CHAPTER - 10

NON-COMMUNICABLE DISEASES

Source: unsplash.com

10.1. Literature Review

Non-communicable diseases (NCDs) are defined as diseases that are not contagious/easily transmissible from one person to another and for which a complete cure is rarely achieved (McKenna 1998)[113]. As per the World Health Organization (WHO), these are usually chronic, i.e., last lifelong and are often a result of genetic, environmental, lifestyle and behavioural factors. The types of NCDs include diabetes, cardiovascular diseases, respiratory diseases including chronic obstructive pulmonary disorders (COPD) and asthma, hypertension, kidney ailments, liver diseases, and thyroid. One major facet of NCDs, especially in the Indian context, is causes of concern including early-age onset of diseases, undiagnosed diseases till later stages and the high rates of mortality. Owing to the current lifestyle choices including smoking, alcohol consumption, unhealthy diets, sedentary lifestyle, and unplanned urbanisation and globalisation, people of all age groups including children, adolescents, adults and the elderly are at an increased risk of and vulnerable to NCDs. As per the WHO, NCDs are the reason behind the deaths of 41 million people, i.e., the equivalent to 71% of all global deaths (Desk 2021)[114]. NCDs are often known as silent diseases given that a lot of people are not aware of these conditions until symptoms becomes apparent. Cardiovascular diseases have now become the leading cause of mortality in India. Low- and middle-income countries account for a higher burden of non-communicable diseases while India factors for about 60% of the fatalities owing to NCDs (Suzanne Nethan 2017)[115]. India, therefore, is dealing with a double burden of diseases, both communicable and non-communicable diseases, today.

In fact, diabetes is the ninth leading cause of deaths globally (Desk, 2020)[116]. India represents one out of six individuals in the world with diabetes and is home to over 77 million diabetics, only second to China, according to the International Diabetes Federation's Diabetes Atlas 2017 (I. D. Desk 2020)[117]. According to a 2019 study titled 'Variation in health system performance for managing diabetes among states in India: a cross-sectional study of individuals aged 15 to 49 years', about 47% of the population, i.e., one in every two Indians living with diabetes, is unaware of their condition and is evidence that there is a diabetes epidemic in India (Jonas Prenissl 2019)[118]. According to Dr Viswanathan Mohan, Chief of Diabetology at Dr Mohan's Diabetes Specialities Centre and a co-author of the same 2019 study, India may surpass its neighbour in the next five years to become the diabetes capital of the world. This is in tandem with the findings of the International Diabetes Federation that India will likely touch 134.3 million people living with diabetes by 2045. Speaking of epidemics in the healthcare ecosystem, the impact of the COVID-19 pandemic cannot be understated given how NCDs have exacerbated the impact of COVID-19. While there were speculations of the potential effects of NCDs on COVID-19, misinformation had already fuelled panic in the public and the lockdowns have only exacerbated the panic, especially with the disruption of essential public

health services. Another added layer of the problem is that half of the diabetic population struggles to manage/control their condition because people often resort to alternate/traditional therapies instead of proven scientific methods and often delay the right treatment. Given the gravity of the diabetes epidemic and the fact that we all know at least a friend, parent or an elderly person who is diagnosed with diabetes and living through the ongoing pandemic, this chapter highlights the need to combat misinformation to tackle the diabetes epidemic within the pandemic.

10.2. Common Myths and Misconceptions

MYTH: 01 **Diabetes is merely a lifestyle disease and not very serious.**

FACT: Diabetes is a chronic health condition and can often turn serious/life threatening if not managed properly through diet and lifestyle changes.

MYTH: 02 **Diabetes is caused by high sugar consumption.**

FACT: Sugar alone does not cause diabetes. It is caused by a blend of genetic, environmental and lifestyle factors. In fact, high sugar content implies being overweight and that is a potential risk factor for diabetes.

MYTH: 03 **Diabetes can be cured with insulin.**

FACT: As of today, there is no cure for diabetes. It can, however, only be treated and controlled through a healthy diet and increased activity.

