China Scholarship Council – University Maastricht

PhD Programme Application form

Basic information

- To be filled in by the prospective UM supervisors -

1. Information on prospective UM supervisors and Promotor

1a. First Supervisor/promoter:

- Title(s), initial(S), first name, surname: *Prof. Dr. IJ. (IJmert) Kant*
- Research group: *Occupational epidemiology, School CAPHRI, Care and Public Health Research Institute, Maastricht University, The Netherlands*
- Address for correspondence: *Dept. of Epidemiology, Maastricht University, P.O. Box 616, 6200 MD Maastricht, The Netherlands*
- Telephone: *+31-433882378 / 2374*
- E-mail: *ij.kant@maastrichtuniversity.nl*

1b. Second Supervisor/copromoter:

- Title(s), initial(S), first name, surname: *Dr. N.W.H. (Nicole) Jansen*
- Research group: *Occupational epidemiology, School CAPHRI, Care and Public Health Research Institute, Maastricht University, The Netherlands*
- Address for correspondence: *Dept. of Epidemiology, Maastricht University, P.O. Box 616, 6200 MD Maastricht, The Netherlands*
- Telephone: *+31-433882384 / 2374*
- E-mail: *nicole.jansen@maastrichtuniversity.nl*

1c. Promotor (if applicable): – see above

- Title(s), initial(S), first name, surname: *Prof. Dr. IJ. (IJmert) Kant*
- Research group: *Occupational epidemiology, School CAPHRI, Care and Public Health Research Institute, Maastricht University, The Netherlands*
- Address for correspondence: *Dept. of Epidemiology, Maastricht University,*

	P.O. Box 616, 6200 MD Maastricht,
	The Netherlands
- Telephone:	*+31-433882378 / 2374*
- E-mail:	*ij.kant@maastrichtuniversity.nl*

2. Information on UM Faculty/ Department/ Institute/ School contact person:

When the application is granted by both the CSC and UM, the contact person is responsible for the practical arrangements (i.e. assistance in obtaining a visa, finding accommodation, etc.) of the visit of the PhD candidate:

- Initial(s), first name, surname:	*Martijn Streefkerk, MSc, RC*
- Research group:	*Managing Director School CAPHRI, Care and Public Health Research Institute, Maastricht University, The Netherlands*
- Address for correspondence:	*Maastricht University, School Office CAPHRI, P.O. Box 616, 6200 MD Maastricht, The Netherlands*
- Telephone:	*+31 43 388 2314*
- E-mail:	*m.streefkerk@maastrichtuniversity.nl*

- To be filled in by the applicant if already known –

1. Information on the applicant

- Initial(s), first name, surname:
- Male/female:
- Current work address:
- Telephone:
- E-mail: WeChat:
- Private address:

2. Details of applicant's home university

Note! A separate letter of recommendation by the supervisor or faculty dean of the home university is required.

- Name of home university:
- Address:
- Telephone:
- E-mail:
- Website (if available):

3. Applicant's home university Master Thesis supervisor:

- Title(s), initial(s), first name, surname:
- Address for correspondence:

- Telephone:
- E-mail: WeChat:

4. Research field(s)

The theme of the current project perfectly fits within two Priority Majors Highly Recommended, as defined by the Chinese Government for 2023-2027, that is:

全球变化与区域响应 / Global Change and Regional Response

基础研究 / Basic Research

5. Title of research plan for CSC-UM PhD Programme

Towards a regional response to the global threat of obesity and diabetes mellitus:
An epidemiological study on the role of the work environment in the aetiology and course of obesity and diabetes mellitus

6. Short summary of research plan (max. 250 words) (A full plan has to be submitted later)

Background:
Chronic health conditions are of increasing importance with regards to the functioning and labour participation of workers. Two highly relevant and interrelated conditions in this respect are obesity and diabetes mellitus. These two conditions are of increasing global relevance and are highly prevalent among workers in a wide range of countries. Epidemiological research is an essential means for establishing occupational risk factors for obesity and diabetes and to assess those factors which may facilitate or hinder functioning and labour participation of workers with these conditions (Weijman et al. 2004*).

