



# How Genetics and the COVID-19 Pandemic Impact Mental Health

Speaker 1 ([00:03](#)):

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Dr. Ramona Moldovan ([00:26](#)):

So yes, there is a genetic vulnerability for mental illness, but there's also a genetic predisposition to happiness and we can do a lot about both.

Kenny Wong ([00:36](#)):

I'm Kenny Wong, a board certified genetic counselor and the Chief Product Officer at xCures, where we use AI to help advanced cancer patients identify the best treatment options. As Deepti Babu mentioned during the last podcast, I'm very excited to be the host this year. Every two months, we'll continue to bring experts in to help break down complex topics in genetics that are making people curious, with the goal of turning curiosity into knowledge you can apply in your own lives. If you have an idea for a topic you'd like explored, please email the show at [nsgc@nsgc.org](mailto:nsgc@nsgc.org).

Kenny Wong ([01:17](#)):

Hi, everyone. Welcome to our next episode of the Genetic Counselors and You podcast. The COVID-19 pandemic has been taking its toll. In the last year, this resulting economic recession and racial uprisings have impacted mental health for many. In fact, one study suggests that four in 10 adults in the US have reported symptoms of anxiety or depressive disorder, up from one in 10 adults before the pandemic. How do genetic and environmental factors impact our mental health? What should we do to maintain our mental health?

Kenny Wong ([01:56](#)):

In this episode, we invited Dr. Ramona Moldovan, a genetic counselor and clinical psychologist, to share her thoughts in honor of Mental Health Awareness Month. Dr. Ramona Moldovan is a senior lecturer at the University of Manchester in the United Kingdom and Babes-Bolyai University in Romania. She is a board certified clinical psychologist with advanced training in cognitive and behavioral psychotherapy and a board certified genetic counselor. For more than 10 years now, Ramona has tried to address some of the similarities and differences between clinical psychology, psychotherapy, and genetic counseling, through her clinics, teaching, and research. Welcome Dr. Moldovan and thank you for joining us.

Dr. Ramona Moldovan ([02:44](#)):

Thank you very much for having me. Such a pleasure. And I'm such a big fan of your podcast.

Kenny Wong ([02:50](#)):



Well, this is my first podcast as well, so I am very excited to be doing this for NSGC. So, this month is Mental Health Awareness Month, and I'm sure a lot of listeners have a lot of questions, and I also get a lot of questions from my friends about this as well. Can you first help us understand what mental health is and what about mental illness and what the differences amongst these two terms are?

Dr. Ramona Moldovan ([03:19](#)):

This is a very topical conversation, perhaps even more so given the context that we're currently in. The interest for mental health is increasingly growing and we also know from the data available that the overall number of people reporting mental health problems has been going up in recent years. Yeah, we do need to talk about it. So, what is mental health? Well, mental health is a generic term that includes our emotional, psychological, and social wellbeing. It means being generally able to think, feel, and react in the ways that you need and you want to live your life.

Dr. Ramona Moldovan ([04:05](#)):

Obviously, our mental health can be impacted by many things. And before we talk about mental illness, it's important to know that there are usually early signs someone might be experience this for quite a long time, which is eating or sleeping too much or too little, having low or no energy, feeling helpless or hopeless, pulling away from people and usual activities, feeling irritable, angry, feeling unable to perform routine daily tasks that you would normally do, like take care of your kids or go to work or to school.

Dr. Ramona Moldovan ([04:42](#)):

So, this can feel just as bad as a physical illness or even worse. There are many different mental health problems and they range from common problems, such as depression and anxiety to schizophrenia and bipolar disorder. Some of these disorders have similar or overlapping symptoms, but what is important to note is that everyone's experience is different and can change at different times. And another number that I thought might be of interest is that the mental health difficulties is actually rising and the prevalence is actually quite worrying. So we know, for example, that 80% of the adults say they feel constantly stressed and about 30% feel they live under extreme pressure. On top of that, we know that globally, one in four individuals experience a mental health problem. So we can, each of us, stop, look around us in shops and in parks or where we work, one in four. So, as I said earlier, this really is a conversation worth having.

