1. Registration form

1.1 Details of applicant

Name, title(s)	Hiroshi Nishigori
Male/female	Male
University, Department (or Insitute)	Centre for Medical Education, Kyoto University
Address for correspondence	Yoshida-konoe cho, Sakyo-ku Kyoto, 606-8500, Japan
Telephone	+81-75-753-9325
E-mail	hiroshi.nishigori@gmail.com

1.2 Title of research proposal

Why do doctors work for patients? –from altruism to prosociality, with the perspective of Bushido

1.3 Abstract

Background: Recently medical professionalism is an important topic in medical education and one of its principles is altruism. When altruism is discussed, it should be related to the different cultures and social contracts, respecting local customs and values. Furthermore, though the view that doctors should be altruistic is longstanding, there is an argument that altruism is fundamentally incompatible and that medical educators should employ a more balanced term like prosociality. Finally, as different doctors must have different work values including altruism or prosociality, they should discuss more to share and understand their own work values.

Research Questions: This research will address four main research questions:

1. How is the concept of altruism of doctors perceived in Japan? How does Bushido influence it and other principles of medical professionalism for current Japanese doctors?
2. What influences subjective workload for junior residents? How does altruism relate to it?
3. What do doctors gain (positive benefits) by seeing patients?
4. How could a workshop enables doctors with different backgrounds to share and understand their different work values among them beyond generations and across cultures?

Study Design: Four studies are planned, each addressing one of the research questions above. The first study will use a mixed method, the second and third study will use qualitative methodology, and the last one will use an action research methodology. Data collection will involve an e-survey, semi-structured individual interviews, and focus groups. Convenience sampling and purposive sampling will be employed to include information-rich participants.

1.4 MSc (date and field) main applicant:

Master of Medical Education, University of Dundee, UK (2008)

1.5 Complete name dissertation supervisor(s)

If already known, please state the complete name of the dissertation supervisor(s) for the proposed research.
Professor Tim Dornan, Dr. Jamiu Busari

2. Research proposal

Description of the proposed research

max. 4.000 words (excluding references, including footnotes) for 2.1 and 2.2.
(use word count to specify number of words). Include details of:

2.1 Research topic (theoretical framework, research questions, hypotheses)

<Theoretical framework> Altruism, Bushido, Prosociality, Motivation, and Medical Professionalism
<Literature review, problem statements and research questions>

Recently medical professionalism is one of the most important topics in medical education. Although there is a variety of definitions of medical professionalism, the physician's charter is one of the most frequently referred (1,2). One of the principles of medical professionalism written in the physician's charter is "altruism" (1) and its term is frequently mentioned in a number of recent medical education articles (3-5). In this project, we will focus on altruism and its related concepts under the framework of medical professionalism.

Etymologically, the word "altruism" was coined or popularized in mid 19th century by French social philosopher Auguste Comte (1798– 1857) (Online Etymology Dictionary, 2012). By Comte, altruism is defined against the self-centeredness of egoism—its polar opposite (Online Etymology Dictionary, 2012) and influenced by Christian religion (6). In medicine, the view that medical professionals should be altruistic is longstanding in western culture (7,8). However, when internationally discussing issues of principles of medical professionalism, we must consider how the concept represents traditions of medicine in cultures other than those of the west (1). By following the recommendation by Cruess, when we discuss or teach altruism, it should be related to the different cultures and social contracts, respecting local customs and values (9).

In the context of Japan which is one of the Asian and non-western countries, we imported the term "altruism" from western culture and have been using the translated term when discussing medical education related issues. However, sometimes we felt its concept did not reach the heart of clinicians and medical teachers. That is probably because we have our own word the concept of which is similar to altruism and familiar to us. Under this condition, the question to be asked is, "How is the concept of altruism of doctors perceived in Japan?"

There is a moral guideline handed down over centuries in Japan, which is "Bushido". Its meaning is "the way of the warrior," and it is a historical Japanese code of personal conduct originating from the ancient samurai warriors. Inazo Nitobe published a book "Bushido: The Soul of Japan" in 1900 in English language and describes Bushido as "the code of moral principles which the knights (samurais) were required or instructed to observe" (10). Its seven principal virtues are: "Rectitude (Gi)", "Courage (Yu)", "Benevolence (Jin)", "Politeness (Rei)", "Honesty (Sei)", "Honor (Meiyo)" and "Loyalty (Chugi)". Bushido is likened to chivalry and the noblesse oblige of the warrior class of Europe, which is closely related to altruism. As in the martial arts of Judo or Karate, it has a basis

in Buddhism, Confucianism, and Shintoism(11). While some cultural experts and scholars argue that the influence of Bushido on Japanese society has lessened in this 21st century, many demonstrate that its spirit remains in the minds and hearts of Japanese people, including doctors, and still exerts an unique effect on modern Japanese behavior(12).

