

Original Paper

Some People Now *Wear Masks*: Is It the Outcome of Lockdown-laws or Individual's Psychological Influence Being Safe: A Cross-examination Under Demand and Supply Model?

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Abstract

Human psychology influences individuals' decisions where many factors can be used exploiting it. But this approach was missing in tackling the COVID-19-crisis while it was spreading globally. Most countries like Bangladesh were not prepared addressing it. They started with traditional approaches explicitly lockdown, shutdown-crowded-spots, and imposed-mandatory wearing-mask outside-home. However, a sizable population-percentage country-wise had ignored the restrictions. During the second wave of the crisis, no-mask-no-service was in practice. It was effective in most cases. However, no effort was given to convince people, making them understand and then make appeal for peoples' actions. Today there is no lockdown or restriction. But a small population-percentage wear masks, which has been growing. This dichotomy result raises the question: Is it the outcome of individual's psychological influence being safe? This study uses demand and supply model and concludes that perceived risk-factors, being observers or heard about the consequences, media-messages, and feelings of responsibility & safety out of self-consciousness etc. play significant roles in today's scenario. Since most people are risk-averse, utility analysis of the factor(s) of psychology-influences such as individual's understanding about severity, knowledge etc. are dominating today's scenario where expected utility leads the mask-wearing-trends. Thus, the policy-proposal ratifies that use the techniques of convincing over command & control could have undercut the death-numbers during severity-period. Welfare analysis of the policy-proposal can lead for future study on today's scenario.

Keywords

COVID-19 crisis, traditional approach, convincing approach, today people live with business-mentality, peoples' understandings are powerful, effective management

1. Introduction

After severely spreading Corona virus disease (COVID-19) for a while globally, now it is with a slower-rate in many countries. Most countries like Bangladesh were not prepared meeting the severity of the COVID-19 challenges.

Tackling the issue during its severity-period, government country-wise like Bangladesh had implemented traditional-approaches explicitly lockdown, shutdown crowded-spot(s) and force individuals for mask-wearing in public places (The Daily Star, 2022; Rahman, 2021a, 2021b, 2021c). However, a large population nationwide had ignored and violated the laws. The severity of this violation was lower in city-areas than that in rural-area where 65% people live in (Rahman, 2021a).

During this crisis, *Wearing-mask* and *Keeping-distance* were simply tools or a protective barrier that had helped to reduce the spread of respiratory infections. At the same time, it had eased people to move around meeting daily needs such as walking around & keeping distances, entering offices, sitting with mask in classrooms & keeping distances and what not. In some cases, masks with different logos and in different shapes were weaponized for partisan purposes. These were all the reality of human lifestyles during the severity or lockdown period country-wise such as Bangladesh.

Today's world is not free from consequences of COVID-19, but it feels like to be in normal stages just like any other health disease issues. So, there is no lockdown law in practice. Today here we see that a small percentage of population wear masks and keep distances in their movement even though there is no lockdown law in place. No law enforcement entity is on the streets and holding weapons targeting violators of lockdown laws. These are the realities of today's human society in Bangladesh. In this progression, no developed countries such as the United States is exception. Recent public polling shows that two thirds of Americans never or rarely wear a mask outside their homes (Nicholas, 2022; WHO, 2023). There are many probable reasons for the decline in masking and keeping distance. This might include there is no lockdown laws in place, no pandemic fatigue—a justified belief that the worst of pandemic consequences is behind us and the removal of mask mandates provisions.

However, there are many people, obviously a small percentage of total population country-wise wear masks. This dichotomy raises question: whether lockdown had resulted *wearing-mask & keeping-physical-distance* during the severity of COVID-19 Crisis country-wise such as Bangladesh? More specifically, today there is no severity of pandemic consequences, but a small percentage of population still wear masks, which raises the question: Is it the outcome of individual's psychological influence being safe?

This study takes on challenges answering the question posed using Demand and Supply Model.

This journey begins with elaboration on what had done country-wise such as Bangladesh addressing the severity of COVID-19 consequences. Then it looks at “what could have done” for addressing the severity, which could have undercut the number of deaths or could have saved more lives. Finally, “what could have done” as a policy-proposal is being cross-examined in this study.

