SYLLABUS

HEALTH, COGNITION AND WELLBEING

Instructor: Antonio Fidalgo
Contact Hours: 40
Class time: Thursdays 9.30am – 12.30pm

LONDON, UK

COURSE DESCRIPTION

Just one in 20 people worldwide have no health problems, with a third of the world's population (2·3 billion individuals) experiencing more than five ailments. A straightforward way to assess the health status of a population is to focus on mortality or life expectancy. A focus on mortality, however, does not take into account that the burden of diseases is not only that they kill people, but that they cause suffering to people who live with them. This course focuses on how psychological, behavioural, and cultural factors contribute to physical health and illness and examines the impact of health conditions on cognition and wellbeing. We also consider the impact of public policy and health inequalities.

COURSE OBJECTIVES

By the end of this course you should be able to:

- Understand and critically analyze contemporary models of disease and methods used in clinical research
- Identify the etiology for major forms of illness, including biological as well as psychological, behavioural and cultural factors
- Evaluate the impact of major forms of illness on both individual cognition and wellbeing, and wider society
- Compare different forms of public health in the western world
- More effectively work in teams, solve problems, prioritize tasks, and communicate with a broad audience

INSTRUCTIONAL METHODOLOGY

The sessions combine introductory lectures, student presentations, discussions and group work. Students will be expected to actively prepare for all classes. The classes are highly participative.

METHOD OF EVALUATION (GRADING)

Your course grade is based on coursework, presentations and participation.

Your course grade will be computed as follows:

	% of Total Grade	Points per item	Total Points
Lecture participation & reflections	10%	1 (x10)	10
Quizzes	30%	15 (x2)	30
Essays	30%	15 (x2)	30
Presentation	15%	15 (x1)	15
Leaflet	15%	15 (x1)	15
Total	100%		100

Lecture Participation: Lecture participation are designed to promote active engagement in lecture, and to help me understand and address common themes or questions that you may have about the lecture content. Lecture participation, tracked by MCQ submitted, is worth 1 point per class. You can only receive credit for lecture reflections if you attended class that day. There are no make-up or late submissions allowed for lecture reflections.

Quizzes: Quizzes are designed to assess your knowledge of contemporary models and research methods the health conditions covered. There are no make-up quizzes in this course.

- Quizzes will be administered on MCQ. You will have a 2-day window of opportunity to take each quiz, and you have 40 minutes to take each quiz once you start.
- Each quiz will have ~16-20 multiple-choice or true-false questions.
- You are responsible for all of the assigned readings (text and articles) and lecture material.
- Quizzes are open-notes and open-book, but you must complete them independently. Completing quizzes with a classmate, or having someone take a quiz for you, is CHEATING.

Essays: Essays are designed to promote critical thinking and written communication. Essays will always be due by the start of class on the due date.
Prompts for essays will always be given one week before the essay is due.
Essays should be 250-500 words total. This typically results in 1-2 typed pages, double-spaced.

- Grading will be based on essay content and writing quality.

Small Group Presentation: You are required to work individually to research a health condition of your choice related to course material. You will also design and present a set of information/suggestions (tip sheet) about the disorder as part of a wiki.

Leaflet: Each individual will create a leaflet not to exceed 1000 words, that summarizes evidence to support your argument and cites at least three original research articles.

ACADEMIC MISCONDUCT

Students are prohibited from committing or attempting to commit any act that constitutes academic misconduct. By way of example, students should not give or receive (or attempt to give or receive) unauthorised help on assignments or examinations without express permission from the instructor. Students should properly acknowledge and document all sources of information (e.g. quotations, paraphrases, ideas) and use only the sources and resources authorized by the instructor. If there is any question about whether an act constitutes academic misconduct, it is the students ’obligation to clarify the question with the instructor before committing or attempting to commit the act.

GENERATIVE AI

Students may use GenAI tools in this class to help with coursework and assignments. Helpful uses include brainstorming ideas, creating outlines, editing, and so forth. However, if you include in your assignment submissions any content that is generated by GenAI, such as text, images, graphics, etc., you must cite the GenAI tool that is your source, in the same way that you must cite any content you use from other sources, such as books, articles, videos, the internet, etc..

Although open use of GenAI is allowed in this class, be advised that GenAI suggestions or content can be inaccurate, incomplete or otherwise problematic; using GenAI can impact negatively the quality of your work and your grades.
I welcome questions and discussion about GenAI use in this course.

