



Inside Psoriatic Disease

MENTAL HEALTH

Breaking the vicious cycle

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Introduction

Good mental health and well-being is increasingly recognized as an integral part of health. From a historical perspective, mental health has often been neglected, and people suffering from mental diseases discriminated against. Even nowadays, it can be difficult to talk about mental health as openly as physical health. Negative attitudes towards mental health are reflected in the language used to talk about it. People living with mental conditions are still stigmatized and, in certain parts of the world, suicide is still considered a crime.

The COVID-19 pandemic worsened mental health, and many people experienced a considerable level of stress and anxiety. But it also showed the importance of providing mental health support to those in need.

Now the tide is turning on mental health. At the policy level, the adoption of resolution WHA65.4 on the global burden of mental disorders in 2012 was a milestone in mental health advocacy. The World Health Organization (WHO) now offers support and resources to member states to address mental health, and countries all around the world have started developing national strategies to support people living with mental disorders.

All around the world, the burden of noncommunicable diseases is increasing. Noncommunicable diseases are often associated with increased burden on mental health and increased use of health services. For people living with noncommunicable diseases, mental disorders are a source of disability, yet they are less likely to be addressed compared to physical symptoms. Psoriatic disease is a quintessential example of a noncommunicable disease associated with a great effect on mental health, quality of life and well-being.

This report summarizes the science linking mental health and psoriatic disease. Together, we will explore quality of life in people living with the disease, and unpack known obstacles to their well-being. Psoriatic disease demands greater attention to mental health and quality of life. With proper mental health support and investment in mental health services, it is possible to minimize this additional burden on people living with psoriatic disease. Early diagnosis and treatment will allow all to achieve their full life potential.

The Brain-Skin Axis



Psoriatic disease is a systemic condition affecting multiple body sites. According to the Global Psoriasis Atlas published in 2020, at least 60 million people are living with psoriasis worldwide¹. As only 19% of countries have epidemiological data on psoriatic disease², and the burden of those living with joint symptoms in addition to skin manifestations is not included in these studies, there is reason to believe that the current figure vastly underestimates the number of people living with the disease.

Psoriatic disease is a multifactorial condition, which means that both genetic and environmental factors play a role in the onset and recurrency of the disease. After its onset, psoriatic disease may resolve with the help of treatments, then return periodically and unpredictably. These recurrences are known as **disease flares**. People with psoriatic disease have to live with it for the entire length of their life.

Living with a condition visible on the skin takes a heavy toll on a person's mental health and emotional well-being. The psychological impact is increasingly recognized as a significant part of psoriatic disease. But the relationship between psoriatic disease and well-being is complex and multifaceted.

For example, one of the factors contributing to the exacerbation of psoriatic disease is stress. Stressful events can be responsible for the onset of disease and can trigger a new flare³. Stress exacerbates psoriatic disease in both children and adults. Stressful events can trigger any type of psoriatic disease (plaque⁴, guttate⁵, pustular⁶, or erythrodermic⁷) and worsen its symptoms^{8,9}. In turn, the physical symptoms of the disease - such as joint pain and skin itch - are both physically and emotionally stressful, and can lead to sleep deprivation, fatigue, and negative effects on mental health. Paradoxically, the unpredictability of disease flares is itself a cause of stress and anxiety. The result: a first-of-its-kind global survey investigating happiness in people with psoriatic disease reported that 54% of respondents experience a level of stress and anxiety that surpasses the general average¹⁰.

Self-esteem, confidence, and body image may be negatively affected by psoriatic disease¹¹. They are often associated with rejection from society, a

What is psoriatic disease?¹³

Psoriatic disease is a systemic condition affecting multiple body sites, predominately the skin, the joints, or both.

Skin and joint symptoms are different manifestations of the same disease. They may manifest independently. A third of people with skin manifestations of psoriatic disease (psoriasis) will develop a type of inflammatory arthritis affecting joints and tendons (psoriatic arthritis). In some people, joint symptoms develop before skin lesions.