2. What Had Done Country-wise such as Bangladesh?

The government initially began its efforts with travel-restrictions, social-distancing-measures, shutting-down academic-arena and finally imposing lockdown-laws in Dhaka city and slowly beyond. Besides this, government-initiated efforts for covid-test & treatment of COVID-19 patients in government and in some private hospitals and clinics across the country. Since then, the number of infected individuals has gradually increased. However, this journey began with the wrong signal to the public. The DGHS under MoH handled giving approval to service providers conducting COVID-19 tests. JKG Healthcare was one of the approved service providers. It was engaged in producing fake test-reports and issued forged “Covid-19-certificate” (Rahman, 2021a, 2021b, 2021c). It got further ugly. Secretly the JKG was led by physician Sabrina Arif Chowdhury who was officially employed as Government Surgeon under the DGHS. This Sabrina-ism has polluted the *entire* healthcare-service sector (Rahman, 2021b). In this process, few like Sabrina, became the money-suckers at the frontline. In the process, the DGHS became a money-making machine and MoH was watching Sabrina-ism. So, the COVID-19 became a blessing for the parties involved with the costs of the public during the pandemic crisis in Bangladesh.

This Sabrina-ism *dilemma* would not take place if the government had started its journey with modern-approaches in this 21st Century digital-era (Rahman, 2021b). It includes convincing people and making them understand for inspiring people for moral responsibility sticking with policy of command & control. Engaging in criminal activities, Sabrina Gong would have engaged with moral responsibilities. Sabrina group would have extended official duties to their fullest where the government’s modern approach would have inspired them.

Despite these multi-phases behaviors, it is recognized that government’s policy “no mask, no service” which was set up sometime near the end of the critical situation, was for inspiring the people for sharpening peoples’ moral-responsibilities addressing the pandemic-crisis for the survival. This is because a society is a system that organizes interactions between individual and diverse groups in a viewpoint for its survival through legal and moral standards. On legal issue, punishment can be imposed based on Court decision. On morality issues, leadership can impose sanctions on individual misbehaves. Thus, in this case “no service” can be seen as a sanction or punishment for an individual who does not follow social rules such as wearing mask.

However, no government-effort was seen in practice that ensures a modern approach. No effort was made to convince people, making people for their way understanding consequences and preventive-measures. Thus, people were not eased taking their own decision in aim to avoid perceived risk.

3. What Could Have Done Country-wise such as Bangladesh: Policy Proposal in Case of Facing Similar Challenges in the Future?

Government could have used approaches for convincing people, making them for understanding and then make appeal for peoples' actions etc. using traditional approach. This is because the 21st Century human-society is a society of business-mentality where individual's psychological influences can play significant roles in their choices (Howard, 1991). In this case, an individual's thoughts, feelings, and other cognitive characteristics can influence his/her behavior, attitude, and functions of his/her mind. These factors can affect human thinking and afterward they also affect his decision-making in daily life. Thus, from the first stages of COVID-19 pandemic crisis, government country-wise could have preferred convincing approach over command-control approach. This is because solving this kind of problem requires a sense of responsibility, I mean individual responsibility. It requires coordinated efforts and pragmatic collaborations with stakeholders, which could have been an effective management for effective outcome. But it was missing in the government's efforts.

This policy proposal "what could have done" is being cross-examined as follows:

It is well recognized that people do make decisions based on their own benefits where people's psychology influences for doing it meeting the needs or demands on daily basis. Many of our actions are influenced in ways we do not even realize. These influences can be a wide array of things including the words, persuasion, seeing something, creation of self-consciousness and body language of others, which cause our psychological influences for doing it. Even a mild persuasion for doing good things can have a substantial impact on us, which means that individual or organizations or government entity too can use persuasion to influence the behaviors of others.

We assume here that promoting any positive messages effectively can enhance people's understanding about their own benefits, which can influence people psychologically for doing things such as wearing mask and what not in case of pandemic or any other situation for individual or society's better-ness. Since this understanding comes through self-psychological influence based on promotional efforts of others, it is powerful and sticks with individual in human society. In this sense, today's wearing mask even there is no lockdown provision in place, people wear mask for its own safety where the individual psychology has played significantly in decision making process wearing mask.

3. Model

Since we live in the 21st Century Digital Era, persuasive techniques or efforts can promote in multi-facets for influencing individual's psychology so that s/he does it for its own benefits. In other words, this mathematical model (Rahman, 2020) can be written as follows:

Psychological influence = $f(\text{Persuasion techniques for mask wearing})$

$PI = f(X_1, X_2, X_3 \dots X_n)$ where

PI = Psychological influence

X_1 = Use loaded words & images of consequences (say dead-body's pics of

COVID-19)

X_2 = Get your foot in the door – reach out everyone in multi-faucets – TV / Radio / drama / movie etc.

