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Psychosocial Occupational Health—A Priority for Middle-Income Countries?

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Psychosocial Occupational Health—A Priority for Middle-Income Countries?

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Abstract: In response to new developments of work and employment in high-income countries (HICs), psychosocial aspects of work and health received increased attention. In contrast, middle-income countries (MICs) are mainly concerned with severe challenges of noxious and dangerous material work environments, poor employment conditions, and deficient social policies, leaving psychosocial aspects in a marginal role at best. More recently, differences between these two worlds were even aggravated by the COVID-19 pandemic. Yet, with economic globalisation and growing worldwide interconnectivity, the world of work in MICs is being rapidly transformed, sharing several concerns with modern Western societies. In this process, psychosocial occupational health will become an increasingly pressing issue. This contribution explores to what extent psychosocial aspects of work and health are already addressed in research originating from MICs. A selective focus on recent findings from two regions, Asia Pacific and Latin America, reveals a high degree of awareness of, and inquiry into, work-stress related problems within these countries. Importantly, in addition to incorporating research progress from HICs, these analyses identify new aspects within specific cultural and socio-economic environments, thus enriching the international state of art.

Keywords: middle-income countries; economic globalisation; psychosocial work environments; occupational health; Asia Pacific; Latin America

Introduction

The world of work and employment underwent substantial changes during the past few decades. Economic globalisation as a process of increasing transnational trade liberalisation and market expansion in developing countries, and availability of ground-breaking innovations in information and communication technology were – and continue to be – two major drivers of this change. Transnational flows of goods and commodities, of capital, and of human labour promoted an unprecedented global interconnectivity. In high-income countries (HICs), new developments of work became evident, such as a rapid growth of service, information and communication occupations and professions, in conjunction with a decrease of the industrial sector, a widespread technological transformation of jobs, and an augmentation of flexibility, diversity, and insecurity of employment conditions, including a growth of nonstandard work. If compared to the industrial stage of development, main challenges of occupational safety and health in these countries shifted from a main concern about noxious material (chemical, physical, biological) work environments and from occupational injuries to a main concern about psycho-mental and socio-emotional stressors at work, evolving from work intensification, mental challenges, interpersonal conflicts, threatening employment conditions, and rapid adaptation to changing job tasks and job trajectories [1]. Accordingly, at the level of scientific analysis, the scope was extended beyond the traditional disciplines of occupational medicine and safety sciences to include psychological, social, behavioural, and organisational aspects, promoting occupational health science as an inter-disciplinary approach [2-4]. To date, a solid body of knowledge on new occupational risk and protective factors is available, and many HICs have extended their monitoring and prevention activities at work to address these new challenges [5].

In a sharp contrast to this development, occupational safety and health in most middle-income countries (MICs) is faced with substantial difficulties of tackling noxious material work environments and occupational injuries in agricultural and industrial sectors of productivity, of improving access

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to paid work and reducing informal employment, and of providing basic social protection, including health care, rehabilitation, unemployment benefits, and pensions. Moreover, universal human rights and antidiscrimination policies need to be enforced at work [6,7]. Against these far-reaching threats resulting in a high burden of work-related diseases and human suffering, any reference to problems related to psychosocial occupational health seem to be misplaced. Yet, despite substantial differences in working conditions and health between countries in the Global North and rapidly developing countries in the Global South – differences that are even aggravated by the COVID-19 pandemic – the world of work in MICs is being rapidly transformed through economic globalisation, technological innovations, and increased worldwide interconnectivity, sharing several concerns with modern Western societies. Challenges of psychosocial occupational health are considered one such shared concern, given globally experienced threats of job insecurity, often combined with growing work intensity, and given a rapid pace of changing work demands and work environments (see next section). Against this background, it is of interest to examine to what extent scientific research originating from MICs has already addressed these latter challenges. To this end, in a further section of this contribution, a narrative review of recent interdisciplinary occupational health research is given, with a selective focus on two regions, Asia Pacific and Latin America.

