



## Correlation Analysis of People Attitude and the Development of Chemical Processes in the Human Body

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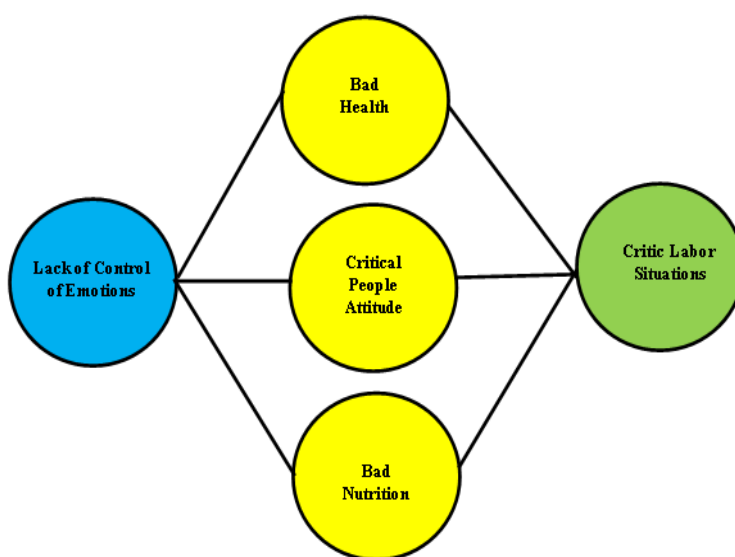
**Abstract** – This chemical science investigation was made to efficiently understand the way in which ionic substances operate in the human body and its correlation that they can have with the attitude of people, whose evaluation was carried out according to the analysis of three actions developed in the human body, such as digestion factors, family, work and social relationships (emotional actions) and the health of 10 people surveyed in the city of Tijuana, Baja California. This evaluation had a main hypothesis at the beginning of the investigation, indicating that, of the three factors mentioned, the one that links emotions had the greatest effect on the behavior of the people evaluated, with the aspect of family and work relationships being of primary importance; followed by the health factor and finally the digestion factor. This scientific study included an analysis of three principal aspects, being first the daily food as a nutrition action, followed a chemical analysis of ionic substances of the human body of the 10 persons evaluated. In addition, the third aspect evaluated was the emotional state of the people and a clinic with the urine analysis were considered to indicate the pH, temperature and oxygen level of each person, with which the main chemical elements of the ionic substances that can circulate through the human body were obtained, as part of the food intake. and drinks, emotional factor and digestion. This scientific study was made from March to May of 2023.

**Keywords:** Chemical science, ionic substances, attitude, Behavior of people.

### 1. INTRODUCTION

The ionic elements in the human body are relevant in the functions of the organs, muscles and any type of human systems. Chemistry is an area of science that has a great diversity of functions, based on the actions that are generated in each activity (Nyachwaya et al, 2014) In each action originated by the attitude of the people, ionic processes are generated, which are expressed as part of chemical reactions, and according to the attitude of each individual, facial representations are originated, which depend on the attitude of each person (Gkitzia et al, 2020). The manifestations of different moods that can be expressed in a positive or negative way, are part of chemical mechanisms that act in the human body, being relevant due to the origin of the stimuli, which cause various reactions in people (Fishman et al, 2018) . This type of evaluation is part of the biochemical actions, which involve the main systems of the human body, such as the cardiovascular, cerebral, digestive, endocrine, excretory, hormonal, nervous, pulmonary, reproductive and respiratory systems. Chemical processes are actions that can modify substances within the human body, to achieve specific functions for each mentioned system, the hormonal system being one of those that has a great

relationship with the attitude of people that sometimes depends on simple or complex situations (Kelly et al, 2016). The substances that are in the human body are represented in the form of ions, being the most common derivatives of bicarbonate, calcium, potassium, magnesium, selenium and sodium; in addition to other substances on a smaller scale, being essential in the functioning of the human body systems mentioned above. In addition, ionic substances are an important part in the transport of nutrients to cells throughout the human body, as well as in the elimination of cellular waste and the functioning of muscles and nerves, as essential operations of the human body. Figure 1 shows the principal factors in the people attitude (Fishman et al, 2020).