X_3 = Creation of self-consciousness - feelings of responsibility & safety associated with wearing masks etc.

X_4 = Use power of reciprocity (free mask distribution, no mask no service etc.)

X_5 = Create a need by having provision in place *e.g.*, lockdown, arrest / penalty Including monetary for violation etc.

X_n = Other factors

Even though there are no provisional requirements or no lockdown in place country-wise such as Bangladesh, comparatively a smaller percentage of the population in human society wear mask. Here an individual wears mask based on his / her psychological influence saving self.

In this instance and in many other similar ones, knowing how to take advantage of human psychology to persuade others can be a valuable tool when necessity arises. So, in instances of *mask wearing or keeping distance* and in many other similar ones, knowing how to take advantage of human psychology to persuade and then act accordingly can be vital when it is needed most. During COVID-19 pandemic crisis, it could have saved more lives country-wise such as Bangladesh. In other words, in the 21st Century business-mentality world, lockdown law could have been the last options for convincing people psychologically for mask wearing and keep distance in their way daily lifestyles.

Today's dynamic societies, less governable by old methods of command & obedience, may set and achieve both individual and broad social goals by enhancing decision-making abilities of individuals where authority's efforts can be vital on promoting individual's psychology for doing or not doing it. For example: environmentally responsible behaviors of humans in society can ensure pollution free environment where individual's psychological influence can be significant for getting it done (Rahman, 2000, 2022). Such a change would mean a radical break with the past as well as with most prevailing governance models.

3.1 Setup & Notation

Today no country has active lockdown provision in place. However, a small percentage of the population still wear masks. These people are stimulated by their own psychological influences for the decision wearing mask where their knowledge particularly experiences, observations etc. are the factors that play vital roles.

3.2 Demand for Factor(s)

To further simplify the exposition, we assume that mask is not free of cost. So, in this case, meeting psychological demand, people spend money, which is price or cost of the factor of psychological influences, in this case knowledge particularly experiences, observations etc. So, these factors are *demand for factors* for adequate psychological influences. During COVID 19 crisis, there were TV advertisements, announcements etc. for wearing masks where in some cases masks were distributed free

of cost. So, these all then served as factors for individual's psychological influence. So, these factors then were in demand.

3.3 Supply and Equilibrium

Based on the current situation, the individual himself supplies the factors of psychological influence for wearing mask now a days. However, during the crisis, provision such as lockdown, TV advertisement, announcement etc. served as factors of psychological influence for wearing mask where agencies or entities such as government supplied the factor(s) of psychological influence for wearing mask. For further clarity, in today's situation, the individual himself makes the decision for his / her own benefit, however, during crisis, law enforcement made the decision for the individual to ensure his / her safety.

