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DermatologicalHealthintheCOVID-19Era

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1. Abstract

COVID-19anditsimpactondermatologicalhealthwasreviewed fromtheoreticalandstatisticalframeworksinthepresentstudy.A cross-sectionalandretrospectiveworkwasdocumentedwithselectionofsourcesindexedtoScopus,consideringtheperiodfrom 2019to2022,aswellasthesearchbykeywords.Approacheswere discussed in order to outline a comprehensive model that considered the differences between the parties involved, as well as their relationshipsinariskcontext.Theproposalcontributestothestate ofthequestionintermsofthepredictionofcontingenciesderived from the probability and affectation of dermatological health.

2. Introduction

COVID-19´s illness, first known as nCov-19, is the most important affection on human health in actual days; which threaten most of the body homeostasis´ scopes, as the dermatological issues. Whilst the COVID-19-associated cutaneous manifestations have been increasingly reported, their exact incidence has yet to beestimated,theirpathophysiologicalmechanismsarelargelyunknown, and the role, direct or indirect, of SARSCoV-2 in their pathogenesis is still debated [1]. In the COVID-19 era, dermatological diseases have been limited to associated cases. Thus, one indicator of COVID-19 was a rash or hives [2].At the beginning of the pandemic, the symptoms shared with other diseases suchas the influence led to the need to identify the most frequent and common symptoms. The rash or urticaria was a symptom from whichthecontagionanddiseasebytheSARSCoV-2coronavirus was inferred.

In this scenario of lack of information and unhealthy conditions, hivesorrashwereconsideredassymptomsofCOVID-19inyoung people more than in adults and the elderly [3].The importance of associatingthissymptomwiththepandemicconsistedinthatfrom visible symptoms massive contagions or community transmission of the coronavirus would be anticipated. In an environment ofscarceinformationandimprecisedata,dermatologicaldiseases emerged as the visible part of the pandemic, although limited to the youth sector. Consequently, the proposals for the description and explanation of the effects of the pandemic on dermatological health were more visible at the beginning. In this context, the objectiveofthisworkwastospecifyamodelforthestudyofthepotentialeffectsofdermatologicalcontagionofthepandemicwheneverit waspossible to associateurticaria or rash with COVID-19.

WhatisthecommunitytransmissionmodelofthepandemicclosesttosymptomsofurticariaorrashinstudentsatapublicuniversityincentralMexico?Thepremisethatguidesthisworksuggests that dermatological health is embedded in the pandemic through the dissemination of cases, inhibiting a prevention campaign [4]. Inthissense,hivesorrashmaynotbeindicatorsofCOVID-19but areassociatedwiththepandemicasasocialamplificationofrisks. Thus,theequationthatbestexplainsthiscaseofdisseminatedmisinformation in students who believed they had COVID-19 from hivesorrashwillbe:1)theformulationthatincludestheinfluence ofthemedia;2)theequationthatrelatestheinformativevariables withthefindingsofthecommunitytransmissionofCOVID-19;3) themodelthatexplainstheeffectoffakenewsonyouthaudiences. Multipleskinmanifestationshavebeendescribedinpatientswith confirmed or suspected severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection; including morbilliform rash; urticaria; pernio-like, acral lesions; livedo-like, vascular lesions; andvesicular,varicella-likeeruptions[5-7].Reportedthehisto-

pathologicalexaminationofCOVID-19-relatedcutaneouslesions, where they can be seen some dermatologic affections like: maculopapular eruptions, varicella-like papulovesicular exanthems, urticarial lesions, papulovesicular exanthema, acral chilblain-like lesions,livedoidlesions(livedoreticularis/racemosa-likepattern), purpuric "vasculitic" pattern, pityriasis rosea-like lesions, Kawasaki-like lesions, subcutaneous lesions and pustular lesions.

3. Theory of Dermatological Health

Thetheoreticalframeworksthatexplainthecommunitytransmission of COVID-19, particularly those theories that anticipate the effects of the pandemic on dermatological health suggest: 1) the media can influence the decisions and actions of audiences; 2) hives and rash are associated with COVID-19 through testimonials rather than research; 3) the dissemination of personalized reports on dermatological health associated with COVID-19 amplifiedthepandemic.Thetheoryofriskamplificationsuggeststhat the pandemic is represented by the information available in the media rather than on social networks [8]. In this sense, dermatological health is an area affected by the health crisis. The testimonials that were promoted on electronic networks amplified the perceptionoftheriskoftheusersofFacebook,Twitter,Instagram, YouTube, Tok-Tok and WhatsApp. As cases of urticaria or rash are disseminated on the networks, the perception of risk emerges thatassociatesthesesymptomswithCOVID-19.Asyoungpeople are those who deal with cases of dermatological health linked to the pandemic, the use of the devices is intensifying. Exposure to risks in young people can be seen from the intensive use of mobiledevices.Fromtheperspectiveofthesocialnetworksframing, the pandemic is a multidimensional phenomenon, but guided by theleadersofFacebook,Twitter,Instagram,YouTubeorTikTok compared to opinion leaders, communicators and columnists. In the case of the cases of hives or rash that were associated with COVID-19, the framing reduced this question to a symptom [9]. Consequently, the pandemic was visible during the convergence of scarce information about the coronavirus and the proliferation ofcasesofdermatologicalaffectation.Theamplificationandframingofrisksthatassociateddermatologicalhealthwith COVID-19 can coexist. The dual-stream perspective warns that social media can spread cases of rashes and hives, while reducing symptomsof reddening of the skin or itching of the skin. In both cases, the dualflowemergeswhenopinionsunderliebothamplificationand framing of risk.

4. StudiesofDermatological Contamination

Based on the amplification of the risk, the informative framing and the double flow of communication, studies of dermatological health associated with the pandemic have established: 1) the prevalenceofcasesofurticariaandrashoverothercasesofsymp- toms associated with COVID -19 as oxygenation in the blood; 2) theamplificationoftheriskincoexistencewiththeinformative framework and the double communication between the interested parties; 3) dermatological health as a representation of the pandemicinInternetusers.Inthecontextofthepandemic,studieson the prevalence of urticaria and rash as indicators of COVID-19 are scarce, but before the pandemic, there are studies in which symptoms are associated with diseases. This is the case of cancer,whichisassociatedwithvarioussymptomsthatInternetusers have spread on electronicnetworks as risk factors. Most common are solutions for cancer or any other terminal and fatal disease. In fact,asthesymptomsarefrequent,theyarelinkedtodiseases.The more lethal and common the diseases, the greater the association withremediesorpreventivestrategies.Inthecaseofthepandemic, thenoveltyisthatthehealthministry'soversawspreadingitslow lethality[10].Inaddition,theministersofhealthalsodisseminated opinions that the pandemic would affect a low percentage of the population.Orelse,thecontrolofthehealthcrisisbasedonstrategiesofconfinementanddistancing,followedbyimmunizationand deconfinement.Thestudieswarnthatthesepublichealthstrategies reflect the scarcity of scientific information on the pandemic.

Regarding the incidence of testimony disseminated on social networksregardingtherepresentationofCOVID-19inInternetusers, the studies suggest that Facebook is more influential than Twit- ter when it comes to legitimizing a health policy or strategy [11]. Consequently,testimonialswillaffectthedecisionsandactionsof audiencesmoreiftheyarereproducedonTwitterwithapreventive orientation against their dissemination on Facebook as evidence of public health. In the nineties, the studies that demonstrated the incidence of communication with images versus discourses were classic[12].Sincethen,researchhasbeenconsistentinclarifying thatimageshaveagreaterimpactthandata,butitisnarrativesthat allowanimageofdeterioratedorconsolidatedhealth.COVID-19 isadiseasethatdoesnothavearepresentation.Eventhecoronavirusisconsideredinvisible,butdeadly.Theassociationofhivesor rashwithCOVID-19representsarepresentationofthepandemic. Studies on immunization suggest that SARS CoV-2 is closely associatedwithvaccinesasanimageofthepublicadministrationof the pandemic, communication and risk management.

5. MathematicalModelsofPublicHealth

This section includes the equations developed to explain the dissemination of testimonials on social networks, as well as the representationofCOVID-19asacontextualproblem[13].Inallusion to the narratives that the coronavirus is an instrument of manipulation of Internet users, the models suggest that it is an integral problem beyond dermatological health. In this way, the theory of risk amplification is complemented by the exponential growth of infectionsmodelbystatingthatthepandemicisimmeasurable,unpredictable and uncontrollable once it exceeds a threshold of risk permissibleforthecommunity[14].Inthesamesense,thelogistic modelwouldbeassociatedwiththeamplificationofriskwhen the

testimonials disseminated on social networks exceed the official conferences. The growth of cases of urticaria and rash associated with COVID-19 from social networks would warn of a phenomenon that can be explained from the logistics function. However, both exponential and logistic function models when associated with risk amplification limit their explanation of the parties involved [15]. The predator and prey model reveal a competitionforthescarcityofinformation.Inthisway,Internetusersar eprey to predators or influencers who reduce the pandemic to somatic

symptoms.Thecommensalismmodelisassociatedwiththetheory offramingsince,mediately,bulliesoraggressorsspreaddermatological health as a preamble to COVID-19. The reduction of the pandemic to testimonials about COVID-19 conditions is a media frame that affects the decision and action of the Internet user.

6. ExponentialFunctionModel

In the family of models that explain complexity, the exponential functionattemptstopredictttheincreaseincasesintheshortterm. Inthissense,thefewtestimoniesrelatedtodermatologicalaffectationsbyCOVID-19wouldfavoracomplexquantitativephenomenon.theexponentialfunctionwouldbeafirstapproximationtothe emergence of a community transmission problem that is disseminated on social networks. Sureda and Otero (2013) suggest that the first question to be resolved in the analysis of the exponential function is the relationship between operative invariants and representationsystems.Inthelearningofknowledgedisseminatedin socialnetworks,theexponentialfunctionisarepresentationofthe immediate future.

Miatello &Tirao (2021) suggest graph of a function that satisfies the differential equation = $\frac{dP}{dt}$= kP, were: P = Population (dependent variable), t = Time (independent variable) and k = constant of proportionality (parameter). Enter the rate of population growthanditssize.ThepopulationgrowthratePisthederivative Since $\frac{dP}{dt}$ it is proportional to the population, it is expressed as the productkP.Inthisway:

$\frac{dP}{dP}$=kP,o'P′=kPo'$\dot{P} = kP$

$\frac{dP}{dt}$=kPfor some constant k

$\frac{dP}{dt}$= 0, if P= 0

P(t) = 0. consequently, k> 0 and (Pt $_0$)> 0, at time$_t$ $_0$ and the population is growing. P (t) becomes larger, so itincreases ($\frac{dP}{dt}$ Trejo & Ferari, 2018). From the exponential function, the diffu- sion of cases of dermatological effects by COVID-19 would be considered as a field of representation in the learning of the pandemic.

7. LogisticFunctionModel

[16]warnthatthelogisticfunctionisusedtopredictthereconfiguration of processes, considering a prolonged exposure to risks. Tsoularis(2001)pointsoutthatexponentialgrowthreachesasaturationpoint,allowingittobeanticipatedfromalogisticfunction.Thus,theexponentialfunctionprecedesthelogisticfunction, andthisprecedesaninflectiondistribution.Thecomplexityto be explained is that the distribution relaxes, and the exponential functioncannolongerpredictitsgrowth,butthelogisticfunction adjuststothistrend. Therefore:t=time(independentvariable),P = Population (dependent variable), k = coefficient of the growth rateforsmallpopulations(parameter),N(itwillbecalledbearing capacity) and P (t) grows if P (t) <N, if P (t)> N is decreasing. $\frac{dP}{dt}$ ≈in this second model if P> N. $\frac{dP}{dt} < 0$.

$\frac{dP}{dt}$=kP,weadd"something"closeto1,ifPissmall

$\frac{dP}{dt}$= k (something)

P(something) = $\left(1 - \frac{P}{N}\right)$ $P'(t) = KP\left(1 - \frac{P}{N}\right)$

P(t) it is the internauts population, K is the growth coefficient of thepopulation.Ntheyaretheconditions(carryingcapacity)ofthe school in which the children interact. P internauts.

$\frac{dP}{dt} = k\left(1 - \frac{P}{N}\right)P$

Hosmer et al., (1991) note that the logistic regression model is suitableforestablishingpeerinfluence.Itmeansthenthatthepre- diction of the incidence of cases presented as a trend of dermatological contamination by COVID-19 can at least be described from the logistical function and thus explain the incidence of the networks that disseminated testimonials among young people.

8. Prey-PredatorModel

Abdulghafour&Naji(2018)suggestthatthepredatorversusprey model includes healthy prey and prey infected and vulnerable to thepredator.Thatis,unliketheexponentialandlogisticalfunction that explain the trend and saturation of testimonials disseminat-ed on networks, the predator and prey model distinguish between persuaded Internet users in relation to Internet users who disseminate and process the testimonials. In other words, the effects of COVID-19 on dermatological health in adolescents and young peoplecanbeexplainedfromthepredatorandpreyfunction.In

$$\frac{dS}{dP} = \alpha S - \beta SP$$
$$\frac{dP}{dt} = \delta SP - \Upsilon P$$

*P*isthenumberofchildrenemployed,*S*isthenumberofchildren susceptible to being infected by lice, *dP / dt* and *dS / dt* represent thegrowthofthetwopopulationsovertime,*t*representstime; *α*,*β*,*γ*and*δ*areparametersthatrepresenttheinteractions,*α:*Coefficientofthegrowthrate,*β:*proportionalityconstant,*ϒ:*Coefficient of the reduction ratio of carriers and *δ: p*roportionality constant[17,18].Proposethatthespecializedpredatorpromotesaredistributionoftherelationshipwiththepreyregardlessofwhether it is infected or not. In other words, the generalist predator that seeksitssurvivalismorepronetoariskyscenario.Incontrast,the

specialized predator is rather suitable in an equilibrium scenario. Therefore, the dissemination of testimonials on networks obeys a stablescenarioinwhichinfluencersarespecializedpredatorscompared to general Internet users who emerged from the pandemic.

9. Model of Disease Spread

Smieszek (2009) warns that community transmission of a contagion is not constant. In this sense, the exponential, logistic and predator prey functions do not allow us to observe the variations thatinhibitthepandemic.Thecommunitytransmissionmodelproposesaheterogeneityandintensityofcases.Thetestimonialsdisseminatedonsocialnetworkshaveadifferentialimpactonlnternet users. Influencers follow diffusion strategies that are not constant andpromotenon-homogeneouseffectswithdiscontinuousintensities.Therefore:(S)influencers,(Z)internauts,(ζ).population,(R) social network, (β) parameter.

$$S' = \Pi - \beta SZ - \delta S$$

$$Z' = \beta SZ - \zeta R - \alpha SZ$$

$$R' = \delta S + \alpha SZ - \zeta R$$

(βN) network influencers, N is the total internauts, (Y/ N) probabilities that a random contact (βN) (S / N) Z = βSZ

Karlsson and Rowlett (2020) warn that containing the spread ofa disease comes at a cost to the parties involved. The speed with whichtheinformationisdisseminateddeterminesthedecisionand action to spread or avoid contagion. Therefore, the dissemination oftestimonialsregardingtheeffectsofCOVID-19onlocaldermatologicalhealthdependsonaccesstoinformationandtheprocess- ing of data in prevention strategies.

10. ComplexContagionModel

Alisonetal.,(2010)demonstratedthatthespreadofspecificcases leads to the increase in more cases. As the pandemic intensified, itseffectsondermatologicalhealthalsoincreased.Theserelationships varied based on emotions. The exponential function, logistics, predator prey and community transmission had not included the difference between the official propagation systems versus emergentorcollateralevents.Inthebasictransmissionmodel,the comparison of other processes adjacent to the pandemic was seen as a differential covariate.

Z/Nprobabilityrandomcontact (αN)

(Z / N) S = αSZ

S′+Z′+R′=Π S +

Z + R →

Ast→∞,ifΠ≠0.Hence,S→∞, Π = δ

= 0.

Adjustingthedifferentialequationsequalto0wehave:

-βSZ = 0

βSZ + ζR - αSZ = 0

αSZ - ζR = 0

From the first equation, we have either of the two S = 0 or Z = 0. So, this follows the form S = 0 with this we get the pietistic equilibrium.

(S, Z, R) = (0, Z, 0)

WhenZ=0,wehavethelice-freeequilibrium. (S, Z,

R) = (N, 0, 0)

Theseequilibriumpointsshowthat,regardlessoftheir stability.

$$J = \begin{pmatrix} -\beta Z & -\beta S & 0 \\ \beta Z - \alpha Z & \beta S - \alpha S & \zeta \\ \alpha Z & \alpha S & -\zeta \end{pmatrix}$$

$$J(N,0,0) = \begin{pmatrix} 0 & -\beta N & 0 \\ 0 & \beta N - \alpha N & \zeta \\ 0 & \alpha N & -\zeta \end{pmatrix}$$

$$det.(J - \lambda I) = -\lambda\{\lambda^2 + [\zeta - (\beta - \alpha)N]\lambda - \beta\zeta N\}$$

$$J(0,Z,0) = \begin{pmatrix} -\beta Z & 0 & 0 \\ \beta Z - \alpha Z & 0 & \zeta \\ \alpha Z & 0 & -\zeta \end{pmatrix}$$

$$det.(J - \lambda I) = -\lambda(-\beta Z - \lambda)(-\zeta - \lambda)$$

WewillrefertothisastheSIZRmodel.Themodelisgivenby

$$S' = \Pi - \beta SZ - \delta S$$

$$I' = \beta SZ - \rho I - \delta I$$

$$Z' = \rho I + \zeta R - \alpha SZ$$

$$R' = \delta S + \delta I + \alpha SZ - \zeta R$$

IfΠ≠0,ashortperiodoftimeandthereforeΠ=δ=0.whenwe setthepreviousequationsto0,weobtaineitherS=0orZ=0from the first equation. It follows once more from our analysis of the basic model that we achieve equilibrium:

Z = 0⇒(S, I, Z, R) = (N, 0, 0, 0)

S= 0 ⇒(S, I, Z, R) = (0, 0, Z, 0)

$$J = \begin{bmatrix} -\beta Z & 0 & -\beta S & 0 \\ \beta Z & -\rho & \beta S & 0 \\ -\alpha Z & \rho & -\alpha S & \zeta \\ \alpha Z & 0 & \alpha S & -\zeta \end{bmatrix}$$

$$\det(J(N,0,0,0) - \lambda I) = det \begin{bmatrix} -\lambda & 0 & -\beta N & 0 \\ 0 & -\rho - \lambda & \beta N & 0 \\ 0 & \rho & -\alpha N - \lambda & \zeta \\ 0 & 0 & \alpha N & -\zeta - \lambda \end{bmatrix}$$

$$= -\lambda\, det \begin{bmatrix} -\rho - \lambda & \beta N & 0 \\ \rho & -\alpha N - \lambda & \zeta \\ 0 & \alpha N & -\zeta - \lambda \end{bmatrix}$$

$$= -\lambda[-\lambda^3 - (\rho + \zeta + \alpha N)\lambda^2 - (\rho\alpha N + \rho\zeta - \rho\beta N)\lambda + \rho\zeta\beta N]$$

Where:>0,firstwehave:ithasaneigenvaluewithapositive

$$\det(J(0,0,Z,0)-\lambda I)=det\begin{bmatrix}-\beta Z-\lambda & 0 & 0 & 0\\ \beta Z & -\rho-\lambda & 0 & 0\\ -\alpha Z & \rho & -\lambda & \zeta\\ \alpha Z & 0 & 0 & -\zeta-\lambda\end{bmatrix}=-(\beta Z-\lambda)\,det\begin{bmatrix}-\rho & c & 0\\ \rho & -\frac{\alpha c}{\beta}-c & \zeta\\ 0 & \frac{\alpha c}{\beta} & -\zeta\end{bmatrix}$$

$$=-(\beta Z-\lambda)\left\{-\lambda\left[\lambda^2+\left(\rho+\frac{\alpha c}{\beta}+c+\zeta\right)\lambda+\frac{\zeta\alpha c}{\beta}+\frac{\rho\alpha c}{\beta}+\rho\zeta+c\zeta\right]\right\}$$

Theeigenvaluesarethereforeλ=0,-βz,-ρ.

Esprague&House(2017)distinguishbetweenabasicandacomplexcontagion.Theexplanationforlaggingcasesisthedifference between basic spread versus a complex structure of contagions. Influencers asymmetrically affect Internet users, causing heterogeneous effects.

11. DermatologicalEffectModel

[16-30] warn that in the face of the pandemic, dermatological healthprofessionalswhenreconvertingthemselvesforCOVID-19 care led to a shortage and low quality of service. They also show that the scarcity and unhealthy situation differentially affectedthe groups based on their age, income and race. The effects of COVID-19 on dermatological health generated more differences betweenthegroups.Theexponentialandlogisticfunctionsdidnot accountfortheseasymmetriesbecausetheyfocusedonthehomogeneityandsymmetryoftherelationshipsbetweeninfluencersand Internet users.

$$S' = \Pi - \beta SZ - \delta S + cZ$$

$$I' = \beta SZ - \rho I - \delta I$$

$$Z' = \rho I + \zeta R - \alpha SZ - cZ$$

$$R' = \delta S + \delta I + \alpha SZ - \zeta R$$

,wenowhavethepossibilitythatanendemicequilibrium(S,I,Z, R) satisfies:

$$-\beta SZ + cZ = 0$$

$$\beta SZ - \rho I = 0$$

$$\rho I + \zeta R - \alpha SZ - cZ = 0$$

$$\alpha SZ - \zeta R = 0$$

$$(S, I, Z, R) = \left(\frac{c}{\beta}, \frac{c}{\rho}Z, Z, \frac{\alpha c}{\zeta\beta}Z\right)$$

$$J = \begin{bmatrix}\beta Z & 0 & -\beta S + c & 0\\ \beta Z & -\rho & \beta S & 0\\ -\alpha Z & \rho & -\alpha S - c & \zeta\\ \alpha Z & 0 & \alpha S & -\zeta\end{bmatrix}$$

$$\det(J(S,I,Z,R)-\lambda I)=det\begin{bmatrix}\beta Z & 0 & 0 & 0\\ \beta Z & -\rho & c & 0\\ -\alpha Z & \rho & -\frac{\alpha c}{\beta}-c & \zeta\\ \alpha Z & 0 & \frac{\alpha c}{\beta} & -\zeta\end{bmatrix}$$

$$S' = \Pi - \beta SZ - \delta S \qquad t \neq t_n$$

$$Z' = \beta SZ + \zeta R - \alpha SZ \qquad t \neq t_n$$

$$R' = \delta S + \alpha SZ - \zeta R \qquad t \neq t_n$$

The predator prey function noted differences, but not due to the socioeconomicandeducationalconditionsofthepartiesinvolved. The community transmission function, basic and complex explained constant or covariable contagions, but the model of dermatological effects found that the pandemic affects the interested parties asymmetrically.

12. Discussion

The contribution of this work to the state of the question lies in the review and discussion of models for the study of the effect of COVID-19 on dermatological health. Based on considering that dermatological health is the product of the surrounding informationinthemediaandsocialnetworks,themodelsthatdermatologicalsciencehasproposedtoexplaintheincidenceofCOVID-19in Internet users were traced.The works that allowed the discussion of the influence of testimonials disseminated on YouTube, Facebook,Twitter,Instagram,Tik-TokandWhatsAppwerereviewed. The content of the testimonials included cases in which influenc- ers indicated that the hives or rash emerged at the same time as other symptoms associated with COVID-19. The disseminationof these testimonials was analyzed from models under theoretical assumptionsofriskamplification,informativeframinganddouble informative flow.

Inrelationtothetheoriesthatexplaintheinfluenceofthepandemic ondermatologicalhealththroughinformationtrendsinsocialnetworks, the present work corroborates the assumptions. The modelsexplaintheimpactoftestimonialsonperceiveddermatological health. The theory of risk amplification shares with the exponential,logistics,predatorpreyandcommunitytransmissionfunction the emergence of influencers in electronic networks during the pandemic. The perspective of the media framing combines with the logistical function the breaking point that can be established fromtheinformationalordistributivesaturation.Thedoubleflow approximation coincides with the predator prey function in terms ofthezero-suminteraction.Thecommunitytransmissionfunction, antecedent to the complex function and effects on dermatological health, is consistent with the theory of risk amplification in terms of the asymmetrybetween the partiesin the faceof thepandemic.

The differences between influencers and Internet users regarding the impact of the pandemic on their dermatological health reveal the emergence of a contagion. The basic and complex function showed that these differences correspond to sociodemographic, economicorculturalfactors.Theamplificationofriskinthissense warns that in uncertain scenarios, risks impact the interested parties asymmetrically. The research lines concerning the prediction ofself-careinthefaceofthepandemicandbasedontheinforma- tion disseminated on social networks will allow anticipating risk scenarios.The explanation of the differences between influencers and Internet users in the face of the pandemic will allow building a public agenda. The topics and axes of discussion related to the effects of anemia on dermatological health will guide the public agenda towards governance.

13. Conclusion

Facing SARS-COV-2 (new coronavirus) has been challenged the humanity.Thatviruswhichprimarywasidentifiedassevereacute respiratory problem, added other health's problems like those in thedermatologicscope.Differentmodelstoexplainimpactonperceiveddermatologicalhealth´sissues,providecorrelatedinformation which states informational or distributive saturation as well as zero-sum interaction. Shown model help on the prediction of self-care,whenfacingthepandemicscenario,collaboratingonthe pathway by public scope. The effects of the pandemic on dermatological health have been explained from theoretical, conceptual and empirical frameworks. From the relationship between influencers and Internet users, the phenomenon is considered emergent.That is, the risksassociated with COVID-19 are assumed as probable if they are disseminated by influencers and are directed at Internet users with a sociodemographic, economic and cultural profileorientedtotheintensiveuseofsocialnetworks.Theoretical approacheswhenlinkedtostatisticalmodelsallowtheexplanation of the phenomenon. Study lines related to the integration of theories and models will anticipate risk scenarios.

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