International Journal of Innovation Scientific Research and Review
Vol. 02, Issue, 09, pp.377-396, September, 2020
Available online at http://www.journalijisr.com

IJISRR

Research Article

ISSN: 2582-6131

DISCLOSING FAULTS; CORRECTING THEM; AND REVEALING OTHERS VITAL, BUT YET UNNOTICED PREVENTABLE PROPHYLACTIC MEASURES THAT MUST BE IMPLEMENTED IN BATTLING AGAINST COVID-19'S PANDEMIC

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Received 24th July 2020; Accepted 20th August 2020; Published online 30th September 2020

ABSTRACT

Every time, human being has responses against infectious diseases. These responses (measures) can work or miscarry out. A century ago Spanish flue, today within the two decades, we have three pathogen viruses: SARS; MERS; and SARS-CoV-2. Regarding to prevalence, today's COVID-19 caused by SARS-CoV-2 is the leader in disrupting social configurations. Within 4 months we have 1.5 million people infected, among which 80000 fatal. At this time, when civilization is at its the highest level, why we don't implement the right prophylactic measures to stop this pandemic? Could this be because of business, or since corona is aggressive, stakeholders need time to understand its nature? The exact answer we may achieve after years (if not decades!). To our side, starting from the end of March, 2020, are attempting to fascinate world's attention to the fact that this type of respiratory based infection disease can be easily terminated by not letting the pathogen to enter into mouth and nostrils! However, instead of arming nations with the mentioned simple principle through relevant experts, stakeholders are deliberately/innocently undertaking blunders - we are witnessed that not only business oriented scientists, but also even presidents of some countries are behaving as a virologist, and artistically lecturing to their public about SARS-CoV-2. Assigning this political oriented muddle to international organizations and or for their own society, in this mixed (experimental and field survey) research, we have the following findings: revealed decisive sanitation-hygiene (prevention based prophylaxis) faults: in "distancing", "hand washing", "face masking", etc. prevention measures, which must be corrected as soon as possible; we unveil yet ignored ways of infection – the role of hairs' factor and cold diets; outer garments role; and using a water bath as an alternative natural disinfectant; etc., that can help us in battling with this pandemic. Furthermore, due to the fact that this work more oriented to aware the public properly on how to implement measures for not to be infected and not to infect others, we have used pedagogical approach to address the above mentioned our results are accompanied with modified photographs and figures (to visualize the data) and for making the text part easily understandable for the community, unusually we used simplified terminologies.

Keywords: SARS-CoV-2, Sanitation-hygiene, Banknotes, Hair, Hot water-bath, Virology, Corona virus.

1. INTRODUCTION

1.1 Background

What first triggered us for this vast study project was the discrepancy/argument between WHO and Media on the role of banknotes - whether bank notes transmitting the coronavirus or not. From this dispute at the beginning we synthesized a single question: Can banknotes have a role in transmitting the coronavirus?

1.1.1 Viruses as whole

Throughout the history, when infections outbreak and ravage the human being, by changing the course of history and, at times, signaling the end of entire civilizations, the human in its turn tried to take measures against pathogens. However, mostly due to lack of awareness, the battle's aftermath was to the germs' side. For instance, neglecting the ancients like Circa of 3000 B.C, Athens and Antonine plagues of 430 B.C and 165 A.D [1}, yesterday's Spanish Flu (1918) took not less than 50 million lives [2}. Recent slaughterer-viruses in particular Zika, Ebola, HIV, SARS-CoV, MERS, SARS-Co-2, etc. too are became century's horrors all over the globe [3,4,5,6}. Certainly, these viruses were common in the past; today they also distracting us; will continue killing tomorrow; and even new strains (if not new species) will appear in the future. However, why at this 21st century, human couldn't defeat them? Previously, world practiced all possible-impossible traditional treatment measures, including religious rituals; today scientifically producing medicines; and human will continue such credible - incredible measures to withstand against the pathogens in the forthcoming. On the other side, veto countries collecting them as a biological weapon! Such cycling indicates that human and these invisible but powerful organisms co survived, existing, and will live together in the form of hunter-prey relation. Because, yet cruise missiles cannot guard the world against these tiny monsters!

1.1.2 What are these monsters?

As far as this paper is oriented in making public awareness, first of all, let us pass through on the biology; differences with others types of viruses and among themselves - the corona viruses:

Biological classification: the virus SARS-CoV-2 is related to family of Corona viridae and genus Beta corona virus [6,7,8}, and has basic similarities, but according to the work [9} there are 6 differences with flu. Whereas, the difference and similarity with SARS-CoV and MERS, aiming the visualization approach, we constructed a table (refer to table 01) to elaborate the issue.

Table 1. Comparison of Coronaviruses: MERS; SARS and SARS-CoV-2 that evolution to be pathogens. The data is retrieved from [6,8}

	Types of caused disease		
events	**MERS-CoV** (middle east respiratory syndrome)	**SARS-CoV** (sever acute respiratory syndrome of coronavirus)	**SARS-CoV-2** (sever acute respiratory syndrome of coronavirus 2)
When emerged	2012-2019	03.2002-08.2003	Since 12.2019
the possible origin	Asia, camel	China, animal?	China
What body part affects	Respiratory	Respiratory, but liver, intestine, nerve in animals	respiratory
How many infected/killed	2496/868	8422/916	700000/40000 will rise!
Type of treatment	No specific	No specific treatment	No specific

1.2 Statement of the problem

1.2.1. Do we know the main infection path

Today, when we are watching how the virus SARS-CoV-2 is seizing the whole globe as H1N1 of the 1918 [10}, we shouldn't have time to focus only on political and business oriented benefits or being engaged with not timing (current) and long lasting luxury researches. Rather, at least alongside of working on searching drug-vaccine, we must apply a direct effort for how to minimize the prevalence of the disease COVID-19. This can be achieved through applying simplest; fastest and cheapest but effective options of prevention based prophylactic measures. Among such measures, the first to protect from being infected is not letting to be virus's victim. This means - isolate from the place, where probably the virus SARS-CoV-2 is present, or not to let it to cling into respiratory cavity. However,

1.2.2 What is the stakeholders' version against the COVID-19?

World take the "hand washing" as if hand is the main path of contagion! Even, today we watched a clip of "happy birth day" to estimate the time – how much time (20) second to wash the hand! As if these seconds must not to be less or more than 20seconds !Hand washing procedure has the first hit [11,12,13}, and keeping a two meters distance from each other. Why world ignored the facemask? In spite of considering "face masking" as the second main (after "stay at home") anti-infection option, (we observe a resistance to cover mouth-nose cavities [14,15,16} in even developed countries.

1.2.3 Role of WHO

Why the WHO do not want to listen us, even do not want to reply for our email from April 3, 2020 to: info@who.int and wpsar@who.int, in which we disclosed how to organize stakeholders not only for this pandemic disaster, but also for others types of disasters [17}

1.2.4 The hairs-nails roles in transmitting the virus is still neglected. Although, we consider it as the vital prevention based prophylactic measures, etc.

1.2.5 Today's authorities messes

As face mask issue in: US become a field of battling between the two parties; in Africa instead of giving the issue for relevant experts, authorities themselves are instructing what to do and not.

1.2.6 Why specialists like virologists, epidemiologists, and microbiologists are silent?

Where are those front line responsible stakeholders, in particular, the virologists, epidemiologists, public health experts, and biochemists, etc.? Why they do not interfere when these pseudo scientists, Media and mainly politicians are captured the Media and distorting the globe, as a result which not only million, but almost all elders will die, or if they can withstand the COVID-19, their health will worsen.

1.2.7. literature givens on the SARS-CoV-2

Instead of implementing the two mentioned effective options through arming the public with ironed awareness, hundreds written information on coronavirus that we found out are dealing about the biological characteristics, in particular on genetic related issues of the SARS-CoV-2; about symptoms of the COVID-19; therapies; clinical reports; and drug-vaccine discoveries. However, works (efforts) on "prevention" issue in general - how not to be infected are too few [18,19}, but nothing we got that directly tell us "don't let the virus to enter into respiratory cavity!"

Even, if there is a sign of anti-infections measures, almost all airing through Media are with non-accurate instructions (faults). Ended, the responsible stakeholders are not working accordingly, they themselves and Media not only don't giving the right instructions, but also knowingly/unknowingly are airing not clear (if not distorted or even issues that must not for the public) distorting facts. the sanitation-hygiene type, for instance non accurate usage of soap-sanitizers and less concentration on face masking,

Because of such muddles, we, to our part, not only as a biochemist, but at most as a pedagogic trying to forward to the world what we are thinking is better: about how to achieve proper understandings about the nature of SARS-CoV-2 and avoiding all the possible paths of transmitting the diseases by clearly identifying the roles of authorities, business sector, Media, religion and even scientists!
We are doing this starting from the middle of March, 2020, by knocking doors of UN, CDC, WHO (April 3, 2020 with 6 paged opinion), scientific publishers, Newspapers, and 20 days ago we offered 28 paged concept note to Ethiopian authorities about how to intensify the public awareness against the disease (PAAD) [20}.

Therefore, in this work too through experimental and survey study, we want to: elaborate all these negative facts and faults that are mentioned in the statement of the problem; suggesting ways of their correction; and investigating others yet ignored options but vitals (that can help) to decrease paths of infection. The other important issue in this work is our unusual approach of article formation: Although, at the beginning, this work was intended to be addressed to virologists and epidemiologists, now it also oriented to the public by using public oriented vocabulary, repeating important issues in several article's sections and to attract public readers we will visualize it by using many pictures and figures (drawings). All these goals are going to achieved by the followings main and sub-objectives:

2. OBJECTIVES OF THE RESEARCH:

Elaborating sanitation-hygienic preventions' faults, correcting them and revealing others neglected but vital control measures:

2.1 laboratory based evaluation of banknotes' ability to transmit the virus SARS-CoV-2 the extent of virus transmission through Banknotes
2.2 Experimentally identifying the maximum water temperature, in which one without any discomfort and as long as possible can insert his hand's fingers.
2.3 evaluating the public's performance in recognizing all types of EMADs against COVID-19
2.4 Surveying how far current instructions - EMADs (sanitation-hygiene prophylaxis measures) are accurate
2.5 Searching-analyzing others neglected but vital EMADs that can be used against the pandemic

3. RESEARCH METHODOLOGY

3.1 Phylosophical approach of the research design:

Although, earlier, we dealt with malaria infection issues [4}, since this project focuses on respiratory based infectious disease, whose pathogen is SARS-CoV-2, we understand how far it will be hard to deal with. and even dangerous for us, whose speciality is biochemistry Neverthless, due to not becouse we are biochemist that deal with living things at the cell level, but since we are pedagogic, are responsible to transfer usefull knowledge (information) to those who are in need. By participating in this way, we are contributing for battling with the pandemic. Hence, our objectives are going to be achieved by runing a mixed (laboratory but blind based experiments and field survey) research activity.

