

LITTER TO EDITOR:

PSYCHOLOGICAL VACCINATION DURING CORONA CRISIS,
HYPOTHESES GENERATING

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ABSTRACT

Background: Since December 2019, the world is increasingly facing a new public health crisis caused by a highly transmittable Coronavirus (CoV) in a pandemic outbreak threatening the human population all over the world. The World Health Organization (WHO) has assigned the disease with the name COVID-19⁽¹⁾. It is declared as a public health emergency of international concern with no evidence-based prevention or treatment yet. So far, millions of people have been affected, billions have been quarantined, and almost all countries are applying severe lockdowns, curfews, and travel restrictions, leaving the communities in isolation, insecurity, and distress. Several studies are underway to consider the rate of infection among children, and the rate of transmission from children to adults, because it has not been clearly understood yet. Based on a common bio-psycho-social immunity system, a multidisciplinary research project is suggested to examine the effectiveness of a novel Crisis Intervention Program for Children and Adolescents (CIPCA) as a first psychological "vaccine" to prevent post-traumatic psychopathology among children in the city of Duhok during the Corona crisis.

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C *COVID-19 Pediatric Symptoms:* Children, particularly younger ages, seem to be affected by CoV less commonly than adults¹. Because of their developing immune system, children are generally thought to be more susceptible to upper respiratory tract infections such as influenza. However, the early stages of the COVID-19 pandemic suggested that pediatric cases were relatively rare and less severe than adults. However, somatic symptoms of COVID-19 can be very mild, including fever, sore throat, cough, and shortness of breath. Severe conditions may lead to death, particularly in association with comorbidity with autoimmune diseases. Children admitted to the hospital due to suspected COVID-19 often showed during the admission period nonspecific

somatic symptoms such as headache, abdominal pain, or other gastrointestinal symptoms that revealed no organic explanation on further investigation (personal telephone communication from Assistant Professor Dr. Azad Haleem, Head of the Pediatrics Department at the Duhok University, currently working in a particular COVID-19 pediatric hospital in the city of Duhok). Neither death nor severe illness is confirmed as a result of COVID-19 among children in Duhok. Children's symptoms mostly seem to be psychosomatic secondary to the parents' reactions to the pandemic and its psychosocial consequences.

Due to the short period of the outbreak of this novel virus, we have no information about the potential effects of the virus on

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the brain or nervous system yet. Most of the psychosomatic symptoms are considered as the expression of psychological distress in the form of worry, sadness, anxiety, aggressiveness, and delinquency, which seems to be secondary to the adults' reactions to the new situations of disturbed daily life because of the lockdowns, curfews, and economic concerns².

Psychosocial Impact of Corona Crisis: In addition to the somatic effects, COVID-19 is expected to carry a long-lasting social, economic, and psychological impact on the community³.

Exerting effects on the society through all these three fronts, the Corona crisis is affecting children and adolescents secondary to the parents and other significant adults in the surrounding collective society. The adult population in war and conflict regions, as in Kurdistan, is living under continuous pressure of other crises, as well. They are more worried about the continuous actions of aggressive military activities, political instability, and economic problems. As a result, children are exposed to forced isolation, abuse and neglect. Preliminary studies indicate an increase of mental health problems, suicidal ideation, and family violence¹.

Inconsistency of the advices and instructions from the experts and authorities, due to the lack of knowledge on this new virus, is leading to uncertainty of the events and expectations, leading to feeling of insecurity among the adults in every family. This is the main reason behind the disturbance of the family routines concerning sleep, meals, activities, and the family system's hierarchy, which is leaving negative impact on children,

particularly when adults in the family become occupied with their worries in the crisis. Despite the parents' forced presence at home, they become occupied with negative thoughts and emotions, which lead to similar conditions among children in the family.

Furthermore, children are exposed to developmental child-specific traumatic experiences when adult-focused crises affect society in generations. Trans-generational posttraumatic growth might be one of the explanations behind the resistance, resilience, and natural immunity shown in the society against war conflicts as well as the current sporadic illness in COVID-19.

Common Immunity System: Recent research suggests new strategies to remediate the effect of childhood trauma through potentiation of adaptive immunity before the onset of clinical symptoms⁴.

The age-related COVID-19 impact on body and mind has been explained by the immunity development process². Less severe illness in symptomatic infants may have to do with the infant's immune system^{5,6}. Infants are exposed to many new things, so the immune system does not care every time it meets something new. This might be considered not only biologically but also psychologically³. Similar to biological immunity as a body defense system, the psychological defense system also is primitive during early childhood. In order to be mature, coping strategies develop according to the individual experiences during childhood leading to the development of "psychological antibodies" in the form of cognitive structures acting as coping strategies to help the child acting

functionally positive. Every crisis situation means a potential risk for traumatization and coping strategies for the development of posttraumatic growth. In addition to the inherited mechanisms of defense expressed through a common immunity system of the child, acquired immunity reactions appear when the child is exposed to a foreign body, as in the case of infection, allergic/ toxic hypersensitivity, or traumatic/ stressful experience, irrespective of the kind of antigen⁷.