MYTH: 04 **Diabetes can be cured with insulin.**

FACT: Although the risk of heart disease is greater in men, there is no evidence that women are immune to it and vice-versa in case of diabetes. Post 65 years, men and women are at equal risk of the diseases and need to get regular body check-ups done.

MYTH: 05 | **People with heart diseases or diabetes must take it slow in terms of physical activities.**

FACT: In fact, it is the opposite—an active lifestyle can reduce the risks of obesity and other complications. People with heart diseases and diabetes must not have a sedentary lifestyle but are encouraged to exercise/undertake physical activities to stay healthy.

MYTH: 06 | **Fat intake must be completely cut off for people suffering with NCDs.**

FACT: While intake of saturated fats must be lowered and trans-fats should be avoided, not all fats are bad for the body. In fact, the good fats from lean meat, salmon and nuts are essential for the functioning of the body, especially the heart.

MYTH: 07 | **Only obese people are definitely prone to diabetes, especially type 2 diabetes.**

FACT: While obesity is a probable risk factor of diabetes and heart diseases, not every obese person suffers from these. In fact, a lot of people in the older generation who are not obese suffer from these conditions. However, a healthier diet with sugar in moderation and activity goes a long way in keeping these lifelong diseases at bay.

MYTH: 08 | **Diabetes is contagious and more so if it runs in the family.**

FACT: Diabetes is a chronic disease that is caused by reduced amount of insulin (hormone that regulates blood sugar) or resistance to the action of insulin, or even a combination of the two. It is based on the individual, and lifestyle and environment factors. While family history implies higher risk, it is not necessary that those with one develop diabetes or that people without a family history are secure.

MYTH: 09 | **Type 2 diabetes is mild and reversible.**

FACT: Type 2 diabetes cannot be cured, at best the glucose levels can return to normal range. In fact, poor management of type 2 diabetes can lead to severe, life-threatening conditions. So, it is vital to manage and control as most diabetes are not reversible.

MYTH: 10 | **Diabetes implies eventual loss of sight/blindness.**

FACT: While poorly controlled diabetes is a risk factor for loss of eyesight, not everyone with diabetes is blind. Early symptoms/mild cases can even be treated with rigorous diabetes management.

10.3. Case Study- A Social Media 'Doctor' who can Cure Diabetes

In the context of NCDs, misinformation often appears in captivating messaging that 'there is no such thing as bad cholesterol' or 'diabetes will be cured in two days', often giving people hope that their chronic disease might finally have a cure. The spectrum of misinformation ranges from the prescription of insulin in India as a scam to help pharmaceutical companies make profits to fad diets to two-day homeopathy cures for diabetes and eating a dozen bananas to cure diabetes. A lot of such fake news has been circulating on social media platforms for years now.

While there is no allopathic cure to diabetes or obesity, precautionary and preventive care for NCDs is often long-term lifestyle changes including changed diets and physical activity. Therefore, when a social media post or advertisement claims that there is an 'immediate' and short-cut cure, people often become optimistic and experiment with alternate medication. While information dissemination continues on social media, one 'doctor' who has owned the misinformation space on diets and COVID-19 is Dr Bishwaroop Roy Chowdhury. He is a self-proclaimed doctor who claims to hold an honorary PhD in diabetes studies from Alliance International University, Zambia, which is headquartered in the Caribbean and not in Africa. Before spreading misinformation on the COVID-19 pandemic, his forte was to curate special DIP (Disciplined and Intelligent People) diets to reverse diabetes within 72 hours. His antidote to curing diabetes is to eat 'sweet fruits' so blood sugar comes down. He has hosted several online and offline events and people have flocked to watch his magic 'scientific' cures. His YouTube videos have over a million views. The sycophancy can be seen in the comments to his videos, where people heap praise on him for his misleading messages. The engineer-turned-doctor's DIP diet promises to cure diabetes, thyroid, PCOS and even cancer, among many other chronic problems.