Work and Health in Middle-Income Countries: Differences and Assimilation to the Global North

A few years before the outbreak of the new pandemic the United Nations' Sustainable Development Goals (SDGs) were declared and subsequently adopted by a large number of member states. One of these goals, SDG 8, calls for the promotion of productive employment and decent work [8]. At that time, it was evident that working and employment conditions differed substantially between the regions of the world, most obviously between high-income-, middle-income-, and low-income countries. In its World Employment Social Outlook in 2018, the International Labour Organisation (ILO) estimated that every third worker in developing countries was living in extreme poverty, and many more were in vulnerable employment (own-account workers and contributing family workers) [9]. Although extreme poverty was significantly reduced in emerging countries, the pace of reduction slowed down, and more than 400 million people were left in moderate working poverty in developing and emerging countries [9]. Informal employment remained extremely high in low-income countries, with less than twenty percent of workers being formally employed, as compared to some sixty percent in upper-middle-income countries, and some eighty-seven percent in high-income countries [10]. Unemployment and under-employment continued to be main concerns in the Global South, in concert with massive restrictions of social protection and civil rights.

While far-reaching decent work deficits were substantial in these parts of the world, MICs experienced some progress. According to the World Bank's classification, MICs are characterised by gross national income per capita ranging between low and high-income countries. Moreover, they are distinct by a strong increase in gross domestic product over the past twenty-five years. Six countries stand out in this regard, Brazil, China, India, Indonesia, Mexico, and the Russian Federation [11]. Despite national variations these countries underwent a process of structural transformation with three dominant features. First, the proportion of people employed in agriculture declined quite strongly. Compared to the year 1991, the percentage in these countries was reduced from fifty-one percent to twenty-seven percent by 2017 [11]. At the same time, as a second feature, the industrial sector did not grow as expected from previous developments in HICs. Overall, about a quarter of the workforce was employed in industry, but many jobs remained of low quality. In the context of economic globalisation, industrial productivity was dominated by multinational corporations operating from the Global North, such that the contribution of the manufacturing sector on economic progress within MICs remained constrained. Third, during this time period, a rapid increase of the service sector was observed, absorbing currently about half the employed population of these six countries. The main problem of this latter development consists in the fact that employment growth was largely limited to low-productivity service sectors, such as retail trade or low-skilled information and communication jobs, offering poor and insecure working conditions and low pay [11]. In consequence, the level of precarious work in MICs is still high, with more than forty percent

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considered as being in vulnerable or informal employment. However, while India and Indonesia document highest proportions, trends in Russia, Mexico and Brazil are more favourable, and China witnessed the sharpest decrease in vulnerable employment over time [11].

These difficulties and disadvantages among working people in MICs were aggravated by the COVID-19 pandemic. Compared to the workforce in HICs, rates of infection, severity of disease, and fatality rates were substantially higher, not least due to lack of vaccination and restricted access to hospital treatment. Moreover, lockdown measures, job loss, and lack of financial and social support from national policies exacerbated human suffering and triggered a mental health crisis [12,13]. The pandemic widened social inequalities in health that dominated the spectrum of morbidity and mortality [14]. Several socioeconomically disadvantaged groups became extremely vulnerable by this pandemic. International migrant workers from Asia and the Pacific are one such group. Hired by labour markets as temporary workers, they immediately lost income and job through lockdown measures, and due to lack of social protection, they suffered from a humanitarian crisis. According to a report, over 90 million people were affected by this fate [15].

These few observations underline the fact that the pandemic worsened the already disadvantaged working and living conditions in large parts of populations in MICs. Of concern, promising small increases of economic and social development emerging since the 1990s in these countries were suddenly abolished. However, there are also some promising developments in emerging economies. Young generations entering the labour market are much better educated than previous generations, offering a broad spectrum of technological skills and competences. For instance, in upper-middle-income countries, some thirty percent of the workforce only are estimated to be undereducated with regard to the demands of the labour market (and some twenty percent are estimated to be overeducated), whereas the percentage of undereducated amounts to seventy percent in low-income countries [16]. Skill match is an important driver of productivity gain and economic growth. In some Asian countries, IT expertise and advances of digitization and artificial intelligence are widely prevalent, supported by expanding collaboration of distinct national higher education elites with centres of excellence in world leading training and research centres. Not least in reaction to lockdown measures, the COVID-19 pandemic has accelerated the implementation of technological innovations in these regions. Remote work, digital work, rapid automation, and e-commerce suddenly expanded. Delivery services via digital platform, such as on- demand physical services or crowd work, are a prominent example. Moreover, the pandemic has accelerated the automation of tasks in a large number of globally operating businesses [17]. As a further side effect of economic globalisation, a considerable part of workers in MICs are employed in the global supply chain economy with strong linkages to HICs. Through these linkages, employment regulations were improved, securing wages and basic safety protection [16]. Thus, at least some parts of the workforce in MICs share common features of work and employment with their colleagues in advanced societies, being exposed to challenging job demands, applying newly acquired skills, and dealing with the physical and psychosocial risks of modern work and employment. Overall, according to Peters et al. [17], the COVID-19 pandemic has highlighted the importance of work for the health of working populations in unprecedented ways. Employers and other stakeholders of enterprises were urged to invest in occupational safety and health, and government agencies expanded their capacity to collect and analyse data on working conditions and health, using them as evidence base for developing preventive programmes. At national level, integrative labour and social policies were prioritized as measures of longer-term protection and health promotion, and investments in the workforce and institutions of occupational health and safety were intensified. International organisations developed a set of recommendations for policy and practice on how to cope with the challenge of the pandemic and the post-pandemic world of work [17]. It is hoped that these multi-level interventions strengthen the quality of work and health in middle-income countries as well.