Therefore, in the study 1, we are going to clarify similarities and differences between western concept of altruism and other professionalism principles and the seven virtues described in Bushido. We are also going to clarify how the virtues of Bushido influence perceptions and behaviors of current Japanese doctors. As a case study from a country of Far East Asia, we are going to wider the concept of altruism and other professionalism principles in an international sense by adding the results of this study.

As described above, the view that medical professionals should be altruistic is longstanding (7,8). Residents' workload has recently become one of the most important themes in postgraduate training around the world, and behind this trend lie a number of ethical and legal events that have spurred the introduction of work-hour restrictions in many western countries. In the United States, the Accreditation Council for Graduate Medical Education (ACGME) developed work hour guidelines in 2002 which limit resident work-hours to 80 hours per week, after of the unfortunate and much-publicized Zion case.(13) In the UK, the European Working Time Directive (EWTD) was incorporated into British law in 1998 and the gradual restriction of doctors' work hours to 48 hours was implemented (14).

Since these regulations were implemented, numerous studies have sought to assess their impact on the health care and medical educational environment, and their efficacy remains controversial(15-17). A recently-published systematic review demonstrated a reduction in mortality after the implementation of work hour rules.(18) However, as the author mentions, there are lots of factors related to residents' workload which remained unclear, and one theme warranting further study is residents' subjective perception of workload.

It may not at first seem obvious why the construct of altruism should be linked to workload. An essential feature of altruism is that what an individual does on behalf of others carries at least some risk of harm to the self. The risk of harm is an essential component of altruism. Workload is a classic case in point because hard work for patients' benefit may be to the detriment of the doctor. It might even be that a workload ethic (captured by phrases such as "protestant work ethic") might call for doctors actually to harm themselves. The construct of pro-social orientation (its definition is described below in the part of study 3) is importantly different because it calls for doctors to work to the greatest OVERALL good at the least OVERALL harm, giving doctors' wellbeing the same importance as patients'. Therefore, in the study 2, we will aim to identify why and how residents work during their training. That will give insight into the broader issue of doctors' altruism (or the question of why doctors work for patients).

In the study 3, we will look at motivation of work for doctors to explore more into altruism of doctors. Some previous literature argue that altruism is fundamentally incompatible, mainly because of current financial drivers of health care (6,7). Burks argues that an approach to clinical care that is prosocial, which we also discussed above, and empathic is recommended rather than promoting altruism (7). Bishop argues that when discussing altruism medical educators should employ a more balanced term, like prosociality borrowed from the social psychology literature (6).

Prosociality is defined as internal psychological states like attitudes, values, and emotional reactions that value other people, especially others in need (19). Prosocial people want to help others, to contribute to one's community, and to have respectful and caring relationships with others. Its concept focuses on motivation relating to the question why do doctors "want to" work for patients.

Therefore, in the study 3, we are going to clarify what doctors gain (positive benefits) by seeing patients to explore deeper into doctors' altruism through the concept of prosociality. We are going to build theories and describe narratives on this theme and argue prosociality as a concept beyond altruism.

Although we will explore why doctors work for patients, in real clinical and teaching settings there is no doubt that there are doctors working mainly for high income, for high social status, for their personal interests or etc. It is no doubt that these "work values" are different among different doctors, and there is also an argument about generation gap on them (20). Indeed, their differences sometimes cause conflict among doctors, especially from different generations and cultures.

To have bettter communication on doctors work values, in the study 4, we will develop a model workshop for doctors from different generations and cultures to share and understand their own work values and their backgrounds. By developing this model workshop, the ultimate goal is for doctors to understand different work values from their own ones and have better relationships with other doctors, beyond generations and across cultures.

Research questions:

1. How is the concept of altruism of doctors perceived in Japan? How does Bushido influence it and other principles of medical professionalism for current Japanese doctors?
2. What influences subjective workload for junior residents? How does altruism relate to it?
3. What do doctors gain (positive benefits) by seeing patients?
4. How could a workshop enables doctors with different backgrounds to share and understand their different work values among them beyond generations and across cultures?