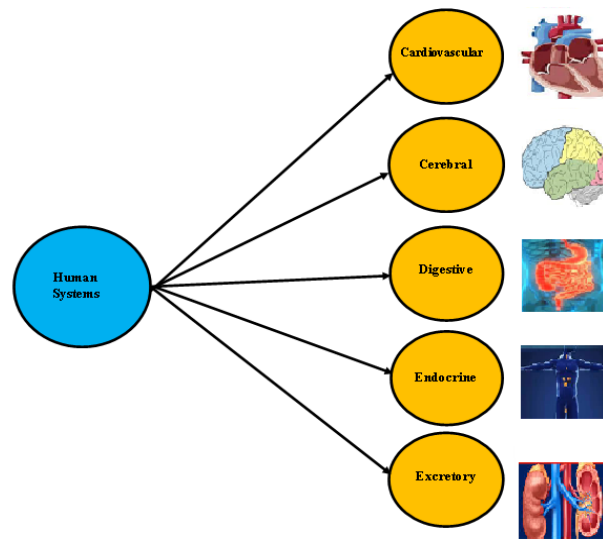


**Fig -1:** Factors of critical people attitude  
Source: Analysis of investigation

Figure 1 shows the four principal actions that can generate critical people attitude from early-age step of children, teenagers, adults and seniors; causing complicated situations in families, labor activities and social events. This can be caused by diverse aspects, as the health situation, relation of persons in labor and social activities, food nutrition and lack of control of emotions in each person. The aspects mentioned, are related with the ionic substances in the human body of each person, which was obtained the pH level, where is from 0 to 6 as acidic level, 7 as neutral level and from 8 to 14 as basic level; which are represented the three types of levels by colors in chemical analysis of pH in manual action or automatized equipments (Epton et al, 2015).

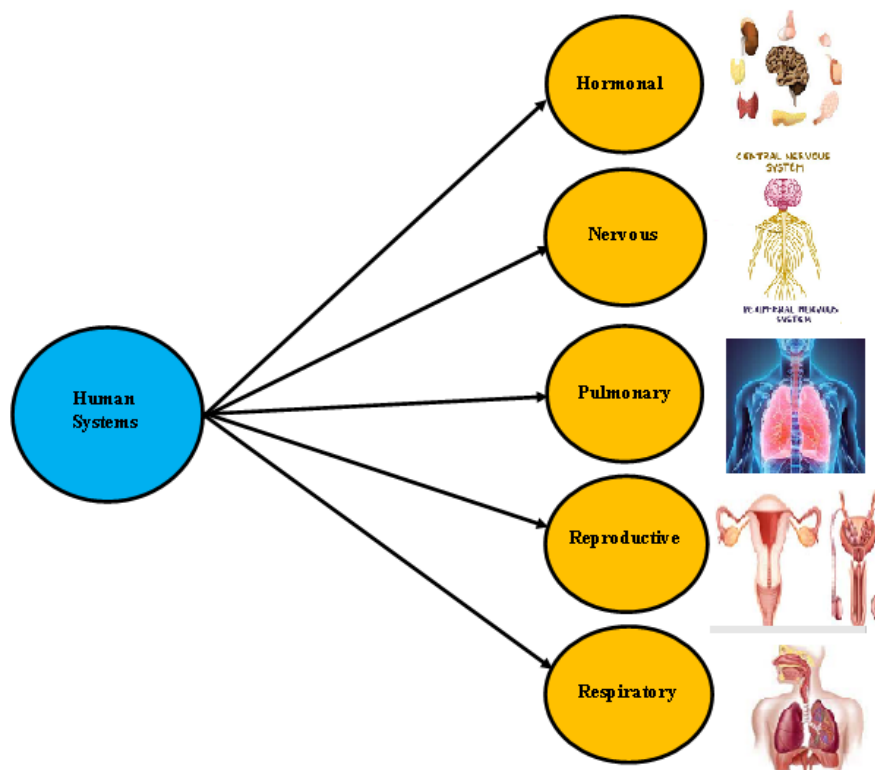
### 1.1 Human Systems

In the human body are the principal human systems, which are represented in figures 2 and 3, where are illustrated in figure 2 the first five human systems (Wolk et al, 2019).



**Fig -2:** Human systems (Part 1)  
Source: Analysis of investigation

In figure 2 is observed the diagram that represents the cardiovascular, cerebral, digestive represents, ed with the cardiovascular,



**Fig -3:** Human systems (Part 2)  
Source: Analysis of investigation

Figure 3 illustrates the second part of the human systems, being represented by the hormonal, nervous, pulmonary, reproductive and respiratory systems; where in both figures 2 and 3, are illustrated each human body system and a picture, which is representative as each part of human body. Also, is showed the principal organs of each human body system, where was analyzed in this investigation to understand efficiently the attitude of persons in based in the ionic substances that acts in all functions of the human body (Middlestadt et al, 2012).