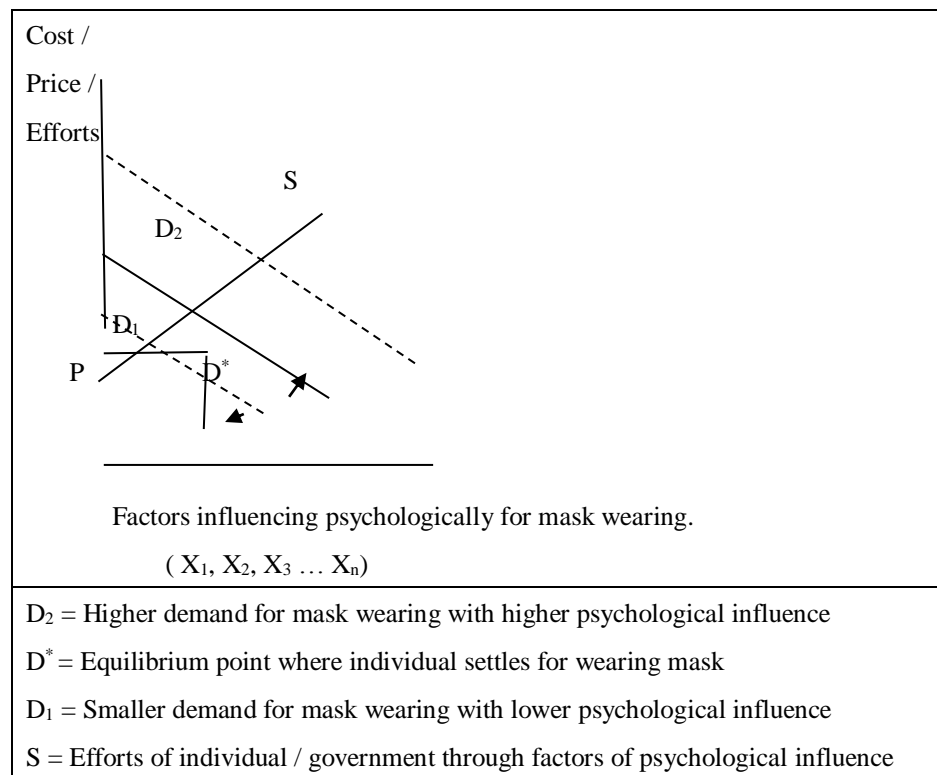


Figure 1. Wearing Mask even no Restriction Is in Place in Today'S World Country-wise

To characterize equilibrium, we have made first assumption that there exists a price \bar{p} such that $D(\bar{p}) > 0$ and $MC(p) < p$ for every $p > \bar{p}$. In other words, it is assumed that factor(s) of psychological influence are beneficial and efficient to those with the highest willingness to pay for it, which makes the individual safe.

Figure 1 shows that a small percentage of population country-wise such as Bangladesh settles at point D* where demand for mask wearing (being safe) = efforts of the individual for individual's psychological influence. In other words, point D* represent the equilibrium point where DD = SS. This is the *scenario* of today's world where there is no restriction or lockdown law in place for mask wearing but some people

wear mask based on individual's own efforts on his or her psychological influence for decision of mask wearing.

Since the proposed model begins with psychological influence = $f(\text{Persuasion techniques for mask wearing})$, here individual's current knowledge about the severity of pandemic crisis as well as knowledge about safety measure, a small percentage of the population has decided to wear mask.

4. Utility Assessment of Factor(S) That Resulted Psychological Influence Wearing Mask

Today in human society some people wear masks outside the home even though there is no restriction imposed by the government country-wise. Here perceived-risk factor plays dominantly setting up the stage for individual's decision to be on safe side where individual's psychological influence convinced him or her meeting self-demand no matter what the surrounding people think about it.

It is palatable to assume that most people in most of the time are risk-averse in general, *i.e.*, they prefer certainty to uncertainty when it comes to their own health issue where individual's understanding about severity, individual's knowledge etc. are important. Figure 2 illustrates the risk preferences of a risk-averse individual.

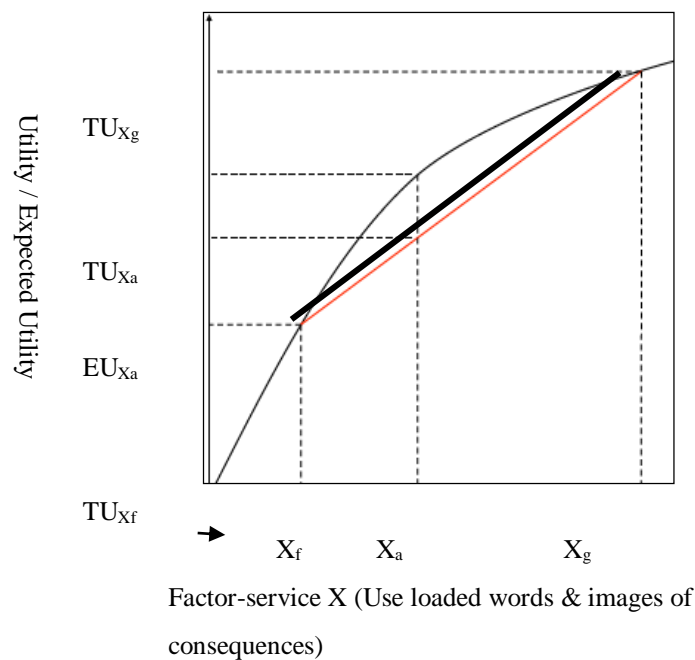


Figure 2. Risk Aversion Scenario of Factor-Service for Creation Psychological Influence for Mask-wearing

In today's world of uncertainty, an individual's actual utility that s/he receives from the factors (say $X_1 = \text{Use loaded words \& images of consequences}$) that create psychological influence for mask wearing where $PI = f(\text{factors that promote level of influence})$ will never fall on the $TU(X)$ but on the chord (the bold line) in Figure 2 (Rahman, 2018). The X_g , in Figure 2, stands for a service outcome of the factors of

PI in which individual may use a certain level of factor-service X while the X_f stands for a negative outcome in which individual may use less of factor-service X . If there is a level of uncertainty that an individual may not use the X_g units of the factor-service X , the utility that this individual receives will lie somewhere on the chord (the bold line). The chord stands for the expected utility (EU) of using factor-service X . Here the EU lies in the concavity of the curve because it is the average probability that the individual will use factor-service X or not. As a result, an individual will never receive TU (X_a) but rather EU (X_a).