ATTENDANCE

Every class (whether on- or off-site) must be attended. Please refer to the GEO attendance policy for more details.

WEEKLY COURSE SCHEDULE

Week 1: Sleep (Guest Lecture)
Between 30 to 48% of adults suffer from insomnia. Using a broad definition of obstructive sleep apnea up to 30% of the population may suffer from it, with 35% of American adults reporting sleeping less than 7 hours a night. Society has long mocked people for sleeping too much, but at what cost?
Learning objectives: by the end of this session students should be able to evaluate the cultural and psychological factors influencing insomnia and the impact that sleep has on health and cognition.
Medic, G., Wille, M., & Hemels, M. E. (2017). Short- and long-term health consequences of sleep disruption. *Nature and science of sleep*, *9*, 151–161. DOI: 10.2147/NSS.S134864
Readings: Alhola, P., & Polo-Kantola, P. (2007). Sleep deprivation: Impact on cognitive performance. *Neuropsychiatric disease and treatment*, *3*(5), 553–567.

Week 2: Introduction to disease and health inequalities
In this lecture we aim to introduce you to the impact of disease in the human body. We also explore how income inequality impacts life expectancy.
Learning objectives: by the end of this session students should be able to demonstrate an understanding of the impact of disease and access to healthcare has in the general population.
Readings: Global Burden of Disease Study 2013 Collaborators (2015). Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*, DOI: 10.1016/S0140-6736(15)60692-4
*Assignment*s: MCQ submission.

Week 3: Health systems and historical context
Health system across the western world can be either a mix of publicly and privately funded programs and healthcare systems (USA) or, single-payer, socialized, and privatized-regulated (EU). Public health policy is defined as the laws, regulations, actions, and decisions implemented within society in order to promote wellness and ensure that specific health goals are met.
Learning objectives: by the end of this session students should be able to comment on how health care systems and public policy have an impact on health, wellbeing and access to healthcare.
Readings: Fitzpatrick R, Raine R. Introduction. In: Raine R, Fitzpatrick R, Barratt H, et al. Challenges, solutions and future directions in the evaluation of service innovations in health care and public health. Southampton (UK): NIHR Journals Library; 2016 May. (Health Services and Delivery Research, No. 4.16.) Available from: https://www.ncbi.nlm.nih.gov/books/NBK361254/doi: 10.3310/hsdr04160-xvii
Assignments: MCQ submission; start preparing leaflet.

Week 4: General antecedents of health
Socioeconomic status (SES) and social support are key psychosocial determinants of health. SES influences health both directly and indirectly, with absolute and relative poverty affecting health inequalities through mechanisms like social comparison. Social support—its type, quality, and source—can improve or sometimes harm health, acting directly or by buffering stress. Both SES and social support impact physiological systems (nervous, immune, endocrine), supporting a biopsychosocial understanding of disease. This session will

examine the issue of how the workings of this psychosocial variable are translated into physiological disease endpoints such as cancer and heart disease.
Learning objectives: articulate the role of socioeconomic status (SES) as a risk-factor for health and illness; articulate an argument as to whether SES should be considered as a proxy for other psychosocial risk factors or as a psychosocial risk-factor in its own right;
Readings: Algren, M.H., Ekholm, O, Nielsen, L. et al (2018). Associations between perceived stress, socioeconomic status, and health-risk behaviour in deprived neighbourhoods in Denmark: a cross-sectional study. *BMC Public Health 18*:250 https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-018-5170-x
*Assignment*s: MCQ submission;

Week 5 Smoking
While the impact of smoking is well known we aim to further the debate by also covering the socio-economic factors influencing smoking levels among high smoking prevalence groups and the cognitive impact of smoking.
Learning objectives: by the end of this session students should be able to critically comment on the factors influencing smokers as well as the impact of smoking on health and cognition.
Readings: Sabia S, Elbaz A, Dugravot A, et al. (2012) Impact of Smoking on Cognitive Decline in Early Old Age: The Whitehall II Cohort Study. *Arch Gen Psychiatry*; 69(6):627–635. DOI: 10.1001/archgenpsychiatry.2011.2016
*Assignment*s: MCQ submission; Leaflet due.