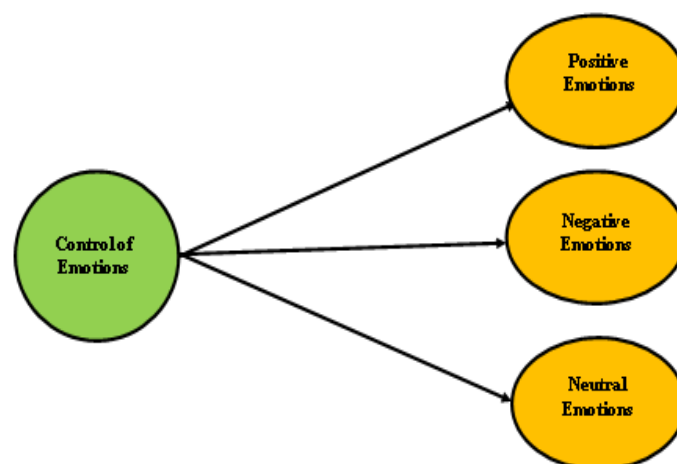
### 1.2 Control of Emotions

This aspect is very relevant in the attitude of each person, because can control each action that cause reactions (bad as negative emotion, good as positive emotion or neutral emotion), which are considered as emotions, which generates an attitude of each person that is depending of the action of emotion and the reaction. In figure 4 is presented the three types of emotions, which are explained next (Bongers et al, 2019; Farheen et al, 2012):

**a) Positive emotion:** These types of emotions are expressed as a smile, joy or satisfaction, depending on the actions to which a person is exposed, and regulating the control of emotions without expressing them excessively and without mockery. These emotions are easy to express, sometimes due to relevant effects, based on the type of emotion.

**b) Negative emotion:** These emotions are expressed in critical situations such as crying, anger, annoyance or sometimes with inappropriate language, such as loud words. They are easy to express, but the best thing is to be in control of your emotions, because sometimes they express themselves excessively, making the expression unnecessary, being expressed due to critical situations that affect people. Sometimes it is difficult to get an immediate solution.

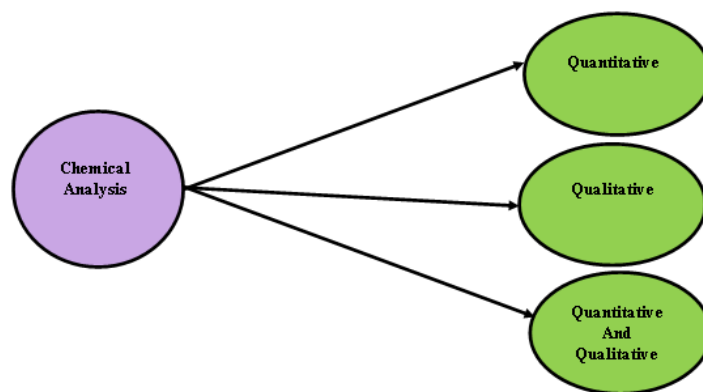
**c) Neutral emotion:** It is sometimes expressed as a response to positive or negative actions, and that do not have such a relevant effect or affectation on people, but are situations that are easy to solve and people only think about how to solve a not very complicated situation