Kenny Wong ([06:02](#)):

I'm sure you get this question a lot, is mental illness genetic? And what about the environmental factors as well?

Dr. Ramona Moldovan ([06:10](#)):

Indeed, it is a frequent question, and I guess many factors contribute to mental health problems, biological factors, such as genes or brain chemistry, and life experiences, such as trauma or abuse. So yes, genetics is linked to mental health, but genetics alone cannot, does not determine mental illness. Mental illness arises as a result of a combined effects of our genetics and life experiences. I think there's also this important distinction between genetic and inherited. So, although we can talk about genetic



vulnerability to develop a psychiatric disorder, and some of us inherits more or less of that vulnerability, that doesn't mean we inherit the psychiatric disorder itself. We simply have a lower or higher likelihood of developing a psychiatric disorder.

Dr. Ramona Moldovan ([07:12](#)):

But very importantly, in addition to that genetic vulnerability, there are a number of environmental factors or life experiences that play an important role in our mental health. For example, substance abuse has been shown to be associated with some psychiatric disorders. Also, traumatic or stressful events can play a role in the development of mental illness. And I think even more, or in addition to that, it's important to be clear that none of these things can cause mental illness on their own, and not only our genetic vulnerability has to interact with various environmental factors and life experiences, as I mentioned, but their combined effect has to surpass our resilience and coping mechanisms.

Dr. Ramona Moldovan ([08:07](#)):

So yes, we can talk about genetics and genetic vulnerability, but we need to factor in life experiences and never forget our own [inaudible 00:08:19]. There's another thing that might be of interest here. So, over the last century, the scientific community has been, I think, predominantly focused on psychopathology, studying it, defining it, reducing it, which is absolutely legitimate. But I think we're now seeing a shift towards the study of mental health wellbeing, happiness. So yes, we can talk about the genetics of mental illness, but I think we also need to talk about the science and genetics, if you will, of mental health, mental well-being, happiness.

Kenny Wong ([08:59](#)):

That was a good point. And you mentioned about the genetic vulnerability earlier, and how do people know whether they have a higher genetic vulnerability versus others? Is that something you can test for right now?

Dr. Ramona Moldovan ([09:18](#)):

The best indicator for your genetic vulnerability and the extent to which it is lower or higher than we would expect in the general population, is your family history. So, at the moment, this is probably the best indicator we have to estimate that vulnerability. So, right now, we can't really test for psychiatric disorders, as you probably know. And I know this is a question that is quite frequent, but it's not something we're ready to do yet and it's probably going to take a long time before we're able to do that. So, I think this is a point where we need to focus obviously and understand the vulnerability, which is key, but I think we also want to understand the environmental factors or the intentional activities that we can do to facilitate our mental health, our wellbeing.

Dr. Ramona Moldovan ([10:20](#)):

And I was mentioning earlier the science or the genetics of happiness. And we know for example, that there seems to be a genetically determined set point, like a genetic predisposition for happiness, which appears to account for about 50% of our wellbeing, and the life circumstances account for about 10%. And the remaining 40% is explained by intentional activities, so that means things that we do in trying to



pursue our own goals. So yes, there is a genetic vulnerability for mental illness, but there's also a genetic predisposition to happiness, and we can do a lot about both.

Kenny Wong ([11:05](#)):

Wow. That's great. And so, you mentioned the environmental factors, and all of us have been impacted in the last year based on the COVID-19 pandemic. Can you share a little bit more about how this has really impacted mental health for everyone, globally right now, with the social distancing requirements? There's lots going on right now.