In addition to skin and joint symptoms, psoriatic disease is characterized by increased risk of developing related noncommunicable diseases. The most common comorbidities are obesity, hypertension, dyslipidemia, diabetes (collectively referred to as metabolic syndrome), cardiovascular disease, and inflammatory bowel disease. Moreover, psoriatic disease has a major impact on mental health and quality of life.



social process called **stigma**. What's worse, stigma is often accompanied by **self-stigma**: individuals with psoriatic disease can feel self-conscious and embarrassed due to their condition^{10,12}. The stigma and self-stigma associated with psoriatic disease have broad repercussions. Negative reactions from society can generate feelings of shame, embarrassment and isolation, which in turn influence mental health and social interactions¹⁰.

The presence or absence of psychiatric comorbidities such as depression and anxiety are only one factor impacting an individual's ability to live a full life. Social interactions, quality of relationships, ability to work and participation in leisure activities are all important aspects to an individual's life experience. All of these aspects can be impaired in psoriatic disease.

The Danger of Psoriatic Disease

Depression and anxiety, and how to decrease the risk



Depression and anxiety are the most common mental disorders worldwide. It is estimated that 3.4% of the world population lives with depression and 3.8% with anxiety¹⁴. Anyone can develop depression or anxiety at some point in life, but some individuals are at increased risk.

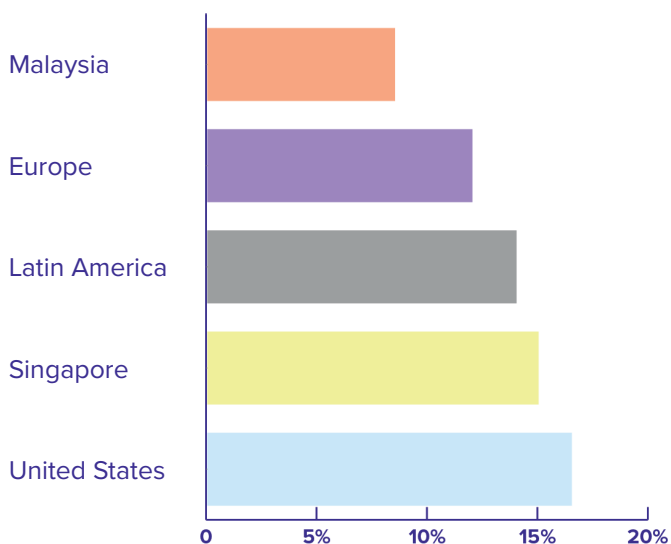
The non-curable, chronic nature of psoriatic disease, the systemic inflammation occurring in the body, and the fact that the disease is visible on the skin renders people living with psoriatic disease at risk of developing depression and anxiety.

But there is hope. Knowing the link between psoriatic disease and depression or anxiety can help people living with the condition and their families identify the early signs of poor mental health. It can also encourage doctors to recognize cases of anxiety and depression in their patients and understand how to intervene.

DEPRESSION

According to the WHO, depression is a common condition affecting more than 264 million people worldwide¹⁵. **Depression** is described as a state of persistent sadness and lack of interest or pleasure in activities that were previously enjoyable or rewarding. Depression impacts daily life, relationships, and social interactions. Depression can also cause physical problems, and it is considered one of the leading causes of disability worldwide¹⁴⁻¹⁶, as it may impair the ability to work and is associated with long sick leave periods.

Research shows that people living with psoriatic disease are more likely to suffer from depression compared to people that do not have psoriatic disease. A review of published scientific



Rate of depression in people with psoriatic disease

studies concluded that more than a quarter of people living with psoriatic disease show symptoms of depression, and one in ten shows signs of clinical depression¹⁷. Studies conducted in different geographies confirm the global trend: 8.5% in Malaysia¹⁸, 15% in Singapore¹⁹, 12% in Europe²⁰, 16.5% in the US²¹, and 14% in Latin America²² have been diagnosed or have shown signs of depression. Psoriatic disease has the highest prevalence of depression compared to other dermatological conditions²³⁻²⁵.

Psychosocial factors related to having a visible disease partly explain the increased risk of developing depression. Stigma and self-stigma experienced by people with psoriatic disease undermines self-confidence and exacerbates depression. When people have psoriatic disease and another comorbidity at the same time, it is an additional burden on mental health. Living with more than one noncommunicable disease has been shown to be associated with an increased risk of depression, and this seems to be the case in people living both skin and joint symptoms of psoriatic disease²⁵⁻²⁸.