2.2 Approach (method and setup)

1. How is the concept of altruism of doctors perceived in Japan? How does Bushido influence it and other principles of medical professionalism for current Japanese doctors?

We will describe Bushido's seven virtues, which are "Rectitude (Gi)", "Courage (Yu)", "Benevolence (Jin)", "Politeness (Rei)", "Honesty (Sei)", "Honor (Meiyo)" and "Loyalty (Chugi)".(10) We will compare them with the elements of medical professionalism, referring to the three principles and ten commitments written in the Physician Charter. We will also do a e-survey for about 150 Japanese medical doctors registered to a doctor's bank run by a private company, asking, "Is each the Bushido's virtue still alive in your daily clinical practice?" using Likert scale. We will also ask to write episodes and reasons for each virtue to support their answers by free comments. The results of the Likert scale will be analyzed as a descriptive statistics. The results of the free comments will be analyzed qulaitatively.

2. What influences subjective workload for junior residents? How does altruism relate to it?

We will adopt a grounded theory as a qualitative study methodology for the study 2. The study setting will be three teaching hospitals in Japan (St. Lukes International Hospital in Tokyo, Okinawa Chubu Hospital in Okinawa, and Teine Keijinkai Hospital in Sapporo). We will conduct two to three focus groups for approximately 30 Japanese residents, convenience sampled, in total at the 3 different hospitals. Focus groups are a well-established qualitative method in medical education research and are especially useful for eliciting the trainee perspective.(21) We will elect to conduct focus groups rather than individual interviews because, as suggested in past studies, we postulate that the interactions between participants will provide more information and perhaps even trigger the formulation of new ideas on the theme.(22) All focus groups will be conducted in individual conference rooms without the presence of an institutional supervising physician and lasted approximately 45-90 minutes. The interview data will be tape-recorded and transcribed verbatim immediately following the interview. The data will be iteratively read by HN and analysed by thematic method. Another researcher in the project team will read the transcripts separately and discuss the identified themes with HN. This triangulation process will be adopted to achieve higher reliability of data analysis. Interview guide is the followings;

a) How is your work going on?
b) How do you make work-life balance?
c) What makes your work more comfortable?
d) What makes your work more stressful?

We will get an ethical approval by the Institutional Review Board at the three teaching hospitals.

3. What do doctors gain (positive benefits) by seeing patients?

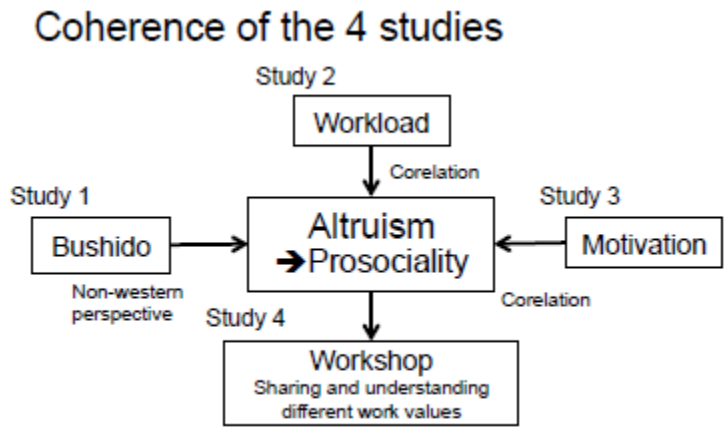
We will adopt a phenomenology as a qualitative study methodology for the study 2. We will conduct semi-structured individual interviews for approximately 10 Japanese doctors, who we think behave prosocially, from 3 different generations (20s to 30s, 40s to 50s, over 60s) from a variety of specialties, purposefully sampled. The interview data will be tape-recorded and transcribed verbatim immediately following the interview. The data will be iteratively read by the first author (Hiroshi Nishigori; HN) and analysed by thematic synthesis method, in which text coding is first performed, followed by the development of descriptive themes, and then generation of analytical themes in the last stage.(23) We will choose this approach because it is suitable for analysing relatively unstructured, text-based data in an inclusive and rigorous manner.(24) Another researcher in the project team will read the transcripts separately and discuss the identified themes with HN. This triangulation process will be adopted to achieve higher reliability of data analysis. Interview guide is the followings;

a) Can you please tell me how you became interested in becoming a doctor?
b) What was the most impressive experience as a doctor so far?
c) What do you think have you gained from the patient?

