cycle, age, diet, smoking it varies from person to person.

Reference:

- Magder SA. The highs and lows of blood pressure: toward meaningful clinical targets in patients with shock. *Crit Care Med*. 2014;42(5):1241–51.
- Magder SA. Pressure-flow relations of diaphragm and vital organs with nitroprusside-induced vasodilation. *J Appl Physiol*. 1986; 61:409–16.
- Sylvester JL, Traystman RJ, Permutt S. Effects of hypoxia on the closing pressure of the canine systemic arterial circulation. *Circ Res*. 1981; 49:980–7.
- Kato R, Pinsky MR. Personalizing blood pressure management in septic shock. *Ann Intensive Care*. 2015;5(1):41.
- Magder S. Starling resistor versus compliance. Which explains the zero-flow pressure of a dynamic arterial pressure-flow relation? *Circ Res*. 1990; 67:209–20.
- American Journal of Hypertension, Volume 1, Issue 4_Pt_1, October 1988, Pages 335–347,
- AlexanderC. Flint, M.D.,Ph.D. <https://orcid.org/0000-0002-37212694>, Carol Conell, Ph.D., Xiushui Ren, M.D., NaderM. Banki, M.D., Sheila L. Chan, M.D., Vivek A. Rao, M.D., Ronald B. Melles, M.D., and Deepak L. Bhatt, M.D., M.P.H. <https://orcid.org/0000-0002-1278->
- Kannel WB. Historic perspectives on the relative contributions of diastolic and systolic blood pressure elevation to cardiovascular risk profile. *Am Heart J* 1999; 138:205-210.
- Izzo JL Jr, Levy D, Black HR. Clinical advisory statement: importance of systolic blood pressure in older Americans. *Hypertension* 2000; 35:1021-1024
- Kannel WB. Blood pressure as a cardiovascular risk factor: prevention and treatment. *JAMA* 1996; 275: 1571–1576.
- Wilsgaard T, Schirmer H, Arnesen E. Impact of body weight on blood pressure with a focus on sex differences: the Tromsø Study, 1986–1995. *Arch Intern Med* 2000; 160: 2847–2853.
- Jones DW. Body weight and blood pressure. Effects of weight reduction on hypertension. *Am J Hypertens* 1996; 9: 50s–54s.
- HolmenJ. Detectin hypertension: screening versus case finding in Norway. *BMJ* 1991; 302: 219–222.
- Kannel WB. Historic perspectives on the relative contributions of diastolic and systolic blood pressure elevation to cardiovascular risk profile. *Am Heart J* 1999; 138:205-210.

- Izzo JL Jr, Levy D, Black HR. Clinical advisory statement: importance of systolic blood pressure in older Americans. *Hypertension* 2000; 35:1021-1024
- Ohtsubo, K. & Marth, J. D. Glycosylation in cellular mechanisms of health and disease. *Cell* 126, 855–867 (2006).
- High blood pressure dangers: Hypertension’s effects on your body. (2023, November 28). Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/high-blood-pressure/art-20045868>
- Goldman, R. (2018, January 23). The Effects of Hypertension on the Body. Healthline. <https://www.healthline.com/health/high-blood-pressure-hypertension/effect-on-body>
- Magder, S., 2018. The meaning of blood pressure. *Critical Care*, 22, pp.1-10.
- DrRamdas, A. S. K., & Shivakumar, R. A. (2005, January 1). *A Guide to High Blood Pressure*. Lotus Press. Pp 80.
- Sheps, S. G. (2003, December 1). *Clinical Mayo Sobre Hypertension*. Mayo Clinic. Pp 17-19.