



# COVID-19, Vaccination and Healthy Living: Protecting Yourself or Exposing Others? The Kiss that Kills

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## Abstract

At a time when vaccines are spreading, there are still pockets of resistance, mainly of a social, psychological and behavioral nature, but also of an economic and health nature in developing countries. We focus here on the social, psychological and behavioral aspects of this resistance. The struggle against Covid-19 is becoming less and less immunological and more and more intrapsychic and social. It is therefore these parameters that need to be targeted. To this end, media campaigns to promote health, but above all to reduce resistance, are therefore quite essential and take precedence over hygiene measures, which citizens are completely saturated with.

## Keywords

Covid-19, Psychological, Social, Behavioral, Reluctance, Resistance, Locus of control, Signal detection theory.

## Introduction

As vaccines begin to take effect, and this differentially in different parts of the world, pockets of resistance are asserting themselves despite the fact that the global case count (as of September 22, 09:21 ET) is 229,665,913; that confirmed cases of death is 4,711,253. These pockets are essentially social, behavioral and psychological in nature. On the one hand, there are those who do not want to be vaccinated, and on the other, there are aberrant behaviors such as group meetings without any protection and other deviations of all kinds [1].

These deviations are of different kinds. On the one hand there are those who still refuse to wear masks [2]. On the other hand, social distancing is very rarely respected, especially in shops, department stores and pedestrian areas [3].

Finally, the hygiene surrounding the masks, their renewal and their cleaning, leaves much to be desired. It is as if the simple fact of wearing a mask, even one that is largely worn out and obsolete, is likely to reassure the subject and those around him.

As a result, the fight against Covid-19 is no longer a matter of immunology, but of behavioral, social and especially

psychological nature. But why such pockets of social, psychological and behavioural resistance [4]?

## Methods

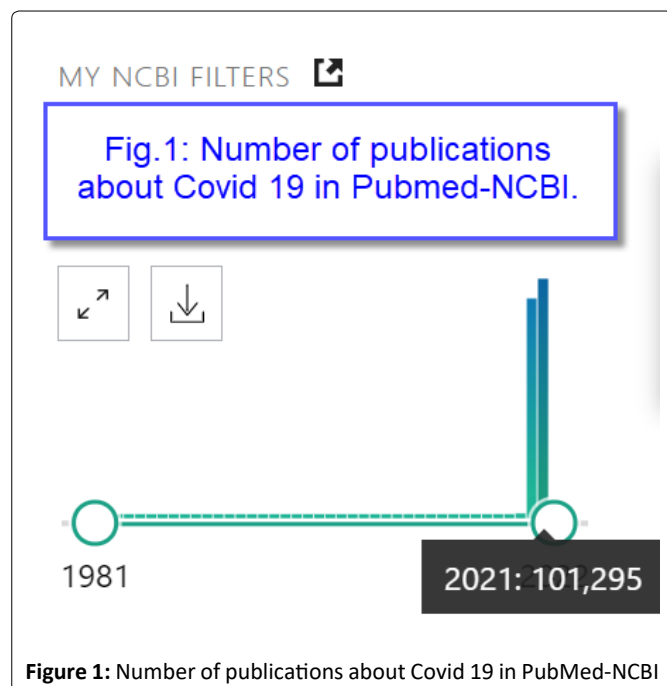
As the literature on Covid-19 has become gigantic and exponential (Figure 1), it is totally impossible to take it into consideration extensively. We have however searched for Covid-19 on Pubmed and Embase with the following keywords: psychological resistance to the vaccine, refusal to wear the mask, hygiene measures, hypochondria, cyberchondria in order to focus our subject. In order to document this article,

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and in view of the large number of remaining articles, we have taken the references that seemed most relevant to us.

## Results

Many of us are unaware (voluntarily or not) of the basic hygiene rules for hand protection, hand disinfection, and all the sanitary measures to be adopted [5].

### On the social level

Several parameters come into play. The first is social comparison, especially among children, adolescents and young adults [6]. This is now to be referred to as *“the kiss that kills”*. Indeed, in order to show affection and trust, so many people abandon their masks because they want to demonstrate to the other person that the bond is more important than security [7]. The same applies to relationships between grandparents and grandchildren, and between parents and children, even if the latter go to school and are therefore more exposed to the virus. The most peculiar thing is that everyone hesitates before lifting the safety measures in wearing the mask [8]. It is therefore the first one to *“set the tone”*, thus non-verbally obliging those around him to adopt the same measure. This is therefore a non-verbal code according to which one must abide by social conventions, without which things would seem inappropriate or unloving. This is therefore a non-verbal code according to which one must abide by social conventions, without which things would seem inappropriate or unloving [6].

Moreover, during group meetings, whatever they may be, alcohol has its typically inhibiting effect: Precautions - such as the use of condoms - take a back seat, especially in order not to be considered *“old-fashioned”*.

Finally, social appearance means that if you take off your mask, you are seen as a *“brave warrior”* who is not afraid of anything [9]. You are therefore considered indestructible,

which has a social, relational, intrapsychic and narcissistic added value. Moreover, the incivism and egocentricity of a whole section of the population play their part: some take the usual precautions, others not at all [10,11].