We will use prosociality as a theoretical framework to analyze the data. We will get an ethical approval by the Institutional Review Board at Kyoto University Graduate School of Medicine.

4. How could a workshop enables doctors with different backgrounds to share and understand their different work values among them beyond generations and across cultures?
We will use an action research methodology (25,26) to develop a model workshop to share and understand different work values among doctors. Action research is defined as a form of collective self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justification of their own social or educational practices, as well as their understanding of these practices and the situations in which they occur (27). We chose this method because of its great potential to generate solutions to practical problems (25), in this case, a lot of arguments for and against different work styles. The study design includes four phases: planning, action, observation and reflection (26). We will plan a workshop, conduct it in a various situations, have evaluations both from the participants and external evaluators, do self reflection among the workshop facilitators, modify the workshop plan, conduct it again, and continue.
We will also create a spider chart using the results of the study 2 and 3 for promoting dialogues for participants in the model workshops we will develop.

The following is the scheme of the 4 studies in our project.



2.3 Literature references

1. Medical Professionalism Project. Medical professionalism in the new millennium: a physicians' charter. Lancet. 2002 Feb 9;359(9305):520–2.

2. Cruess RL, Cruess SR, Steinert Y, editors. Teaching Medical Professionalism. 1st ed. Cambridge University Press; 2008.

3. Klein EJ, Jackson JC, Kratz L, Marcuse EK, McPhillips HA, Shugerman RP, et al. Teaching professionalism to residents. Acad Med. 2003 Jan;78(1):26–34.

4. Gordon J. Fostering students' personal and professional development in medicine: a new framework for PPD. Med Educ. 2003 Apr;37(4):341–9.

5. Faulkner LR, McCurdy RL. Teaching medical students social responsibility: the right thing to do. Acad Med. 2000 Apr;75(4):346–50.

6. Bishop JP, Rees CE. Hero or has-been: is there a future for altruism in medical education? Adv Health Sci Educ Theory Pract. 2007 Aug;12(3):391–9.
7. Burks DJ, Kobus AM. The legacy of altruism in health care: the promotion of empathy, prosociality and humanism. Med Educ. 2012 Mar;46(3):317–25.
8. Coulter ID, Wilkes M, Der-Martirosian C. Altruism revisited: a comparison of medical, law and business students' altruistic attitudes. Med Educ. 2007 Apr;41(4):341–5.
9. Cruess SR, Cruess RL, Steinert Y. Linking the teaching of professionalism to the social contract: a call for cultural humility. Med Teach. 2010;32(5):357–9.
10. Nitobe I. Bushido: The Soul of Japan. CreateSpace Independent Publishing Platform; 2010.
11. Levine DN. The liberal arts and the martial arts. Liberal Education. 1984.
12. Haitao L. A Cultural Interpretation of Japan's Bushido [J]. Dongjiang Journal. 2008.
13. Goitein L, Shanafelt TD, Wipf JE, Slatore CG, Back AL. The effects of work-hour limitations on resident well-being, patient care, and education in an internal medicine residency program. Arch. Intern. Med. 2005 Dec;165(22):2601–6.
14. Pickersgill T. The European working time directive for doctors in training. BMJ. 2001 Dec 1;323(7324):1266.
15. Landrigan CP, Rothschild JM, Cronin JW, Kaushal R, Burdick E, Katz JT, et al. Effect of reducing interns' work hours on serious medical errors in intensive care units. N. Engl. J. Med. 2004 Oct 28;351(18):1838–48.
16. Gopaldas RR, Huh J, Bakaeen FG, Wang XL, Coselli JS, LeMaire SA, et al. The impact of resident work-hour restrictions on outcomes of cardiac operations. J. Surg. Res. 2009 Dec;157(2):268–74.
17. Hutter MM, Kellogg KC, Ferguson CM, Abbott WM, Warshaw AL. The impact of the 80-hour resident workweek on surgical residents and attending surgeons. Ann. Surg. 2006 Jun;243(6):864–71–discussion871–5.
18. Baldwin K, Namdari S, Donegan D, Kamath AF, Mehta S. Early effects of resident work-hour restrictions on patient safety: a systematic review and plea for improved studies. J Bone Joint Surg Am. 2011 Jan 19;93(2):e5.
19. Post SG, editor. Altruism and Health: Perspectives from Empirical Research. 1st ed. Oxford University Press, USA; 2007.
20. Smith LG. Medical professionalism and the generation gap. Am. J. Med. 2005 Apr;118(4):439–42.