**Fig -4:** Relevant aspects of control of emotions  
Source: Analysis of investigation

### 1.3 Chemical Analysis

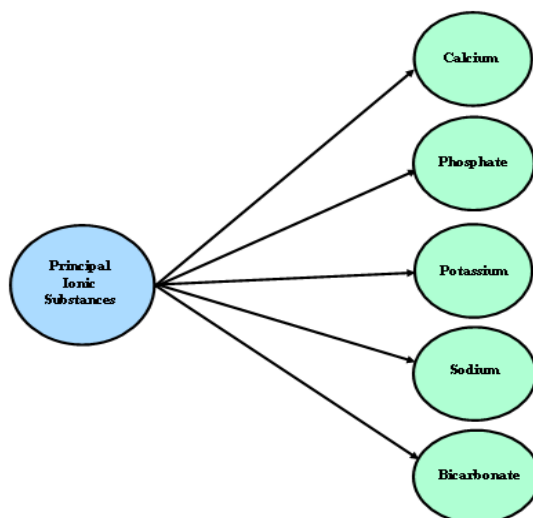
Some experts in psychologic and chemicals in the thematic of attitude of persons and chemical analysis, consider that the attitude of persons can be originated by some relevant aspects as chemical factors known as ionic substances that are in the human body to its functions in each human body system (Cooper et al, 2016). This is evaluated by chemical analysis to determine the correlation analysis of presence of ionic substances with the principal reasons of behavior of persons, being the three principal chemical analysis the quantitative analysis (with numerical data), qualitative analysis (with evaluation of levels) and quantitative and qualitative analysis (with numerical data and evaluation of levels), which are showed in figure (Presseau et al, 202; Gurmu, .2018). These types of chemical analysis are very important in the obtaining of chemical substances in the human body, which are called clinical analysis. For this reason, is necessary determine as chemical aspect, the type and percentage or level of this ionic substances as calcium, phosphate, potassium, sodium and bicarbonate, to help to nutrients to transport to cells eliminate cells waste and supports to the human body function adequately (Presseau et al, 2019).



**Fig -5:** Types of chemical analysis  
Source: Analysis of investigation

### 1.4 Nutrition Factor in Persons

This relevant aspect debit be evaluated constantly and is considered as biochemical evaluation to analyze the methods of transport of nutrients to cells to make the correctly actions of each human body systems mentioned above. The adequate nutrition is very important in the health of each person, because in base of the nutrients (type and quantity or percentage), are generated the actions in each human body systems, and with this can originate a good attitude of persons. The biochemical action in the human body depends of the food consumed by persons, and one aspect of the reactions and control of emotions are the adequate nutrition, because can generate a correctly interactions between the ionic substances in the human body, causing good energy in persons and act as optimist people. Figure 6 shows the five principal ionic substances that generates an adequate nutrition factor in the human body and can originate good attitude in people. The main macro minerals for the human body, in good health, are calcium, phosphorus, magnesium, sodium, potassium, chlorine and sulfur, while smaller amounts of iron, manganese, copper, iodine, zinc, cobalt, fluoride and selenium.



**Fig -6:** Types of ionic substances  
Source: Analysis of investigation

## 2. METHODOLOGY

This investigation obtained relevant information about the relation of the actions of ionic substances in the human body, which are important in the function of each human body systems, and the attitude of each person. Next are explained the steps applied in this investigation, with the 10 persons evaluated:

- a) Chemical analysis of the persons evaluated and the relation with the attitude of these people.
- b) Evaluation of pH of persons, which were depending of the nutrition action, and the relation with the attitude of people evaluated.

To obtain the numerical data of the ionic substances in the human body were used the next specialized techniques: (1) to the calcium was utilized the bone densitometry or DEXA scan, (2) to the phosphate was used the spectrophotometry, (3) to the potassium was utilized the electroanalysis, (4) to the sodium was used the anion gap and (5) to the bicarbonate was utilized the gasometry. The pH was measured with a pHmeter, temperature with a thermometer and oxygen level with the oximeter.

## 3. RESULTS

The information obtained showed interesting results, which were presented in tables and graphs, as the correlation analysis of the variables applied in this scientific study, where was observed relevant evaluations with the type of analysis elaborated.

### Correlation analysis of chemical substances and people attitude

This part of the investigation was made to obtain the type of ionic substances as a clinical analysis of the people evaluated, where was observed the type of chemical substances and quantity of the ionic elements mentioned.

**Table -1:** Relation of adequate quantity and low quantity of ionic substances (March-May 2023)

Ionic Substances		REALQ, mg; Low Levels					REALQ, mg; High Levels				
Persons	Attitude	C <sub>a</sub>	P	K	N <sub>a</sub>	NaHCO <sub>3</sub>	C <sub>a</sub>	P	K	N <sub>a</sub>	NaHCO <sub>3</sub>
1	B	868	955	2493	1981	2673					
2	G						1006	1259	3010	2334	3043
3	B	877	1234	2679	1999	2578					
4	B	763	976	2451	1877	2433					
5	B						1313	1456	3568	2789	3462
6	G						1653	1378	3457	2566	3279
7	B	981	1247	2965	2289	2996					
8	B						1379	1566	3789	2544	3333
9	G						1351	1455	3782	2541	3591
10	B						1432	1588	3567	2653	3432