Dr. Ramona Moldovan ([11:31](#)):

Yeah. Yeah. It's such an important question because I think COVID has significantly impacted the daily lives of so many of us. And as expected, and as you mentioned, given the spread and the major health implications, most political and public health decisions were mainly focused on reducing the medical and economic implications of this pandemic. But we're now in a better position to assess and address the psychological and social costs of the pandemic. And I think one way of approaching or understanding COVID from a psychological perspective, is by first reflecting on what we as individuals tend to perceive as being stressful in the first place.

Dr. Ramona Moldovan ([12:19](#)):

So, the first thing is we always look at the extent to which something can be predicted, anticipated. So, we know for example, that the lower the predictability, the higher the level of emotional distress. The second thing we tend to look at as individuals, is the extent to which something can be controlled or influenced, and data have shown that the lower the perceived control, the higher the level of negative emotions. And the third factor is the extent to which something is perceived as important to us. So, the higher the personal relevance, the higher the intensity of emotions.

Dr. Ramona Moldovan ([13:05](#)):

So, you can see why the context, where we couldn't predict or control much the course or the impacts of the pandemic, which is obviously incredibly personal and relevant for ourselves, for our families, has been exceptionally stressful for so many of us. And I think also what was unfortunate over the last year was that the public health guidelines and recommendations have unintentionally deprived us of many of our resilience strategies.

Dr. Ramona Moldovan ([13:42](#)):

Social distancing then prolongs an unwanted separation from our loved ones. It meant loneliness, suicidal thoughts. So, it is unsurprising that we have seen increased levels of anxiety, depression, difficulty sleeping, excessive eating, increased alcohol and drug use, excessive internet use, gambling. So, I think given the nature of this unprecedented, at least for our generation, pandemic, we have seen an impact on our mental health in general and it has been even more challenging for those of us who are more vulnerable for one reason or another.

Kenny Wong ([14:31](#)):



Yeah. And hopefully, as the vaccines become more available around the globe, this will alleviate some of the factors that would contribute to the mental health factors that you brought up earlier. And so, even for individuals who would want to seek help, when is the best time to seek help and speak to a psychologist, a specialist like yourself? And how would they seek help? Especially, there are certain areas right now where there's still social distancing requirements, or there may still be a lockdown depending on where you're at around the world. Can you share a little bit about when and where and how individuals should seek help?

Dr. Ramona Moldovan ([15:18](#)):

Yeah. Really, really good question and important for us to have in mind as we're all navigating this context, which as I said, it's unprecedented and hopefully won't happen ever, if anytime soon. So, I think often people ask, "How do I know I should be asking for help?" It's very common to feel unsure and to wonder whether you should try to handle things on your own, but it's always okay to ask for help, even if you're not sure. I think the rule of the thumb here is checking how intense your anxiety, depression, anger, irritability, feel. And to what extent you feel these negative emotions are under control. So, do you worry more than usual? Do you have thoughts or feelings that are difficult to cope with? Are you finding it hard to enjoy your life to the full? These are just a few questions, or a few strategies to have a look at yourself, what you feel and what you think you can cope with and deal with really.

Dr. Ramona Moldovan ([16:27](#)):

And there are a lot of options for supports and luckily help is available. And over the last year, even more options became available online, and literally help can be just a click away sometimes. Using online resources can be a great way to support your mental health and that can be useful for a number of things, looking for health information. And some people find researching their difficulties empowering, reading about other people's experiences, connecting with other people can be incredibly helpful. In fact, many websites and social media platforms provide an online space where people can talk openly about how they feel and cope with.

Dr. Ramona Moldovan ([17:18](#)):

So, I think overall, the internet is quite good in the sense that it provides easy access to a number of online treatment options, including online therapy and blogs and podcasts and apps. But of course, these may not work for everyone and sometimes we might need more support. So, speaking to your friends and family might be enough, and that can help, but you might want even more support and say, local charities, a mental health helpline, students services, community services, support in your workplace. You might feel you want to talk to your GP, ask for a referral to a clinical psychologist or a [inaudible 00:18:05] therapist. In fairness, there is no right or wrong way of doing this and different things work for different people, at different times. But I think the main takeaway message here is that help is available.

