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The Link Between Physical Functional Impairment and Psychological Distress: Clinical Associations, Psychosocial Mechanisms, and Structural Determinants

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Abstract. Research based on the biomedical model, spanning various fields, has addressed physical functional impairment and psychological distress separately, with most previous explanations centered on the individual level. However, an increasing number of studies suggest that the relationship between the two is not just a disease or functional problem, but is also influenced by clinical status, social interaction, and institutional environment. This paper explores the potential multi-level connections between physical functional impairment and psychological distress through a narrative review. At the individual and clinical levels, functional impairment related to certain mental health problems may continue even after symptoms are alleviated, and stigma may also impact individuals' perceptions of their own health and the utilization of healthcare services. At the level of social interaction, social attitudes, discrimination, public stigma and self-stigma can exacerbate psychological burdens and impact individual identities. At the broader structural level, social environments, policy frameworks, access to healthcare, and spatial and institutional marginalization all influence the risks encountered by disabled populations and their access to assistance. While existing literature offers increasing evidence for these relationships, longitudinal follow-up and intervention studies remain sparse. Future research could explore how these factors interact over time, and whether adjustments at the environmental and institutional levels could enhance mental health and social integration. Lastly, the article discusses several topics that warrant further investigation within the Chinese social context.

Keywords: physical functional impairment, mental health, stigma, social model, health equity

1. Introduction

Sociology, public health and clinical psychology all discuss the relationship between physical disability, mental health and social environment, but these problems have rarely been understood within the same framework. Influenced by the traditional biomedical model, physical disability and mental health problems are often studied separately, and the relevant explanations are more focused on the individual level. However, in real life, physical health problems and psychological distress

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are usually not independent of each other. The World Health Organization estimates that about 1.3 billion people worldwide, or about 16% of the population, live with some form of disability [1]. For these people, the problem does not come only from physical functional impairment itself. Obstacles in medical services, insufficient social support, prejudices and institutional environment may further affect their health and daily life. Some physical functional impairments might also develop into longer-term psychological strain and social marginalization due to social norms, prejudice, or environmental barriers. Therefore, if these problems are understood and dealt with only from the individual level, it may be difficult to explain all the difficulties actually faced by people with disabilities, and it may be difficult to fully respond to the resulting health inequalities. This paper concentrates on the relationship between physical impairment and psychological distress, and organizes the analysis according to the dimensions of clinical processes, social interactions, and structural environment. In particular, this paper attempts to answer the following research questions.

• RQ1: How are mental health conditions and long-term functional impairment interrelated, and how do changes in physical health, psychological distress, and healthcare-seeking behavior interact?

• RQ2: What is the role of psychosocial factors (e.g., social norms, discrimination, and internalized stigma) in the development of psychological distress among disabled individuals?

• RQ3: How do institutional structures, policy arrangements, and environmental design influence the psychological well-being of disabled people?

These three questions correspond to the micro, meso, and macro levels, respectively. The rest of this article follows this order.

2. Literature and methods

2.1. Literature search and screening

This article adopts the method of narrative review. Literature retrieval is mainly carried out in three databases: PubMed, Web of Science and PsycINFO. The keywords used include "disability", "stigma", "mental health" and "psychological distress" and so on. The scope of the search covers the relevant literature that can be obtained by September 2026. The included literature is mainly peer-reviewed empirical research published after 2015, and a small number of important theoretical literature and classical epidemiological studies related to the framework of this article are also retained. When screening literature, three aspects are mainly considered. First, the research content needs to be related to physical functional impairment or disability, as well as mental health or psychological distress. Second, the literature is mainly based on peer-reviewed empirical research, supplemented by reports from major international organizations and a small number of important theoretical literature. Third, only English literature was included to ensure the consistency of the subsequent screening and analysis process. During screening, the titles and abstracts were read first, and then the full texts of the literature that might match the topic were further reviewed. In addition, this article also checks the reference lists of the included studies to find additional relevant studies.

