ERS Scientific Working Group 09.04, "Psychologists and behavioural scientists": the next step towards multidisciplinary respiratory care

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The new ERS Scientific Working Group 09.04 "Psychologists and Behavioural Scientists" will support psychological and behavioural aspects of respiratory care, in order to improve multidisciplinary clinical practice, education, and research https://bit.ly/2OPJF0U

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Impaired lung function is a cardinal feature in people with various chronic respiratory diseases, which is predominantly treated pharmacologically with additional smoking cessation if appropriate. Despite optimal medical treatment, many people with respiratory disease still experience daily physical, psychological and social limitations [1, 2]. As the degree of lung function impairment only partially explains these daily limitations, diagnostics and management must focus beyond biomedical and pharmacological approaches. Therefore, the role of allied respiratory professionals is essential within comprehensive disease management programmes, including adequate diagnostics, disease monitoring, and tailored non-pharmacological therapy options.

Scientific and educational activities around allied respiratory care are covered by European Respiratory Society (ERS) Assembly 9 "Allied Respiratory Professionals", which has consisted so far of three scientific

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working groups: 09.01 "Respiratory Function Technologists/Scientists", 09.02 "Physiotherapists", and 09.03 "Nurses". During the ERS General Assembly meeting, which took place during the virtual ERS International Congress 2020, a new ERS Assembly 9-related scientific working group was ratified: 09.04 "Psychologists and Behavioural Scientists". So, the ERS and its Assembly 9 are taking the next step towards multidisciplinary respiratory care, by fostering scientific and educational activities around psychology and behaviour change across the eight main disease domains: airway diseases, interstitial lung diseases, paediatric respiratory diseases, pulmonary vascular diseases, respiratory critical care, respiratory infections, sleep and breathing disorders, and thoracic oncology. This scientific working group is inclusive of individuals with a variety of professional backgrounds who support psychological and behavioural aspects of respiratory care, in order to improve clinical practice, education and research. In this editorial, we introduce the added value of the future ERS scientific working group 09.04.

The clinical relevance of psychology and behaviour change

People with chronic respiratory diseases not only experience prominent respiratory symptoms, but additionally those related to multiple comorbidities [3–8]. They more often live in deprived communities with poor housing and poor air quality, and experience reduced social support and loneliness [9, 10]. These multidimensional factors can strongly contribute to and perpetuate cognitive impairments and psychological symptoms, create barriers to adaptive health behaviours and significantly contribute to the burden of the disease, affecting quality of life often in a downward spiral [11, 12]. The net effects are substantial reductions in the quality of life for those with chronic respiratory disease, their families and informal caregivers [12, 13], together with high socioeconomic costs [14].

Nevertheless, people with chronic respiratory disease must continually adapt and learn to live with their respiratory and non-respiratory symptoms, and concomitant comorbidities, in their given social environments [15, 16]. Preferably, this happens with optimal medical and therapeutic support from formal and informal caregivers. This chronic care management is an essential but highly complex practice, especially in the era of personalised treatments [1, 4, 11]. Alongside the "classical" medical and therapeutic components, support preferably involves further important elements, such as guided self-management, psychosocial interventions and behaviour change techniques, supported by a multidisciplinary team [2, 9, 12, 17–19]. However, psychosocial and behavioural factors are still considerably under-recognised in chronic respiratory care and research, thus limiting the availability of comprehensive, integrated and holistic treatments and preventing optimal treatment effects [4, 11, 20]. Therefore, the new ERS scientific working group 09.04 is of great added value from a clinical, scientific and educational perspective.

Management of psychological symptoms

Various studies have demonstrated that comorbid psychological symptoms are very common in individuals with chronic respiratory conditions [9, 21, 22]. For example, in people with asthma, symptom prevalence rates have been estimated at between 7% and 26% for anxiety and between 22% and 45% for depression, with higher rates typically being observed in more severe asthma forms [23, 24]. In people with COPD, questionnaire-based pooled prevalence rates for symptoms of anxiety and depression of 36% and 40%, respectively [25], have been reported in meta-analyses, although these rates can range across studies between 2% and 80%, depending on the diagnostic tool used and the specific subgroups of people [22]. When using the gold standard of DSM criteria-based clinical interviews, these pooled prevalence rates are somewhat lower (26% and 19%), but still about three times higher than in non-COPD control groups [26]. In addition, the burden of chronic disease can result in more specific, disease-related distress, for example fear and subsequent avoidance of dyspnoea and/or physical activities [27–29]. In both cases, psychological distress can have a major negative impact on the course of disease and the disease management. These detrimental associations include more frequent exacerbations and (re)hospitalisations, increased inflammation and smoking behaviour, increased symptom burden and use of short-acting reliever medication, decreases in physical and social functioning, reduced quality of life and activity levels, less favourable outcome of pulmonary rehabilitation and increased mortality [9, 21, 28, 30, 31].

Notably, in everyday clinical practice, comorbid psychological symptoms and distress remain undetected and untreated in more than 50% and 70% of people with asthma and COPD, respectively [32, 33]. This also holds for informal caregivers of people with chronic respiratory disease, who often show a high level of psychological burden in the absence of adequate support [12, 13, 34]. In this regard, psychologists and behavioural scientists have a key role in the prevention, detection and treatment of psychological symptoms and distress. They are crucial to the development, implementation and evaluation of psychological interventions. These range from traditional cognitive behavioural approaches to newer acceptance-based models, which have been shown to be effective in several studies, but still need intensified further research [23, 29, 35–39]. This includes not only delivering specialist approaches when required, but also providing supervision to support other multidisciplinary healthcare professionals and

informal caregivers who provide generalist psychological support. When successfully applied, these interventions can not only reduce psychological symptoms and distress in people with chronic respiratory disease and informal caregivers, but also create positive downstream effects on self-management, functional disease outcomes, quality of life and healthcare costs [37–40].