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Psychosocial Occupational Health as a Research Topic in MICs

Latin America

Despite their variety in terms of economic, social, and political structure the majority of countries of Latin America belong to the large group of MICs. Brazil stands out as the largest state, and Mexico, Costa Rica, and Chile are members of the Organisation for Economic Co-Operation and Development (OECD). The global financial crisis of 2008 decelerated economic growth at large scale, thus reducing several promising developments of decent work and employment. As mentioned earlier, the proportion of people working in agriculture was continuously diminished during the past three decades, whereas employment in the service grew up to sixty or even seventy percent in countries like Mexico and Brazil [11]. Informal and precarious work remained high across this region, and although manufacturing played an important role for productivity, old-fashioned technologies and deficits of upskilling the labour force and improving formal employment prevented substantial progress [18]. Furthermore, political and economic pressure resulted in a reduction of social protection at work and an expansion, rather than limitation, of precarious employment [19]. Following the COVID-19 pandemic a decreased economic growth has been observed even in the most dynamic countries in Latin America and the Caribbean, despite a recovering labour market, specifically in the private employment sector. Large parts of those employed in formal or informal work continue to be exposed to elevated hours of work and increased work pressure [16]. Importantly, at the turn of this century many countries improved their occupational health and safety services, and implemented laws and regulations to protect workers' health. Colombia and Mexico stand out as countries with established regulations and laws addressing psychosocial occupational risks, but similar initiatives with a focus on reducing work violence were developed in Argentina, Chile, Uruguay, Puerto Rico, Brazil, Venezuela, and Peru [18].

Paucity of data on working conditions and health is one of the main obstacles of raining awareness and developing workplace health promotion activities. Until recently, this was also the case in Latin America. Yet, some years ago a first cross-country comparative survey on working conditions and health was accomplished in ten Latin American countries [20]. Samples were restricted to formally employed men and women working in industry, construction, and service sectors. Agricultural work and mining were excluded. The survey listed several physical, chemical, and biological hazards. In addition, lack of influence at work (order of tasks, choice of working methods) and working at high speed were included as psychosocial risk factors. Findings from Colombia, Argentina, Chile, six countries of Central America, and Uruguay revealed a high percentage of employees working more than 40 hours/week (58 percent among men; 40 percent among women), a high prevalence of repetitive movements, manual handling, as well as working at high speed and with low influence [20].

A recent systematic review of ten years of research on psychosocial factors, health and work performance in Latin America revealed a high level of original scientific activity in this field [21]. These authors included the results from 85 studies published in English or Spanish language in their review. A majority of reports were conducted in Brazil, and relative large parts of investigations analysed working conditions in the health and educational sectors. Although only two of these studies had a longitudinal design several publications were based on large samples. Of interest, leading theoretical models of psychosocial work environments with relevance to health were examined in these studies, in particular the demand-control-support (or job strain) model [22], the effort-reward imbalance model [23], and the organisational justice model [24]. Many studies used a combination of concepts, as assessed by a Spanish version of the Copenhagen Psychosocial Questionnaire [25]. Despite a major limitation of cross-sectional study design, a large majority of results observed significant associations of psychosocial risks at work with health indicators. Most often, self-reported mental health indicators were used (depressive symptoms, burnout, exhaustion). Several studies explored relationships with musculoskeletal symptoms, pain, cardiovascular risk factors, and substance abuse. To conclude, the current international state of research on psychosocial occupational health has been addressed and applied quite extensively by researchers in several

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rapidly developing Latin American countries, thus providing preliminary evidence of its explanatory contribution in the context of service occupations and professions in MICs. Methodological limitations of this research seem to be mainly due to restricted funding and training opportunities and structural constraints of academic work.