The relationship between psoriatic disease and depression is bidirectional: psoriatic disease can cause depression, and depression can cause psoriatic disease²⁹⁻³². In fact, science has started to uncover the molecular mechanisms behind the association between psoriatic disease and depression. Inflammation seems to be the link. Some of the same inflammatory mediators are implicated in both psoriatic disease and depression^{30,33}.

There are segments of the patient population at increased risk of developing depression. This should be taken into account by health care professionals in their dialogues with patients. For example, women and young people are more prone to develop depression in connection with psoriatic disease, and thus deserve special attention^{28,31}.

In the worst scenarios, the feeling of helplessness experienced when living with psoriatic disease can lead to suicidal ideations and behavior. A review of scientific literature found that people with psoriatic disease are more than twice as likely to experience suicidal thoughts. They also have more non-fatal and fatal suicide attempts than people without psoriatic disease³⁴. However, other analyses did not confirm these results³⁵. Therefore, it is difficult to draw conclusions. More studies are needed to understand the risk of suicidal ideation and behavior in people living with psoriatic disease. Studies agree that being young and having a more severe disease increase the risk of having suicidal thoughts^{34,35}.

Everyone deserves to have their mental health taken seriously. A timely evaluation of signs of depression eases the burden of psoriatic disease and saves lives. Depression makes it harder for people to focus on improving their psoriatic disease and impairs adherence to treatment, so signs of depression must be addressed before and during therapy. Moreover, timely and proper treatment of psoriatic disease improves depression: it has been shown that certain biologic medications improve psoriatic disease and decrease depressive symptoms and suicidality³⁵. This may be due to the effect of the medications on the inflammatory pathways shared by psoriatic disease and depression. It may also be the result of seeing the symptoms of psoriatic disease improve quickly and extensively³⁶.

ANXIETY

According to the American Psychiatric Association, **anxiety** is a normal reaction to stress, helping people to be alert and react in dangerous

situations³⁷. Issues arise when the feeling of anxiety becomes excessive and persistent. Anxiety can cause physical symptoms such as increased blood pressure, rapid heartbeat, sweating, or dizziness. Anxiety and related disorders can cause people to avoid situations out of worry³⁸.

Studies consistently show that people living with psoriatic disease have an increased prevalence of anxiety compared to people without psoriatic disease. A review analyzing studies on the prevalence of anxiety in people with psoriatic disease reports a prevalence ranging from 7% to 48%³⁹. Much like depression, psoriatic disease can cause anxiety, and anxiety can exacerbate psoriatic disease²⁹. The co-existence of skin lesions and joint symptoms increases the prevalence of anxiety²⁶, but there seems to be no correlation between the risk of developing anxiety and the severity of psoriatic disease²⁵. Itch, a significant symptom of psoriatic disease experienced by many, increases the levels of anxiety⁴⁰. Similar to depression, anxiety disorders have a molecular signature that partly overlaps with psoriatic disease. A variety of treatments for psoriatic disease can also improve anxiety^{25,39}.

The COVID-19 pandemic has exacerbated stress, fear, and anxiety in the general population all around the world⁴⁰. Fear of contracting the virus causing COVID-19, worries about the consequences of the pandemic on jobs and the economy, and isolation due to the reduction in social contacts has impacted many people. A systematic review of data from more than 200 countries published in 2021 showed an increase of depressive and anxiety disorders due to the pandemic⁴².

Stress and anxiety exacerbated by the COVID-19 pandemic have challenged people living with psoriatic disease. In a study conducted in China in 2020, people with psoriatic disease reported a worsening of mental health. Depression, anxiety, stress, and insomnia were experienced more frequently during the pandemic compared to the times before the pandemic⁴³. However, other surveys conducted in Germany⁴⁴ and preliminary results from the UK⁴⁵ did not find changes in the burden of mental conditions before or during the pandemic. A global survey of

more than four thousand people living with psoriatic disease conducted by the research group PsoProtectMe showed that almost half (43%) of respondents living with psoriatic disease have seen their disease becoming worse during the pandemic. Of those reporting worsening of disease, 47% had symptoms of anxiety and depression, compared to 29% with no worsened disease^{46,47}. Individuals reporting worsening of the disease were more likely to live with other comorbidities, be females, and adopt a shielding behavior such as minimizing in-person contacts and not leaving home. Discontinuation of treatment was another cause for worsening of

psoriatic disease during the pandemic: living with an immune-mediated disease treated with medicines suppressing the immune system was worrying for many, especially at the beginning of the COVID-19 pandemic, when the relationship between immunomodulatory drugs and likelihood of contracting the virus causing COVID-19 was still unknown. Care for people living with chronic conditions was impaired while resources shifted to respond to COVID-19^{48,49}. For psoriatic disease, canceled appointments⁵⁰ and initial hesitancy with immunomodulatory therapy⁵¹⁻⁵³ has compromised care and may have triggered lasting consequences.