2.2. Analytical methods

This article uses the social ecological stratification framework to sort out and analyze the literature. First of all, the retrieved studies are classified according to three levels: micro, meso and macro. Then, the research design, sample characteristics and main conclusions of each type of study are compared, focusing on the common points between different studies and which problems are currently lacking in further research. This article does not statistically combine the effect sizes, but

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pays more attention to the recurring mechanisms and consistent findings in different studies, and then puts this evidence into three ecological levels for sorting. Because this article adopts a narrative review, it can include literature from different disciplines and different research methods at the same time.

2.3. Analytical framework: social ecological stratification and stigma mechanisms

The analysis framework of this article combines the social ecological model [2] with the social model of disability to understand the relationship between physical functional impairment and psychological distress at three levels. The micro level mainly includes the clinical and psychological processes of individuals, the meso level includes interpersonal interaction, group norms and stigma, and the macro level involves institutions, policy and spatial environment. Physical functional impairment itself mainly occurs at the individual level, but it does not necessarily directly lead to psychological distress. Psychological distress may arise after the accumulation of risks at different levels. For example, clinical problems at the micro level may form the basis, social stigma and identity threats at the meso level may further increase the psychological burden, and institutional and environmental factors at the macro level will affect the extent of these risks and whether individuals can obtain support and intervention (Figure 1).

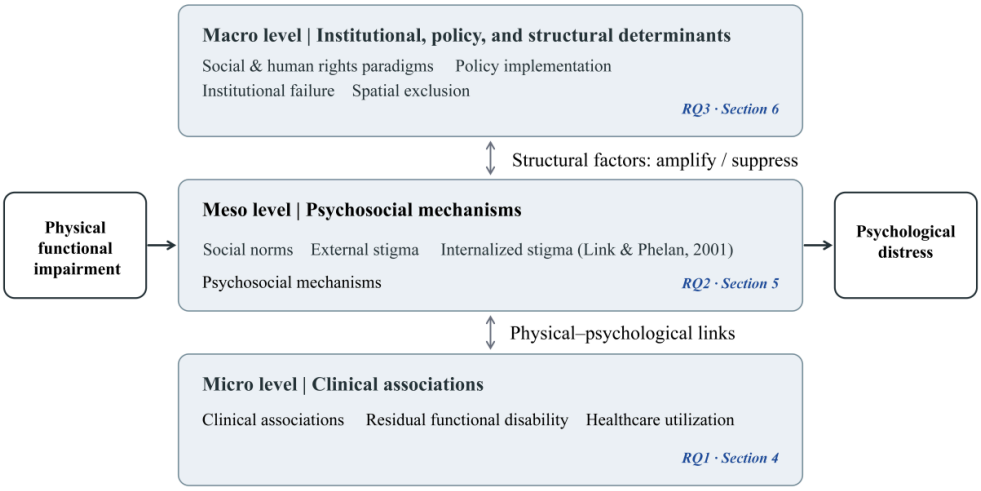


Figure 1. Social ecological framework of disability, stigma, and psychological distress (photo credit: original)

At the meso level, stigma is an important mechanism for understanding this process. Stigma is defined as a process in which labeling, stereotyping, separation, status loss, and discrimination occur together, and this process depends on unequal social, economic, and political power [3]. Once physical functional differences are socially marked, individuals may experience exclusion in daily interactions, internalize negative evaluations, and experience threats to identity. Social norms also shape the content and distribution of stigma, with differences related to gender, ethnicity, and socioeconomic status.

At the macro level, the social model of disability emphasizes that individual functional impairment should be distinguished from restrictions, exclusion and loss of opportunities caused by the social environment. The core value of the social model of disability is to shift the focus of analysis from "repairing individuals" to identifying exclusion mechanisms in political, economic and cultural environments [4]. The World Health Organization's report on health equity also interprets

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disability as the result of the interaction between health conditions and environmental factors, and emphasizes the importance of accessibility, inclusive health systems and social participation [1]. The study also shows that barriers related to the physical environment, communication, attitudes and institutions can together cause inequality in access to medical services [5]. Therefore, RQ1 corresponds to the clinical associations at the micro level, RQ2 corresponds to the psychosocial mechanisms at the meso level, and RQ3 corresponds to the structural determinants at the macro level.