3.2. Laboratory based but blinded experiments: banknotes and hot water bath issues

3.2.1 Are bank notes can transmit the virus?

Although, we could not get fixed information, where the WHO recommend/ordered not to use banknotes, Media, for instance The Guardian and The Telegraph [21,22,23} citing the WHO as if WHO is the only proposer about the role of banknotes on the COVID-19 disease. Two weeks ago, the WHO in its turn refused to acknowledge what the media wrote, by saying: "…we were misrepresented…"; "…WHO did NOT say banknotes would transmit COVID-19, nor have we issued any warnings or statements about this…" [24}. These debates between Media and WHO weretriggered us to launch lab experiment.

Despite, the fact that microorganisms can be accumulated on banknotes surface, aiming to: justify that WHO must have not to dispute the fact about accumulation of active viruses on bank notes; show how far our laboratory and its workers can handle experiments; fulfill equipment and materials in the lab; accumulate experience in culturing virus; and using the result as a parallel (relative) control for further our deal with the coronavirus itself, we have had designed a laboratory based experiment as follows:

Materials: saliva-mucus of infected; 0.9% saline solution; 27+3 banknotes with the same nominal (10 Ethiopian Birr banknotes); infected and non infected by influenza persons and others materials that are necessary to cultivate microorganism, in particular viruses.

Procedures: preparing 300ml of 0.9 saline solution in condition of 15-20^{o}C; the infected and non-infected (two persons one experimental and the other as internal control) will salivate-mucus of equal amount into two 20ml of saline solution (experiment and control); shaking/stirring the mixture until the mucus-saline homogenized (mixed). but not for long time (10-30 seconds). Then, adding saline to make 30ml of each in a flask tube of 50ml in volume.

The other 30ml of the saline solution (as a control will be stirred too).keeping the same mentioned temperature. Therefore, need three or two experimenters. Then from the three mixtures (solution of 3X30) taking by 3ml and spreading on the surface of the 9+9+9 banknotes' of the same side). To control the accuracy of used solution, there must be left 3ml from the 30ml! At the end, within the interval of 5, 10 and 30minutes we will wash (extracting back what we were spreading) the banknotes surface with 5ml of 0.9% saline solution (totally must be 45ml for each three. Then, continue culturing processes based on [25, 26, 27}. After, 6 hours, we ourselves remark the petty dish (plates) number to make the experiment blind.

1st group of pictures (№ 1-2): show our initial experimental procedures of extracting microorganisms from banknotes and culturing them respectivelly.

1

2

3.2.2 which the maximum water tempretaure can human hands' fingures endure?

We want to use hot water as a natural-alternative disinfectant, because high temperature can distruct a biological structure [28,29,30}. Thus, to identify the maximum water temperature that human hand can endure at least for seconds, we designed a laboratory experiment:

Materials: water, water-bath with termoregulator, first Aid (emergency Kitt), and 3-5 volenters, on whom will be tested the temperature varities (variables).

Room conditions:normal constant, but different temperature variables (30, 35, 40, and 45^{o}C, etc)

Procedures: we will heat/boil 3-4 liter water in to different tempreature's variables. In each temperature variable first we ourselves insert our hands until we feel a burning sense (but not more than a minute durabilty), then 3-5 volenturs will insert their hands into each different temperature water bath, for less than 30 seconds.But, after each variables, a volenter should wait at least for 5 minutes? (to return skin's temperature to a normal condition before inserting to the next temperatured bath.

3.3 Field survey - study design

3.3.1 Philosophy of the project

As indicated in the statement of the problem (refer to point 1.2)We are borring, because responsible stakeholders may seem not having a willing to reveal for the public about the effective epidemio-prophylactic measures against this pandemic. Having this attitude, we planned to assess (survey)instructions of the WHO, UNESCO, CDC; individual countries like Ethiopian and abroad.

Data to be gathered: evaluating types of practicing and assesing (findings) yet neglected but vital measures to combat COVID-19

T**ools** for gathering the data: samsung moble a7 (2018) for video, picturing, and audio recordings

To document primary data, we mostly use Samsung A7 (2018) mobile's video camera with 24megapixel with its mounted audio recorder, and Information from others countries (as a form of secondary data) retrieved through media and internet

Procedure: we will have to observe & discussing with the stakeholders in particular evaluating the Addis Ababa city respondents' knowledge-practitce (understandings and implimentation) of sanitation-hygiene measures against COVID-19 and other countries (as a secondary data will be colected through internet)

From prevention based prophylactical measures, we will mainly focus on:"Distance keeping"; "face Masking"; "handwashing"; "keeping nails-hairs and outer garments from being contaminated:etc. Data collection types are two: we will observe and appraise what, who and how instruct the public to perform properly the prevention part of a prophylactic measures against pathogens that causes respiratory infection, in particular the disease – COVID-19; Secondly, how far the public properly follow instructions usage of sanitation-hygeine agents like soap, sanitizers-anticeptics for hands and assessing their knowledge-practice about the usage of the main EMAD - mouth-nose mask; etc.

The field survey designed to study the performance of sanitation-hygiene (prevention oriented prophylaxis) activities. Certainly, for a full research performance, on such issues we ought to visit clinics, quarantine places, etc., however, it takes time to have permission from authorities; even in this chaotic condition, it is hard to know from whom to ask a research permission (our university was closed not only for students-teachers, but also even the managers too for days had no right to enter); and mainly at this time even for us it is dangerous to visit such contaminated sites. Moreover, for us as a biochemist, the already infected has no interest. Rather, our burning desire is except the experiment, understanding whether the public will have awareness about the two main prevention measures: "stay at home" and "wear face mask". Therefore, addressing to the public a postulation – if you do not let the SARS-CoV-2 to cling into your respiratory cavity is our main goal. The disease COVID-19 will not reach you! Certainly, such issue will not give time – it is our obligation to do something what we think usefull not only for Ethiopia but for the globe as a whole. Hence, we are going to collect primary and secondary data about the sanitation-hygiene mesures, through survey the Addis Ababa city's streets and internet-Media of others countries.

3.2.1 What kind EMADs and how far these prevention-control options are properly implimented against the SARS-CoV-2 by the stakeholders, in particular the public

Our focus on sanitation-hygiene measures is divided into three catagories: documenting the hand washing, and distance keeping (these two EMADs are considered as the main prophylactics not only in Ethiopia but also throughout the globe); about face masking (in this….); and how far the public properly perform them.

3.3.2 What others EMADs are yet neglected in the process of containing the COVID-19's pandemic:

We will focused on – how far the stakeholders give attention for the role of secondary source in the role of contaminator, in particular the impact of human hairs-nails; outer garments; accessories for cold drinks in café-restaurants; and others cold products like dairy, butchery, kecks ; etc. How far the public aware about the role of others vital but relatively neglected options in transmitting the virus: banknotes; and commodities (others fomites) issues.

4. RAW RESULTS (MATERIALS) OF EXPERIMENTS AND SURVEY STUDIES

4.1 Experimental results

4.1.1 Banknotes

At the beginning, stage of the research's design, we encountered ftwo interrelated problems:

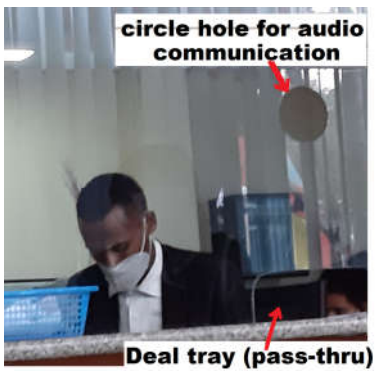
Because of the pandemic in Addis Ababa, our university closed to be a quarantine place for incoming travelers. As a result not only the doubt of having sample of SARS-CoV-2, even we couldn't further contain the experiment; and moreover, we realize that doing such project is said to be a luxury, because its outcomes will be late to contribute for the battling against the COVID-19 pandemic. Therefore, we terminated the launched experiment for a better time and or for others. However, to answer for our formulated question - "Can banknotes accumulate and transfer coronavirus from person to person? we crutched on analyzing previous scientific works (literature reviews). Hence, as seen in table 02, from 20 possible literature which are directly related to banknote-microorganism relations,we selected half of them(the experimental works' results), for judging whether banknotes can serve as a potential transmitter of the coronavirus.

Table 2. Collected 10 researches on whether banknotes can be transmitters of microorganisms

No	Thr raised research problem	Date	Result of the research	Address in the list reference
1	Parasitological and Bacterial Contamination of Nigerian Currency Notes	2019	Yes, contaminated by bacteria Nigerian currency	31
2	Antibiotic Susceptibility Profile of Bacteria Isolated from Kenyan Bank Notes	2019	Yes, bacteria isolated from kenyan banknotes	32
3	Microbial Contamination of Indian Currency Notes	2012	Yes, Indian banknote too, contaminated	33
4	Bacterial and Fungi Contamination of Saudi Arabian Paper Currency	2011	In Saudi banknote found bacteria and fungi	34
5	Survival of Influenza Virus on Banknote	2008	Up to 3 days influenza from banknotes capable to infect	26
6	Can banknote spread the new corona?	2020	Yes they may	23
7	contactless payments in fight against coronavirus	2020	Dirty banknotes can transmit coronavirus	35
8	China orders disinfection of banknotes in coronavirus fight	2020	China suggest that coronavirus can contaminate banknotes	36
9	Where and how much time the coronavirus can survive	2020	Coronavirus can survive up to 4 days on paper money	37
10	What can help the virus to be transmitted	2020	One of 10 objects is bank notes	21

During the survey, we revealed that banks by themselves can be one of the contamination sites: when they are exchange process of documents and banknotes, there may be contamination not only by banknotes, but also through air droplets (at least during the audio conversation between client and clerk-casher). This is because, as seen in the first group of pictures (3-5), the windows through which client (gust) and casher (clerk) are interacting are not designed to minimize a direct in-out air flow. In others countries too, as seen in pictures 6-13, the main focus during designing [38,39} is safety issues against robberies and bullet proofing, but, not against airborne pathogens like TB, influenza, etc.

