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A breath of fresh air: Images of respiratory illness in novels, poems, films, music, and paintings

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Abstract

The nature and severity of respiratory disease are typically expressed with biomedical measures such as pulmonary function, X-rays, blood tests, and other physiological characteristics. The impact of respiratory illness on the sufferer, however, is reflected in the stories patients tell: to themselves, their social environment, and their health care providers. Behavioral research often applies standardized questionnaires to assess this subjective impact. Additional approaches to sampling patients' experience of respiratory illness may, however, provide important and clinically useful information that is not captured by other methods. Herein, we assert that novels, poems, movies, music, and paintings may represent a rich, experiential understanding of the patient's point of view of asthma, cystic fibrosis, lung cancer, and tuberculosis. Examination of these works illustrates the broad range and major impact of respiratory illness on patients' quality of life. We suggest that examining how illness is represented in various art forms may help patients, their social environment, and their health care providers in coping with the illness and in humanizing medical care. Medical students' clinical skills may benefit when illness experiences as expressed in art are incorporated in the medical curriculum. More generally, Narrative Health Psychology, Narrative Medicine, and Medical Humanities deserve more attention in education, training, and clinical care of (respiratory) physicians, medical students, and other health care professionals.

Keywords

art, medical education, Medical Humanities, Narrative Health Psychology, Narrative Medicine, respiratory illness

He is a professional. He has read at least ten poems a day for sixty years—that's 220,000 poems and probably a lot more. Not one of them was about breathing.

Carruth (2003: 177)

Increasingly, medical care for persons with respiratory disease incorporates the patient's point of view on his/her illness (Denford et al., 2014;

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Global Initiative for Asthma (GINA), 2012; Global Initiative for Chronic Obstructive Lung Disease (GOLD), 2013; Kaptein et al., 2014). Developments in organizational, financial, and philosophical aspects of medical care appear to be major reasons for the expansion in outcome in respiratory care: from improvements in pulmonary function to patient-reported outcomes, such as quality of life (QOL; Leidy and Murray, 2013). QOL was historically not prioritized in clinical care or research, perhaps serving as a secondary or tertiary measure. Nowadays, QOL often has the status of primary outcome in research in patients with a wide variety of respiratory diseases (Bauer et al., 2013). This development has occurred not only in the domain of respiratory illnesses but in medicine more generally (e.g. Shapiro, 2011).

QOL is typically defined as "the functional effect of an illness and its consequent therapy upon a patient, as perceived by the patient" (Schipper et al., 1996: 16). QOL is assessed with questionnaires, sometimes with interviews, or views of close proxies (i.e. partner, children, and health care provider). Unsurprisingly, a major determinant of QOL is the patient's perceptions of the illness and its treatment. It thus follows that changing ("improving") this perception can lead to enhanced QOL, underscoring the relevance and importance of studying patients' illness perceptions ("the patient's perception and understanding of the disease and treatment"; Jansen et al., 2011; Kaptein et al., 2008a; Petrie et al., 2002).

The great increase in research about QOL and the translation of QOL-research results into self-management programs in order to improve patients' QOL falls within the perspective of the biopsychosocial approach to illness (Newman et al., 2009). In this model, biomedical, psychological, and social aspects of human existence are interrelated. The clinical implementation of the model is part and parcel of Medical Humanities. An innovative approach in this field pertains to examining how an illness is represented, depicted, or imagined in various art forms.

Medical Humanities is the overall concept, defined as "an interdisciplinary field of medicine, which includes the humanities (philosophy, ethics, history, and religion), social science (anthropology, cultural studies, psychology, sociology), and the arts (literature, theater, film, and visual arts), and their application to medical education and practice" (Aull, 2014; Brody, 2011). Many prestigious medical journals have sections on this subject (e.g. "Change of Shift" in Annals of Emergency Medicine, "Art of Oncology" in Journal of Clinical Oncology, and "Healing Arts" in Journal of General Internal Medicine), reflecting the increasing attention devoted to experiencing illness and "storying stories" in the medical world (Kaptein et al., 2012). In health psychology, the *Journal of* Health Psychology is explicitly interested in "Narrative Health Psychology" (NHP), as attested to not only by the current Special Issue but also by publishing major publications on this topic in its regular issues (Murray, 2009). Other journals in the health psychology domain that can be mentioned in this regard are, for example, Aging & Mental Health, Health, Medical Humanities, *Oualitative* Health Research, Qualitative Research, and Sociology of Health and Illness (e.g. De Korte et al., 2014; Sools, 2012). Narrative Medicine (NM) must be credited as an important impetus in the Medical Humanities. NM is defined by Charon (2006) as "medicine practiced with the narrative competence to recognize, absorb, interpret, and be moved by the stories of illness" (p. vii). Clearly, this definition emphasizes how NM is embedded in medicine, in medical practice, and as practiced by MDs. NHP is related in many ways, but is more firmly in the domain of (health) psychology: it employs theory and methods from the behavioral domain. Theories on coping, illness perceptions, treatment beliefs, QOL, and selfmanagement guide much of the research in NHP. Qualitative and quantitative methods and statistical techniques are part of the tool kit of NHP.