3. Clinical associations, functional impairment, and healthcare utilization

Mental disorders are closely associated with physical health and daily functioning. Mental health problems can be associated with persistent impairments in daily functioning and social roles, whereas chronic medical conditions, pain, and physical disability can contribute to psychological distress. Evidence also suggests that social isolation and internalized stigma are associated with how people perceive and respond to health changes, which may in turn relate to their use of healthcare services.

3.1. Mental disorders and persistent functional disability

Based on diagnostic interview data from the Netherlands Mental Health Survey and Incidence Study (NEMESIS, N = 7,147), functional and social role impairments associated with mood disorders, such as depression, have been found to be substantial and may persist beyond the symptoms themselves [6]. Notably, the NEMESIS data also revealed the phenomenon of "residual functional disability": even after mental health symptoms have subsided, impairments in daily life, work, and social interactions may still persist. An analysis of two national samples of working-age adults with different types of disabilities in the United States found a significantly greater burden of loneliness among people with disabilities, with severe loneliness occurring across different disability types [7]. These findings suggest that loneliness may be one factor linking functional impairment with psychological distress, rather than simply a consequence of poor mental health.

3.2. Changes in physical health, psychological burden, and utilization of medical services

A three-year follow-up study of 898 patients with chronic physical diseases found that internalized stigma was related to patients' evaluation of their own physical health, decreased physical function and increased pain [8]. The study also found that internalized stigma can moderate the relationship between changes in physical health or functional limitations and the use of medical services, which shows that stigma may affect how individuals understand and respond to changes in their own health. This effect may involve both physical and psychological aspects, and gradually form a cumulative effect. With the increase of functional restrictions, individuals may encounter more setbacks in daily life and may be more likely to make social comparisons. At the same time, internalized stigma will transform negative evaluations from others into a denial of one's own abilities and value. Therefore, the deterioration of physical condition does not necessarily directly lead to psychological distress. How individuals understand these changes and evaluate themselves may be an important psychological process that connects changes in physical function and psychological distress.

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4. Social and psychological mechanisms: Social norms, stigma, and identity threats

Besides the direct links between physical impairment and functioning, the transition from physical impairment to psychological distress involves many social factors. Social norms, gender roles, and multilevel stigma systems are key pathways through which social pressure affects personal identity and mental health.

4.1. Gendered social norms and disability identity

Social expectations of gender roles may result in greater psychological pressure on people with disabilities, with gender-related normative pressure being particularly important. Based on a sample of Australian adult men, a comparison of conformity to traditional masculine norms between men with and without disabilities found that, although the total scores of the two groups were close, the subscale results revealed that men with disabilities had lower levels of conformity to norms related to social status, work priority, and heterosexuality, and higher levels of conformity to self-reliance norms ("to do it all myself") [9]. This combination was interpreted as a reconstruction of masculine identity: men do not rely solely on traditional physical strengths or occupational identities to demonstrate their masculinity, but rather highlight the importance of autonomy and personal responsibility. Such an identity construction may help preserve dignity, but may increase the psychological difficulty of expressing vulnerability, admitting the need for assistance, and proactively seeking help. Women with disabilities may face a dual disadvantage related to disability and gender: the World Health Organization reported that women with disabilities face more barriers in accessing healthcare, rehabilitation, and social services than men with disabilities, and their risk of poor mental health is accordingly higher [1].

4.2. Direct damage to mental health from external stigma

Ableist bias is manifested in social exclusion and has detrimental effects on mental health. External stigma, including obvious discrimination, "patronizing tolerance", and social exclusion, interferes with daily interpersonal interactions and is associated with anxiety, depression, and even an increased risk of suicide when individuals perceive or experience such biases [10, 11].