2nd group of pictures (3-5): Deal tray (pass-through trays) types in different banks of Ethiopia



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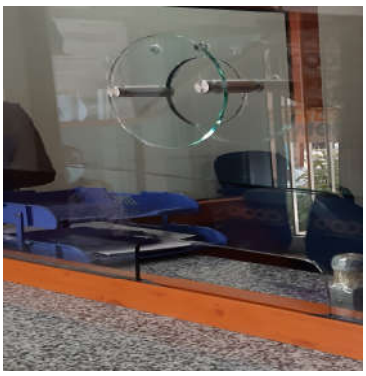

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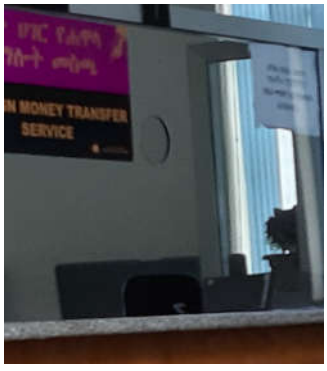

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3rd group of pictures (6-15): Deal tray types in other countries (retrieved from internet)

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4th group of pictures (11-15): voice ports for audio communication (among guest and clerk-casher)

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12

13

14

15

All these picture 3-10 show that air flow (wind) can easily move in and out. On the otherside

In pictures 11-15 are seen different models of voice port for audio communication between gust and casher (clerk), however fully a direct air flow through such ports is stopped in pictures 14 and 15, since they are usingelectrical speaker-microphones.

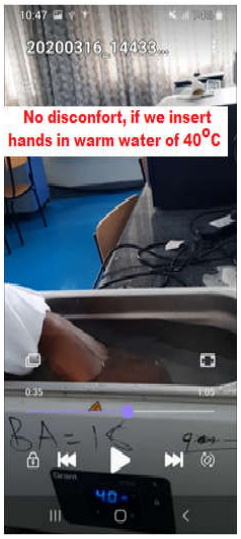
4.1.2 selection of the maximum water-bath tempretaure that human hands' fingures endure

Although, in our experiment design, we programmed to work with 30, 35, 40, and 45^{o}C, etc. temperature variables, as seen in the 5th group of pictures, during the experiment we have a possibility to fix on video only the data of 33, 40, 45 and 48^{o}C. However, with each 6 temperature phases, 3 randomly selected volunteered students-participants by their instructor a female lecturer participated in inserting their left hand (because in most people the right hand skin may adopt heat than the left) into the warm/hot water for seconds (until they feel a skin burning sense, but due to the fearing that these undergraduate students may hurt-burn their skin aiming to be said "more endurance", we do not let them to insert their hands for more than 30 seconds!).

Interval of time, the time which is quite enough to lose the previous heat sense for each was more than 5 minutes. However, in the hotter water, where the temperature raise up to 50-60^{o}C, due to the burning risk, we do not let to insert fingers not only the students, but also their lecturer too. Into such hot waters only we ourselves inserted fingers. Moreover, each time, before a participant insert his fingers into any of the variety, we checked how far the temperature is not harmful and checking whether there is an electrical shock phenomena on March 16, 2020,).

5th group of pictures (16-19): retrieved from four videos that were used to record the experimental process on selection the maximum water temprature that can be indoured by human fingures

16



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On March 12, 2020, we have had the first experiment, but since it was not recorded, we repeated it in March 16, 2020.

Table 3. durability of inserted fingures in different temprature phases (5 temperature varities)

t°C variables	Volunteers-participants	Average inserting duration	remarks
33°C	We ourselves and 3 students	30 sec	
40°C	We ourselves and 3 students	30 sec	
45°C	Female lecturer and 3 students	15 sec	
48°C	Female lecturer and 2 student	15 sec	
60°C	We ourselves only	6 sec	Feel Burning

What to add for the table are: the variable "48°C" was tested by the three (2 students and the lecturer), because we didn't let for the third student to insert, since we have observed a dissatisfaction (may be a burning sense) on his face after testing the 45°C variable.

4.2 Field survey-study design results (collected materials)

Primary data: as indicated in the methodology part (refer to 3.2), we have been limited to survey the Addis Ababa city's street cafe-bar, crowded places like bus stop and

Secondary data: internet-Media (to collect secondary data from others countries).

During data collection we were focused on sanitation-hygiene measures that we grouped into two: since, by authorities and Media, the "hand washing" and "distance keeping" (two EMADs) are considered as the main prophylactic measures to stop COVID-19,not only in Ethiopia but also throughout the globe), we concentrated in gathering data (picturing and recording) on how far the public properly perform them; and how far the public aware of others prophylactic measures that are comparatively given less attention by stakeholders-instructors as well as the WHO (but, as a biochemist we believe that they are vital in battling against the pathogen SARS-CoV-2).

4.2.1 We were focused in collecting data in the form of pictures (Photographs) and video:

Directly: on the street, transport stations, banks and café-restaurants, we recorded what we have observed and discuss with respondents (where it is possible)about the sanitation-hygiene measures that authorities and Media are intensively - instructing the public:"distance keeping". "hand washing" and The same data retrieved from the internet.

4.2.2 In what others options we focused

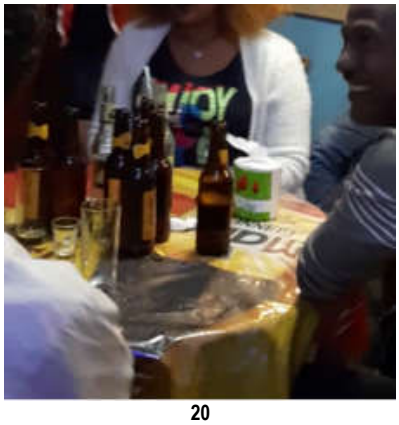
Additional to the five sanitation-hygiene prophylaxis issues: "distance keeping", "hand washing": "Face masking"; "hair and nails issues" in places where peoples are gathering (in café, restaurants, shops, banks etc.) that was planned and expressed in our methodology (3.3.1); during the survey we unveil others options that can facilitate the infection process like accessories for cold drinks including alcohol contented; shops, where products with less heat are prepared (diary, butchery, torts, candy, etc.).

4.2.3 What we have documented from the survey and secondary data

Our achieved data is reflected through 5 groups of pictures (groups 6-10), most of the 43 pictures, which are retrieved from videos that were taken on Addis Ababa's streets and others mentioned places:

Although, in this pandemic period, there shouldn't be a question about individuals' moral, we tried to modify the pictures to distort their originality, however, in cause if a picture has a similarity with somebody, please consider it as a non-intentional causaland for such accident we apologize beforehand.

6th group of pictures (20-23) show how public do not follow the "distance keeping" principle



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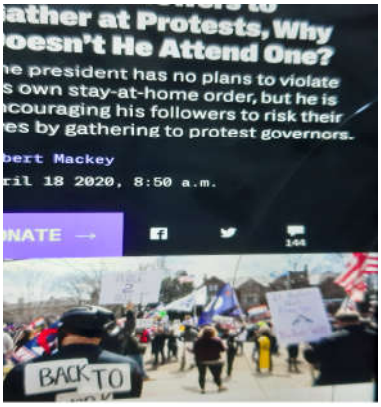

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Picture 20: in a bar people are not only gathering, but using glasses for pouring drinkings
Picture 21: on a queue peoples are not keeping distance among each other
Picture 22: in a demonstration not only the do not follow "distance keeping", but also "face masking"

faults during taking measures against SARS-CoV-2.

Not only among with whom we have interacted, not few do not understand why hand washing is neccessay: but for us too, are not clear what on Media are cerculating: responsible stakeholders through media do not clearly reason out on how to perform hand washing and how it helps to protect from infection, rather politicians and Media are behaving as virologist. We are wittnesing that no matter what is their educational background, they are artistically lecturing about the pandemic. As we have warned in our works (PEAD [20}) and [17} instead, their political opponents tend to perform reversely. Because of suchdistorted information, those whom we interviewed couldn't tell us the main reason for hand sanitization. Even, there are answers that the virus may infect hands – as if it can endocytosis directly to the skin's epidermis (of hands!). Moreover, as seen in the serial pictures (23-26) the way of implimenting the hand disinfection is not always proper.
As of fault procedures of hand washing, the face masking usage too, is not properly implimented by some individuals (refer to the illustrated edited-modified pictures 24-29):

7th group of pictures (23-26): show faults during hand washing processes

23

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25

26

Picture 23 - the faucet is not convenient to shut down, hence the virus, what we left on the faucet during opening, may return back to fingersduring shutting the water flow.

Picture 24 - the place where mounted the hand washing apparatus is not attract to be washed, and even the concentration of the liquid soap seems to be diluted and as a result may not be enough to kill the virus within 20 seconds

Picture 25 - on the video, he turned over the faucet, and washing, but he should have to use at least rotating such faucet to turn of the water flow (as in picture 23). This means, part of the virus, which was left on the surface of the faucet (during opening the water) will be returned back to the wetted washed hand-fingers

Picture 26 – Even with a better faucet, some of us do not understand that we may return back viruses(that we left during opening the water)to our fingers from the faucet surface

8th group of pictures (27-32): modified pictures (for not to be identified individuals) are retrieved from videos that were taken during survey on the street


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Picture 27 – the guard wears medical face mask, but he wears it up-down(the left side to the right)
Picture 28 – Most of Addis Ababa residents on the street and shops, if they have masks, either it is in their pocket, on hands or they hang it around their neck/under jaw (refer to pictures 31 and 32). In other countries too, we have a data of the same tendency
Picture 29 – Although,this young boy is selling on the street facemasks, he too as in the picture 30, hanging his masks beneath his jaw
Picture 30 – the three are volunteers on the street to teach how to sanitize the public with liquid sanitizer.