21. Barbour RS. Making sense of focus groups. Med Educ. 2005 Jul;39(7):742–50.
22. Dijksterhuis MGK, Voorhuis M, Teunissen PW, Schuwirth LWT, Cate ten OTJ, Braat DDM, et al. Assessment of competence and progressive independence in postgraduate clinical training. Med Educ. 2009 Dec;43(12):1156–65.
23. Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. BMC Med Res Methodol. 2008;8(1):45.
24. Ziebland S, McPherson A. Making sense of qualitative data analysis: an introduction with illustrations from DIPEx (personal experiences of health and illness). Med Educ. 2006 May;40(5):405–14.
25. Meyer J. Qualitative research in health care. Using qualitative methods in health related action research. BMJ. 2000 Jan 15;320(7228):178–81.
26. Cohen L, Manion L, Morrison K. Research Methods in Education. 7(null) ed. Routledge; 2011.
27. Waterman H. Embracing ambiguities and valuing ourselves: issues of validity in action research. J Adv Nurs. 1998 Jul;28(1):101–5.

2.4 Time plan

I anticipate completing the above studies and preparing a PhD thesis that will include articles describing each of the studies along with an introduction, relevant literature review, and discussion integrating the analyses, over a 4 year period.

2.5 Scientific setting

Main publications of applicant(s):

1. Deshpande GA, Soejima K, Ishida Y, Takahashi O, Jacobs JL, Heist BS, Obara H, Nishigori H, Fukui, T. A global template for reforming residency without work-hours restrictions: decrease caseloads, increase education. Findings of the Japan Resident Workload Study Group. Medical Teacher. 2012;34(3):232-9.
2. Nishigori H, Takahashi O, Sugimoto N, Kitamura K, McMahon GT. A national survey of international electives for medical students in Japan: 2009-2010. Medical Teacher. 2012;34(1):71-73.
3. Nishigori H, Sriruksa K. Asian perspectives for reflection. Medical Teacher. 2011;33:580-581.
4. Nishigori H, Masuda K, Kikukawa M, et al. A model teaching session for the hypothesis-driven physical examination. Medical Teacher. 2011.33:410-417.

5. Nishigori H, Otani T, Uchino M, Plint S, Ban N. I came, I saw, I reflected: a qualitative study into learning outcomes of international electives for Japanese and British medical students. Medical Teacher. 2009; 31: e196-e201.
6. Nishigori H, Nishigori M, Yoshimura H. DREEM, PHEEM, ATEEM and STEEM in Japanese, Medical Teacher, 2009; 31: 560.
7. Yudkowsky R, Otaki J, Lowenstein T, Riddle J, Nishigori H, Bordage G. A hypothesis-driven physical examination learning and assessment procedure for medical students: initial validity evidence. Medical Education. 2009; 43: 729-740.

2.6 Setting within Research Group

The studies will be completed basically at the Center for Medical Education, Kyoto University. The Center for Medical Education at Kyoto University will provide essential support for my doctoral work. My boss, Professor Yasuhiko Konishi, will provide dedicated research space as well as funding to support 2 days per week of protected research time. I submitted a grant application to the Ministry of Education, Culture, Sports, Science and Technology for this project. Estimated total costs for this project is 18,000 Euro for conference participation including travel and accommodation, 8,000 Euro for transcription and 16,000 Euro for research assisstant. We do not have many medical education researchers in Japan, especially those who have experience in qualitative research. So, Professor Tim Dornan and Dr. Jamiu Busari will be the main supervisor in the research team. As described above, if I get a grant, we will hire research assistants who will support me for this whole project.

2.7 Output

In publication terms, each of the four studies described above is expected to yield at least one peer-reviewed, published article. In addition, we will present these studies in a variety of international and domestic conferences like the AMEE (Association of Medical Education in Europe), the APMEC (Asian Pacific Medical Education Conference), and the JSME (Japan Society of Medical Education).

2.8 Societal & Scientific Relevance

(if applicable)
max. 1 page.
How can results be applied in other research areas?
How can results be applied in society, business, etc.?

These studies will provide a wider perspective on work values for doctors and practical perspective to teach medical professionalism for medical educators.

3. Signature