Given the importance of studying and improving the way patients deal with their illness (e.g. self-management) as reflected in research about examining and improving QOL, a Medical Humanities approach may be helpful for patients, their partners and family, and their health care providers (Newman et al., 2009). Prior work in cognate domains has

shown considerable promise in this regard. For example, medical students instructed by museum staff about how to observe the skin of people depicted on paintings performed better than students in a control condition when examining actual patients with dermatological problems (Naghshineh et al., 2008). Similarly, encouraging preliminary findings on improving physician training and/or clinical skills have been reported in studies on the effects of reading novels (Khorana et al., 2011) and listening to music (Staricoff and Clift, 2011). Reports on innovations in teaching medicine to students have recently emphasized the importance of incorporating Medical Humanities in the curriculum in the United States (American Society for Bioethics and Humanities (ASBH), 2009), United Kingdom (General Medical Council (GMC), 2009), and the Netherlands (Raamplan, 2009). Attention is given to this topic in pulmonary medicine journals as well (Murray, 2013). It should be emphasized that most of these studies represent relatively small, short-term studies, most often with uncontrolled designs. Therefore, more high-quality research is needed with careful and sophisticated designs, longer duration of the intervention, and assessment of effects.

Medical Humanities may be directed at medical students and medical doctors, as well as targeted to patients. Medical students and doctors can benefit in a variety of ways; in addition to perhaps improving clinical skills (as noted earlier), there is evidence—albeit preliminary that empathy, patient communication and interviewing skills, and other aspects of care can improve, following Medical Humanities training or experiences (Ousager and Johannessen, 2010). Medical Humanities may also be directed at patients with respiratory illness-or any illness for that matter-who might benefit from reading novels and poems about their illness, seeing films or paintings reflecting their experiences, or writing about their illness experiences. For instance, a structured program of expressive writing (writing about one's deepest thoughts and feelings) has been shown to be beneficial for patients with asthma (Smyth et al., 1999).

Other approaches also show some positive effects, including bibliotherapy (Lucas and Soares, 2013; McCulliss, 2012), creative arts therapy (Puig et al., 2006), and music therapy (Bradt et al., 2011). A fascinating application of neuroscience and its methods was published recently, demonstrating that reading emotionally charged novels resulted in the activation of a portion in the brain associated with empathy (Zeman et al., 2013). This finding may point at one (among others) mechanism between being exposed to art and being a better, that is, more empathetic, clinician (Johnson, 2012). We return to the emerging domain of work in neurobiology as it relates to NHP in our discussion.

One emerging approach to examining Medical Humanities in patients with respiratory illness involves studying how respiratory illnesses are represented in various art forms. We have recently outlined the rationale of such an approach (Kaptein et al., 2013). In this article, we examine the representation of chronic respiratory diseases in five art forms: novels, poems, films, music, and paintings. By identifying and compiling a list of novels, poems, films, music pieces, and paintings, physicians, medical students, and patients may be helped in locating and using relevant works in their practice or personal lives. In addition to cataloging such works, we also discuss approaches to incorporate these representations ("patients' stories") in medical training. Such integration may improve clinical interactions (diagnostic skills, empathy or other aspects of communication, etc.) and should encourage self-management by the patients in order to positively affect their QOL (Newman et al., 2009). The aim of this article is therefore to elucidate the representation of major respiratory illnesses (asthma, chronic obstructive pulmonary disease (COPD), cystic fibrosis, lung cancer, pleurisy, pneumonia, sarcoidosis, and tuberculosis) in five art forms. Our approach can be applied to any other medical specialty, making it a fascinating method to explore the results of combining disease categories with various artistic forms of expression.

Method

Novels, poems, movies, music, and paintings related to respiratory disorders were identified in a number of ways (1 to 6, see below). Eight respiratory disorders were chosen, based on their prevalence and relevance in the area of respiratory diseases: asthma, COPD, cystic fibrosis, lung cancer, pleurisy, pneumonia, sarcoidosis, and tuberculosis. Novels and poems had to be available in English (either as the original language or translated into English). If the original works were not in English, movies had to have English subtitles; operas had to have librettos translated into English. This criterion was used to maximize replication of our work.