However, they don't properly wear (are hanging) face mask. The women, for whom they are spraying sanitizer to her hand is inspector on the street, but as seen in the picture she doesn't wear face mask

Picture 31 – they are doing sport on the street, where others used to walk on. But they do not wear face mask. What they answered for us is that, since they are sporting, the virus will not infect them (the main advantage for such sport is not to develop non infectious diseases, but not to strengthening the epithelial cells of respiratory cavityfor not to endocytosis the virus)

Picture 32 – these are a university's top managers, with almost doctor degree, however, today they didn't use facemask

9th Group of pictures (33-36): pictures about hairs issues are taken on the street and from internet, but basically modified not to violet individual rights (if any to be considered).

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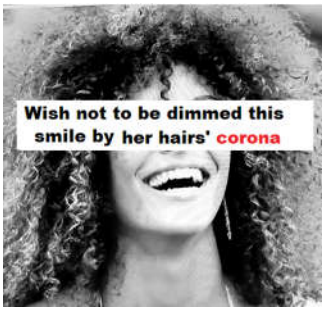

36

Picture 35 – the picture taken inside a transport.If the corona virus present inside the car, then her hairs can stuck it.
Picture 36 – in this modified picture, the man's hairs seem not to transmit the virus, but what about during sleeping ?
Picture 37 – these two girls are sleeping on chairs (may be inside a car). If there is a virus in her hairs, then neglecting to herself, what is the probability of this virus to enter to the nostrils-mouth of her friend?
Picture 38 – this girl has a best smile, but since her hairs surface area is high, then if she passed through an air, where there are coronaviruses, the hair can collect from the air the viruses. When she sleeps or during wind the viruses may enter to her respiratory cavity

10th Group of pictures (37-40): nails issue retrieved from internet, but basically modified due to research ethics


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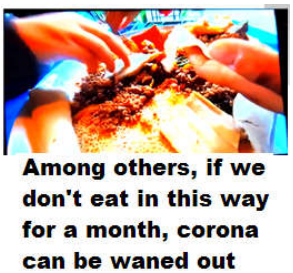


40

Picture 37 – Kids as usual sop-up their fingers, an instinctive behavior without which earlier was impossible to learn how to self-feed (survive).
Picture 38 – yes, some people, mostly females are inserting their fingers into their mouth

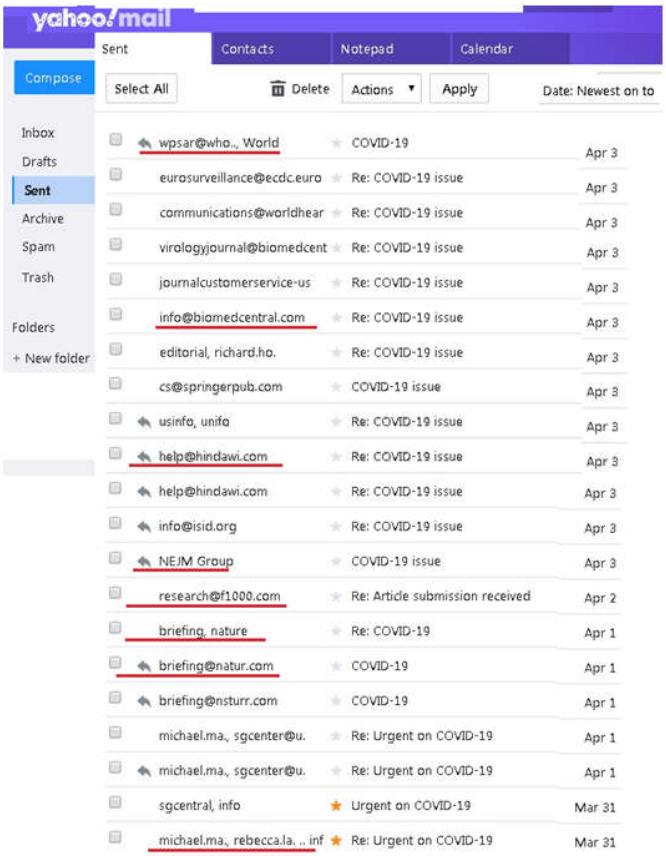
Picture 39 – this picture shows that the man grows his finger nails
Picture 40 – in many countries (in Asia, Africa and may be in Latin America), instead of using forks or spoons, most nations are cultured to eat with their bare fingers

4.2.4 In this survey (in Ethiopia and others), we revealed that except inaccurate "distance"; "hand washing manipulations" and poorly using face masks, we didn't achieve data on the others - most of the primary and secondary means of infecting and to be infected (that are mentioned in the methodology part 3.1). Although, they are vital in combating the COVID-19: outer garments; and accessuaries for cold drinks (as seen in picture 20 in crowded places like bars-hotels) issues; shops, where are selling cold diets like diary, bitchery, kack, etc products are severly neglected even by scientsts - A situation that can be hollow-specious!

Banks' deal trays and voice ports

what we achieved (except planned before starting the survey) during field survey is

In bars-caffee, peoples despite their unmasking, are drinking drafts or other cold drinks by powering the drink into a glass/cup, through which their hygiene at least questionable, since they are exposed to the air, where may be the virus. In shops, where are selling products that do not heated, will be convinient for the virus to survive more time.



Picture (41): approval for our effert in prevention the pandemic: starting from the end of march, 2020 , we emailed to WHO and scientific journals

5. DISCUSSION

Since the beginning of the COVID-19 pandemic, world poorly tries to control it. Poorly, because, instead of: virologysts; microbiologsts; epidemiologists and others relevant experts, the politicians, Media and even pseudo scientists are the main players. Again poorly, because in this 21st century, when we are trying to conquer the space, we couldn't stop this pandemic, a pandemic, whose the only option to be defeteated is – arming the public with the right awareness on the viruse's nature, in particular how it infect people – by clinging the SARS-CoV-2 into the mouth and nosal cavities!

To our part starting from March 16, 2020, (the day that we started experimental work) as a biochemist, we are trying what we can to remind the world (refer to pictures 42-45) that the main transmission option is air droplet that exhaled out from infected individual. However, next to "stat at home" (now a days the public do not mind it) the "washing hand" with soap and disinfecting by sanitizers and two meters appart are the main way of world's protecting options from being infected. Even, adverting with the known song "Happy Birthday" for 20 seconds (durability recommended to wash hand with soap)! Instead, of focusing on giving the correct awareness on how not to be infected and on how not to infect others, pseudo scientists, Media and even some countries' presidents including of USA, Madagascars, Belarusi, Tanzaniya, Brazil, etc. are trying to convince their nations as if the pandemic is not serious (Turkmenistan's president banned to use the word "coronavirus" [40}) ; advert

drug-vaccine projects, and they for instace, Mr. Trump do not believe on mouth-nose cover we are wondering that such personell that governs huge country has no advisors, who can advise him at least not to talk – I do not wearing! Hence, one day somebody will take the responsibilty for this infectional crises.

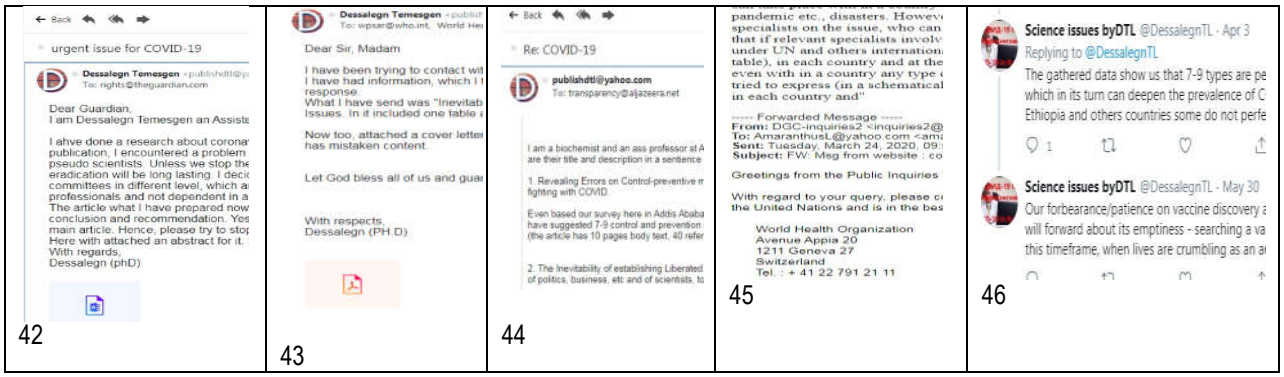
When we return to the discussion of the research results:

Yes, we understand that for a research article a single type of experiment or qualitative based research is enough. If that so, this work can yeild at least 5 articles. However, works that are related to coronavirus should be addressed to the public as soon as possible. Therefore, we have included all that we tried to inform the globe through our twitter page on April, 2020 the to media, to journals and WHO (refer to pictures 41-50); experimental results and field survey (qualitative research); are banknotes transmit the SARS-CoV-2"; "…deal tray-voice ports in cashery's room"; "what maximum water bath temperature can be resisted by human hands?..."; "distance keeping"; "hand washing"; "face masking"; "…hairs-nails…"; "…accessories for cold drinks in bars-caffe"; diary; butchery and backery-torta products; "outer garments…" issues are generalized only with in a single article! Because of such our principle, the our earlier two works [17,20} and this are bulky.

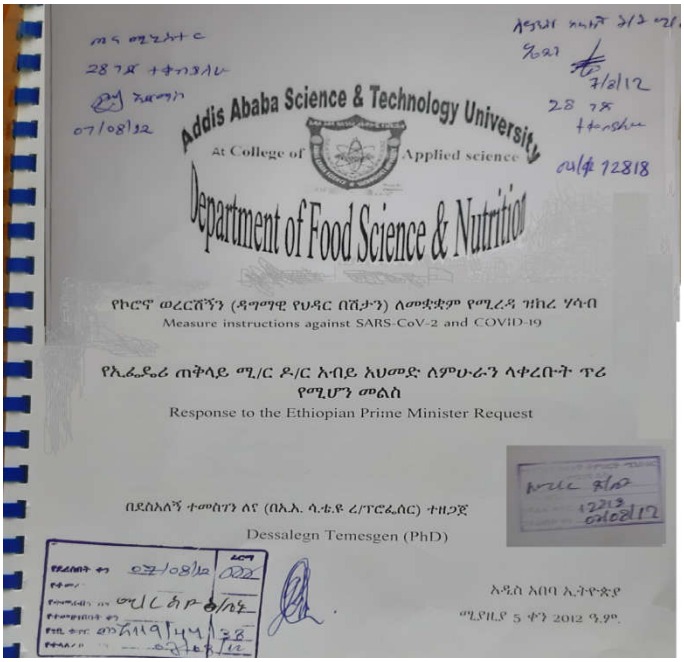
Anyway, these 10 issues for the sake of convenience, which we divide into two groups will be discussed here under and we are hoping and as a pedagogic we will be satisfied if reader of this article able to scratch to raise and the following questions for each of them and will try to have a better answer than we are going to discuss about them (above all 5+4 options) that we expressed months ago by saying "we revealed 7-9 mistakes that should be corrected (refer to picture 49) - what is their role in the battling process with the COVID-19 pandemic? And what else issue that is their elated to prevention prophylactic against the pandemic.