How much does it cost to have depression and anxiety in addition to psoriatic disease?

Having depression or anxiety together with psoriatic increases costs for individuals. A recent study conducted in the US found that the annual cost of having psoriatic disease and depression is 8859 USD higher than having psoriatic disease alone. For anxiety, the increase in cost is 3018 USD⁵⁴. The costs rise even further if indirect costs, such as short-term disability and absenteeism from work, are also taken into account: people with psoriatic disease and accompanying depression and/or anxiety lose more workdays due to absence or short-term disability compared to people with psoriatic disease only.

This study reaffirms older studies noting a significant increase in costs and health care utilization by people with psoriatic disease and additional depression and/or anxiety⁵⁵⁻⁵⁷.

Considering the evidence that timely and proper treatment of psoriatic disease decreases the risk of developing anxiety and depression, achieving optimal treatment would not only translate to a lighter burden for the individuals, but would also save the costs of treating mental health conditions on top of psoriatic disease.



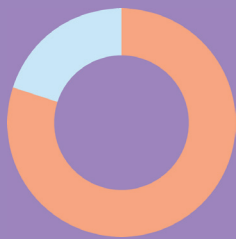
ACTING ON MENTAL HEALTH

Mental health is an integral part of health and well-being. At the 65th World Health Assembly in 2012, world leaders formally recognized the importance of emotional well-being to achieve the highest attainable standards of health. Policies and national action plans are slowly being adopted, but there are significant inequalities in the implementation of such plans globally⁵⁸.

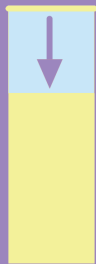
Just as for physical health, mental health is influenced by many factors, including social and economic determinants, living standards, working conditions, and social support. For example, people experiencing discrimination and human right violations are particularly vulnerable to mental conditions.

Even physical health influences mental health, and vice versa. People living with mental conditions like depression are at higher risk of dying prematurely from other diseases because they tend to postpone seeking help for physical conditions. At the same time, living with a noncommunicable disease also negatively impacts mental health.

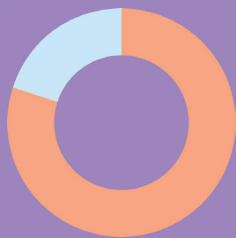
Global targets from the Comprehensive Mental Health Action Plan 2013-2030



80% of countries will have integrated mental health into primary health care, by 2030.



The global rate of suicide will be reduced by one-third, by 2030.



80% of countries will have a system in place for mental health and psychosocial preparedness for emergencies and/or disasters, by 2030.

The WHO has published numerous tools to aid member states in promoting, preventing, and treating mental conditions. One of the most valuable tools is the Comprehensive Mental Health Action Plan 2013-2030⁵⁹. This plan focuses on four objectives and targets:

1. Strengthen effective leadership and governance for mental health
2. Provide comprehensive, integrated and responsive mental health and social care services in community-based settings
3. Implement strategies for promotion and prevention in mental health
4. Strengthen information systems, evidence and research for mental health

The plan pushes for the inclusion of mental health services in programs for noncommunicable diseases, and for such services to be covered by universal health coverage schemes. There is a lack of health workers sufficiently trained to provide quality services and prescribe medications for mental conditions. Moreover, some sectors of the health system, such as primary care, are not sufficiently equipped to offer mental health support to those in need.

Suicide prevention is a cornerstone of the WHO plan. It is estimated that 800 000 people die by suicide every year, one death every 40 seconds⁶⁰. The plan sets a target of halving the number of suicides by 2030 by acting on prevention especially among vulnerable populations, such as young people.