Kenny Wong ([18:20](#)):

That is very helpful. Thank you. And you mentioned the concept of tele-health and I know this is becoming more prominent, especially during COVID right now. Like my son, we basically have a virtual visit with the pediatrician. Can you share a little bit more about for a consult with psychologists, whether this is just as effective for tele-health rather than an in-person visit?



Dr. Ramona Moldovan ([18:50](#)):

Yeah, that's really important, I think, to have in mind. As you mentioned, and I mentioned as well earlier, there's so much support online, either transferring your face-to-face consultation into an online virtual context. Does that work just as well? Sometimes the question is, do we even need a human interaction? Can we just interact with a chat box or a computer program or an app? And I think it very much depends on the type of problems or difficulties you have, sometimes, or for some difficulties, or mental health problems, you might need that human rapport, you need the help or you need the therapeutic relationship to facilitate and catalyze change for yourself. So, it doesn't work for everyone if you want that connection.

Dr. Ramona Moldovan ([19:47](#)):

Maybe if you're not really friendly with devices, or if you're lonely in the first place and being online only reminds you of how lonely you are. So, you might need that routine of going into a healthcare center, facility, and having that routine. But I think overall to go back to your question, I think there's sufficient empirical data to show that tele-medicine, online support, can be just as effective as face-to-face, but depending on the problem. So, we shouldn't just assume that an app or online counseling will help anything-

Kenny Wong ([20:29](#)):

I see.

Dr. Ramona Moldovan ([20:30](#)):

[crosstalk 00:20:30] as it would when we would go face-to-face.

Kenny Wong ([20:33](#)):

Thank you. That makes sense. One other question I have for you is, right now, exercising, especially when you're stuck at home the last year, people are more aware and I think in the last decade, people are more cognizant of what they could do to improve, maintain their personal wellbeing and health. So, what about for mental health, how do you exercise to maintain your mental health? And can you share a little bit more about that?

Dr. Ramona Moldovan ([21:06](#)):

Science and empirical data. Science has been very generous with us in terms of adjusting a few simple ends. We now know efficient strategies that we could consider in terms of limiting or preventing the negative psychological effects of something like the COVID-19 pandemic. And there are a few things we might find useful. I think the first one is understanding that being worried or sad is absolutely normal in this context. And trying to co-exist with these negative emotions rather than numb them with chocolates or extra glasses of wine, or avoid feeling them altogether by binge-watching Netflix.

Dr. Ramona Moldovan ([21:51](#)):

Now, of course, I'm not saying that a nice dessert or a glass of Chardonnay or a good film, don't help, because they can, and they certainly can help you feel better, but that's more along the lines of feeling better, not getting better, not healing. So, being accepting and normalizing your negative emotions and



allowing yourself to feel them, is probably a good first step. I think we then need to be aware of our thoughts as well, because most often, when our feelings are overwhelming there might be problematic thoughts we might want to keep an eye on. It's also very important to establish and follow routines. Something like setting objectives each day, however small, and trying to achieve them. That is very important as well.

Dr. Ramona Moldovan ([22:46](#)):

And of course, getting enough sleep, having a balanced diet, exercising, spending as much time as possible outside. These may all sound like it's too small to matter strategies, but they do have an additive effect [inaudible 00:23:02]. I think that's also important, something that's rewarding. Cultivate social supports, keeping in touch with family and friends and neighbors. And obviously, I think we've seen this quite a lot lately or in the last year, physical distancing does not mean emotional and digital distancing. So, even if travel or family gatherings and socializing will continue to be impacted by the pandemic for a while, we can still take advantage of the technology and keep in touch with our loved ones and also try to include or not forget those who might be lonely or feeling low.

Kenny Wong ([23:40](#)):

Thank you, Dr. Moldovan. So, I think this is very, especially even for myself, very informative. And are there anything else that you, based on all the experience you've had in the last decade, speaking to patients, that you would like to share, that you think would be helpful for our audience?