Week 6: HIV
Since its discovery, HIV went from a lethal disease to a chronic condition. However, the cognitive impact is less well known and we will explore this here. In a similar manner, we will cover how inequality in society impacts HIV infection rates and treatment.
Learning objectives: by the end of this session students should be able to comment on the factors influencing HIV transmission and the impact of HIV on health and cognition.
Readings: Watkins, C. C., & Treisman, G. J. (2015). Cognitive impairment in patients with AIDS - prevalence and severity. *HIV/AIDS (Auckland, N.Z.)*, *7*, 35–47. DOI: 10.2147/HIV.S39665
Assignments: MCQ submission: Essay #1 Due:

Week 7: Coronary heart disease
This session explores psychosocial risk factors for coronary artery disease (CAD) alongside traditional biological and behavioral risks. CAD, its symptoms, and key cardiology terms are defined, with prevalence showing it as a leading cause of premature death in males and significant mortality in older females in the U.K. Traditional risk factors include age, sex, family history, obesity, hypertension, smoking, sedentary lifestyle, and high cholesterol. The session emphasizes that CAD is multi-factorial, with psychosocial contributors such as low socioeconomic status, poor social support, stressful life events, high job demand, low perceived control, Type A behavior, and negative affectivity. Special attention is given to frequently expressed anger, which acts as a coronary-toxic factor through sustained physiological reactivity and interactions with other risks like smoking and interpersonal conflict. Finally, sex differences in CAD mortality and the effectiveness of psychosocial interventions for prevention and treatment are examined.
Learning objectives: define coronary artery disease (CAD) and associated symptoms, distinguish it from other cardiothoracic disorders and define other commonly used terms in cardiothoracic medicine; articulate features of the epidemiology of CAD and associated risk-

factors; critically discuss the efficacy of psychosocial interventions for CAD prevention and remediation.
Assignments: MCQ submission:

Week 8: Cancer
Cancer is expected to impact 1 in 2 of us. While most are aware of the physical impact of cancer the cognitive impact is less known and we will examine this during our session. We also cover biobehavioural approaches to cancer progression and survival.
Learning objectives: by the end of this session students should be able to comment on the impact of cancer on health and cognition, and the interaction of behaviour and biological processes during treatment.
Readings: Janelsins, M. C., Kesler, S. R., Ahles, T. A., & Morrow, G. R. (2014). Prevalence, mechanisms, and management of cancer-related cognitive impairment. *International review of psychiatry (Abingdon, England)*, *26*(1), 102–113. DOI: 10.3109/09540261.2013.864260
Lutgendorf, S. K., & Andersen, B. L. (2015). Biobehavioral approaches to cancer progression and survival: Mechanisms and interventions. The American psychologist, 70(2), 186–197. https://doi.org/10.1037/a0035730
Assignments: MCQ submission, Quiz; Essay #2 Due

Week 9: Pain
Chronic pain impacts up to 40% of individuals (think of lower back pain for example). Its prevalence rises steadily with increasing age, affecting up to 62% of the population over the age of 75 with significant impact on productivity and wellbeing.
Learning objectives: by the end of this session students should be able to demonstrate an understanding of the impact of chronic pain on health and cognition and comment on the demographic and social factors influencing pain.
*Reading*s: Dueñas, M., Ojeda, B., Salazar, A., Mico, J. A., & Failde, I. (2016). A review of chronic pain impact on patients, their social environment and the health care system. *Journal of pain research*, *9*, 457–467. DOI: 10.2147/JPR.S105892
Fayaz A, Croft P, Langford RM, et al (2016) Prevalence of chronic pain in the UK: a systematic review and meta-analysis of population studies BMJ Open;6:e010364. doi: 10.1136/bmjopen-2015-010364
Assignments: MCQ submission, Quiz

Week 10: The impact on care-givers and student final presentations
Caring for others can take a significant toll on one's health. This session focuses on the physical and emotional impact of care giving as well as the impact of socio-economic status on the need for and ability to provide care.
Learning objectives: by the end of this session students should be able to evaluate the role of care-givers and the impact this role has on health and cognition.
Readings: Schulz, R., & Sherwood, P. R. (2008). Physical and mental health effects of family caregiving. *The American journal of nursing*, *108*(9 Suppl), 23–27.
https://doi.org/10.1097/01.NAJ.0000336406.45248.4c
Assignments: The final class will also include student final presentations.

Co-curricular Activity
Group Sound Bath at GEO, Thursday 28 May 6pm