In this scanned list of email page, the underlined are correspondency with WHO and known journals

11th group of scanned pictures (42-46): show thatwhen, to whom and what we wrote about the pandemic issues



Picture 42: to the journal Guardian we wrote
Picture 43: April, 2020 to Aljazeera about 7-9 basic errors, which should be corrected as soon as possible
Picture 44: March-April 3, 2020 to WHO about mistakes even in its instructions, and attached 6 paged file
Picture 45: On March 24, 2020 UN replied to our request that we should have to contact WHO
Picture 46: Even on April 3, in our twitter page posted that we reveal 7-9 errors in performing against COVID-19
Picture 47 (scanned): Cover page of the PEAD [20}



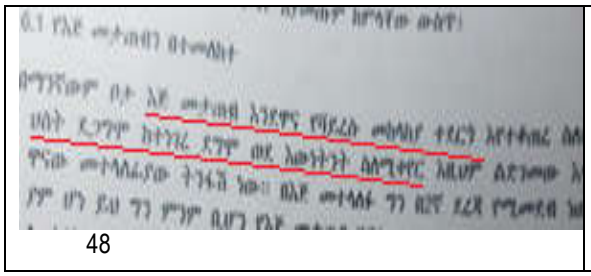
Picture 47: Cover page of the PEAD [20} that we offered to Ethiopian SMADs under a title of “Measures-Instructions Against SARS-CoV-2 and COVID-19”.through post office, however on April 8, 2020 the post office refused us to accept (may be because of corona). Next time we prepared it broadly and as seen in the picture, we offered it to health minister and science & higher education minister. In it, we included many points (organizational based and sanitation-hygiene prophylaxis measures to be taken), for controlling the corona spread that can help to not to be infected and on how not to infect others.

Concept note to the Ethiopian authorities:

We tried to send the first variety of our concept note (under the title “Measures/instructions against SARS-CoV-2 and COVID-19” (response to the Ethiopian Prime request) to the prime minister office (refer to picture 47)

Picture 47: the [20} prepared on April 15, 2020 (28 pages), in which we reveal what to be done by the Ethiopian government to minimize the infection process

11thGroup of pictures (43-45): scanned phrases from our PEAD’s content



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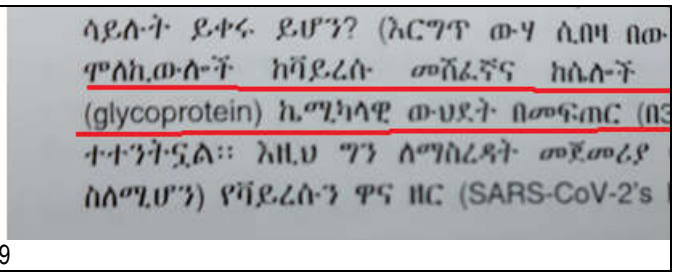
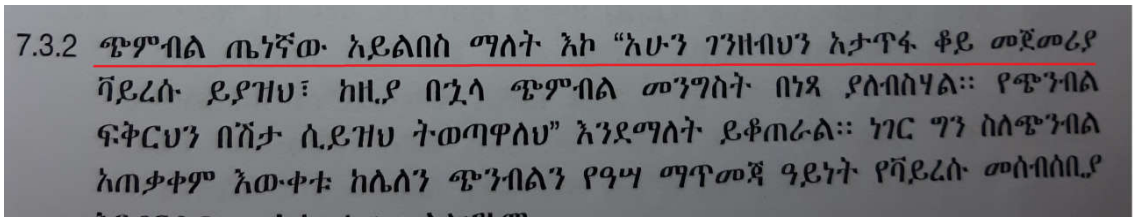


49

In picture 48, which we scanned from our PEAD, the underlined Amharic phrase can be translated into English as follows: “…in this time a hand washing become the main prophylactic measure for not to be infected and infect others“...although, the main prevention measure is “stay at home”, since everywhere including Media are repeating it, now this false idea converts into truth.Thereforepublic thinks that hand washing has a priority even than wearing face mask.

Therefore, let us repeat our thoughts here also in this article – the main option to transmit the virus is and or mucus to: non infected person, commodities and or atmosphere (surroundings), salivating,…” further in this document for the authorities we tried to inform that soap dilution is dangerous (refer to picture 49) and the main option not to be infected or infect others is not hand washing, rather the facemask (see the scanned phrase in picture 50).

Picture 50: what we see in the underlined Amharic phrase can be translated as: how diluted soaps are dangerous, since they are not capable even to distract the glycoprotein of the virus, as a result, which it may develop a mutant corona.



Picture 50: when most do not talk about or directly oppose the face mask wearing {14,15,16} we were concerned about the vitality of wearing a facemask. Let us translate the underlined phrase that we wrote: on April 2020,“…if you do not permit to yet not infected people wearing a face mask, you mean that “wait, don’t buy face mask, just let first the virus infect you, then we will offer you a free face mask…”

5.1 Discussion about the experimental part of the study’s results

5.1.1 Banknotes role in transmitting the virus
5.1.2 deal tray dweller andvoice ports in banknote-ticket operators’ cabin
What to do to minimize air flow through deal tray (pass through) dwellers and voice ports in banks and others cash, tickets’selling organizations?
5.1.3 To select a maximum hot water for hand disinfection, which maximum temperature can be endured by human hands?

5.2 From field survey and secondary data

5.2.1 Distance keeping: is 2 meters justified by scientific works?
5.2.2 Hand washing: are we all properly perform hand washing procedure?
5.2.3 Face mask: is not face masking the second after “stay at home” the main EMAD to combat COVID-19?
5.2.4 Hairs-nails: are not hairs the second (after a direct contact with saliva, mucus or exhale of the infected) path to be infected?
5.2.5 Cold drinks and glass/cups in cafe-restaurants: don’t these items contribute for the infection?
5.2.6 the role of others cold diets like diary, butchery products that we are consuming outside home.

5.2.7 Outer garments: what is the role of outer garment in the infection process?

5.1 laboratory based experiments' results

We have had designed two types of express experiments, which were intended to answer for questions: can the SARS-CoV-2 be transmitted through banknotes? And, what maximum water temprature can be endoured by human hand's fingures?

5.1.1 Banknotes role in transmitting the virus: Are bank notes can be transmitter for coronavirus?

Regarding to the fact that microorganisms can be found on banknotes' surface, WHO's uncertainty was confused us! Such dispute between media [21,22,23} and WHO's reply [24} may show that as an international organization, WHO is fearing - if banknote-virus related issues can be raised to the public, it will hurt the virus-affected countries and international financial-political sectors as well. Dangerous tendency (if it is true), because it indicates that this organization is not free of politics?!

Whatsoever, due to the 2 reasons. mentioned in the 4.1.1, we couldn't finalized what we designed(laboratory experiment on the banknotes issues), rather we switched into literature review based analization about whether the banknotes can transmit the SARS-CoV-2. Therefore as seen in table 2 (from possible 20 works we included half of them): those indicated in № 1-4 in the table are studies, which are concluded that banknotes can accumulate and transmitt bacteria and fungi. The 5th, which 12 years ago was published[26}, informing us about influenza virus and banknotes relation issues, and №7-10 in the table are directly indicated about the possibility of coronavirus transmission through banknotes. In contrast to the above mentioned about virus's survival-growth conditions, there may be a probability of surviving by means of bacteriophage (need a research whether coronavirus can be a bacteriophage – a research which may change the theory of SARS-CoV-2 initial source), inside the bacteria, which are accumulated on the surface of the banknote. If this happen, theoretically, instead of being vanished, the SARS-CoV-2 via using the bacteria on the surface of the banknote in the role of bacteriophage [40} can reproduce itself, as a result the durability and environmental influence, may have less impact for virus's survival!

5.1.2 What to do to minimize air flow through deal tray (pass through) dwellers and voice centers in banks and others cash, tickets' selling organizations?

During our work on banknotes and germs' related issues, we visited banks in Ethiopia and retrieved others' countries' bank issues through internet:

As illustrated in pictures (3-5), today's situation of some Ethiopian banks, comparativelly is not safe in two ways:distance between clients in queue are not aproprate and the cash-ticket windows through which client and bank workers are interacting (not designed to protect from respiratory based infectious diseases): window's deal tray and the hole (voice port) for voce are capable of leting air flow (wind) in and out, since, the only concern was the money. Neglecting of Ethiopians, foregn countries' banks as seen in pictures (9-14) designed the deal tray and voice ports just to safe from robbery's bullet. For instance patent [38,39} are focused on bullet proofing structure).. No one was thinking about the healthy of cashers (clerks) or clients.

Our designes(mechanical modification and air flow direction changer) will be used not only for coronavirus, but also against others todays and tomorrow's airborn-droplets pathogens

5.1.3 which maximum water tempreture can be tolerated by human hands

When we return to the sanitation-hygeine issues, the reason why we launched experiment to select water bath with maximum temperature, but that human hands can indure at least for 10 seconds.

'; to select a water bath wih maximum temperature for using it as a natural disinfectant for hands:

Because: soap and sanitizers are implimented as disinfectant for hands, since they have ability to kill (disrupting) microorganisms from hand's surface. The mechanism of disruption microorgamsims by such chemicals can be expressed as follows:

Earlier soaps contain only oils. When such soap disolvingin water it has ability to disolve dirts (with oil components) from the water. Todays plain or liquid soapscontain extra non soluble finned substances for mechanical breaking down dirts and,oxidative chemicals, biological compounds (even enzymes) that can disolve membranes of living organisms. Which means such detergents and sanitizers are active chemicals to react with organic compounds of liveng organisms, for instance with biological membranes. As a result the pathogen, whose coat (envelope) is deformed, can be abolished from our hand surface.