> *Dr Bishwarooy Roy Chowdhury's infamous DIP diet plan can fix any kind of disorder including weight loss, PCOS or thyroid and can reverse diabetes in 72 hours. (**YouTube**)*

Although social media giants like Facebook, Twitter and YouTube have banned most of his channels, the internet doctor's videos and messages continue to be circulated on social media, garnering thousands to millions of views. There are many more quacks like him who claim to 'cure' chronic diseases through diets, pills and natural fruit concoctions. However, it must be remembered that doctors and medical professionals across the world would have been following such breakthrough cures, if at all they existed. Since there is no magic formula that will cure most NCDs, the only scientific and proven solution is to have an overall lifestyle change including diet control and physical activity that can prevent, control and manage severe diabetes and plausibly reverse prediabetes or extremely mild diabetes, cholesterol and other chronic health issues. Digital literacy, therefore, becomes a crucial tool to combat health misinformation. While one can explore alternate treatments, one should be careful to distinguish between credible alternate treatment and the quacks whose advice can, in fact, make these health issues worse.

10.4. Expert Speaks

DR ISHU KATARIA

She is a Senior Public Health Researcher with RTI International's Center for Global Noncommunicable Diseases. Dr Kataria works on NCD prevention and control both in India and globally. She has experience in conceptualising and developing training interventions, and designing and implementing programmes on cancer prevention, adolescent NCDs, maternal and child health, and behaviour change communication.

01 What are some of the biggest challenges in NCDs and how should these be dealt with?

Dr Kataria: India has traditionally seen a lot of focus on communicable diseases, and it continues to do so. However, 60% of all the deaths are due to NCDs and the situation is similar at the global level as well. While the debate of non-communicable diseases vs communicable diseases continues, it is important to note that NCDs need to be prioritised given that they are chronic in nature. Long-lasting diseases require complicated treatments for life and more so in the case of the combination of NCDs a person has. There is a lot of interplay including unhealthy diets, air pollution, alcohol consumption, physical inactivity, etc. To prevent and control major NCDs, the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) was developed to have a multi-sectoral approach through National Monitoring and Action Plan (NMAP) for prevention and control of common NCDs. The idea was that the onus is not on one ministry or one set of stakeholders but rather how there is a need for different players in the ecosystem to prevent and combat NCDs through this blueprint. For instance, different stakeholders like civil society organisations, academia, stakeholders for monitoring and surveillance, among other stakeholders, are required to be embedded in talks about health promotion and preventions. Therefore, there are strategies and plans in place that the government has initiated recognising the problem and state governments are following suit, but I think there still needs to be a lot of prioritisation for NCDs, specially with regards to funding, which remains a challenge, even globally.

02 According to you, what is the impact of alternative medicine on people, especially those with NCDs?

Dr Kataria: In a lot of places in India and even if you look at the other systems, you have a good majority of what you call these quacks, and there is a lot of belief in them. In fact, people would rather consult the quacks over trained medical professionals owing to community pressure or peer pressure, which is in terms of people living in the neighbourhood, or you have elders in the communities where you see such things happening. This can have a serious negative impact given that they take the medication or treatment for progress but instead it leads to worsening of the diseases. There is a vast difference between how a professional would approach the problem, diagnose it and treat is as per the protocol versus how the quacks do it. In my experience, this can have severe consequences, sometimes even prove to be fatal for certain diseases and disorders. On the other hand are the people who seek alternative treatment in different stages—some at an early stage or some resort to these treatments when

there is no effect of allopathic medicines. Therefore, it is on both sides of the spectrum, and it does have an impact because you are not following the correct protocols for treating the condition and this can, therefore, impact the health of people who resort to alternative medicine providers.

03 Misinformation around nutrition is an under-debated topic. How should we start an effective conversation around it and inform people to consume the right diet?