5. Analysis of the Proposal and Today's Outcome

In the proposed approach, individual's benefit using facemask and keeping-distance will be equal to expected-benefit. This outcome depends on the individual's efforts and quality of the product individual uses. Any changes in an individual's efforts may risk getting infected. It may defeat the individual in fights with pandemic such as COVID-19. So, under the modern approach individuals can receive more expected-benefit than that under traditional-approach. This is because individuals will have more information & resources available to him from multiple sources. Under traditional approach, individuals may have limited information on consequences & preventive-measure by struggling with lockdown-laws. Also, individuals can have this information mostly on their own efforts, which cannot be challenging for rural people because of the digital era.

During the period of the COVID-19 crisis, both first wave and the second wave, in Bangladesh, putting efforts only within main cities, by engaging local administration, the government could have reached out rural areas based on it foresee. In return, it would have undermined the trends of catastrophes. During the second wave, strict lockdown laws with provisions of arrest and penalties for violators nationwide were in place. With two reasons, it was difficult to assess the effectiveness of current strict policies in Bangladesh. They were 1) death and infected people numbers daily were remained unchanged with minor variation and 2) mostly populated rural-area situation was not fully known.

But people now are familiar with consequences and preventive-measures in choices to be on safe-side. This progression was not free-of-cost but with high-price-tag "so many precious lives." It could have been curtailed in numbers if modern strategies were in place.

6. Conclusion

It is well recognized that people do make decisions based on their own benefits where people's psychology influences for doing it meeting the needs on daily basis. Individual's many actions are influenced in ways the individual does not realize. These influences can be a wide array of things, including the words and body language of others. In this process, factor(s) that prompt psychological influences can be used for individual's decision exploitation. However, this approach was missing addressing the COVID-19 crisis while it was spreading globally country-wise. Most countries like Bangladesh were not prepared meeting the challenges. Addressing the issue, they started with

traditional approaches namely lockdown, shutdown crowded-spot(s) and *no-mask no-service*. However, a sizable percentage of the population nationwide had violated laws. During the second wave of the crisis, *no-mask no-service* was in practice, which was effective in most cases country-wise. However, no effort was given to convince people, making them understand and then making appeal for peoples' actions etc. using the traditional approach. Today there is no lockdown and no restrictions in place, but a small percentage of the population wear masks. This *dichotomy* in result raises the question: Is it the outcome of individual's psychological influence being safe? This study uses demand and supply model and conclude that some factors such as perceived risk-factors, self-witnessing of images of consequences, messages through media and feelings of responsibility & safety out of self-consciousness etc. play significant roles in today's *scenario* wearing masks. Since most people are risk-averse, utility analysis of the factor(s) such as individual's understanding about severity, individual's knowledge etc. are dominating today's *scenario* where expected utility leads the psychological influence on today's decision. Thus, the policy-proposal ratifies that using techniques of convincing people imposing command & control could have saved more lives. Welfare analysis of the policy-proposal can lead to future study on today's *scenario*.

7. Declaration

1). Funding: There is/was no funding for this study

This should include information that explains whether and by whom the research was supported. The names of funding organizations

2). Ethical Approval: There was no ethical violation in completion of this study.

• Ethical approval: Ethical approval: If applicable include the following details:

(a) Not applicable

(b) I here confirm that all research performed following relevant guidelines/regulations applicable when human participants are involved (e.g., Declaration of Helsinki, or similar)

(c) Not applicable

• Informed consent: This article does not hold any studies with human participants performed by any of the authors.

*Author's contribution: I am the only author of this article. So, this study is not a duplication or copying from other studies. I here declare that this contribution is original. Hope this declaration ensures promoting transparency.

*Conflict of interest: There is no conflict of financial or non-financial interest related to this work was given for publication.

*Data availability statement: This study used no data statistics. It is a theoretical work where it uses the author's own ideas and the author's earlier research works related to the subject area.

**** Not applicable. This study uses no data statistics.

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