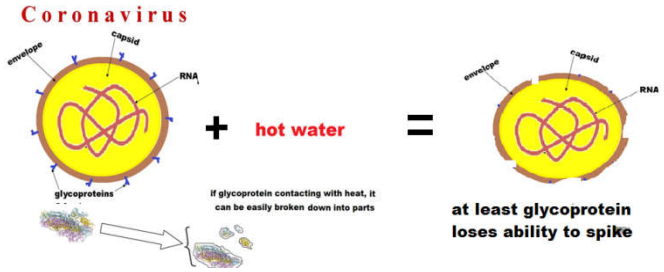
When we come to our theme, as seen below (figure1), the virus SARS-CoV-2 has envelope (coat) to defend the capsid and contain glycoproteins, which serve to spike [41,42}with an enzymitical structure (ACE) of a host cell's membrane. But, the content of envelope, in particular its glycoprotein is vulnerable for such chemicals (soap and sanitizers). Its structure can be easily torn into appart by such chemicals (refer to figure 01). Thus, based on the biochemistry context, such biological components can be easily breaking down not only by produced chemicals, but also naturally (physically and chemically) they can be denaturalized. For instance, heat, humidity and or pressure can destruct at least the structure of membranes. Because of such fact, we tried to propose the heat factor as a natural EMAD against the virus SARS-CoV-2. First of all as seen in the figure 01, mainly, the glycoprotein on the envelope can be destructured by these physical and chemical reaction of water spieces (refer to figure 02). Therefore, understanding literature given [28, 29} that the coronavirus can survive only within a limited

temperature range, we are proposing to use hot water (higher than the limited temperature of the virus's survival). Therefore, to disinfection (to distruct the glycoprotein of the coronavirus),we designed an experiment to select the maximum temperature of a water bath in which we can insert our hands for more time.

Having this fact and taking into account the survey results: Our survey in Addis Ababa city (discussion with respondents and observation) reaveled that in addition to coast issue for such antiseptics (soaps and sanitizers: the way how to use them for hand hygeining are not proper for such type of virushere in Ethiopia and abroad as well (refer to pictures 25 and 26); although, comparing to its value in defending us from coronavirus, it may disrupt the important skin's microflora; due to the alergic causes with soap-sanitizer type of chemical based EMADs, some individuals are not interested to use them; some business oriented organizations are using more diliuted liquid soaps for handwashing, which is dangerous since with weak detergents (refer to picture 24) we may create mutant-new strain of the virus (Darwin's theory – fitted more survive),; the queue to wash handsin mass gathering places like sport, school, prisons, forced us to start experiment on this alternative natural disinfectant,, etc.

Thus, according to the literature review results, at least one ouldn't say that banknotes do not transmit the SARS-CoV-2.

Figure 01: The possible abolishing process of viruse's glycoproten by hot water



Yes, based on our experimental result, even neglecting the 60^{o}C (refere to table 1), one can insert his hands into a water-bath with tempreture of 45^{o}C, without any burning sense for more than 10 seconds (all the four participants and we ourselves sensed it as a moderate temperature). Therefore, although need another work to establish at what water temperature; humidity; pressure and duration of inserting hands can kill the virus. Our start will ignite the scientsts to direct into ternative natural disinfectant. We suggest that if one insert his fingeres at least for 10 seconds in a hot water, the virus on his hand's surface will lose its biological functions. Because, when pure water heated, it will yield four types (refer to figure 02) of water species. These species are too active to react with others chemicals. For instance except the movable H_2O, the rest three can easily react with molecules of the viruses envelope. In particular they can react with enzyme and protein contented part of the pathogen's envelope like glycoprotein. As a result, which at least the glycoprotein can be breaking down the hydrogyn bonds in its structure.

Figure 02: possible pure water spieces that may be created when the water temperature rises

$$(H_2O)_{n>4} \xrightarrow{t^o} H^+,\ OH^-,\ H_2O \text{ and } H_3O^+$$

The denaturation of hydrogen bonds of the virus envelope by any of the above active ions in its turn, can lead at least to the elimination of virus's ability to spike its glycoprotein [41,42} with ACE of a host cell (figure 1).

This type of EMAD can be implimented in places, where many people are gathering-working-living:

first for ten seconds or more insert hands in the elongated but narrow (to minimize evaporation and energy lose) hot water bath with termoregulater. Then if necessary can wash with or without antisepti) Even such mass disinfection in waterbath, psychologically will force to wash hands thoroughly after the bath.

5.2 Discussions on surveyed results

As we continiously tried to address not only to Ethiopian government, but also to the world : UN (March 2020) WHO, The Guardian, Aljezzera, F1000research, IJAR, Nature, etc. (refere to picture 41-42 and 43-50), EMADs that we should have to apply against this type of respiratory infectious disease caused by such pathegon-coronavirus should take into account two types of paths: the primary source of the pathogen SARS-CoV-2 (direct contact of respiratory cavity of non infected with the infected exhale, salive or mucus), and the secondary paths (options) of infection: contact with part of infected body like hairs hands and commodities like door's handle, mobile and others fomites that have direct/indirect contact with the infected person.

Therefore, keeping in mind that one can be infected only if the virus enter to his respiratory cavity of healthy person through his contaminated body parts or fomites let us discuss the relation of the followings 7 issues (5.2.1-5.2.6) with the virus SARS-CoV-2: "distance keeping", "hand washing", "face mask", "hairs and nails", "consuming cold foods-drinks outside home", "and "the outer garment"; and "stay at home"

5.2.1"Distanc keeping"

On the "keeping distance" issues, we couldn't found any serious literature about "2 meters" distance not only that can justify, but also the first source about such limit of distance.

Distance keeping: is 2 meters justified by scientific works?

we were opposing the CDC, WHO's and Media's about the "2 meters issue" and tried to reach them to inform our thoughts (refer to picture 41) about faults in 7-9 measures of preventing from being infected.

During our 15 days survey, here in Addis Ababa and secondary data that we retrieved from websites, we observe that people do not take into account the distance issue in café-bars; shops and other places,but comparatively in bus stop at the queue start to keep the said "2meters" distance. In other countries too the same tendency (if not worse), for example during demonstrations it is clear that none of them do not concernabout distancing. What the other mess we encounter is that in Ethiopia and abroad, every where advertizing as if two meters being apart is the main solution not to be infected or infect others. The only reason why two meters is – because the virus is big, it will fail down with in 2 meters! Firstly, we couldn't get literature thatcan justify the two meters; secondly, to the physics context we are indoubt with such conclusion, because floating depends on the Density (**d**) of a substance, i.e. mass of the body divided by its volume, which we know from school physics program (figure 03).

Figure 03: for more clarification of the distance issue, we illustrate the density and mass relation

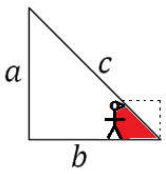
$$d = \frac{m}{v}$$

To fall down, "**d**"(density) should be higher than of the air's density (1.27-1.2/kgm^3). Thirdly, the circleshape of the virus also can play an opposite role. The other fourth, but main issue is the wind (air flow – movement of air to a definite direction with a speed): if there is a wind the virus can be taken as long as the wind's strength and as long as the virus's lifespan (survival) in the air.

Hence, the "2 meters" limit is a dangerous issue, Although it may be an ethical to point out here, in the article, which is specially directed for the mass, we can raise the height issue too. When we talk about distance factor, we should raise a height and air (wind) strength issues: from a constant height, viruses' falling or travelling (flying) forward depends up on the air movement's (wind) speed. Falling down, lifting up or travelling, depends not only on virus's density but also the air movement's (wind) strength, and direction.Assumethe height (a) of the virus's source (infected person or his location) and the strength of the wing (s) are directly proportional to the virus'stravelling distance through (b). from this physics based reality (refer to figure 04), we can understand that more the strength of wind, more distance and height of virus's start point, it can travel far away with the air droplet. To make it clear for health doctors, in particular to those, who are responsible for quarantine place managers,we illustrated the following Pythagoras formula (figure 04):

Figure 04: Pythagoras theorem in algebraic and geometric form of expression

$$a^2 + b^2 = c^2$$ or in geometrical expression



The length of "C" and the distance "b" depends upon the wind speed too. Anyway, the person shouldn't appear on the squared or at least in the shaded area!

People in crowded queue (standing) or walking and even talking to each other (refer to pictures 21-24). What about hospitals and quarantine places? Are they taking into account the wind and mathematical –physics principles?

5.2.2. Hand washing: are we all properly perform hand washing procedures?

We have surveid the Addis Ababa city for 15 days. During observation, in each gate of offices, markets-shops, café and resteurants (refere to pictures 23-26), one can see hand washing apparatues with liquid or plane soap. However, as indicated in each of mentioned 4 pictures, we have reveal discomforts with the apparatues' instalation and more importantly, the liquid soap that is offering to be used by the visitors in most causes was more diluted with water. In our April proposal (concept note) to the Ethiopian government [20], we stressed on the issue by saying that with such diluted soap, we may develop mutant of the coronavirus (refer to pictures 23), because if we decreased the concentration of the reagent, which is formulated to kill pathogens, there may survive some of the viruses. According to Darwin's theory the fitted (that withstand the diluted antiseptic) will servive and develop more fitted(mutant-strain) of the virus

Even, created a clip "Happy Birth Day to You", which lasts for 20 second. Whom and why this much long or short of time (20 second) was established for us not clear! The two meter distance limit, we couldn't get any data about whom, why and when such distance limit was recognized.