Study objective:
This project aims to identify work related factors relevant for the aetiology and course of obesity and diabetes using an epidemiological approach.

Methods and techniques:
Establishing relevant risk factors in the etiology and course of obesity and diabetes mellitus is a starting point for possible preventive strategies aimed at promoting the health and functioning of workers. The aims of this project can only be met by appropriate epidemiological research, and the conduct of longitudinal analysis techniques.
Data from the ongoing prospective Maastricht Cohort study (MCS) will be used for addressing the study aims. The MCS was established in 1998 among 12,140 workers and surveys a large heterogeneous population of employees from 45 different companies and organizations in the Netherlands (Kant et al., 2003*; Stynen et al. 2015*).
Moreover, during the project all necessary, methodological, epidemiological and clinical knowledge and insight is provided to enable the candidate to set up similar data-infrastructures in China too, hence enabling a regional response to the global threat of obesity and diabetes mellitus.

Expected Results:
It is hypothesized that the work environment has a strong influence on the aetiology and course and of obesity and diabetes among workers. Results of this innovative project can be used for primary and secondary prevention of obesity and diabetes mellitus in the working population.

*

Weijman I, Kant I, Swaen GM, Ros WJ, Rutten GE, Schaufeli WB, Schabracq MJ, Winnubst JA. Diabetes, employment and fatigue-related complaints: a comparison between diabetic employees, "healthy" employees, and employees with other chronic diseases. J Occup Environ Med. 2004 Aug;46(8):828-36. doi: 10.1097/01.jom.0000135605.62330.ca. PMID: 15300135. Citations (Web of Science): 24
Kant IJ, Bültmann U, Schröer CAP, Beurskens AJHM, Van Amelsvoort LPGM, & Swaen, GMH. An epidemiological approach to study fatigue in the working population: The Maastricht Cohort Study. Occup Environ Med. 2003; 60(Suppl 1), i32-39. Citations (Web of Science): 109
Stynen D, Jansen NW, Kant IJ. The impact of depression and diabetes mellitus on older workers' functioning. J Psychosom Res. 2015;79(6):604-613. doi:10.1016/j.jpsychores.2015.07.008. Citations (Web of Science): 10

Requirements:
Highly motivated student, with good English language and communication skills, as well as a proactive attitude. Ideally the candidate has excellent knowledge of epidemiology, work and (public) health, and has already (some) experience with observational epidemiological research, and longitudinal data analysis techniques.

Duration of stay:	48 month PhD training
Starting time:	by mutual agreement
Courses:	Courses can be followed throughout the PhD trajectory, and may involve a.o. Statistics, Epidemiology, Methodology, Presenting in English, and Scientific Writing

Group's performance: Publications: ; H-Index: ; number of citations .

	Publications	**H-index**	**Number of citations**
Prof. dr. IJmert Kant	178	49	7,891
Dr. Nicole Jansen	78	25	2,328

For the proposal relevant key publications by the research group (2016 -2022)

Jennen JGM, **Jansen NWH**, van Amelsvoort LGPM, Slangen JJM, **Kant I**. *Chronic conditions and self-perceived health among older employees in relation to indicators of labour participation and retirement over time.* Work. 2022;71(1):133-150. doi: 10.3233/WOR-210436. PMID: 34924423; PMCID: PMC8842761.
Citations (Web of Science): 0

Jennen JGM, **Jansen NWH**, van Amelsvoort LGPM, Slangen JJM, **Kant IJ**. *Associations between depressive complaints and indicators of labour participation among older Dutch employees: a prospective cohort study*. Int Arch Occup Environ Health. 2021 Apr;94(3):391-407. doi: 10.1007/s00420-020-01584-9. Epub 2020 Oct 21. PMID: 33084927; PMCID: PMC8032620.
Citations (Web of Science): 2

Fleuren BPI, de Grip A, **Jansen NWH, Kant I**, Zijlstra FRH. *Unshrouding the Sphere from the Clouds: Towards a Comprehensive Conceptual Framework for Sustainable Employability*. Sustainability 2020, 12, 6366. https://doi.org/10.3390/su12166366. Citations (Web of Science): 19