- PubMed was searched via combining each of the eight respiratory disorders with the concepts "novel," "poem," "movie," "music," and "painting," respectively.
- The website of the Literature, Arts, and Medicine Database of New York University (http://litmed.med.nyu.edu) was searched in a similar way.
- References in the book Medizin und Literatur were studied (Von Engelhardt, 2000). This book lists thousands of references in the Literature and Medicine field. They were hand searched by the first author (A.A.K.) for relevant publications (i.e. journal articles, scientific books).
- Journal sections in key journals were searched (e.g. Academic Medicine, American Journal of Medicine, American Journal of Psychiatry, Annals of Internal Medicine, British Medical Journal (BMJ), Chest, Canadian Medical Association Journal (CMAJ). Family Medicine, Health Affairs, Journal of Medicine and Movies, Neurology, and Theoretical Medicine and Bioethics).
- Colleagues, medical students who participated in Medical Humanities

- teaching activities, and friends were asked to provide suggestions.
- Modern Language Association (MLA) International Bibliography (http://www.mla.org).

Results

The New York University database produced the largest number of sources for asthma, cystic fibrosis, tuberculosis, and lung cancer. For instance, this database lists some 60 novels where tuberculosis is a topic. On the other hand, the number of novels on COPD, pneumonia, and pleurisy is zero in this database. Other data sources reflect this finding, and the same goes for the other four types of art (poem, film, music, and painting).

Table 1 depicts representative results of our search: the grid with four diseases and five art forms is covered by 20 examples of the art forms applied. Asthma, cystic fibrosis, lung cancer, and tuberculosis are represented in all five art categories; for COPD, we only found a poem (Berry, 2001); for pleurisy, we identified one novel (Bernhard, 1981; Kaptein and Lyons, 2009). Our methods did not identify any representations of patients with sarcoidosis in the five art forms. Relatively, little appears to exist regarding pneumonia; the novel *Raise high the roof beam, carpenters* does mention pneumonia but only in passing, and the illness does not play a significant role in the novel (Salinger, 1963).

For some of the boxes, multiple results were found. For instance, the song *TB sheets* by Van Morrison fits the box "music" in "tuberculosis." In those cases, we chose to include in the table the most traditional, classic source. Opera is considered "high culture" and represents the reason for including this example (vs others) in the table—at the same time, one has to take into account that a "match" between interest of a person in the art form and the content are essential for user engagement ("transporting into narrative worlds," Green and Carpenter, 2011).

One of the few extended descriptions of an episode of severe acute *asthma* is given by the French author Raymond Queneau (1944).

	Novel	Poem	Movie	Music	Painting
Asthma	The Skin of Dreams (Queneau)	Night Attack (Horowitz)	The Motorcycle Diaries (Salles)	Allemande l'Asmatique (O'Neill)	Three Studies for Figures at the Base of a Crucifixion (Cohen)
Cystic fibrosis	Things Left Undone (Tilghman)	65 Roses (Fisher)	Breath (van Nuffel)	Angels in Waiting (Cochran)	65 Roses (Fisher)
Lung cancer	The Quarry (Banks)	Needle Biopsy (Updike)	Thank You for Smoking (Reitman)	Vieillir (Brel)	Self-portrait with Cigarette (Berman)
Tuberculosis	Magic Mountain (Mann)	Bacteria (Dürrigl)	Drunken Angel (Kurosawa)	La Traviata (Hutcheon)	Science and Charity (Black)

Table 1. Four respiratory disorders and five art forms applied to 20 works of art (between brackets: first author, poet, director, composer, or painter).

Reading the quotation aloud will induce breathlessness in the listener:

Louis with his two fists propped on his knees, Louis, bent over, begins to breathe badly ... he is in the process of becoming conscious of his respiration. He cannot be said to be panting ... but he is affected ... afflicted with a constriction of the lungs, of pulmonary muscles, of the pulmonous nerves, of the pulmonic canals ... it is kind of stifling ... that starts from below, that also starts from both sides at once, it is a thoracic stifling, an encirclement of the respiratory barrel. And now something is very wrong. It is worse than strangling, worse than encirclement, an anatomical nightmare, a metaphysical anguish, a revolt ... (Queneau, 1944: 11–12).

Horowitz (1996) captures in a poem the horrors of asthma attacking in the night: "... the steaming kettle and misty bath give short relief/ as I rock and rale in hell, awaiting the morning sun/ and the birds at dawn/ to greet them with my rhonchitic song" (p. 252), whereas director Salles (2004) in the movie *The Motorcycle Diaries* depicts Che Guevara suffering asthma during his trip through South America. When health psychologists invited patients with asthma to tell them what it is like to have an asthmatic attack, the patients mentioned similar experiences: fear, panic, choking, and malaise (Skevington et al., 1997). The article is aptly called "On the language of breathlessness."

In Allemande l'Asmatique, the cello imitates the audible wheezing during an asthma attack (O'Neill, 2010; Figure 1, http://www.muziek-web.nl/Link/U00002130797/CLASSICAL). Francis Bacon's Three Studies for Figures at the Base of a Crucifixion impresses by its vicious representation of shortness of breath and its associated panic and fear of suffocating and dying (Cohen, 1999).

Cystic fibrosis is represented in a poem "65 Roses" based on the observation that most children with this disease find it hard to say the name of their disease and instead pronounce it as more or less similar to "sixty-five roses." These roses are shown in a painting by a collective of 65 painters (Fisher, 2003; Figure 2).