A lot can be done to achieve the plan's targets by paying special attention to people living with psoriatic disease. Knowing that this segment of the population is particularly vulnerable to mental conditions and experiences many situations exacerbating poor mental health, offering mental health services to people with psoriatic disease will improve the lives of millions of people worldwide and will help governments achieve the WHO targets on mental health.



Beyond Mental Health

Living free from psychiatric conditions is only the first step towards living a full life. The possibility of finding and maintaining a job, having meaningful relationships, experiencing a fulfilling sexual life, and participating in society are all important aspects of an individual's well-being.

QUALITY OF LIFE

According to WHO, **quality of life** is “an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns”⁶¹.

The global psoriatic disease survey “Psoriasis and Beyond”, a study of nearly 5000 people with psoriatic disease from 20 countries, has found that half of the participants report a moderate-to-very large impact of the disease on their quality of life⁶².

Psoriatic disease is an obstacle to full participation in society. People living with a disease that manifests on the skin, such as psoriatic disease, often report feeling stared at, feeling the need to cover their skin not to be seen, and being excluded from normal social environments^{63,64}. Therefore, individuals tend to avoid social circumstances and places where there are many people.

Family life and relationships are negatively impacted by the disease as well. The study “Psoriasis and Beyond” shows that 81% of respondents report an impact on their relationships⁶². Partners of people living with psoriatic disease see the impact of the disease in their everyday life: the overwhelming majority (92%) of partners of people living with psoriatic disease reported that the partner's disease has impacted their family life and relationship in the form of extra housework, concerns over the partner's health, limited social engagements, restricted leisure activities or vacations, and more⁶⁵. Individuals living with people with psoriatic disease also experience higher levels of anxiety and depression⁶⁶.

Some people living with psoriatic disease experience lesions in the genital area. This manifestation impairs an individual's ability to live a

fulfilling sexual life. Avoidance of sexual relationships and intercourse is more common in people with genital psoriasis compared to people without skin manifestations in the genital area. These sexual limitations have repercussions on relationships and social life. Genital lesions are often associated with itch, and may cause embarrassment. The discomfort, embarrassment, and obstacles in living a fulfilling sexual life reflect poorly on mental health and quality of life⁶⁷.

Families and women planning to have children face unique challenges compared to their peers without psoriatic disease. The effect of psoriatic disease on pregnancy outcomes are unclear⁶⁸⁻⁷². More than one third of women are concerned about the impact of their treatments on fertility and the unborn child, and have made decisions whether or not to have children because of their condition⁷²⁻⁷⁴. Being that psoriatic disease is a condition that has a genetic component, people worry that their children will also develop psoriatic disease⁷².

It is proven that having psoriatic disease influences the education and career choices of people living with it. Physically, fatigue and work absence may limit productivity and ability to perform tasks^{10,12,72,75-77}. People working in contact with the public also report a high degree of self-consciousness, discrimination, and impact on their ability to stay employed^{72,75}. Career advancements and earning potential are also affected^{74,76}. Some people report that psoriatic disease is the sole reason for their unemployment¹².

Well-being and happiness in psoriatic disease: World Psoriasis Happiness Report^{10,77}



The World Psoriasis Happiness report explores the impact of psoriatic disease on well-being and happiness. The authors surveyed 100 000 respondents and collected data on key parameters such as loneliness, social support, stress, comorbidities, lifestyle, and work life, and how they relate to happiness.

The rich dataset is complemented by stories showing the impact of psoriatic disease on people's lives.

Read the reports here:

- <https://ifpa-pso.com/resources-tools/world-psoriasis-happiness-report-2017>
- <https://ifpa-pso.com/resources-tools/world-psoriasis-happiness-report-2018>

WELL-BEING

The term well-being can be explained as a sum of how people feel, how they function, and how satisfied they are in life^{78,79}. As such, well-being is not only the absence of what is clinically considered a mental illness, but the addition of positive feelings, factors associated with quality of life (social interactions, income), productivity and life satisfaction.

Not much is known about well-being and psoriatic disease. From the analysis of mental health and quality of life presented above, there are many factors indicating that psoriatic disease drags people in the wrong direction when it comes to achieving a state of well-being.

This does not mean that it is impossible for people living with psoriatic disease to achieve a state of well-being. There are many things that can be done to minimize impact on people's lives, and improve well-being.