Van der Mark-Reeuwijk KG, Weggemans RM, Bültmann U, Burdorf A, Deeg DJH, Geuskens GA, Henkens KCJIM**, Kant I**, de Lange A, Lindeboom M, van Rhenen W, van der Beek AJ. *Health and prolonging working lives: an advisory report of the Health Council of The Netherlands*. Scand J Work Environ Health 2019;45(5):514-519. doi:10.5271/sjweh.3828. Citations (Web of Science): 11

Stynen D, **Jansen NWH**, Slangen JJM, de Grip A, **Kant IJ**. *Need for recovery and different types of early labour force exit: a prospective cohort study among older workers*. Int Arch Occup Environ Health. 2019;92(5):683-697. doi:10.1007/s00420-019-01404-9.
Citations (Web of Science): 3

Kant I, van Amelsvoort LGPM. *Applying a biopsychosocial perspective in occupational health: Easier said than done!* Work. 2017;57(2):149-151. doi: 10.3233/WOR-172550. PMID: 28582942.
Citations (Web of Science): 3

Van Amelsvoort LGPM, de Brouwer CPM, Heerkens YF, Widdershoven GAM, **Kant I**. *Fostering functioning of workers: A new challenge for prevention in occupational health*. Work. 2017;57(2):153-156. doi: 10.3233/WOR-172549. PMID: 28582941.
Citations (Web of Science): 9

Van Amelsvoort LG, **Jansen NW, Kant I**. *Addressing long-term sickness absence: moving beyond disease, illness and work-related factors for effective prevention*. Scand J Work Environ Health. 2017 Jan 1;43(1):1-4. doi: 10.5271/sjweh.3605. Epub 2016 Dec 2. PMID: 27911453.
Citations (Web of Science): 10

Fleuren BPI, de Grip A, **Jansen NWH, Kant I**, Zijlstra FRH. *Critical reflections on the currently leading definition of sustainable employability.* Scand J Work Environ Health. 2016 Jun 1;42(6):557-560. doi: 10.5271/sjweh.3585. Epub 2016 Aug 22. PMID: 27548816.
Citations (Web of Science): 29

Gommans FG, **Jansen NW**, Mackey MG, Stynen D, de Grip A, **Kant IJ**. *The Impact of Physical Work Demands on Need for Recovery, Employment Status, Retirement Intentions, and Ability to Extend Working Careers: A Longitudinal Study Among Older Workers*. J Occup Environ Med. 2016;58(4):e140-e151. doi:10.1097/JOM.0000000000000687.
Citations (Web of Science): 7

The PhD project will be carried out within the research unit Occupational Epidemiology, research line 'Functioning, Participation and Rehabilitation' of the Care and Public Health Research Institute (School CAPHRI), Faculty of Health, Medicine and Life sciences, Maastricht University.
Website School CAPHRI: Care and Public Health Research Institute - Research - Maastricht University .
Research in the unit Occupational Epidemiology focusses on the mutual relationships between work, health and labor participation. Using an epidemiological approach, risk factors in the etiology and natural course of health complaints / diseases in relation to work are determined and the effect of interventions to improve workers' health assessed. Basis for this research is the Maastricht Cohort study (MCS) of which Prof. IJmert Kant is the founding father and project leader. Over 17 PhD students completed their PhD project based on the data-infrastructure of the Maastricht Cohort Study, under supervision of Prof. Kant.

7. Motivation for CSC-UM PhD application (max. 250 words)

The subject of the current project fully fits within two Priority Majors Highly Recommended, as defined by the Chinese Government for 2023-2027, that is:

全球变化与区域响应 / Global Change and Regional Response

基础研究 / Basic Research

This is because the project will provide insight into risk factors in the onset and course of obesity and diabetes mellitus, conditions that pose a global threat and warrant for regional response. Moreover, the aims of this project can only be met by appropriate epidemiological research. During the project all necessary, methodological, epidemiological and clinical knowledge and insight is provided to also enable the candidate to set up similar data-infrastructures in China too, hence facilitating a regional response to the global threat of obesity and diabetes mellitus. As such this project perfectly brings together education, methodology, epidemiology and public health.