Tilghman's *Things Left Undone* is a novel on living and dying with cystic fibrosis (Tilghman, 1999). The Dutch/Flemish movie *De Adem* (The Breath) is a prizewinning movie about the genetic basis of the illness and its impact on two patients (Van Nuffel, 2010). Tammy Cochran (2010) wrote music about this medical condition and mourned the loss of the lives of two young boys because of cystic fibrosis in *Angels in Waiting*.

The Quarry is a novel where one of the protagonists develops lung cancer, and as a consequence, dies of it. The main figure in the novel is the patient's son, whose struggle with the events we follow (Banks, 2013; Figure 3). Updike (2009) represented lung cancer in his



Figure 1. Allemande l'Asmatique, Marais (O'Neill, 2010).

poem *Needle Biopsy*. The Marlboro Man plays a role in *Thank You for Smoking*, unraveling the perverse tactics of Big Tobacco (Reitman, 2005). Jacques Brel (1977), who died of lung cancer when he was 48 years, sings about his illness in *Vieillir*. Edvard Munch depicts

himself in a self-portrait smoking a cigarette during one of his frequent depressive episodes, attempting to reduce his depressive feelings (Berman, 1993).

The Magic Mountain by Thomas Mann is, by most accounts, the most famous novel where



Figure 2. "65 Roses," Cystic Fibrosis Society Canada (Fisher, 2003).

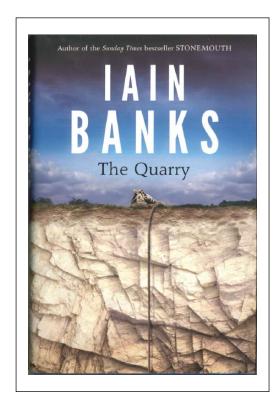


Figure 3. Cover, The Quarry (Banks, 2013).

tuberculosis plays a key role (Mann, 1924). The poem *Bacteria* by Šimić is part of a series of seven poems about this disease (Dürrigl and Fatović-Ferenčić, 2006). Japanese director Kurosawa shows tuberculosis and doctors in *Drunken Angel* in the dark alleys of Tokyo (Kurosawa, 1948; Figure 4). The soprano in *La Traviata* by Verdi mimics labored breathing and dies uttering her final breath (Hutcheon and Hutcheon, 1996). Picasso painted *Science and Caritas*—with his father the model for the bearded doctor, and his sister in bed, who probably died of tuberculosis (Black, 2000).

Discussion

An important aspect of this documentation is the view that the representation in novels, poems, films, music, and paintings of various respiratory illnesses reflects how patients experience their respiratory disease. Fiction is, in most cases, a thought experiment. Studying these representations and experiments is intellectually and scientifically satisfying, besides moving and entertaining. However, there is

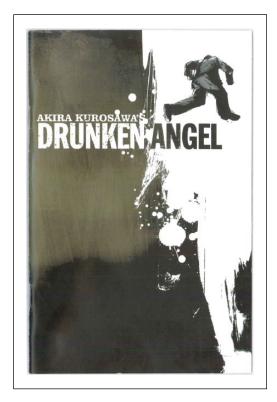


Figure 4. Movie, Drunken Angel (Kurosawa, 1948).

more to it: although clinicians explore the responses of patients to their illness routinely in their conversations with the patients, the information about illness experiences found in various art forms may be richer and more informative. Fiction and art provide detailed pictures and thick descriptions, of life and character, its complexities, the workings of inner life, and pictures of particular people leading particular lives in particular circumstances. Because it maps the complexities truly and richly, it does do justice to creatures just like us, in a non-detached way, thus speaking to our heart, to "the heart of what matters" (Cunningham, 2001). Incorporating this information into the patient-physician encounter might be instrumental in improving concordance (the concept that replaces the word "compliance" and self-management; Horne, 2006; Kaptein et al., 2008b). This in turn may improve the patients' medical outcome and QOL, and recall that, although preliminary,

there is some evidence that reading/experiencing these artistic representations of illness may enhance clinicians' empathy, communication, and even diagnostic skills (Ousager and Johannessen, 2010).

We have given a broad-brush sketch of how various respiratory illnesses are represented in various art genres. Future work may benefit from using finer brushes and pencils, devoting separate studies to various categories of respondents (e.g. health care providers, patients, partners, medical students, and psychology students), aimed at various perspectives (e.g. improving diagnostic and biopsychosocial therapeutic interventions of health care providers, or improving QOL of patients and their partners). Given in our article, one issue that needs attention in future research concerns potential mechanisms between exposing medical students or health care providers to products of various art forms on the one hand (the stimuli) and changes (improvements) in relevant outcome measures, such as empathy and observable patient-related behaviors, and therefore quality of biopsychosocial care (i.e. the responses) on the other hand. Such a minimodel allows for including mediating variables, such as personality factors, and additional characteristics. We hypothesize that the stimuli of various art forms help stimulate learners (MDs and others) to become more sensitive to how illness is much more than a biomedical phenomenon. Virtually, anyone will be moved by watching the patient in the movie Wit or by watching a painting by Munch of a dying child. This sensitization may facilitate teaching activities focusing on the biopsychosocial model (see Hawkins and McEntyre (2000) for examples of models, methods, and empirical studies in this area of Teaching Literature and Medicine).