People must receive early diagnosis and proper treatment to keep the disease under control. The insurgence of psychiatric comorbidities, such as depression and anxiety, must be caught early so that people can receive the help they need. Moreover, educating society on psoriatic disease combats stigma in society and in the workplace. Greater awareness will create more favorable conditions for people with psoriatic disease to participate in society and pursue a career of their choice. These practical (and achievable) interventions, when implemented, will change the lives of millions of people living with psoriatic disease.



Fighting for Well-being

EARLY DIAGNOSIS AND PROPER TREATMENT SAVE LIVES

Having psoriatic disease diagnosed early and then well-controlled makes a great difference for mental health and well-being. Biologically, suppressing those inflammatory mediators causing both psoriatic disease and depression or anxiety improves symptoms. Furthermore, seeing psoriatic disease improve quickly and extensively positively impacts mental health. Psoriatic disease impacts all aspects of life, not only a person's health. Having the disease well-managed means reducing its whole burden.

A smartphone app to improve mental health^{80,81}

In general, educational programs for people living with psoriatic disease improve self-management skills and reduce disease activity, but have limited effects on mental health. To further improve self-management skills and build trust in doctor-patient relationships, a group of scientists designed a smartphone app. Participants used the app to record photos of their skin and to answer questionnaires on quality of life, mood, activity, pain, and itch. Symptom tracking was combined with a tested psoriatic disease educational program. The results showed a significant reduction in depression and anxiety after 6 months on the app. The reduction was even larger and more long-lasting (up to 1 year) in those



participants using the app less frequently (once every 5 weeks). The study authors speculate that the good results on mental health may be due to the improved communication between the participants and the doctors: by entering information on mood and quality of life into the app, study participants may have increased self-perception of their own disease, thus allowing them to have a more open conversation on those matters, even via the chat function available in the app. Regular monitoring can be seen as a way to increase an individual's sense of control over the disease. Control, in turn, has been shown to positively influence mental health.

A resource for people with psoriatic disease and the workplace⁷⁵

In 2021, the Canadian Psoriasis Network, the Canadian Association of Psoriasis Patients and the awareness group Unmasking Psoriasis published “Working it out”, a report on workplace challenges and the needs of people living with psoriatic disease. The final chapters of the report are dedicated to workplace accommodations. People with psoriatic disease may require adaptations in working conditions to maintain health and productivity. The report thoroughly explains legal rights and obligations for employees and employers, including instructions to prepare a request for workplace accommodations, and tips for completing forms on work absence and disability benefits. Tailored to Canadian laws and regulations, it is a very useful toolbox for Canadians living with psoriatic disease to navigate workplace challenges.



PEOPLE, NOT A COLLECTION OF SYMPTOMS

When medical consultations do not dedicate time to talk about mental health and quality of life, they ignore a great deal of what really matters for a full life.

For conditions such as depression and anxiety, referral to a professional that can evaluate mental health status (ideally already when the first signs of the diseases appear) and provide proper support helps reduce symptoms and shorten the duration of depression or anxiety. An open discussion with a health care professional about treatment goals and quality of life may be the first step towards finding resources. Patient organizations and patient networks are key in providing this support. They serve as a unique platform to share experiences and gather tips to cope with a chronic disease¹⁰. Some patient organizations even provide information on legislation and worker’s rights in terms of disability benefits, workplace accommodations or other country-specific resources.

Prevention is chronically undervalued when it comes to mental health and quality of life. Healthy eating, physical exercise, quitting smoking and avoiding harmful use of alcohol are recognized interventions to promote mental health^{82–86}. These same behaviors are also strategies to improve psoriatic disease^{87,88}. Prevention must take more space in the holistic care of psoriatic disease, which would bring benefits on many fronts.

INVEST IN MENTAL HEALTH

The goals and targets listed in the WHO's Comprehensive Mental Health Action Plan 2013-2030 and the increased attention on mental health in recent years are positive for the psoriatic disease community. Inclusion of mental health services in health programs for noncommunicable diseases, and mental health training for primary care workers will improve psoriatic disease care. Preventing and diagnosing mental conditions in people living with psoriatic disease must be a priority if we are to achieve the vision of health: a state of complete physical, mental, and social well-being.

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