5.2.3 "Face masking"

As our field survey and internet secondary data show, everywhere washing-sanitizing hands is taken as the main EMAD to contain COVID-19. Whereas, the role of facemask has no significant place and distorted information about distance keeping are severely neglected. Furthermore, we understand that there are thoughts [14,15,16} that facemasking is not necessary for yet not infected individuals, fearing mask's deficiency for medical workers, patients and security organs; dreading that the mass may not properly use facemasks; although, officially there was no information, the security intelligence forces do not want the public to be masked (afraid of criminal with wearing facemask) or may be business oriented stakeholders and or politicians. In general, all the above mentioned means of infecting by the virus are ways of entering the virus into the last destination, i. e. respiratory cavity of the non infected person! This means that the only options to be infected is the virus' contact with the upper part of the throat and or the inner part of nostrils or if the vurus directly contacted with alveoles(in case if less mucus secreted and not enouph nasal hair on the surface of nostrils and cilia for filtering the air that to be enhaled)

5.2.7 "Stay at home"

airdroplet from infected person that are created during exhaling; as a saliva or during snoothing in the form of mucus, directly can reach to the being infected friend's (mostly sexual partner) or family member's (to children or parent's) respiratory cavity; more infected causes can be grouped into the contamination of surrounding atmosphare and when non infected breath in (inhale) the air, the virus can enter to his mouth and or nose; and already known situations: when the virus droped into any surface including infected person's hands, clothes, door handlings, mobile and others fomites.

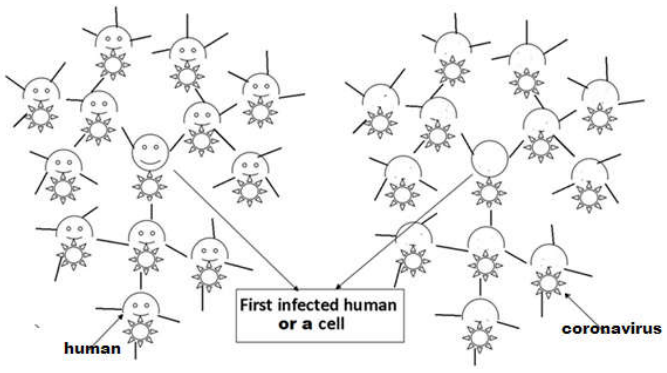
5.2.3. Face mask: is not face masking the 2nd after stay at home the main prevention EMAD to combat COVID-19?

The main efective but cheap EMAD against this pandemic are only two: don't expose your self to atmosphere, where there may be even a single coronavirus (refer to point), i.e. stay at home for 30 days, however, if it is too neccessary to go out of home, then until you return back to your home, never wear off your face mask even for seconds. To the contrary, there is resistance of wearing face mask!, not only in Ethiopia but also around the globe. Even in USA those who support Mr Trump do not want to wear facemask. What the second awful thing is that as seen in pictures 27-32, people who are using facemask do not wear it properly. Certainly, we are and will acuse stakeholders, because in particular responsible authorities do not inform the real advantage of face masking, and if any do not instruct how to use it properly. As a result of their idle/ignorance there is a resistance to wear face mask by yet not infected people with a justification/reasoning - not to creat shortage of masks for doctors, ursers, and patients and fearing its possible sideeffects[14,15,16}. During our observation, we reveal that even with in a family, there is facemask interchange, which must not to be practiced. Moreover, any facemask before using for the first time should be throughly disinfected.

The face mask usage is not limited in preventing from coronavirus:

Each year 4 million people are passing away from respiratory infectious disease that is caused by common colds. We do not know how many lives will be crumbled as automun leaves after months if today's number is 80000? In one thing we are sure: As shown in figure 05, it will have a mathematical regression, unless privintive measures do not take place, in particular if politicians-authorities, pseudo-business oriented scientists, and publishers-media do not stop their messes!On the other hand, as we mentioned in [17}, if the issue will be handed by relevant experts: virulogists, microbiologists, biochemists and epidemiologists. In particular at least if the public will be aware of on how to use properly the face mask, not only the SARS-CoV-2, but also others influenza-common cold and tuburclose pathogens can be disappeared.

Figure 05: Schematical perception on the SARS-CoV-2 invading regression on human and cell



The above scheme in figure 05 showsthe possible number of humans and cellsthat can be infected within a single coronavirus. And shows how the infection process can have a mathematical regression

5.2.4 Hairs-nails: are not hairs the second (after the primary)path to be infected?

The neglected but vital means of transmitting the virus are hairs and nails. In particular as seen in pictures 33-36, long hairs or that cover the eye, nose and mouth are the real cantaminater of the respiratory cavities. If these mentioned may have less possibility, the transmission from bed sheet, even to others who share the bed is high.Because, although they don't have a direct contact as the hands do, since they have more surface area, can trap more viruses from the air (atmosphare) than hands. Additionaly, alhough the hair shaft is made up of a keratin protein and it has no interest for the virus,since on it habitate bacteria, theoretically viruses can bacteriophage (as in cause of banknote) and multiply further, till they found their destination host's cell (epitelial cells of respiratory organs).
Even short hairs too can transmit during aslept, because the virus from them easily can transfer into
the blanket, bed sheet or bolster.

5.2.5 Role of bar-café, where cold drinks are consuming

In such places clients do not think about the pandemic, in particular when they are drinking alchol. As a result, next to hospitals, in such places it is guaranted to have the virus! Thus, the right measure was – closing such institutions for the pandemic period. However, due to the econimical situation and or since the ruling party need members' voice of such institutions, may not want to enter into confrontation by closing them as doing others developed countries. Yes, African government has no economical possibility as US, where can shut down such places, since the affected population can earn compensation. During our surveyin cafee and resteurants, although Ethiopian government is taking some important measures like decreasing: alchol drinks, tables (to maximize distance among the gusts), selling duration (only up to 18:00), etc., as seen in picture 20, we observe that there is a crowded of people. Most of the gusts do not remember about the distancing issue, in particular after they took alchol. Yes, we do not have know about these problems when we design this reasech. However, what we reveal during the practice is the acessories like glasses and cups that are used for cold drinks (alchols, beers, drafts and even for soft drinks) are not well preparing (disinfecting) according to the pandemic!

5.2.6 Role of products from meat, milk, kecks, candy, and vegitable products

Should be disinfect by thoroughly washing and heating. Therefore, avoid consuption of such products outside home. Yes, we remember that one day we have listen from media about the issue. However, even most of the sellers are not masking. These ithems are dangerous, even we are using them as a nutrition (medium) for microorganisms! What we are afraid is that, the virus may develpe new mutant on such products! But, wehen we raise about low temperature, we mean the moderate low temperature that is suitable for the virus [28,29}, but not the ice state, because when ice forms the virus will loose liquid water and even the water ice cristal forms needle like structure that can physically torn appart cells organels.

5.2.7. Outer garments: what is the role of outer garment in the infection process?

There is a guarantee that if the virus is in the atmosphare, it will be settled at least on the outer garments. Therefore, all our clothes that are exposed to the surroundings must be disinfected. When we return back home, better to disinfect outer garments (outer cover clothes and shoes), with medically approved airosole-anticeptics during returning back home, may have positive effect. Or, as in most uropean countries doing, such garments must be left outside or puting in a polyethylen bag!

5.2.8 Stay at home

Primary means of infecting: direct contact of mouth-nose of non infected with saliva-mucus-exhaled air droplet of infected person. Secondary means of infectng: mouth-nose of healthy person contacting with contaminated hairs, hands and or other body's parts of himself or of infected person. Tertiary means of infecting: contacting mouth-nose of yet not infected person with contaminated surrounding air, cloths, mobile, door handlings and others fomites. If one passes thoroughly the points 5.1.1-5.2.6, then, to avoid these type of contacting the mouth-nose of a non infected person, the simplest and effective way is isolate non infected person from, where the virus may theoretically present. The isolation is "stay at home".

However, although not only this virus, but also others airbornpathogens can be disappeared if we stay at home for 30 days, not only in developing countries, where many people are earning their income daily, but also even in developed countries the "stay at home" will not work!First of all the public should fully be aware of the impact of the disease, secondly its way of transmission and then how to prevent from being infected. However, today, when every non educated or business oriented and politicians are artistically lecturing for us what to do, there will be more worsen situations not only the increase of the pandemic prevalence, but also economic crises and even conflicts (Mr. Trump yesterday alerted China about future problems on the Taiwan issue) etc. It must not to be an obligation, since we should not violate a right for movement-displacement. But, person who is outside his home, must not violet others right, the right to breathe virus free air. This must be the main reason not to go out, and if there is a satisfied-justified reason to go out, either the person should have a certificate in which indicated that he was infected and checked that he he has antibody of SARS-CoV-2at least keep distance from others and mainly should wear face mask that filtrate his breath (exhale)

Situation in bars-café

About such problems, since the end of March, we were hollering-screaming everywhere, starting emailing to WHO, UN, CDC, to The Guardian, Aljezeera, scientific paper publishers like F1000research, IJAR, Nature, upto delivering a 28 paged proposal to our country's government and to Addis Ababa Science & Technology University [20}, etc. (refere to scanned email document parts in a form of group pictures: 41-50; However,

instead of forwarding the issue for relevant specialists, to have air-time for their own benefit or because of their ignorance (if not deliberately). Authorities and Media are behaved and still behaving as a virologist-epidemiologyst, As a result this pandemic is crumbling lives as an autumn leaves!

Yes, in this month additional to Madagascar president's online cocktel drinking show, through Media, emerge news about vaccine production!

Although, we have separate article on the world's drug-vaccine discoveryduels, in this work what we want to alert the stakeholders is that – Airing through Media about discovering drug or vaccine for this virus will iddle/relax the public. A situation that make the public diminish to violet epidemiological-prophylactcic rules. To the biochemistry-physiology-anathomy and immunology principles for such type of vacine, within this time frame – most probably it is impossible to have an effecive vaccine. Hence, if in this time, if any body has a vaccine, we will be client for Lotery game, since we too have a chance of winning the first prize.

6. CONCLUSION AND RECOMMENDATION

6.1 banknotes can be transmitters of the virus SARS-CoV-2

6.2 In banks and others institutions, where documents, tickets, banknotes are processing (exchanging),at least the circular voice port (fixed or closeable) and deal tray (pass-through), which are designed for cash-document exchange should have mounted ventilators to push back air flow into outside diretions

6.3water bath more than 40^{o}C may be usefull to decontaminate hands in mass (community) gathering sites like: production plants; sport events; university launges; military campuses; prisons; etc;

6.3 Let every one imagin that the atmosphare contain the virus! Hence, two meter distancing principle may work if there is no air movment (wind), for instance in a vaccume like space!.