The prevalence of a disease seems one determinant of it being used by artists. Asthma, cystic fibrosis, lung cancer and tuberculosis have been, and still are, object of artistic representations. Pleurisy, pneumonia, sarcoidosis, and—remarkably, given its high prevalence and incidence—COPD are rarely (if ever) the subject of the work of authors, poets, film directors, composers or painters. Somewhat speculatively,

one may suggest that the high degree of "the tobacco-smoking blue-collar-worker" stigma of COPD is an important reason for COPD being underrepresented in the arts.

Asthma is represented in a very consistent fashion in novels, poems, films, music, and painting: it evokes high levels of anxiety and panic because of unpredictable episodes of suffocating shortness of breath, with fears of dying. A teacher who discusses asthma in his/her lectures for medical students could read out a few sentences from The Skin of Dreams, recite Night Attack, show a few minutes of Che Guevara's asthma attacks in The Motorcycle Diaries, play Allemande l'Asmatique, and end his/her lecture by showing Bacon's Triptych 1944. This might lead to a greater understanding of what asthma means in patients, thereby sensitizing health care professional and medical students to tailor therapeutic advice to the patient's illness perceptions. This, in turn, might impact positively on patient-reported outcomes.

For cystic fibrosis, lung cancer, and tuberculosis, similar didactic jewels can be developed based on Table 1. Using the methods described in the "Method" section of this article allows researchers and clinicians—and patients—to compile lists of art works that may be applied in clinical care and research in all areas of medicine. Other diagnostic categories have books devoted to illnesses within those categories. In psychiatry, for instance, Oyebode (2009) compiled a book that analyses diagnostic entities such as bipolar disorder, depression, and schizophrenia, in novels and poem. In neurology, authors put epilepsy center stage (Von Engelhardt et al., 2000). Others review movies in the medical context (Colt et al., 2011). Cardiovascular disorders, cancer, and dermatological disorders (e.g. Meulenberg, 1977) would also be fascinating topics for analyzing their representations in various art forms.

We acknowledge a number of limitations in our approach to this topic. Our search for identifying novels, poems, movies, music, and paintings has flaws. The field of Medical Humanities is quite young, and this implies that search strategies and databases are not as sophisticated as, for example, PubMed. Future

students and faculty at departments of Medical Humanities could make dramatic contributions here by refining and expanding search strategies and databases. Although the authors of this article cover some five or six languages, and searched as widely as possible, we no doubt missed works. Great novels in languages that are assumed to be hard to access have typically been translated into languages such as English or French. However, we recognize that we are unable to know all novels that have published about, for example, asthma. In addition, in the Medical Humanities classes we have taught, the students were able to provide new examples regarding books, movies, and/or music about a particular illness. Also, one may argue about our conceptualization of "genres." This is a contentious issue, Woods (2011) writes, "a sophisticated account of genre is largely absent from literary and semiotic approaches to medicine-related and illness narrative" (p. 74). This makes any attempt to categorize forms of art into distinct genres a somewhat hazardous undertaking.

This exploration also suggests a number of research implications. Further to reports on Medical Humanities in medical education, and to reviews on the effects of Medical Humanities on clinical skills and behavior of medical students, effect studies on Medical Humanities with stronger designs are needed (ASBH, 2009; GMC, 2009; Raamplan, 2009). Effect evaluations of teaching Medical Humanities to medical students support this conclusion (Ousager and Johannessen, 2010). As aforementioned, there are a number of studies that seem to offer hope on impacting positively on clinical skills of medical students embedded in theoretical models (Kaptein et al., 2012). Also, in our view, it is about time to seriously address the issue of developing a system which would be instrumental in providing researchers with high-quality sources for research on the image of a particular illness.

There are also fruitful lines of work to be conducted exploring the "mind-body" issues that help elucidate how participation and appreciation of the arts may influence biologically relevant processes. For example, emotions in clinicians

regarding patients' emotions may be made visible via various techniques, illustrating how mind and body closely interact (Nummenmaa et al., 2014). Brain imaging techniques might be employed in future research, not only observationally but—for example—in the service of teaching clinicians to be (more) empathetic to emotions in their patients. There is burgeoning interest in the interface of arts and neurobiology that moves beyond the "mere" use of imaging techniques to examine regions of interest and related activation. For example, engagement with the arts may be related to alterations in both brain function and structure (e.g. patterns of functional connectivity, neuroplasticity, and neurogeneration); the interested reader is referred to Dulamea and Dulamea (2011) for an intriguing primer on these issues under the broader rubric of "neuroaesthetics."