In the United Kingdom Household Longitudinal Study (UKHLS; baseline N = 871), after controlling for baseline mental health, perceived disability discrimination was found to predict increased psychological distress and poorer mental functioning four years later, suggesting a cumulative association between exposure to discrimination and poorer mental health [10]. A survey of 269 university students and employees with physical disabilities in northwestern Ethiopia found that 90.7% of the participants met the criteria for stigma used in that study [11]. Stigma was significantly correlated with functional impairment and psychological distress; individuals who had suicidal thoughts or behaviors had significantly higher stigma scores; and lower social support was also associated with higher levels of stigma burden. These results suggest that when disability and negative social evaluation co-occur, the resulting functional difficulties may contribute to broader psychological and social risks.

Notably, the negative effects of indirect or hidden exclusion may be comparable to those of overt discrimination. The psychological consequences of "tolerated" versus "discriminated against" experiences were compared across three related studies in Turkey involving disabled people, sexual minorities, and Kurdish minorities (N = 862 in total) [12]. Being "tolerated" (meaning that although

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superficially accepted, the tolerated person is still regarded as inferior) was also associated with poorer psychological well-being through threatened social identity needs.

4.3. Stigma internalization and individual coping

Stigma exists at multiple levels—social, institutional, and individual—and people have to constantly readjust at both the cognitive and identity levels. A systematic review of different forms of stigma related to sexual minority status, HIV, disease/disability, and weight shows that there are generally consistent correlations between anticipated and internalized stigma and depression [13]. However, the longitudinal results are weaker than the cross-sectional ones, and it has been argued that stigma internalization should be viewed as a psychological mechanism that needs to be continually tested rather than assumed to reflect a simple cause-and-effect relationship. In the same vein, a systematic review on severe mental illness finds that self-stigma is associated with lower self-esteem, more severe symptoms, lower quality of life, and poorer social functioning [14]. Together, these results indicate that once external devaluation becomes part of the self-evaluation process, it may be damaging to both mental health and social functioning. Furthermore, people have multiple identities and these will influence the way they experience stigma, changing the contexts in which it happens and how it manifests itself. A systematic review and integration of qualitative accounts of ethnic minority youth with disabilities found that their experiences of disability are also affected by ethnicity, gender, and socioeconomic status; their experiences of stigma in terms of accessing services, educational and employment opportunities, and dealing with discrimination are shaped by the combination of all these characteristics [15]. It is not a simple addition of prejudices; it is the intersection of various power relations in particular situations: a person might experience physical barriers to access, cultural prejudices about their abilities, and lack of resources, all while negotiating their identities in relation to different groups. There is also the added burden of constantly managing one's identity and being socially vigilant. Semi-structured interviews with 31 French disabled students as they left school and entered the labor market identified four categories of identity-management strategies [16]. The disabled job-seekers are not passive victims of the threat to their identity; they are proactive in using identity-management strategies to either protect or reconstruct their desired professional identity, although such strategies can be successful or unsuccessful. It has been argued that this transition from school to work is a critical period: for the job-seeker, it involves a delicate balance of seeking accommodation, keeping their sense of agency, and managing the expectations of others.

5. Institutional, policy and structural determinants

In addition to individual and interpersonal mechanisms, structural factors such as institutional frameworks, policy design, urban space and legal rights will also affect how society defines and responds to disability and how adverse situations related to disability persist.

5.1. Theoretical framework: Social model and human rights paradigm

The traditional biomedical model often regards functional impairment as a "personal defect", so it is mainly dealt with through treatment and correction. The social model of disability and the human rights model recognize the existence of functional impairment itself, but at the same time emphasize that disability is also affected by institutional barriers, lack of accessibility and discriminatory social

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values. According to this logic, improving physical and mental health should not only focus on the treatment of individuals, but also change the relevant social environment and policies.

A review of the theoretical value of the social model of disability emphasizes that a distinction should be made between "impairment" and "disability". The former refers to differences in physical, sensory or psychological functions, and the latter refers to restrictions, exclusion and loss of opportunities caused by social organization [4]. This distinction shifts the research focus from the individual's own "defects" to institutions and the environment. The social model of disability does not deny the reality of pain, illness or the need for treatment, but opposes the attribution of disability experience entirely to individual pathology. In clinical practice, this means that in addition to medical treatment, it is also necessary to provide accessibility support, anti-discrimination measures and policies to promote social integration.