6.4 "handwashing" and "facemasking" procedures against COVID-19 need to be accurate

6.5 Head hairs: since they are neglected by stakeholders, they are at least the third (if not the second) option (next to airdroplets and hand) in transmitting the virus SARS-CoV-2.

6.6 Using glass/cup for cold drinks and feeding outside home, from butchery, dairy, etc. where no heat is applying as well, are not safe. Even, Avoid moderately cold drinks, but not ice, because ice kills germs.

6.7 In any type of visual media, during interview, every one must wear face mask

6.9In our 1st article, we have identified the six organization based prophylactic measures, one of them is involving religion' leaders in teaching-convencing their fellowers about the viruses fact

6.10 scalling up immune system through drug (for chronical disease patients), and balanced diet with enough (but not excess!) vitamin C contented

6.11 stop politisizing and businessing the pandemic:Instead of adverting a drug-vaccine discovery (just let no one anounce till it produced the effective product (if any), which may make public idle/ignorance the danger of the pandemic, arming the public with the COVID-19's nature can dramatically decrease the infection's prevalence.

6.12 each individual should have conceltation for everyone with a certificate that he passed the awareness test! This is important, because the individual put effert, when he is answering for each test.

6.13 If we help scaling up nations' awareness of avoiding the entrance of the virus into respiratory cavity for a month, then not only SARS-CoV-2 but others respiratory infectious microorganisms too will be vanished! To achieve this, above all, stay at home for maximum of 30 days will end not only this pandemic, but also others respiratory infectious pathegons.

6.14 The easiest, cheapest but effective way of self defence from infection is not to let the virus to stick into inner part of the respiratory cavity. From this postulate, one can derived three preventive measures from being infected or infect others: Donot go out, where there may be the virus in the atmosphere; if you are forced to go out, never put off your facemask during your stay out of your home and the third preventive way is do not bring the virus with comodities, your clothes (fomites) and body part like hairs and hands

7. This work is dedicated to all COVID-19'svictims, including to our sister Mintwab Temesgen Leye.

8. AKNOWLEDGEMENT:

This work was not be able to be prepared in the form of article without "Bank of Abyssinia"'s promise to assist us in paying (publishing charge-fee) through wire transfer system

9. REFERENCES

1. Owen Jarus/2020/20 of the worst epidemics and pandemics in history. 20 of the worst epidemics and pandemics in history _ Live Science.html. https://www.livescience.com
2. All about History /2020/ Spanish Flu: the deadlist pandemic in history. Retriebved march 26, 2020 from https://www.livescience.com
3. Adrian Mylne, Oliver J. Brady, Zhi Huang, et al A comprehensive database of the geographic spread of past human Ebola outbreaks. Scientific Data volume 1, Article number: 140042 (2014) Doi: 10.1146/annurev-virology-110615-042301
4. Dessalegn Temesgen Leye /2018/. Additional (4th) Option for Malaria Elimination Activities. Global Infections Conference, November 12-13, 2018 Melbourne, Australia. https://www. OMICS.org
5. Sharp P.M. & Hahn, B.H. /2011/ 'Origins of HIV and the AIDs Pandemic' cold spring Harbour Perspective in Medicine 1(1):a0006841
6. Meo S.A. Meo, A.M. Alhowikan, T. Al-Khlawi, et. Al. /2020/ Novel Coronavirus 2019-nCoV: Prevalence, Characteristics Comparison with SARS-CoV and MERS-CoV/Eur Rev Med PharmacolSci/Vol 23- N.4
7. Tyrrell D.A.J. /1981/ Biology of Coronaviruses 1980. In: terMeulen V., Siddell S., Wege H. eds) biochemistry and Biology of Coronaviruses. Advances in Experimental Medicine and Biology
8. Roujian Lu, Xiang Zhao, Juan Li, et. al. /01.29.2020/Genomic characterisation and epidemiology of 2019 novel coronavirus: implications for virus origins and receptor binding. https://doi.org/10.1016/S0140-6736(20)30251-8
9. Tanya Basu /03.10.2020/These are 6 of the main differences between flu and cocronavirus/Genomic Medicine/www.technologyreview.com
10. CDC. History of 1918 Flu Pandemic Influenza (Flu). Retrieved on March 26, 2020 from www.cdc.gov pandemic-resources
11. Solomon Oranusi, Akande V, OlatundeDahunsi /01.01.2013/yi Assessment of Microbal Quality and Antibacterial Activity of Commenly used Hand Washes/Society for Advancment of Science/Journal of Biological and Chemical Research
12. CDC/ How to wash your hands/https//www.cdc.gov
13. World Health Organization (WHO)/10.20/2015/ WHO: how to hand wash? With Soap/Youtube.com
14. face masks cannot stop healthy people getting COVID-19 . retrieved on https://www.theguardian.com
15. Kelly Servick/03.28.2020/Would everyone wearing face masks help us slow the pandemic?/https://www.sciencemag.org
16. face masks cannot stop healthy people getting COVID-19 . retrieved on https://www.theguardian.com
17. Dessalegn Temesgen Leye /06.17.2020/. Options to enhance the Control-Prevention measures' achievement in combating COVID-19's Pandemic. Global Scientific Journal, Volume 8, Issue 6
18. Johnson WG Jr /1984/ Prevention of respiratory tract infection . Am J. Med CDC respiratory infection Control Measures
19. Seto WH, Conly JM, Pessoa-Silva CL, et al. 2020/ Infection Prevention and control measure for acute respiratory infections in healthcare Settings. Eastern Mediterranean Health Journal https://www.Emro.who.int accessed 04.11.2020
20. Dessalegn Temesgen Leye /2020/. Measures/Instructions against SARS-CoV-2 and COVID-19: Response to the Ethiopian Prime Minister's Request (document). Ministry of Health 119/44
21. Sirin Kale 03/03/2020 From banknotes to handrails: 10 objects that help spread coronavirus the Guardian / Gardian WHO From banknotes to handrails_ 10 objects that help spread coronavirus _ World news _ The Guardian2.html
22. Bill Gardner/03.02.2020/ Dirty banknotes may be spreading the coronavirus, WHO suggests/The Telegraph
23. Alex Kasprak 03.06.2020 Can Contaminated Money Spread the New Coronavirus? The World Health Organization has advised people to "wash their hands after handling banknotes
24. MeeraJagannathan 03/09/2020 World Health Organization: 'We did NOT say that cash was transmitting coronavirus'/we were misinterepresented World Health Organization_ 'We did NOT say that cash was transmitting coronavirus' - MarketWatch.html
25. Ali Hematian, NourkhodaSadeghifard, Reza Mohebi, et. Al. /01.08/2016/Traditional and Modern Cell Culture in Virus Diagnosis/Osong Public Health and Research Perispectives 7(2): 77-82 https://www.ncbi.nlm.gov
26. SagarAryal (2018). Techniques of virus cultivation. https://www.microbiologyinfo.comtechniques-of-virus-cultivation
27. Yves Thomas, Guido Vogel, Werner Wunderli, et. al./05.2008/ Survival of Influenza Virus on Banknote / Appl Environ Microbiol. 2008 May; 74(10): 3002–3007
28. K. H. Chan, J. S. Malik Peiris, S. Y. Lam, et al./10.01.2011/ The effect of Temperature and Relative Humidity on the Viability of the SARS Coronavirus/http://doi.org/10.1155/2011/734690
29. Shu-Ming Duan, Xin-Sheng Zhao, Rui-Wen, et al. /09.03.2003/Stability of SARS Coronavirus in Human Specimens and Environmental and Its Sensitivity to Heating and UvIrradisation/Biomed
30. ,Environ Sci, 16(3), 246-55
31. Aylin Woodward/The coronavirus can live on a surgical mask for 7 days, cloth for 2 days, and paper for 3 hours . here is how to disinfect surfaces properly/ https://www.businessinsider.com accessed 04.10.2020
32. AdegokeTosin, Olusi Titus Adeniyi, AwosoluOluwascunBunmi (2019) Parasitological and Bacterial Contamination of Nigerian Currency Notes and Antimicrobal Resistance of the Isolates in Akure, Southwestern Nigeria J. Biology
33. Muguongo, S., Nyamache, A., &Maingi, J. (2019). Antibiotic Susceptibility Profile of Bacteria Isolated from Kenyan Bank Notes Circulating in Nyeri Town. Microbiology Research Journal International, 28(2), 1-12. ttps://doi.org/10.9734/mrji/2019/v28i230125
34. Pradeep NV, Marulasiddaiah BS, M. Chetana, Parthasarathy ?Gayathri (2012) Microbial Contamination of Indian Currency Notes in Circulation J. Biology
35. Suaad S. Alwakeel, Laila A. Nasser (2011) Bacterial and Fungi Contamination of Saudi Arabian Paper Currency and Cell Phones j. Biology
36. Bill Gardner /03.02.2020 /contactless payments in fight against coronavirus/ https://www.festipay.com
37. EngenTham , Josh Horwitz and Edied by Kim Coghill / 02.26.2020/ China orders disinfection of banknotes in coronavirus fight/ China order disinfection of banknote in coronavirus fight report Reuters.html
38. Aylin Woodward/The coronavirus can live on a surgical mask for 7 days, cloth for 2 days, and paper for 3 hours . here is how to disinfect surfaces properly/ https://www.businessinsider.com

39. creative industries (2019). Bulletproof materials: Pass-through trays in bank security. Key Factors in pass-through Trays for Bank Security.Html. https://www.creativeind.com
40. US4640200A pass-through transaction drawer with removable deal tra. https://www.google.com/patent/UA4640200A
41. Emanuel Angelakis, Esam L. Azhar, FehmidaBibi, et. al. (2014). Paper Money and Coins as Potential Vector of transmissible disease. Future Microbal j. (2014) 9(2). www.kau.edu.sa
42. XiuyuanOu, Yan Liu, Xiaobo Lei, Pei Li / 04.26.2020/ Characterization of spike glycoprotein of SARS-CoV-2 on virus entry and its immune cross-reactivity / https://www.researchgate.net
43. Walls AC, Park YJ, Tortoric MA, et al. /2020/ Structure, Function, and Antigenicity of the SARS-C0V-2 Spike Glycoprotein,/Cell. 2020 Apr;181(2):281-292.e6. DOI:10.1016/j.cell.2020.02.058

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