Given the evidence supporting Medical Humanities in general, and the large corpus of available Medical Humanities materials with which physicians and patients may work, we believe that the area of Medical Humanities should be an area of pedagogical and clinical emphasis. Incorporating various art forms and their applications to patients with (chronic) illness may help in sensitizing medical students and other health care professionals in applying a biopsychosocial approach to patients. This may not only help the patients involved but also their social environment, and the medical students and health care providers (Kaptein et al., 2013).

The various art forms in their application to illness in this article are instrumental in enhancing knowledge and experience in health care students and professionals. Novels, poems, films, and other art forms help in listening better to patients' stories. This in turn may help improving the QOL of patients. Also, it will improve the quality of medical Empowering patients by "letting their stories breathe" can be conceptualized as improving their health, given newly arising definitions of health, for example, "the ability of people to adapt and self-manage" (Huber et al., 2011). NM's contribution in this regard deserves further study. Empirical studies deserve being carried out to test these statements.

Close reading of descriptions in various art forms of the illness experience may be very instrumental in teaching researchers and clinicians about how illness is perceived, given meaning to, and coped with. This, of course, is true not only for respiratory illness but for any illness. Or, as McKechnie (2014) states in her response to Woods, "The only way we can become effective interpreters of another human being's plight (...) is through narrative engagement."

The Common Sense Model (CSM; Leventhal) in our view is a beautiful and elegant theoretical model which may be very helpful in the NHP domain, and the NM domain. Briefly, the model outlines how patients (and clinicians) create personal models of an illness, and how these representations inform coping, self-management, and QOL. The empirical work in the context of the model is strong. It illustrates that addressing unhelpful representations helps improve coping, and thereby, QOL and self-management. The model is very helpful in the context of this article—and for NHP and NM (see Kaptein and Lyons (2009) for a theoretical and empirical illustration, with Cancer Ward as the analyzed novel). The CSM provides a useful and manageable approach to dealing with Woods' concerns about "narratives." The truth-value of narratives, for instance, or the possible harmful character of narratives and additional issues Woods raises, all find a reasonable representation in the CSM. In the CSM, it is not really relevant whether illness representations are true or not (even the illness representations of the most experienced MD are not "true" as medical knowledge shows these representations to be myths in 10-year time from now). This illustrates how theories and methods/methodologies from health psychology may benefit Medical Humanities and NHP research and clinical work in Medical Humanities, NM, and NHP.

All this leads us to expand a bit in the clinical applications of our framework (i.e. using various art forms for research and clinical work in the areas of NHP and NM): have a small group of cardiologists in training read a novel

about cardiovascular illness (e.g. Nádas, 2004); ask them listen to a patient with a myocardial infarction; and have them study an article on illness representations in patients with a myocardial infarction, where it was shown how substituting unhelpful for adaptive illness representations impacted on sexual activities, work resumption, and angina pectoris symptoms. We have successfully applied this format in a pilot study (Kaptein et al., 2012).

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References

- American Society for Bioethics and Humanities (ASBH) (2009) ASBH Taskforce on Ethics and Humanities Education in Undergraduate Medical Programs. Glenview, IL: ASBH.
- Aull F (2014) Mission statement. Available at: http://www.medhum.med.nyu.edu (accessed 1 February 2014).
- Banks I (2013) The Quarry. London: Little, Brown.
 Bauer M, Leavens A and Schwartzman K (2013)
 A systematic review and meta-analysis of the impact of tuberculosis on health-related quality of life. Quality of Life Research 22(8): 2213–2235.
- Berman PG (1993) Edvard Munch's *Self-portrait* with cigarette: Smoking and the Bohemian persona. *Art Bulletin* 75(4): 627–646.
- Bernhard T (1981) *Der Atem—Eine Entscheidung* [The Breath—A Decision]. Munich: Deutscher Taschenbuch Verlag.
- Berry MJ (2001) Pleas from a pulmonary rehabilitation patient. *Chest* 120(4): 1427.
- Black D (2000) Picasso's Science and charity.

 Bereavement Care 19(2): 21.