Dr Kataria: I think change should come at the policy level; it must be communicated from the national or state perspectives. If you see a piece of information from the government, you assume it is correct and credible, and it has a wider reach among the masses. Take food labelling, for instance; the issue with it is that the regulation of the guidelines pertaining to labelling in the country is not strong enough. This, in turn, provides manufacturers with loopholes, who then add false claims to their labels. Therefore, if these things are modified at the policy level, there are better chances of streamlining it and reducing the false claims through right messaging from top-down. That said, there are many players spread out within the nutrition sector right now that are picking it up. Some of them are trained and credible. On the other hand, there are people and organisations who are not trained yet they claim to know the rules of the game. Therefore, change must be brought at a policy level, i.e., strengthen the policies and provide the right information even within specific sections of the Ministry that deal with the topic. Once the policies are formulated in a way that they are more consumer-friendly, then comes the enforcement of the policies and the manufacturers would find minimal loopholes.

04 You have significant experience in capacity building from conceptualisation to implementation and monitoring. How have the outcomes been so far?

Dr Kataria: Capacity building happens at different levels. In my experience, I predominantly engage in capacity building with young people who work on the ground, either implementation or in liaison with implementation organisations on NCDs, engaging their communities and different stakeholders. I think the impact of monitoring and evaluation comes right from the start and not in the middle or at the end. The point is that you will be monitoring at different time points and evaluating at different time points starting from conceptualisation and planning, and this gives you a better chance of learning as you go along. You will see that if you have made mistakes, there are chances of course correction, and that is how you get the maximum impact; that is what we call embedded learning. This is what we try to do in all the capacity building work that happens, where you not only capacitate people on how and what to do based on what they tell you is the need of their context but also build monitoring and evaluation right from conceptualisation.

05 What has been the impact of COVID-19 on NCDs in India?

Dr Kataria: I'd suggest a different framing for it, and say that both NCDs and COVID-19 are very closely interlinked, and it has now also been documented very well that NCDs exacerbate COVID-19. For instance, if you have risk factors like tobacco consumption or obesity, you see linkages that make you more vulnerable to COVID-19. We have been seeing a lot of literature coming up about obesity, diabetes, heart conditions, etc. as an underlying risk factor for exacerbating it. It is critical to observe and understand the impact of COVID-19 on morbidity and mortality, and NCDs are definitely playing a huge role as risk factors for contraction and recovery of COVID-19.

10.5. Conclusion

The evidence from the current literature shows that there is a reciprocal relationship between COVID-19 and NCDs; NCDs imply vulnerability to COVID-19 while COVID-19 increases NCD-related risk factors. The need to prioritise NCDs has never been more significant. While low- and middle-income countries like India are already struggling for monetary and infrastructure needs, the pandemic has added an insurmountable burden to the existing NCD problems. Added to this are the layers of misinformation that not only disrupt the ecosystem but also make course correction a herculean task. While certain preventive measures are already in place, the challenge of tackling misinformation involves more than one stakeholder. Misinformation coupled with industry leaders promoting false or misleading food labelling to boost their product sales and revenue is a disaster recipe for NCDs. The proposed way forward includes understanding the impact of misinformation on NCDs, especially during the pandemic, which has been exacerbated manifold. For instance, the lockdowns witnessed the suspension of out-patient services in hospitals while on the other hand, people feared seeking medical care owing to the fear of contracting COVID-19. Therefore, data-driven research is key to understand the extent of the problem. Followed by this is the need to gather the relevant stakeholders including the governments (state and national), civil society organisations, healthcare experts, researchers, on-ground partner/implementation organisations, funding partners, media and others to identify the challenges and barriers, and ways to fight misinformation. Pertinent research on best practices and success stories from around the world and innovative practices must be collated and contextualised to fit in at the state, region and community levels.

Misinformation is a complex problem that requires deep behavioural and psychological understanding of people. Digital literacy must involve modules to specifically address the negative impact of misinformation on NCDs, and provide credible and course-corrective messages to the people on NCDs.