Trauma, Stress, and Immunity among Children of Kurdistan: Recent research on trauma and stress is increasingly converging as we go down into early childhood. Child-specific criteria have been identified for trauma and posttraumatic psychopathology⁸. In the Kurdistan region of Iraq, children and adolescents constitute a major vulnerable group due to several kinds of crises in the community targeting the adult population, such as war conflicts, forced displacement, and economic crises. Although identified traumatic experience is obligatory for diagnosing any post-traumatic psychopathology, such as post-traumatic stress disorder (PTSD), anxiety disorders, or depression in children and adolescents⁹, our previous studies suggest culture-related protecting family factors for children's mental health during disasters in Kurdistan^{10,8,11,12}. Furthermore, PTSD has shown an impact on psychosocial development and functioning in childhood. This has been expressed as hypervigilance among child survivors of Anfal¹².

Preventing Posttraumatic Psychopathology:

A WHO survey confirms that the first onset of mental disorders usually occurs before the age of 14 years^{13,14}. Psychopathological processes during childhood mainly start after child abuse or neglect. Traumatic experiences during childhood are considered the largest single factor that causes psychopathology. Still, no evidence-based prevention has been found. The Crisis Intervention Program for Children and Adolescents (CIPCA) was developed at the Metin Health House (MHH) in the city of Duhok in the Kurdistan Region of Iraq (KRI) to urgently provide a timely and cost-effective short and concise psychological intervention to prevent posttraumatic psychopathology in children and adolescents among the Internally Displaced People (IDP)¹⁵⁻¹⁷. A pilot study showed low psychological symptom scores at one-year and two-year follow-up¹⁷.

PLANNED RESEARCH HYPOTHESES

- 1- CIPCA is effective in preventing posttraumatic psychopathology among children and adolescent irrespective of the type of crisis.
- 2- The prevention mechanism of CIPCA is similar to that of biological vaccination.
- 3- Peace and conflict resolution promotes the individual defense mechanism based on common immunity principles.

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پوخته

کوتانا (فاکسینا) دهرونی د قهیرانا کورونادا، دهینانا هیپوتیسان

هلهك قهيران زاروكان دنیشین، بهلئ ههر قهیرانهكی لایهك نهړینی ژئ ههیه. دیاره زاروكین كوردستانی ستراتیجیین قهژینی و نامویران خوهپاراستنی و پیگههشتنا پشته قهجنیقینی و خوهراگرتن بهرامیهر نافاتین دوباره دین بدهستین مروفان پهیداكرینه. قهیرانا كورونا یا نوهه تیکهلدییت دگهل قهیرانهكا پرگریك یا دریزخایه زبهر گهندهلئ و گهفین شهروشیقین دهولتین جیران. دیاره بهلاقبونا فیروسی كورونال كوردستانی نهویه نهگهرئ پهیدابونا نهساخیا كوفید- ۱۹ بوئ توندیا كول گهلهك جفاکین جیهانی رویدایه. لقیژئ نههم سیسته مهكا بهرگریا ههقهش پیشنیار دكهین، یا ناقاکریه ل سهر بنگههك بیولوژی دهرونی جفاکی، نو مه هندهك تیسین داناین بو ههلسهنگاندئ بپروژهكا لیکولینا زانستی گهلهتاییهتمهندی بهرنامهیهكی نوی بی دهستکاری دقهیرانین زاروك و گهنجاندا (سیپكا) وهك نیکهم فاکسین بو پاراستنا ساخلهمیا دورونی پشته قهجنیقینی.

الخلاصة

التطعيم النفسي في أزمة كورونا، توليد الفرضيات

على الرغم من أن العديد من الأزمات يمكن أن تكون مؤلمة للطفل، إلا أن كل أزمة لها جانب إيجابي أيضًا. يبدو أن أطفال كردستان قد ورثوا استراتيجيات النجاة وآليات التأقلم وعوامل الحماية والنمو بعد الصدمة والصمود أمام الكوارث المتكررة من صنع الإنسان عبر الأجيال. أزمة كورونا الحالية تتداخل في كردستان مع أزمة اقتصادية معقدة وطويلة الأمد بسبب الفساد و التهديد المستمر من الأعمال الحربية والهجمات العسكرية من دول الجوار. يبدو أن انتشار فيروس كورونا في كردستان لم يؤدي إلى مرض كوفيد-19 بتلك الشدة كما هو الحال في العديد من المجتمعات الأخرى في العالم. نقترح هنا نظام مناعة مشترك قائم على أساس بيولوجي نفسي اجتماعي، وقد وضعنا عددا من الفرضيات لاختبارها في مشروع بحثي متعدد التخصصات يستخدم برنامجا جديدا للتدخل في الأزمات لدى الأطفال و المراهقين (سيپكا) كأول لقاح نفسي للوقاية من الأمراض النفسية ما بعد الصدمة.