- Bradt J, Dileo C, Grocke D, et al. (2011) Music interventions for improving psychological and physical outcomes in cancer patients (review). Cochrane Database of Systematic Reviews 8: CD006911.
- Brel J (1977) Vieillir (Les Marquises, Barclay).
- Brody H (2011) Defining the medical humanities: Three conceptions and three narratives. *Journal* of Medical Humanities 32(1): 1–7.
- Carruth H (2003) Notes on emphysema. In: Rothenberg D and Pryor WJ (eds) *Writing on Air (A Terra Nova Book)*. Cambridge, MA: The MIT Press, pp. 171–180.
- Charon R (2006) Narrative Medicine—Honoring the Stories of Illness. Oxford: Oxford University Press.
- Cochran T (2010) *Angels in Waiting*. Nashville, TN: Epic.
- Cohen SG (1999) Asthma among the famous: Francis Bacon (1909–1992) British painter. *Allergy and Asthma Proceedings* 20(6): 396–402.
- Colt H, Quadrelli S and Friedman L (eds) (2011) The Picture of Health: Medical Ethics and the Movies. New York: Oxford University Press.
- Cunningham A (2001) The Heart of What Matters: The Role for Literature in Moral Philosophy. Berkeley, CA: University of California Press.
- De Korte J, Drossaert CHC, Westerhof GJ, et al. (2014) Life review in groups? An explorative analysis of social processes that facilitate or hinder the effectiveness of life review. *Aging & Mental Health* 18(3): 376–384.
- Denford S, Taylor RS, Campbell JL, et al. (2014) Effective behavior change techniques in asthma self-care interventions: Systematic review and meta-regression. *Health Psychology* 33(7): 577–587.
- Dulamea A and Dulamea M (2011) The neurobiology of visual arts—Implications in the neuroplasticity process. *Romanian Journal of Neurology* X(3): 120–125.
- Dürrigl M-A and Fatović-Ferenčić S (2006) "I am living in my own corpse"—The experience of tuberculosis in poems by AB Šimić. *Medical Humanities* 32(1): 4–6.
- Fisher DG (2003) *One of Everything*. Cleveland, OH: Cleveland State University Poetry Center, p. 53.
- General Medical Council (GMC) (2009) *Tomorrow's Doctors*. London: GMC.
- Global Initiative for Asthma (GINA) (2012) From the Global Strategy for Asthma Management and

Prevention. GINA. Available at: http://www.ginasthma.org/ (accessed 1 February 2014).

- Global Initiative for Chronic Obstructive Lung Disease (GOLD) (2013) From the Global Strategy for the Diagnosis, Management and Prevention of COPD. GOLD. Available at: http://www.goldcopd.org/ (accessed 1 February 2014).
- Green MC and Carpenter JM (2011) Transporting into narrative worlds. *Scientific Study of Literature* 1(1): 113–122.
- Hawkins HA and McEntyre MC (eds) (2000) Teaching Literature and Medicine. New York: Modern Language Association.
- Horne R (2006) Compliance, adherence, and concordance. Implications for asthma treatment. *Chest* 130(Suppl. 1): 65S–72S.
- Horowitz HW (1996) Night attack. *The Lancet* 348(9022): 252.
- Huber M, Knottnerus JA, Green L, et al. (2011) Health: How should we define it? *BMJ* 343(d4163): 235–237.
- Hutcheon L and Hutcheon M (1996) Opera: Desire, Disease, Death. Lincoln, NB: University of Nebraska Press.
- Jansen DL, Heijmans M, Rijken M, et al. (2011) The development of and first experiences with a behavioural self-regulation intervention for end-stage renal disease patients and their partners. *Journal of Health Psychology* 16(2): 274–283.
- Johnson DR (2012) Transportation into a story increases empathy, prosocial behavior, and perceptual bias toward fearful expressions. *Personality and Individual Differences* 52(2): 150–155.
- Kaptein AA and Lyons AC (2009) The doctor, the breath, and Thomas Bernhard: Using novels in health psychology. *Journal of Health Psychology* 14(2): 161–170.
- Kaptein AA, Fischer M and Scharloo M (2014) Selfmanagement in patients with COPD: Theoretical context, content, outcomes, and integration into clinical care. *International Journal of Chronic* Obstructive Pulmonary Disease 9: 907–917.
- Kaptein AA, Hughes BM, Scharloo M, et al. (2008a) Illness perceptions about asthma are determinants of outcome. *Journal of Asthma* 45(6): 459–464.
- Kaptein AA, Lyons AC, Pearson AS, et al. (2012) Storying stories. Medical Education Development 2(1): 24–26.
- Kaptein AA, Meulenberg F and Smyth JM (2013) Do art lovers make better doctors? *Lancet Respiratory Medicine* 1(10): 769–770.

Kaptein AA, Scharloo M, Fischer MJ, et al. (2008b) Illness perceptions and COPD: An emerging field for COPD patient management. *Journal of Asthma* 45(8): 625–629.