It is not possible to provide a substantial literature review of the topic in the context of this short report. Certainly, in addition to the review of Pujol-Cols and Lazzaro-Salazar [21] pioneering research on leading models of psychosocial stress and health was conducted, specifically in three research centres in Brazil [26-28] and in Colombia [18].

Asia Pacific

Whereas a majority of countries in Latin America were classified as upper-middle-income countries, the region in Asia Pacific with more than a dozen of nations is much more diverse. Among the more prominent countries, Japan, Australia, and South Korea are classified as high-income nations, whereas China, Malaysia, and Thailand belong to the upper-middle-income category, and Vietnam and Indonesia are lower-middle-income countries. Research on psychosocial occupational health emerged quite differently across this region. While Japan [29] and Australia [30] initiated internationally acknowledged research traditions already in the 1990s, Chinese scientists introduced the measurement methods of leading theoretical models of psychosocial work environments (e.g., job strain; effort-reward imbalance) in their country at the beginning of this century [31]. A cross-national Asia Pacific research effort started in 2010 with a series of annual expert workshops that resulted in innovative transnational scientific collaboration and in the production of two books reviewing emerging original research in this region, and specifically in Australia, Japan, South Korea, Malaysia, Thailand, China, Indonesia, and Vietnam [32,33].

These two books are particularly remarkable as they do not only document the adaptation of Western research to these rapidly developing countries, but as they also emphasise specific socio-cultural features and contexts of Asian working life, thus enriching the global scope of analysis. For instance, bullying as a psychosocial risk factor is generally found to be an unacceptable offensive behaviour in Western societies, whereas in a collectivist culture like Malaysia that expects a high degree of loyalty to superiors, bullying is experienced rather frequently, specifically among low-status and newly recruited employees, targeted by seniors as a sign of unequal power [34]. Gender-role specific impact of conflict between work and family (and family and work) on health and well-being in China is another example. Compared to Western societies, the gendered division of work is more pervasive, exposing a large part of fulltime-employed women to a double burden of paid work and unpaid family work [35]. In consequence, women exposed to cumulative stress are particularly vulnerable to cardiovascular risk and disease [36]. In some Asian countries, working and employment conditions are hardly comparable to those in Western HICs. As an example, in Thailand, Indonesia, Vietnam, and Malaysia, retail work is highly prevalent. Up to ninety percent of employed people are working in small or medium enterprises, where critical ergonomic conditions, highly repetitive movements, and work pressure combined with job insecurity and low pay determine the everyday work experience [37]. Finally, compared to Western societies, labour and social policies differ substantially in Asian Pacific MICs. Laws and regulations enforcing the implementation of basic standards of decent work and employment and the provision of occupational safety and health services have been enacted less often. A comparison of labour and social policy measures between two high-income regions, Australia and Taiwan, and two middle-income countries, Malaysia and Thailand, illustrates the case. Concerning laws on workers' mental health and safety, policies in the former two regions defined clear employer responsibilities by specific laws, and some disorders (e.g. cardiovascular diseases in Taiwan) are recognised as compensable occupational diseases in relation to psychosocial stress at work. Neither Malaysia nor Thailand have implemented binding obligations beyond very general statements. If specified, occupational safety and health measures are restricted to physical and chemical hazards [38]. Similarly, guidelines, campaigns, and information dissemination on psychosocial occupational risks and health were widely developed in the former

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two regions, but were largely absent or initiated in response to some severe complaint in the less developed regions.

Among the MICs in Asia Pacific, the development of research on psychosocial occupational health in China stands out in terms of quantity and international impact. Over the past ten years, dozens of studies explored associations of work stress models with health in a large spectrum of Chinese occupations [as a review, e.g., 39]. As one of several innovative developments, some studies extended their scope to analyse transgenerational impact of working conditions on children's health [e.g., 40]. Most recently, with the COVID-19 pandemic, Chinese researchers contributed internationally leading analyses on interactions between working conditions and infection, course of disease, and workplace prevention strategies. As a remarkable example, they were among the first to report adverse effects of stressful work on anxiety and depression among frontline public health workers in China [41,42].