Dr. Ramona Moldovan ([24:01](#)):

And that's a big question. And I think there probably is one that I could mention and I think very interestingly, that's still present, even in the last year. And I think one of the big one is how to be okay, can one still strive for happiness, with everything going on? And should we just settle for survival mode and thrive later? And this is obviously mainly related to last year. So, going back to what I said at the very beginning, I think even under the circumstances, I think it's a good idea to shift our focus for mental illness and psychopathology to mental health and is a good and positive life.

Dr. Ramona Moldovan ([24:47](#)):

And I would say that, of course, there is no universal roads to wellbeing and we all have our own goals and preferences and talents. But I think there are a few elements, a few things that have been shown to work, even from a scientific perspective. First one would be, cultivate positive emotions. That includes joy, hope, interest, love, compassion, amusement, gratitude. So, this is something we can do or achieve by spending time with people we care about, doing things that we enjoy, listening to uplifting music. So, one can be quite creative in doing this. The other one would be letting yourself be completely immersed in something you love, which can be pretty much anything you like, but try to choose something where you lose track of time when you do it.

Dr. Ramona Moldovan ([25:44](#)):

And build positive relationships, can't begin to tell you how important social connection is, getting in touch with people you haven't spoken to in a while, your neighbor about their cats, sharing good news, all of that means connection, belongingness. And big one is also, look for meaning or a purpose higher



than yourself. That can be, get involved in a cause. Try something new. Spend quality time with people you like, including your pet, anything goes really, but do try to zoom out meaningfully. So, I think these are all things we try and do, even under these circumstances. And there is strong evidence that they do lead to resilience and overall wellbeing. I'll give you an example of another study if we have time for that, but that's probably too long an answer for your question.

Kenny Wong ([26:39](#)):

But we can definitely share that in the resources section, if our audience, our listeners will want to hear more about that too. Thank you, Dr. Moldovan, this has been very informative for myself and I'm sure our listeners would really love to read more about this as well. So, would you mind sharing a summary or the takeaways for the listeners, from what we've discussed today?

Dr. Ramona Moldovan ([27:02](#)):

Yes. Absolutely. There are a few takeaways that could be useful to keep in mind. The first one would be being worried or sad is absolutely normal and we often have more strengths and resilience that we give ourselves credit for. So, always keep that in mind. And when trying to look after ourselves, always make sure you get enough sleep and eat a balanced diet, exercise, spend as much time as possible outside. And very, very importantly, cultivate, nourish, cherish positive emotions and build loving relationships.

Dr. Ramona Moldovan ([27:41](#)):

In terms of research, probably the most well known study here is the Harvard Study. This is a study that went on for 80 years. So, this is one of the world's longest studies of adults' life. Researchers have collected lots and lots of data about the participants' physical and mental health, their lives, including their triumphs and failures, careers, marriages, and so on. And one of their main findings is a lesson, not only for them, but for us all, close relationships more than anything, keep people happy throughout their lives. Loving relationships, romantic or non-romantic, protect us from daily stresses, help us delay mental and physical decline, and are the best predictors of a long and happy life. So, what makes a good life? A good life is built with good, loving relationships. So, the running joke here is that after 80 years of research and more than \$20 million invested in this study, the conclusion is actually quite short and clear, happiness means love. Period.

Kenny Wong ([29:00](#)):

So, we will also share more information, the topics we discussed today, the episode page as well. Thank you, Dr. Moldovan.

Dr. Ramona Moldovan ([29:09](#)):

Thank you very much for having me.

Kenny Wong ([29:11](#)):

Who will win the Heart of Genetic Counseling Award? Register for the award ceremony to find out live and hear the emotional stories of what excellent care feels like to patients. Presented by the National Society of Genetic Counselors at Invitae, the Heart of Genetic Counseling Award celebrates the heart that genetic counselors bring to patient care, giving patients compassion and insight as they seek to





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Speaker 1 ([29:58](#)):

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