- Khorana AA, Shayne M and Korones DN (2011) Can literature enhance oncology training? A pilot humanities curriculum. *Journal of Clinical Oncology* 29(4): 468–471.
- Kurosawa A (1948) *Drunken Angel*. Tokyo, Japan: Toho.
- Leidy NK and Murray LT (2013) Patient-reported outcome (PRO) measures for clinical trials of COPD: The EXACT and E-RS. *COPD* 10(3): 393–398.
- Lucas CV and Soares L (2013) Bibliotherapy: A tool to promote children's psychological well-being. *Journal of Poetry Therapy* 26(3): 137–147.
- McCulliss D (2012) Bibliotherapy: Historical and research perspectives. *Journal of Poetry and Therapy* 25(1): 23–28.
- McKechnie CC (2014) Anxieties of communication: The limits of narrative in the medical humanities. *Medical Humanities* 40(2): 119–124.
- Mann T (1924) *Der Zauberberg* [The Magic Mountain]. Berlin: Fischer Verlag.
- Meulenberg F (1977) The hidden delight of psoriasis. *BMJ* 315: 1709–711.
- Murray JF (2013) Willing suspension of disbelief— New roles for Violetta and Mimi. *American Journal of Respiratory and Critical Care Medicine* 187(5): 465–467.
- Murray M (2009) Health psychology and writing: An introduction. *Journal of Health Psychology* 14(2): 158–160.
- Nádas P (2004) My Own Death. London: Vintage.
- Naghshineh S, Hafler JP, Miller AR, et al. (2008) Formal art observation training improves medical students' visual diagnostic skills. *Journal of General Internal Medicine* 23(7): 991–997.
- Newman S, Steed L and Mulligan K (eds) (2009) Chronic Physical Illness: Self-Management and Behavioural Interventions. Maidenhead: Open University Press.
- Nummenmaa L, Glerean E, Hari R, et al. (2014) Bodily maps of emotions. *Proceedings of the National Academy of Sciences of the United States of America* 111(2): 646–655.
- O'Neill D (2010) Medical classics. BMJ 341: 675.
- Ousager J and Johannessen H (2010) Humanities in undergraduate medical education: A literature review. Academic Medicine 85(6): 988–998.
- Oyebode F (2009) *Mindreadings—Literature* and *Psychiatry*. London: Royal College of Psychiatrists Publications.

- Petrie KJ, Cameron LD, Ellis CJ, et al. (2002) Changing illness perceptions after myocardial infarction: An early intervention randomized controlled trial. *Psychosomatic Medicine* 64(4): 580–586.
- Puig A, Lee SM, Goodwin L, et al. (2006) The efficacy of creative arts therapies to enhance emotional expression, spirituality, and psychological well-being of newly diagnosed Stage I and Stage II breast cancer patients: A preliminary study. Arts in Psychotherapy 33: 218–228.
- Queneau R (1944) Loin de Rueil [The Skin of Dreams]. London: Borough (translated edition 1987).
- Raamplan (2009) Raamplan Artsopleiding [Conditions for the Training of Medical Students]. Utrecht: Nederlandse Federatie van Universitair Medische Centra (NFU).
- Reitman J (2005) *Thank You for Smoking*. New York: Twentieth Century Fox Corp.
- Salinger JD (1963) Raise High the Roof Beam, Carpenters and Seymour: An Introduction. New York: Little, Brown.
- Salles W (2004) *The Motorcycle Diaries*. Los Angeles, CA: FilmFour Ltd.
- Schipper H, Clinch JJ and Olweny CLM (1996)
 Quality of life studies: Definitions and conceptual issues. In: Spilker B (ed.) *Quality of Life and Pharmacoeconomics in Clinical Trials* (2nd edn). Philadelphia, PA: Lippincott-Raven Publishers, pp. 11–23.
- Shapiro J (2011) Illness narratives: Reliability, authenticity and the empathic witness. *Medical Humanities* 37(2): 68–72.

- Skevington SM, Pilaar M, Routh D, et al. (1997) On the language of breathlessness. *Psychology and Health* 12(5): 677–689.
- Smyth JS, Stone AA, Hurewitz A, et al. (1999) Effects of writing about stressful experiences on symptom reduction in patients with asthma or rheumatoid arthritis. *JAMA* 281(14): 1304–1309.
- Sools A (2012) Narrative health research: Exploring big and small stories as analytical tools. *Health* 17(10): 93–110.
- Staricoff R and Clift S (2011) Arts and Music in Healthcare: An Overview of the Medical Literature: 2004–2011. Canterbury: Canterbury Christ Church University.
- Tilghman C (1999) *Things Left Undone*. New York: Random House.
- Updike J (2009) End Points and Other Poems (Needle Biopsy). New York: Alfred A. Knopf, pp. 27–28.
- Van Nuffel H (2010) Adem [Breath]. Amsterdam: Paradiso.
- Von Engelhardt D (2000) *Medizin in der Literatur der Neuzeit* [Medicine in the Literature of the Modern Time]. Hürtgenwald: Guido Presser.
- Von Engelhardt D, Schneble H and Wolf P (eds) (2000) "Das ist eine alte Krankheit": Epilepsie in der Literatur ["That's an Old Illness"—Epilepsy in Literature]. Stuttgart: Schattauer.
- Woods A (2011) The limits of narrative: Provocations for the medical humanities. *Medical Humanities* 37(1): 73–78.
- Zeman A, Milton F, Smith A, et al. (2013) By heart: An fMRI study of brain activation by poetry and prose. *Journal of Consciousness Studies* 20(1): 132–158.