Discussion

This selective review of recent research on psychosocial occupational risks and health in two regions of MICs, Latin America and Asia Pacific, revealed a high degree of awareness of, and inquiry into, work-stress related problems within these countries. Importantly, in addition to incorporating research progress from HICs, these analyses identified new aspects within specific cultural and socio-economic environments, specifically in the context of Asian research. In summary, in both regions, psychosocial occupational research has grown very rapidly in recent years, and it has received wide attention within scientific audiences as well as among stakeholders of occupational health (professionals, employers, trade unions). In Latin America, knowledge so far is restricted to more privileged occupational groups (formal employment in service sector, public institutions), and the quality of evidence is limited due to the predominance of cross-sectional study designs. These methodological limitations are mainly due to restricted funding and training opportunities as well as to structural constraints of academic research. While these latter concerns matter for developing countries in Asia Pacific as well, differences in research development are more pronounced between high- and middle- income countries. Thanks to a transnational collaborative development inaugurated by Australian and Japanese scientists [32,33], a series of cross-national investigations was initiated, thus promoting the field in less developed regions.

The findings of these reports do not support the notion that occupational health research in MICs is mainly concerned with occupational injuries, industrial hygiene, and traditional occupational medicine, dealing with physical and chemical hazards. Rather, occupational health researchers demonstrate a high degree of awareness of new challenges resulting from the transformation of work and employment in a globalised economy. In pioneering studies, they set out to document the prevalence of psychosocial stress at work in their country and the burden of disease that may be attributable to it. The findings of many relevant investigations were not published in English language, but rather in original language of respective countries, mainly Spanish or Portuguese language in Latin America, and Chinese or Japanese language in Asia. Therefore, the internationally dominant Anglo-Saxon paradigm of research publication does not fairly represent the state of art. As was critically noticed in one contribution, "in the area of occupational health psychology, only 10 % of the global knowledge published in English emerges from the Asia Pacific" [43, p. 4]. Similarly, in the Latin American review discussed above it was stated that most accounts of research in this region "considered only papers in English, indexed in international databases, … thus ignoring to a considerable extent studies conducted in Latin America" [21, p. 188]. These signs of a hegemonial role of Western science have contributed to a lack of awareness and recognition of original research evolving from rapidly developing regions of the world.

In this perspective, the main difference in occupational health research between the Global North and the Global South is not the presence or absence of psychosocial occupational health research, but rather the transfer of respective knowledge into practice and policy. The documents confirmed that laws and regulations protecting workers' health and safety and securing decent work are insufficiently developed and enforced in rapidly developing countries, and that national labour

and social policies often fail to provide basic protection and support to employed people. Of concern, those in informal employment by and large are excluded from basic social protection. As a further shortcoming, occupational safety and health services remain underdeveloped, with a substantial shortage of health professionals to be recruited from different disciplines and training backgrounds. In both regions considered, the impact of trade unions on the promotion of healthy work is limited, as they represent only a part of the employed population, and other forms of social dialogue between employer and employee organisations were rarely observed. Few if any MICs in the two regions collect administrative monitoring and surveillance data on occupational health on a regular basis, and opportunities of developing preventive measures from available evidence are rare. Finally, collective awareness and critical appraisal of adverse, unhealthy working conditions is poorly developed, due to lack of information campaigns and poor impact of pressure groups, and cultural norms of collectivism and dependence on authority may undermine critical social developments, specifically in the Asian Pacific region. Taken together, there is still a long way to go before innovative research on psychosocial occupational health in these developing countries can be transferred into marked and sustainable effects on workers' health.

This short report suffers from several limitations. It is based on selective research as no attempt was made to review a broad field of scientific inquiry in a systematic way. Its main aim was to challenge the widely prevalent view that occupational health research in MICs mainly deals with traditional topics of safety, hygiene, and material hazards, thus bypassing a new evidence base on psychosocial occupational health emerging from research in modern Western societies. While this view has been refuted in two regions of MICs, Latin America and Asia Pacific, it may still be valid in other regions. So far, little research only is available on the topic in Africa, Central Asia, and in the Eastern Mediterranean Region.

In conclusion, in view of a large impact of economic globalisation and worldwide connectivity on work, employment, and health, aggravated by global crises, the psychosocial dimension of occupational health deserves increased attention in research, practice, and policy, not only in the Global North, but equally so in the Global South.

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