The World Health Organization also pointed out that from the perspective of the right to health and health equity, the poor health status of people with disabilities is not only caused by disability itself, but also closely related to factors such as poverty, stigma, transportation and information barriers, inadequate medical services and exclusionary policies [1]. Another global review indicates that to promote health equity, the planning of the health system also needs to take into account the participation of people with disabilities, resource allocation, information communication and accountability mechanisms [5]. Therefore, from the perspective of the human rights model, accessibility and access to medical services should not be understood as a charitable act, but should be regarded as an institutional responsibility. Relevant policies should not only achieve formal equality, but also further reduce obstacles in the process of actual participation.

5.2. Policy implementation, institutional failure, and spatial exclusion

Analysis of country-specific policy practices shows that policy formulation, policy administration, and environmental accessibility all play a role in shaping the social inclusion and psychological well-being of persons with disabilities.

In one study, 18 participants between the ages of 18 and 40 with physical disabilities living in Kathmandu, Nepal, participated in in-depth interviews [17]. They shared their experiences of exclusionary social norms, discrimination based on physical differences, inaccessibility of public facilities, poor policy implementation, and cumbersome procedures. These factors were reported to limit their educational, occupational, and social lives on a day-to-day basis and to intensify their sense of vulnerability and marginalization. These findings suggest that even if legal and policy systems recognize the rights of persons with disabilities, the process of policy implementation and the living environment can continue to produce exclusion.

A critical review of disability policy in Europe (Flanders) and of guidelines from the United Nations and the European Union reveals that "deinstitutionalization" reforms are facing two paradoxical challenges [18]. The first is a persistent form of institutional segregation, with people with disabilities continuing to live behind closed doors. The second is a process of "community institutionalisation without walls," in which people with disabilities are ostensibly moved out of institutions into the community, but the burden of care is passed on to families without adequate resources or corresponding improvements in community accessibility. On this basis, a "social-spatial professionalisation" strategy has been proposed, which requires social workers and urban planners to actively intervene and reshape the spaces and social structures in the public realm, instead of merely closing institutions or providing targeted solutions for individuals.

A systematic review of global accessibility barriers to medical services for people with disabilities and related interventions found that the physical environment, communication, social

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attitudes and institutional arrangements are all important barriers to accessing medical services for people with disabilities [5]. The review also points out that improving medical services alone is not enough to address the structural inequalities faced by people with disabilities.

6. Conclusion

6.1. Main conclusions

In general, existing research shows that the relationship between physical functional impairment and psychological distress involves multiple levels. Clinical problems and functional limitations may be further affected by social norms, identity threats and stigma; at the same time, institutional policies and environmental obstacles may also further transform physical functional impairment into broader structural disadvantages and affect long-term psychological distress. Such a multi-level framework provides a comprehensive perspective for understanding the mental health of people with disabilities, and also shows that relevant interventions should not only focus on the psychological and social levels, but also consider structural factors.

6.2. Research gaps

Existing studies have accumulated more cross-sectional evidence, and have consistently found that there is a relationship between disability, psychological distress, public stigma and self-stigma. Future research can focus on two directions. First, long-term tracking research could be strengthened, especially on the process of identity reconstruction of individuals during life transitions, such as entering the workplace from school and experiencing acquired disability in middle age. Second, more systematic long-term intervention assessments could be carried out to further examine the extent to which environmental improvement, psychosocial support and policy optimization can improve mental health and social participation.

6.3. Research directions

In the context of contemporary China, the relationship between physical disability, mental health and social structure is also worth further study. Future research can focus on three aspects. First, future studies can examine how cultural norms such as filial piety, collectivism and "face" affect the role of self-stigma, willingness to ask for help and family support. Second, future studies can further examine how disability interacts with structural factors such as the household registration system, migrant status, population aging and urban-rural differences. Third, further attention should be paid to the actual implementation of accessibility policies and disability employment policies at the local level, and whether the implementation of these policies is related to mental health and social participation.

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