Management of cognitive dysfunction

It is well known that cognitive and neuropsychological functions are adversely related to several factors such as hypoxia, hypercapnia, inflammatory processes and sleep fragmentation that characterise several chronic respiratory diseases [41]. Not surprisingly, people affected by chronic respiratory diseases show an increased risk of developing deficits in several cognitive functions (*e.g.* attention, mental flexibility, reasoning, memory and information processing speed) and developing mild cognitive impairment [41–43]. For example, a recent Dutch study demonstrated that of 183 people with COPD referred for pulmonary rehabilitation, 42% suffered from cognitive impairment as measured in a detailed neuropsychological test battery, and this prevalence was unrelated to the severity of COPD [44]. These cognitive dysfunctions represent a substantial burden on the affected person, their family and society and are associated with worse health status, greater risk of (longer) hospitalisation for respiratory problems, and increased mortality [21]. In clinical as well as home settings, cognitive impairment can influence both uptake of treatments as well as self-management, for example taking the adequate dose of the correct medication for the right (comorbid) symptoms at the correct moment. However, routine screenings for and potential treatments of cognitive impairments in people with chronic respiratory diseases are widely absent in clinical reality. Psychologists and behavioural scientists with training in cognitive functioning and neuropsychology represent an important profession in the development, scientific exploration and implementation of specific cognitive screening procedures and the management of cognitive dysfunction in respiratory care, alongside their multidisciplinary colleagues [18].

Opportunities for the European Respiratory Society

In addition to supporting diagnosis and treatment of psychological symptoms and cognitive dysfunction in people with chronic respiratory diseases, the formation of the new ERS scientific working group 09.04 provides a number of additional opportunities for the society, which might further be helpful in attracting new members.

First, the personalised treatment of chronic respiratory symptoms, and of the frequent comorbid physical, cognitive and psychological symptoms, often requires a complex and tailored management that exceeds traditional pharmacological approaches [1, 4, 11, 12]. This is increasingly important as the population ages, and people live with multiple chronic conditions alongside their respiratory disease [45]. In most cases, services must support several important behavioural changes in many areas of life for people with chronic respiratory disease, their informal caregivers and even their wider communities, which can be particularly challenging when health literacy is low. Examples include smoking cessation, avoidance of triggers and air pollution, increases in physical and social activities, early and adequate exacerbation management and dietary changes. To achieve these changes, usually new, individually tailored behavioural skills have to be learnt, such as regular self-monitoring of symptoms, adequate drug delivery and inhaler techniques, bronchial hygiene and breathing techniques, activity planning and pacing, sleep management techniques, and/or relaxation or stress management techniques [9, 29, 31]. Often, behavioural changes are supported within self-management training or during larger multidisciplinary programmes, such as pulmonary rehabilitation. These interventions have a convincing evidence base for beneficial effects on symptoms, hospitalisation rates, quality of life and exercise capacity [17, 46]. Many psychologists and behavioural scientists are formally trained in the assessment of needs and the application of individually tailored behaviour change techniques and self-management interventions that may contribute to effective multidisciplinary programmes. Their intensified and more coordinated involvement in the development, implementation and evaluation of such interventions is therefore a major opportunity. In close cooperation with other multidisciplinary colleagues, this can include a role for psychologists and behavioural scientists in supporting the education and training of other health professionals in the appropriate application and high-quality evaluation of interventions to promote cognitive and psychosocial wellbeing, and to support and enable people to participate in behaviour change and self-management.

Second, the visibility and utilisation of psychologists and behavioural scientists among respiratory care professionals, as illustrated above, is still limited. This was also evidenced by an international survey among members of the ERS, American Thoracic Society (ATS) and American Association of Cardiovascular and Pulmonary Rehabilitation on the content of pulmonary rehabilitation programmes [47]. A dedicated group within the ERS can, therefore, not only increase the visibility and involvement of these professions, but also foster collaborations with other ERS assemblies and groups, for example 01.02 “Rehabilitation and Chronic Care”, 04.02 “Sleep and Control of Breathing” and 06.03 “Tobacco, Smoking

Control and Health Education". These collaborations might additionally support the dissemination of dedicated research methodology, such as advanced statistical analyses and neuropsychological measures across the ERS network.

Third, the new group 09.04 may also be an opportunity when it comes to mental health issues in respiratory health care professionals. Psychological symptoms, distress and burnout are not only prevalent and important to be recognised in people with respiratory disease, but also in all types of professionals involved in their care [48, 49]. This is currently an underserved area both within and outside ERS and members of this group are well positioned to develop respective programmes.

Finally, the group can also be a point of contact and exchange between ERS and other international networks, such as the ATS Assembly on Behavioural Research, the International Society on the Advancement of Respiratory Psychophysiology, the American Psychosomatic Society, the International Society for Behavioral Medicine or other national organisations, respectively. Such networks can ensure that psychological and behavioural research and practice with people affected by respiratory disease builds on, and integrates with, the best of existing work in respiratory and psychological sciences.

Taken together, we are convinced that the formation of the new ERS scientific working group 09.04 will contribute to an urgently needed, increased awareness of psychosocial factors and behaviour change in the care of people with chronic respiratory diseases. This will be a next important step towards more effectively addressing the multidimensional needs of people with chronic respiratory disease and their caregivers in the future, with the ultimate goal of optimising the effects of truly personalised multidisciplinary treatments.

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