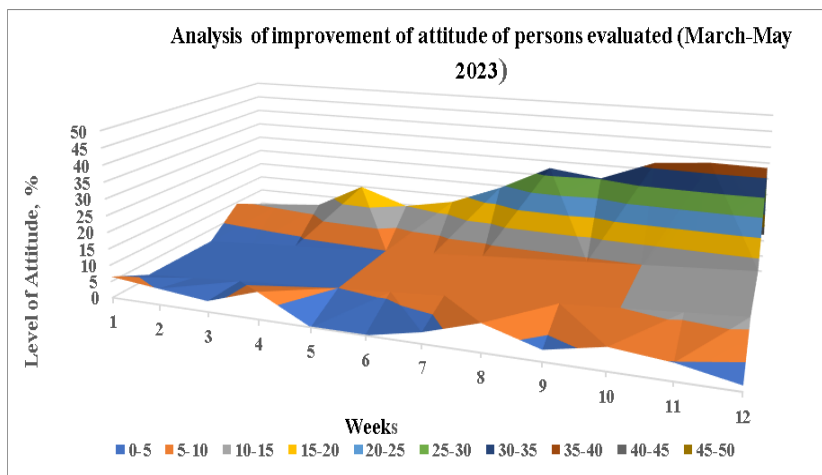
Required Quantity-REQQ, Real Quantity-REALQ

Calcium-C<sub>a</sub>, Phosphate-P, Potassium-K, Sodium-N<sub>a</sub>, Bicarbonate-NaHCO<sub>3</sub>

REQQ of C<sub>a</sub> (1000 mg), P (1250 mg), K (3000 mg), N<sub>a</sub> (2300 mg), NaHCO<sub>3</sub> (3000 mg)

Attitude. B. Bad, G. Good.

Table 1 represents the evaluation of 10 persons about the principal ionic substances analyzed, and were compared with the attitude of persons, about the control of emotions and responsibility and behavior with his family and in his labor activities, observing that regardless of low or high levels of ionic substances, the attitude was bad or good. regardless of low or high levels of ionic substances. Also was made a fast course to control the emotions and improve the attitude of people that was bad attitude before the fast course, and was improved the attitude, being better than at the beginning of this investigation.



**Fig -7:** Analysis of improvement of attitude after the fast course of persons evaluated.

Figure 7 illustrated the level of percentage of attitude of the 10 persons evaluated, considering the disposition to support the people of his family, relatives, neighbors, co-workers and society, as well as to elaborate his functions in an adequate way. The percentage levels are by colors, depending on the level of attitude, being predominant the blue and orange colors.

### Correlation analysis of pH and attitude of persons

The next analysis was made to relate the physical parameters presented in table 2, and the attitude aspects (Bad-B or Good-G), which are presented with numerical data.

**Table -2:** Relation of physical factors and the attitude of persons evaluated (March-May 2023)

Parameters		pH	Nutrition Level	Temperature, ° C	Oxygen Level, %
Persons	Attitude				
1	B	5.7	B	27.6	91
2	B	6.8	B	30.3	94
3	G	7.4	A	35.2	96
4	G	8.9	A	33.6	93
5	G	5.3	A	37.1	90
6	B	6.2	B	36.8	95
7	B	7.6	B	33.7	93
8	G	7.2	A	29.9	95
9	G	6.9	A	36.7	97
10	B	7.5	A	35.9	96

Table 2 shows the relation of the physics aspects to relate with the attitude of people that participate in this scientific study, where were observed the numerical levels, which as pH were from 5 to 9, followed by the nutrition level as B(Bad) and A (Adequate) temperature levels from 27 °C to 37 °C, and the oxygen level from 90% to 100% and showed the attitude aspects. As was observed in table 1, the levels of the physical parameters have influence in the attitude, but not is necessarily have low levels of the parameters evaluated to have bad attitude.

## 4. CONCLUSIONS

This investigation was made to determine any type of relation of the factors evaluated, indicating that some aspects have more effect in the behavior of persons and the changes of attitude of the people evaluated in this scientific study. The evaluations represent a possible perspective of the professor-researcher and student-researchers, which suggest that the good health and adequate nutrition, can be a relation of the attitude of each person. Also, the fast course of control of emotions were important in to have good attitude and can be a person with good operative yielding in the labor activities, have excellent relation with his family,





friends, neighbors and the society. This study was very relevant and can be supports to make excellent relations between persons in any type of society.

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