### Psychological aspects

All this brings us back to the concept of the *“internal locus of control”* [12] and to signal detection theory [13]. Where signal detection theory is clearly in line with Pascal's Wager and therefore in the sense that there is nothing to lose by getting vaccinated, many people continue to deny, fear and shun the vaccine.

Wallston's questionnaire [12] includes three subscales (Internal Health Locus of Control or IHLC, Powerful Health Locus of Control or PHLC, and Chance Health Locus of Control or CHLC). It is this *“multidimensional health locus of control”* scale we have used extensively in various pathologies, both psychiatric and organic.

The use of this scale gives rise to different types of information which interested us greatly since some of them give us direct relational information about the patient's representation of the power of his family and doctors over his health. While some individuals believe they have a personal role to play in avoiding or fighting illness (internal perception of *“health control”*), others rely on the fate or power of *“others”*, family members or health professionals.

Similarly, while some patients feel involved and fully responsible for their health, others have a passive view and believe that only others (doctor, spouse, medication...) or chance are responsible for their evolution [14,15]. We know how important the philosophy of existence that the patient develops in life in general or applied to the illness can be for the quality of prevention, treatment, both in terms of its initiation (medical consultations or not) and its maintenance (*“compliance”*, *“fidelity”*, *“adherence”* to the treatment) and perhaps even for the evolution of the illness, whether somatic or psychiatric.

It is indeed relatively transparent that the norms of our society are centered on the need to harmoniously combine the imperative of autonomy with that of socialization, the demands of individualization with those of solidarity and interpersonal relations. The application of this dual imperative of autonomy and socialization to the field of health gives a glimpse, in the form of the *“responsible internal”*, of what the *“ideal patient”* or *“ideal healthy person”* would be: One who knows how to listen to advice, apply it, gradually take it on board and then assimilate it, so as to finally achieve good self-management, whether in the course of health or illness [15].

On the other hand, the *“black beasts”* of medicine, referred to as *“deniers”*, those who consult too late or never, who treat themselves *“in their own way”*, and do as they please, will quite readily find themselves in either the *“pure intern”* profile or the *“no sayer”* profile. They will show poor compliance, infidelity to the treatment, they will seek information and ask embarrassing questions, and end up *“doing whatever they want”*.

In our view, it is essentially those people who have too strong an internal locus of control and those who are suggestible who will be resistant to any vaccination and hygienic precautions for protection against the virus (external locus of control). As Robinson and colleagues say [4], being female, younger, of lower income or education level and belonging to an ethnic minority group were consistently associated with being less likely to intend to vaccinate. Even in medical students, female gender, being younger, having inadequate health literacy and lower education were associated with reluctance to be vaccinated against COVID-19 [16].

Thus, the two opposites are similar: Those who want to “keep the power” even towards health instructions and those who are suggestible by those around them (fear of the vaccine and its consequences, fear of being injected with “the disease”, suggestibility to rumours about side effects, etc.).

The psychological resistance to being vaccinated is much greater than we think: some people find it financially beneficial to continue receiving benefits and delay their return to work, others develop various forms of hypochondria or cyberchondria for fear of being infected [17,18].

## Behavioral aspects

Many of us are unaware (voluntarily or not) of the basic hygiene rules for hand protection, hand disinfection, and all the sanitary measures to be adopted [19,20].

For example, the non-replacement of masks is an obvious demonstration: how many people do not wear the same mask for weeks on end, just to look socially ‘proper’ [8,21]?

How many people do not disinfect their hands (and others) after touching stair railings, door latches, lift buttons, common objects used by a community such as coffee machines [19]? Over 26% of the global population has no access to a hand washing station in the home; for many low-income countries this proportion rises to over 50%. In other instances, the water is unaffordable or the supply has been shut off on account of unpaid bills. But when there is no water in the home or yard, or no mechanism for delivering enough water, good hand-washing is extremely difficult. Well before COVID-19, global cost-benefit analyses of water and sanitation investments, with benefits measured in time-savings as well as health, showed significant net benefits in all sub-regions of the developing world [20,22].

How many carers and surface technicians do not change their working clothes frequently enough, even after having been in contact with infected people [22]?

How many people visiting their relatives in nursing homes do not take the necessary precautions [23]? How many people shopping do not follow hygiene precautions, including when handling objects and food [24]?

## Conclusion

While vaccination against Covid-19 is progressing slowly internationally, even in countries where the vaccine is readily available, pockets of resistance continue to exist. Fear of the vaccine is still very real for many, just as hygiene precautions are not sufficiently taken into account by some people.

As a result, progress in microbiology is strongly countered by strictly social, psychological and behavioral aspects. Our findings might be taken into high consideration by stakeholders and national officials in the health care register, who are responsible for promoting a truthful perception of risk and proper compliance with precautionary measures.

## Conflicts of Interests

The authors have none to declare. They have all worked equally to the manuscript.

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