In 2020, the WHO reported that worldwide obesity has nearly tripled since 1975. In 2016, more than 1.9 billion adults were overweight. Of these over 650 million were obese. Obesity as such has become a global public health crisis (1,2,3).
A study based on Chinese national data reported that China had the largest number of affected people worldwide, with over 40% of adults and 15% of children being obese or overweight in 2012 (3). These data revealed not only an alarming increase in obesity, but also in non-communicable diseases, such as diabetes, with the prevalence of diabetes reported to be 2.6% in 2002 and 9.7% in 2012 (3).

The IDF Diabetes Atlas Ninth edition 2019 provides information on diabetes worldwide: in 2019, approximately 463 million adults (20-79 years) were living with diabetes; by 2045 this will rise to 700 million.

Diabetes not only imposes a huge health burden but also a large economic burden worldwide. In the working-age population, costs of lost productivity can far exceed diabetes-related medical costs (4).

Since both obesity and diabetes mellitus have such a tremendous global impact both in the general and working population, the subject is highly relevant and suitable for an international collaborative project.
In 2019 the "China blue paper on obesity prevention and control" report was published (5), based on a project that aimed to synthesize existing evidence in the field and help enhance obesity and chronic disease prevention and control efforts in China. Apart from proposing policy recommendations for China, the report also points out directions for future research (1,5), emphasizing a.o. long-term and large-scale obesity research, novel research approaches, enhancing research on environmental risk factors for obesity, and enhancing research on outcome and impact evaluation.

The current project perfectly fits these directions for future research. Observational epidemiological research is a key component for monitoring and predicting the functioning of the labour force and labour force participation with regards to obesity and diabetes, and is, as such, an invaluable tool for public health policy. As such an epidemiologic approach is highly relevant to establish an evidence-based basis for effective interventions to prevent obesity and diabetes and/or tackle suboptimal functioning of workers and reduce work disability in workers with these conditions.

The current epidemiological project is highly feasible as data from the ongoing prospective Maastricht Cohort study (MCS) will be used, with 12,140 workers at baseline and over 16 years of follow-up data. Information from the MCS has proven to be a valuable resource both for research as well policy support as to underpin and develop occupational health policy measures.

1) *Wang Y, Xue H, Sun M, Zhu X, Zhao L, Yang Y. Prevention and control of obesity in China. Lancet Glob Health. 2019 Sep;7(9):e1166-e1167. doi: 10.1016/S2214-109X(19)30276-1. PMID: 31401995.*
2) *Ng M, Fleming T, Robinson M, et al. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet 2014; 384: 766–81.*
3) *Wang Y, Wang L, Qu W. New national data show alarming increase in obesity and noncommunicable chronic diseases in China. Eur J Clin Nutr. 2017 Jan;71(1):149-150. doi: 10.1038/ejcn.2016.171. Epub 2016 Oct 5. PMID: 27703162.*
4) *Png, M. E., Yoong, J., Phan, T. P., & Wee, H. L. (2016). Current and future economic burden of diabetes among working-age adults in Asia: conservative estimates for Singapore from 2010-2050. BMC public health, 16, 153. https://doi.org/10.1186/s12889-016-2827-1*
5) *Wang Y, Sun M, Yang Y. China blue paper on obesity prevention and control. Beijing: Peking University Medical Publisher, 2019.*

Applicant's Curriculum Vitae (if available)

---

8. Personal details

Applicant
- Title(s), initial(s), first name, surname:

CSC-UM PhD programme start 1-9-2022
(proposed start date of the PhD project: 01 September 2023)

- Surname:
- Nationality: Chinese
- Date of Birth:
- Country and place of birth:

9. Master's degree (if applicable)
Note! Add a copy of your Master's degree to your application

University (211 or 985 if available):
Faculty/discipline:
City and country:
Date:
Grade average:
Title Master's thesis (if applicable):
Thesis grade: