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# Vietnamese healthcare practitioners' perception of a course on physical activity on prescription and its usefulness

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#### Vietnamesisk sjukvårdspersonals uppfattning av en kurs i fysisk aktivitet på recept och dess användbarhet

Bakgrund: Välfärdssjukdomar är ett växande problem i Vietnam. Fysisk aktivitet kan användas både som prevention och behandling av många av dessa sjukdomar. Ett samarbetsprojekt mellan Sverige och Vietnam har under 2010-13 arbetat med att i Vietnam utbilda sjukvårdpersonal om fysisk aktivitet på recept, skapa riktlinjer för sjukvården och öka allmänhetens kunskap om fysiska aktivitet via mediekanaler. Denna studie utvärderade kvalitativt en av projektets kurser för sjukvårdspersonal om fysisk aktivitet på recept. Syfte: Att undersöka kursdeltagarnas uppfattning om inverkan av en kurs om fysisk aktivitet på recept. Material och metod: Åtta kursdeltagare intervjuades om kursens olika delar, vad de har lärt sig från kursen och användbarheten av denna kunskap. Data analyserades med manifest innehållsanalys där underkategorier och kategorier skapades. Resultat: De vietnamesiska kursdeltagarna ansåg att kursen hade antingen inverkan på deras yrkesliv, deras livsstil eller ingen inverkan alls. Kursdeltagarna ansåg att kursen var utbildande och motiverande men att kursen också var kort och inte tillräckligt detaljerad. Det var framträdande att deltagarna uppfattade att de hade ökat sin kunskap om fysisk aktivitet. Hinder som deltagarna uppfattade när de försökte implementera kunskapen från kursen inkluderade främst kollegor och patienters okunskap kring fysisk aktivitet men även finansiella hinder samt praktiska svårigheter att utöva fysisk aktivitet. Slutsatser: Kursdeltagarna uppfattade kursen som användbar antingen för deras livsstil, i deras yrkesliv eller för varken eller.

## Vietnamese healthcare practitioners' perception of a course on physical activity on prescription and its usefulness

Introduction: Non-communicable diseases (NCDs) are an increasing problem in Vietnam. Physical activity (PA) can both be used as a preventive measure and as a treatment for NCDs. A collaborative project between Sweden and Vietnam has between 2010-13 worked in Vietnam with educating health care professionals about physical activity on prescription (PaP), to create guidelines about PaP and to increase public awareness of PA by media campaigns. This study is a qualitative evaluation of a course for health care professionals about PaP. Aim: To investigate course participants' perception of the impact of a course on physical activity on prescription. Materials and methods: Eight course participants were interviewed on the course's different parts, on what they have learnt and the usefulness of this knowledge. The data was analysed with manifest content analysis and subcategories and categories were created. Results: The Vietnamese course participants perceived that the course had an impact on either their professional life, personal life and life style or no impact at all. The participants felt that the course was educational and motivational but also that the course was short and not detailed enough. It was evident that the participants perceived that they had increased their knowledge about PA. The obstacles that the participants experienced when implementing knowledge from the course were mainly issues relating to colleagues' and patients' low awareness of the impact of physical activity but there were also financial issues and practical difficulties to practise PA. Conclusions: The Vietnamese healthcare practitioners perceived that the course had an impact on their professional life, personal life and life style or no impact at all.

Keyword: Qualitative Research, Evaluation Studies, Education, Exercise, Vietnam

#### **Abbreviations**

CHI – Compulsory Health Insurance

CME – Continuing Medical Education

HCFP – Health Care Funds for the Poor

HMU – Hanoi Medical University

KI – Karolinska Institute

NCDs – Non-communicable Diseases

PA – Physical Activity

PaP – Physical activity on Prescription

SHI – Social Health Insurance

SOLO – Structure of Observed Learning Outcome

TOT – Training Of Trainers

VHI – Voluntary Health Insurance

WHO – World Health Organisation

#### 1. Introduction

In the last 20 years Vietnam has had a high economical growth and a rapid increase in non-communicable diseases (World Health Organization., 2011b). Health care practitioners in Vietnam face a challenge of addressing prevention and treatment of non-communicable diseases largely through understanding of lifestyle (d. T. Ha et al., 2011). A Swedish Vietnamese collaboration focusing on physical activity on prescription as a way of handling the non-communicable disease issue took place between 2010 and 2013. This study is a qualitative evaluation of one of the training courses that took place during this collaborative project.

#### 1. 1 Non-communicable diseases

Non-communicable diseases (NCDs) are non-infectious diseases e.g. cardiovascular diseases, stroke, chronic lung disease, kidney diseases, diabetes, asthma, cancer, osteoporosis and stroke (World Health Organization., 2011a). Common risk factors for NCDs include tobacco use, obesity, poor diet and physical inactivity (Lee et al., 2012; World Health Organization., 2009). World Health Organisation (WHO) estimates that 63% of the 57 million deaths that occurred in 2008 were due to NCDs, and 80% of these occurred in low or middle income countries (World Health Organization., 2011a). In Vietnam NCDs are estimated to cause 75% of the deaths, while injuries, communicable diseases, maternal, perinatal and nutritional conditions are responsible for the remaining 25% (World Health Organization., 2011b). WHO also estimates that NCDs will increase worldwide between 2010 and 2020, with the most rapid increase at 20% in South-East Asia, Africa and Eastern Mediterranean (World Health Organization., 2011a).

#### 1. 2 Vietnamese health care

In the past 30 years Vietnam has transited from a socialistic economy with a health care system funded by a public health care sector to today's health care system which is partly funded publically and partly through out-of-pocket individual contributions and has both private and public health care providers (Segall et al., 2002). Vietnam has an extensive rural health care that was founded in the 1950s and extended to the south after the reunification in the 1970s (Segall et al., 2002). Before the reforms the health care was close to free for the individual patient, and with highly subsidised drugs. In the 1980s many reforms were introduced and among these service fees and decreased subsidization of drug prices were

introduced. Before the 1990s the local production brigades were responsible for providing the health care but in 1994 the central government took over the financial responsibility (Ekman, Liem, Duc, & Axelson, 2008). Today the majority of higher referral care in Vietnam is given by public hospitals, with a few specialized private hospitals in urban areas (Ekman et al., 2008).

#### 1. 2. 1 Health challenges in Vietnam

Since the 1980s, Vietnam's economy has been one of the fastest growing economies in the world. The growing economy has resulted in improved living standards for the Vietnamese but has also lead to some negative changes in life style, e.g. a more sedentary life, a higher calorie intake and lower intake of fruits and vegetables (Trinh, Nguyen, Dibley, Phongsavan, & Bauman, 2008). Vietnam is facing a major challenge with poverty and high incidence of communicable diseases but also a rapid increase in NCDs (d. T. Ha et al., 2011; World Health Organization., 2011b). WHO estimates that 40.4% of Vietnamese men smoke daily, while only 1.0% of the Vietnamese women smoke daily (World Health Organization., 2011b). The number of tobacco users has remained similar the past 10 years, with a small increase in female smokers (Nguyen et al., 2012).

There has been intensive research conducted on the connection between physical inactivity and NCDs (Hu et al., 2005; Ram & Trivedi, 2012). Physical inactivity is responsible for 21-25% of the colon and breast cancer incidence, 27% of diabetes incidence and 30% of ischemic heart disease incidence (World Health Organization., 2010). The Vietnamese Ministry of Health is now making efforts to prevent an NCD epidemic, and has thus initiated an anti-smoking campaign which includes health warnings on tobacco packaging, a higher tax on tobacco and a tobacco advertising ban (Higashi, Khuong, Ngo, & Hill, 2011). Recently, authorities in Vietnam have started trying to increase the levels of physical activity and prevent obesity in the population and have therefore initiated collaboration with the Karolinska Institute in Sweden.

## 1. 3 An educational, media and policy approach to address the need for physical activity to prevent and treat disease in Vietnam

In 2010 a project called "Physical activity in non-communicable disease prevention in Vietnam: from evidence base to policy implementation" was initiated as a collaboration

between Karolinska Institute in Sweden and Professional Associations for Physical Activity (an association within the Sports Medicine section of the Swedish Society of Medicine) in Sweden and Hanoi Medical University in Vietnam. The Vietnamese Ministry of Health and the WHO office in Vietnam were also collaborating within the project. The project was funded by SIDA (Swedish International Development Cooperation Agency).

The project consisted of three parts: firstly to translate selected parts of the book "Physical activity in prevention and treatment of disease" (Sundberg & al, 2010) to Vietnamese, secondly to conduct a Training of Trainers (TOT) course for Vietnamese healthcare professionals held in Sweden and thirdly to conduct a training and education course on physical activity for patients and healthcare professionals held in Vietnam. By educating TOT-participants the project aimed to build a base of knowledge that could carry the knowledge on to participants in the training courses and by training health care practitioners and medical students the project aimed to implement physical activity in to the clinical practise of the training course participants. The "Physical activity in prevention and treatment of disease" book was meant be used as a base for developing Vietnamese guidelines. The Project also attempted to spread knowledge about the importance of physical activity to the Vietnamese public by educating journalists.

The translation of "Physical activity in prevention and treatment of disease" was completed in October 2012. Two TOT courses were conducted with Vietnamese health care practitioners and were held in Stockholm, Sweden. One course was held between August 29th and September 2nd 2011 and the other between February 20th and 24th 2012, and the two courses had in total 12 participants. The TOT participants have since their training been assisting in the training of other health care practitioners in Vietnam.

#### 1. 3. 1 Training courses

Two training courses on physical activity held in Vietnam have been organised by former TOT participants with cooperation from Karolinska Institute in Sweden, and Hanoi Medical University in Vietnam. The first was held in two locations; in Phu Tho between November 6th and 8th 2011 and in Hanoi between November 9th and 11th 2011. The second training course was held April 16th to 20th 2012 and was given to five groups; for medical and social health students, for health care practitioners in a sport hospital, for health care practitioners in

a geriatric hospital, for nurses and for journalists. The two training courses, in November 2011 and in April 2012, had in total 226 participants.

#### 1. 4 Continuing medical education

All health care practitioners face the challenge to keep themselves updated on the evidence base of clinical practise. Common practise is continued education throughout the professional life of all health care professionals. Licenced medical professionals go through a longer education but after being licenced and obtaining a speciality it is essential to continue to update knowledge and practise to be able to give the patients evidence-based care (Davis, Thomson, Oxman, & Haynes, 1992). Continued medical education (CME) and continuing professional development (CPD) are two somewhat overlapping concepts; this paper will henceforth use the term CME, which describes both continued development of knowledge and managerial, social, and personal skills of medical professionals.

To counsel a patient to make an active lifestyle change can be challenging and the health care professional's attitude towards lifestyle change, confidence in behaviour change techniques and knowledge of the subject are equally important (Pipe, Sorensen, & Reid, 2009; S. C. Thompson, Schwankovsky, & Pitts, 1993). Improvements in these areas can be provided through CME. Studies show that educating the health care professionals in approaches as well as in lifestyle change (e.g. smoking cessation) will increase the impact of the intervention (Ockene, 1987; Svetkey et al., 2009; S. C. Thompson et al., 1993). Trained professionals are more inclined to introduce an intervention, have a higher frequency of interventions and that the interventions are more rigorous than those of untrained professionals (Ockene, 1987; S. C. Thompson et al., 1993). Research shows that many different methods are effective such as implementing guidelines (Grimshaw & Russell, 1993; Wensing, van der Weijden, & Grol, 1998), computer-based learning (Wutoh, Boren, & Balas, 2004), simulations (McGaghie, Issenberg, Petrusa, & Scalese, 2010), lectures, interactive education e.g. role playing or case discussion, feedback, printed materials and reminders. However, not all CME nor interventions are effective and thus CMEs are commonly evaluated so that it can be improved and to establish if the education is necessary or useful.

Interventions and CME on lifestyle changes and obstacles associated with such interventions and CME have been fairly well studied in high-income countries (Barnidge et al., 2013;

Dallat et al., 2013; Hesketh, Waters, Green, Salmon, & Williams, 2005; Messent, Cooke, & Long, 1999; Mosca, McGillen, & Rubenfire, 1998). Low- and middle-income countries are, however, experiencing an increasing risk of NCDs and more interventions are being carried out in low- and middle-income countries (D. A. Ha & Chisholm, 2011; Higashi et al., 2011). However, the field has not been as thoroughly studied in low- and middle-income countries as in high-income countries.

This study is an evaluation of the course held in in Hanoi between November 9th and 11th 2011. The course that was given in Vietnam will make the foundation for future courses and an evaluation will underpin similar projects in the future. Therefore it is imperative that this course is thoroughly evaluated with questionnaires and interviews about how the participants experienced the course and what they gained from it.

#### 2. Aim

The aim of this study was to examine Vietnamese healthcare practitioners' perceptions of a course about physical activity on prescription.

The specific research questions were

- How did the course participants perceive their learning experience?
- How did the course participants perceive the various learning activities of the course?
- Did the participants perceive the course as useful?
- What obstacles do the course participants experience when putting the knowledge from the course to use?

#### 3. Materials and Methods

#### 3. 1 Research approach

A questionnaire evaluation of the course on physical activity on prescription was made coincident with this study. A qualitative approach was chosen in the current study to obtain a nuanced understanding of the course participants' experiences, to capture their thoughts and views and to generate rich data (Patton, 2002; Weurlander & Stenfors-Hayes, 2008). We chose to use interviews to address the research questions and the aim. It should be emphasized that this method cannot capture the informants' actual experiences but only how the informants express their perceived experiences afterwards (Patton, 2002). Rich data often

involves data from semi structured interviews with a few informants rather than collection of statements from many (Patton, 2002).

#### 3. 2 Participants

Eight interviewees were selected from the group that participated in the November 2011 course in Hanoi. The course included lectures on the evidence base of physical activity in treatment of disease, recommendations on physical activity and how to prescribe physical activity. The course also encompassed practical training such as workshops on physical activity on prescription (PaP) networks in Vietnam, patient cases, some break time exercise and a visit to Vietnam's Sport Hospital in Hanoi were physical activity already is prescribed. From Phu Tho 30 doctors, pharmacists, nurses and collaborators participated and from Hanoi 28 doctors, university lecturers and medical students participated in the course.

The learning objectives of the training courses were for the participants to (1) understand the relationship between physical activity (PA) and different aspects of health and disease, (2) understand the basic underlying concepts (and mechanisms) behind those relationships, (3) have knowledge about PA guidelines, (4) be able to assess a patient's lifestyle risk profile using simple methods and measurements (available in primary care versus hospital setting), (5) be familiar with evidence-bases methods to promote PA, (6) know the public health benefits of PA and (7) be able to demonstrate skills in giving adequate advice on PA and make individual PA prescriptions for patients.

The Vietnamese counterparts at Hanoi Medical School assisted with the contact information for the interviewees. The interviewees were selected to obtain a representation of different professions, gender and types of work place, and to capture the breadth of experiences of the course (see Table 1). The interviewees were contacted by telephone in Vietnamese by the hired interpreter, and were given information about the interviews including information that they were not required to volunteer. Before the interviews the interviewees also received written information and signed an informed consent (See Attachment A) that stated that the interviewees could refuse to answer any questions and end the interviews at their convenience. The interviewer also stressed this verbally before commencing the interviews.

**Table 1: Study participants** 

Profession, and specialisation	Work Place	Gender
PhD, MD researcher	National Institute of Nutrition	M
MD, cardiology	National Hospital of Geriatrics	F
Nurse, lecturer	Nursing Department, Thang Long University	M
MD, orthopaedic surgery	Vietnam Sport Hospital	M
MD, physical medicine and rehabilitation	Vietnam Sport Hospital	F
Medical Student	Hanoi Medical University	M
Lecturer of physical education	Department of Physical Education, Hanoi Medical	M
	University	
MD, cardiology	Private Clinic	M

The interviews were held in Hanoi, Vietnam during September and October 2012. The interviewees received 100 000 VND, approximately 32 SEK, as a compensation for their participation. The interviews were held in cafés and conference rooms adjacent to the interviewees' workplace at the interviewees' convenience.

#### 3. 3 Data collection

The interviews were conducted in English by the author using an interview guide (see attachment B). The interviews were recorded on a tape recorder (Olympus Digital Voice Recorder WS-210S). An experienced interpreter was hired and to counteract unintended summaries the importance of translating *verbatim* was stressed. Three interviewees preferred to reply in English and five interviewees preferred to reply in Vietnamese (see Table 2).

The interview guide was constructed around the themes (1) perceived change in knowledge of physical activity on prescription, (2) experience of the different learning activities of the course (3) usefulness of the course and (4) obstacles when working with PA (see attachment B). The three interviews conducted in English were between 13 minutes and 29 minutes long and the interviews conducted in Vietnamese were between 17 minutes and 45 minutes long, including the translation time. One of the interviews was interrupted by a patient and thus the recording included a patient consultation and some of the interviews included small talk. The

irrelevant parts of the interviews were excluded from the active interview time shown in Table 1. The median time that the active part of the interviews lasted was 18 minutes.

The interviews conducted in English were transcribed *verbatim* into text documents. The interpreter's English translations, from the interviews that were conducted in Vietnamese, were transcribed *verbatim* into text documents. The transcriptions were between four and eleven pages long and the patient consultations and small talks were excluded from these transcription documents. One interviewee gave very long replies and the translations that the interpreter made during this interview contained unintended summaries. To ensure the validity and avoid incorrect translations and summaries the interpreter transcribed this interview from recorded Vietnamese to written English. The other seven recordings were transcribed by the author and the transcripts were overseen by the interpreter to ensure that the transcripts were *verbatim*.

Table 2: An overview of the interview data

Interview	Interview	Active	Interpretation	Number of	Transcribed from
#	language	interview time	was used	transcribed	Vietnamese by
				pages	interpreter
1	English	29 min 17 sec		11	
2	Vietnamese	35 min 06 sec	X	5	X
3	Vietnamese	45 min 55 sec	X	8	
4	Vietnamese	17 min 10 sec	x	4	
5	Vietnamese	17 min 06 sec	X	4	
6	English	13 min 30 sec		5	
7	Vietnamese	18 min 42 sec	X	4	
8	English	16 min 30 sec		5	

#### 3. 4 Data analysis

The transcribed interviews were analysed with inductive manifest qualitative content analysis that resulted in identified categories (Graneheim & Lundman, 2004). Due to difficulties with interpreting gestures and posture in an interviewee from another culture and to interpret mood and character of a conversation that is translated by a third party, it was decided to analyse the material in a manifest approach. The analyses were documented in notes to ensure transparency and trustworthiness (Graneheim & Lundman, 2004; Patton, 2002).

The transcribed interviews were read through multiple times and meaning units were found. Meaning units were defined as "words, sentences or paragraphs containing aspects related to each other through their content and context" (Graneheim & Lundman, 2004). The transcriptions were read through by two supervisors to ensure that all meaning units were found. The meaning units were condensed and similar meaning units created subcategories. Categories were formed from the subcategories (see Table 3). The analysis resulted in four main categories that are presented in the results section. To ensure validity the entire analysis were read by and discussed with the supervisors.

**Table 3: Excerpt from the content analysis process.** Data from several interviews.

Meaning units	Condensed meaning units	Subcategories	Categories
The most interesting here is he discuss with eh professor some teachers from Karolinska Institute	It was interesting to discuss with the professors	Enjoyed the	The course was educational, motivational and easy to understand
I love the open atmosphere And eh the open atmosphere is not only between the presenters, the professors and the participants but also among the participants And that was the first time I feel that I am equal to my professor	I loved the open atmosphere between the professors and participants and between the participants	active discussion between participants and teachers	
the lecturer of the professor is very comprehensive and very easy to be understand	The lecturer is very easy to understand	Easy to understand	
when the professors give speech it's very easily understandable	The professors are easy to understand	lecture	
she also find that the course is quite short	I thought the course was quite short	The course was	The course was too short and not detailed enough
the second one is the time of the course	The time of the course was too short	too short	
it's only the general exercise and she she feels very familiar to this exercise because she working very well with the physical activity in this hospital	The course taught general things and I already knew theses things because I work with PA in my hospital	The course was not detailed enough at defining PA,	
she hope that eh in the course the physical activity exercise would have been more particular and more detailed	I hoped that the information about PA would be more detailed	PA related terms or PA prescription in different medical fields	

#### 3. 5 Ethical considerations

This study was based on interviews with the course participants, which meant that the interviewees had to dedicate some time and energy into this project. However the value of the evaluation of the course is that future courses can be improved which may benefit future

course participants. Therefore it was deemed that the value of this study surpassed the inconvenience of the interviewees.

It was taken into consideration that there was a risk that the interviewees felt required to volunteer due to the fact that Karolinska Institutet was a stakeholder in these projects or due to pressure from the Vietnamese hierarchy. An informed consent form (see attachment A) translated to both Vietnamese and English was used to inform the interviewees that the interview was voluntary and that they could refuse to answer the questions or at any time refuse to take part. The interviewer also stressed this verbally before each interview. It was also taken into consideration that the interviewees might have a hectic schedule and that their participation in the interviews would affect them either at work or at home. Hence the interviews were voluntary and the interviewees determined at what time, date and place that the interviews were held.

Because this study was conducted in Vietnam an ethical permission was not applied for in Sweden and the Vietnamese collaborator did not require an ethical permission to interview the participants. To ensure confidentiality the recorded interviews have only been made available to the author and the interpreter and the transcribed interviews have been made anonymised and have only been made available to the author, the interpreter, the supervisors and to supervisor Carl Johan Sundbergs's research group.

#### 4. Results

The results of this study are presented by describing the categories and the subcategories that were created from the meaning units found in the transcribed interviews.

#### 4. 1 The participants' perceived learning experience

The participants that were interviewed came from different professions and had different experiences of physical activity and how to use it before they took the course. The participants also felt differently about how much they had learnt during the course.

#### 4. 1. 1 The participants' level of knowledge before the course

Some of the participants reported that they had heard about PA on prescription and that PA is important for health, and some stated that they had experience of equipment to measure the

effects of PA. Some participants stated that even though they knew about the health benefits of PA before the course they could not give the patient a prescription adapted to the patients' particular situation but could only give some general advice on PA. Some stated that before the course they could not explain the benefits to their patients or give convincing proof. Another aspect was that the course was the first time they heard about PA. It was also evident that prior to the course participants had believed that PA had to be very hard to have any effect, or that it was not important to do PA themselves or that PA was only useful in rehabilitating patients after orthopaedic surgery.

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"[Before the course I know] that the role of physical activity is very important in prevention and treatment of disease [sic]"

(Transcribed from interpreters translation. From interview 4)

"I don't know anything [about PA] before I took this course [sic]"

(Transcribed from interview 8)
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#### 4. 1. 2 Not learned anything new or not learned enough

Some participants stated that they did not learn anything new, because they already knew before the course what was taught in the course. Others stated that they learnt new things but in some way they did not learn enough.

"All the theory I [...] [knew before], also I learned from the lecturer here.

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(Transcribed from interview 1)

"[I have] more [...] knowledge about physical activity but [I] feel that [...] [the]

knowledge, the skill and the practice is not enough for [me] to be confident to be working

with physical activity. When working with students and the patients [I think] that [I]
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(Transcribed from interpreters translation. From interview 3)

#### 4. 1. 3 Learned new things

haven't [...] enough proofs [sic]"

It was found that some participants felt they had learnt how to prescribe PA adjusted to their patients' situation. Some participants also stated that the course had taught them to reduce their own and their patients' sedentary time. Some participants expressed that they had learnt that their patients should take advantage of everyday exercise such as walking the stairs

instead of taking the elevator, or doing household work. Some participants said that the course had taught them that PA could improve their own health and the health of their families and their patients. Some participants stated that they learnt that some patients have a genetically greater risk of becoming obese. It was also evident that participants experienced that the course taught them to understand PA better.

"[I am]also aware of the importance of physical activity and because [I] know that if [I]do physical activity more [I]can improve [my]physical and mental health [sic]" (Transcribed from interpreters translation. From interview 3)

"Afterwards [the course] [...] I believe the [...] importance of physical activity is like, well what can I say? Indispensable! [sic]"

(Transcribed from interview 6)

#### 4. 2 The participants' perception of the learning activities of the course

The interviewees experienced both positive and negative aspects of the course. These aspects either helped or hindered the participants' learning.

#### 4. 2. 1 Educational, motivational and easy to understand

Some participants expressed that they found the lectures understandable even though the lectures were held in English and some participants reported that the translator helped them to make the lectures understandable. Some participants also stated that there was an open and motivational atmosphere that gave them the possibility to take an active part and have a discussion with the lecturers and that they had enjoyed that. Some participants expressed that they received or were referred to interesting articles about PA and some stated that they received statistically proven theories about PA during the lectures. It was evident that some participants felt that the course made them more interested in PA and some participants stated that they felt that they learned how to prescribe physical activity.

"I love the open atmosphere and [...] the open atmosphere is not only between the presenters, the professors and the participants but also among the participants. And that was the first time I feel that I am equal to my professor [sic]"

(Transcribed from interview 6)

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"I really felt interested in this [PA] issue [sic]" (Transcribed from interview 2)
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#### 4. 2. 2 Great curriculum

Participants reported that they enjoyed the curriculum and the different parts of the course. The lectures, the break time exercise where they actively could implement their knowledge about physical activity and get energized were appreciated, and the study visit to a sport medicine hospital that prescribes physical activity had helped them to learn. Some expressed that the course was well organized.

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"[The] organizing [of] the course is very excellent [sic]"
(Transcribed from interpreters translation. From interview 4)
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"[I liked] the physical exercise that professor M. [taught us during the break]. [...] The participants have the chance to practice right away after the theory and [...] [that made it] very easy to remember [sic]"

(Transcribed from interpreters translation. From interview 7)

#### 4. 2. 3. Too short and not detailed enough

Some participants stated that the course was not detailed enough at defining PA, PA related terms or PA prescriptions in different medical fields. Others stated that the course was too short and that they did not learn enough.

"The course is too short so that [I] can not gain allot of content [or] a lot of knowledge [sic]"

(Transcribed from interpreters translation. From interview 4)

"[The lectured] contents for each specific [field] [...] has little information. It has little lesson for each specific fields [...] [sic]"

(Transcribed from interview 8)

#### 4. 2. 4. Too difficult and not practical

Some course participants expressed that the course was too detailed and difficult to understand, some stated that it was difficult to understand because the lectures were in English. Some participants expressed that the course was not practically useful, that the

lectures did not include enough breaks which made it more difficult to learn or that the course was given on weekdays when it was difficult to get time of from work.

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"The first one [problem] is language, the English. [...] [I] also [had] some questions but [I] couldn't express [myself] to the lecturers [in English] and [I] only discussed with [...] some [of] the other participants [sic]" (Transcribed from interpreters translation. From interview 5)

"[...][The] experience of this course is not used in my job [sic]" (Transcribed from interview 8)
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#### 4. 3 The participants' perception of the course's usefulness

The interviewees either found the knowledge from the course useful in their personal life, in their professional life or not useful at all as described in more detail below.

#### 4. 3. 1 The knowledge from the course was useful

Some of the participants expressed that they had used the knowledge they gained from the course in their work, by counselling patients in how to increase their physical activity. Some of the participants expressed that that they had used the knowledge from the course to improve their own or their relatives' health by persuading their relatives to increase their physical activity.

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"[...] some knowledge from the course help [me] allot in working and [I] find that very useful [sic]"

(Transcribed from interpreters translation. From interview 4)
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"[I] acknowledge that [...] the knowledge [I got] from the course will help, not only [...] [my] patient but it also help [myself and] influence [me to do] physical activity and [...][improve my] health [sic]"

(Transcribed from interpreters translation. From interview 3)

#### 4. 3. 2 The knowledge from the course was not useful

Some of the participants stated that the knowledge that they had gained from the course was not useful in their job, or that they were already working with physical activity and the course did not changed the way that they worked. Another aspect was that they had not yet had the chance to use the knowledge that they gained from the course.

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"Because that [I am] working in a physical therapy and rehabilitation department so that [I] already have the physical activity exercise for each patient [sic]" (Transcribed from interpreters translation. From interview 5)

"[I] [...] can not discuss with the students as well as teach the students because [...] [I] haven't had chance to [sic]" (Transcribed from interpreters translation. From interview 3)
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# 4. 4 The participants' perception of obstacles to implementation of the knowledge

The interviewees experienced different obstacles when using their knowledge from the course, and suggested different ways of coping with or solving these obstacles.

#### 4. 4. 1 Practical difficulties and low resources

Some participants stated that there is only equipment of poor quality or not enough equipment for doing PA research in Vietnam and not enough money to buy the needed equipment. Another aspect was that there are practical difficulties to doing PA in Vietnam such as the hot summer weather, having no time to exercise, the traffic chaos of Hanoi and the small living space. Some participants simply stated that there are not enough resources in Vietnam to implement PA on prescription. Others stated that the best way to reduce the obstacles on doing PA for the Vietnamese public was to build more facilities for PA.

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"In Vietnam [...] the resource [...] and also the fund for physical activity on prescription is not much [sic]"

(Transcribed from interpreters translation. From interview 5)
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"It's very hot for example. [...] [In school there should be] a room for exercise like playing ball, with air-condition. It's better, but difficult for Vietnam economy [sic]" (Transcribed from interview 1)

#### 4. 4. 2 Low awareness and not enough information

Some participants expressed that the guidelines were not detailed enough and that this made it more difficult to use the knowledge from the course when working. Others stated that it was too difficult to educate and motivate the patients. Another aspect was that healthcare workers were not familiar with the concept of PA on prescription, or did not like the concept and were not willing to apply it. Some participants stated that it was an obstacle that most material available was in English and not in Vietnamese.

Some participants stated that the greatest obstacle was that they themselves did not know enough about PA on prescription and some expressed that more education about PA on prescription is needed. To overcome the obstacles it was suggested that health care professionals need to motivate patients by giving the patients knowledge on PA and repeating the message many times. Some participants expressed that PA should be taught to children in Vietnam because it would be easier to change behaviour in children than in adults. Others stated that guidelines and information could be found on the Internet. It was also suggested that more courses about PA on prescription should be held. Some participants stated that information about PA should be told on the Vietnamese radio and TV. Others stated that the course participants need to share what they have learnt with their friends, family and colleagues.

"The doctors haven't got any guideline to [...] look up for prescribing PA. [...] PA prescription is the same as medicine prescription [and] it needs to be particular in each patient, especially in patients with function disability, rheumatic or coronal artery diseases [sic]"

(Transcribed from interview 2)

"[We have] to share our knowledge with other doctors. [...] Not every doctor have had the chance to take that course [...] [sic]"

(Transcribed from interview 6)

#### 4. 4. 3 No obstacles, physical activity is widely accepted in Vietnam

Some participants stated that PA was accepted and used in Vietnam already and the courses were therefore not necessary.

"[...] I think it [PA] is widely accepted in the Vietnamese society so [...] people are [...] aware that they have to perform physical activity if they want a longer life and a healthy life [so] of course so its easy to advice people to walk [sic]" (Transcribed from interview 6)

#### 5. Discussion

The aim of this study was to evaluate Vietnamese healthcare practitioners' perception of a physical activity on prescription course. During the analysis of the interviews it became evident that the interviewed participants had experienced the course in different ways. Some of them experienced the course as educational and motivational, and perceived that they had learned a lot and that the knowledge was useful in their work. Some of the participants even deemed the knowledge so important that they made lifestyle changes themselves towards being more active. Others felt that the course was too short, difficult and not detailed enough, and that they did not learn anything new or not enough and they perceived that the knowledge from the course was not useful. This discussion will focus on the strengths and limitations of the evaluated course as perceived by the participants. Here, some interpretations are presented and compared to other studies on similar subjects on the strengths and limitations of the studied course.

#### **5.** 1 Strengths of the course

#### 5. 1. 1 Wide-ranging curriculum including active teaching techniques

A study by (Bloom, 2005) showed that active teaching techniques such as simulations or performing a task and receiving feedback give a deeper learning than a more inactive technique such as lectures. According to (Davis et al., 1992) education is more effective when multiple approaches on learning are combined, such as including both lectures, workshops, study visits and practical training in one course which is consistent with this study's findings. Some participants perceived that the many activities of the course helped them learn; similarly, it was expressed that the possibility to actively take part also helped the participants to learn.

#### 5. 1. 2 Motivational atmosphere

Some participants stated that there was an open and motivational atmosphere that gave them the possibility to take an active part. What can be concluded from both literature and this investigation is that a course which evokes interest and a motivation to learn and which makes the participants active, is more likely to facilitate deep learning and useful knowledge (Biggs & Tang, 2007).

As reported by (J. B. Biggs & Tang, 2007) intrinsic motivation leads to in depth learning and is therefore the most preferred type of motivation for long-lasting knowledge. According to (Schiefele, 1991) interest is "nothing more than the lay term for intrinsic motivation" which leads to the notion that the participants that were interested in PA may have been more motivated to learn.

#### 5. 1. 3 A useful course

The course was designed to teach how to prescribe PA and thus increase the physical activity level of the public, but some of the participants accepted the knowledge so enthusiastically that they made lifestyle changes themselves. It has been shown in research on smoking cessation that health care practitioners who have a high readiness to change their own lifestyle are also more prone to counsel lifestyle changes in their patients (Christensen, 1993; Nardini, Bertoletti, Rastelli, & Donner, 1998). This is an effect that optimistically can be anticipated with the participants that made lifestyle changes and would fortify the outcome of the course.

#### 5. 1. 4 Learning new skills

Many participants perceived that they had learned how to counsel patients about PA, both how to advice the patient and on how to approach the subject of PA. Studies also show that health care professionals who are educated on both approaches and on the subject of lifestyle change will increase the impact of the patient intervention (Ockene, 1987; Svetkey et al., 2009; S. C. Thompson et al., 1993). Research shows that trained professionals are more inclined to introduce an intervention, have a higher regularity of the interventions than do untrained professionals, and that the interventions are more rigorous (Svetkey et al., 2009; S. C. Thompson et al., 1993).

#### **5.** 2 Limitations of the course

## 5. 2. 1 Not tackling the participants' differences in prior knowledge, experience and motivation

The participants interviewed in this study came from different professions and work places and had different levels of experience and knowledge of physical activity on prescription prior to the course. Some of the participants stated during the interviews that they felt that the course was too difficult, and others that the course was not detailed enough. These differences are likely due to differences in prior knowledge. It has been shown that prior knowledge of a subject has a linear correlation with interest in that subject (R. A. Thompson & Zamboanga, 2003; Tobias, 1994). According to (R. A. Thompson & Zamboanga, 2003) prior knowledge and higher interest will lead to better learning outcome. It is also obviously problematic to hold a course for individuals with different levels of prior knowledge. If the gap between prior knowledge and the level of the course is too great, the participant will not be able to understand the course. If the gap is to small the participant will already know all that is taught in the course.

Learning requires that the student is able, motivated and in an environment that promotes learning. Thus, the study environment together with the intrinsic factors of the individual students will affect the learning outcome (J. Biggs, 1979). The study environment that this study has evaluated was consistent for all participants as all of them participated in the same lectures, workshops and study visits. This leads to the notion that the differences in perceived learning outcomes are due to the individuals' intrinsic factors e.g. motivation, ability, previous knowledge, approaches to learning or perception of the course.

#### 5. 2. 2 Duration of the course

It has been shown that the duration of educational interventions such as courses are important (Garet, Porter, Desimone, Birman, & Yoon, 2001). A longer duration of a course gives a deeper learning but research also shows that the span of the intervention is important, i.e. to study a subject during a single five days long occasion has a lower impact than an on-going course that is given once a week but spans a full year (Garet et al., 2001). This is reflected in the findings of this study. Some participants expressed that they that the course was too short and not detailed enough and that this hindered their learning.

#### 5. 2. 3 Obstacles to implementing the knowledge into clinical practise

This study also aimed to find out what obstacles the participants perceived when they tried to implement what they had learned into their clinical practise. These obstacles are not as such limitations of the evaluated course but of the entire educational, media and policy project, where this evaluated course was only one part. However, these obstacles affect the outcome of the course and were thus also examined.

It has been shown in reviews on CME interventions that educational courses can have an impact on physician performance but only if combined with guidelines and clinical policy or feedback and reminders (Davis et al., 1992; Grimshaw & Russell, 1993; Wensing et al., 1998). This was echoed in participants' responses that the guidelines were not detailed enough. The participants also expressed that not having detailed guidelines was an obstacle when working with physical activity. The Vietnamese national guidelines and the translation of the book "Physical activity in prevention and treatment of disease" were not yet completed at the time of the interviews. National guidelines for physical activity will presumably increase the chance of physicians implementing and using their knowledge.

Studies show that increasing greenways or improving sidewalk can increase physical activity among the public in a cost effective way (Barnidge et al., 2013; Dallat et al., 2013). The interviewees in this study similarly perceived that the Hanoi environment with its hot weather, small living space and chaotic traffic was a big obstacle to increasing the physical activity among the public. Many interviewees also felt that there are not enough resources to improve the environment at present.

#### 5. 3 Methodological considerations

#### 5. 3. 1 Limitations of this study

The aim of this study was to evaluate a course and examine what the participants perceived that they had learnt, the perceived usefulness of the course and obstacles of using the knowledge in clinical practise. The study might have benefitted from having a clearer aim. The interviewee selection was at the start of the study meant to include four participants from the course that was held in Phu Tho. This would have meant that this study could have validated the data through cross verification of data from two different sources i.e. data triangulation, and which could have given this study a higher credibility.

An interviewer with good knowledge of Vietnamese culture and language would have been able to get a deeper understanding of the interviewees' answers. Using an interpreter to conduct interviews increases the risk of misunderstanding, unintended summaries made by the interpreter and loss of nuances. Another limitation of the study was that the data consist of the interviewees' self-reported experiences. Self-reporting is common in qualitative research, but self reported experiences cannot be measured quantitatively and can depend on and vary with the individual. Finally, the study would have benefitted from being analysed by two independent researchers. However, in order to ensure trustworthiness of the findings, the analysis and emerging findings were discussed thoroughly with the supervisors.

#### 5. 3. 2. Strengths of this study

A clear strength of the study was that the same experienced interpreter was used in all interviews. The author both interviewed and transcribed all the interviews and the interpreter also oversaw the transcriptions from the interview to ensure a higher credibility and *verbatim* transcriptions.

Due to difficulties in obtaining authorization to interview participants from Phu Tho, eight participants from the Hanoi course were selected instead and the selection from the Hanoi course had a wide representation of different professions, gender and type of work place to capture the breadth of experiences of the course. Transferability is in qualitative research defined by to what degree the results are transferable or generalized to other groups through the eyes of the readers (Shenton, 2004). This study is based on eight interviews and can only represent these interviewees' opinions, but this study also studies the general phenomenon that students embrace knowledge differently and this general phenomenon can have some transferability to similar course evaluations especially so since this evaluation had a wide selection of participants.

#### 5. 4 Clinical implications and future research

The evaluated course will make a foundation for future courses and this evaluation will be used to underpin similar projects in the future. There is need for further research on how to prevent NCD's in low- and middle-income countries. Our results also highlight the importance of research on how to implement risk factor reduction interventions in low- and

middle-income countries such as Vietnam. The findings in this paper suggest that low- and middle-income countries may have different obstacles due to differences in resources. More research is needed on cost-effective ways to increase PA in low- and middle-income countries.

#### 6. Conclusion

Some of the Vietnamese healthcare practitioners interviewed in this study perceived that they learned more about how to prescribe physical activity and some perceived that they did not learn anything new or did not learn enough. The course participants experienced the various learning activities of the course as educational, motivational and easy to understand with a suitable curriculum but also too short, not detailed enough, too difficult and not practical. They deemed the course useful for their professional life or their personal lifestyle, but in some cases that the course was not useful. Practical difficulties, low resources, low awareness and not enough information were perceived as obstacles to putting the knowledge from the course to use. Some participants experienced no obstacles and perceived that physical activity was widely accepted in Vietnam. Overall, the course was successful as most participants reported that they had learned more about physical activity on prescription and most participants found the course useful. However, the course could be improved by extending the duration, using Vietnamese-speaking lecturers and by giving to course to a more homogeneous group.

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#### Attachment A – Informed Consent

#### Thoả thuận tham gia nghiên cứu

Cuộc phỏng vấn được thiết kế nhằm đánh giá hiệu quả của khoá học đào tạo "Kê đơn hoạt động thể lực" mà Anh/Chị từng tham gia vào tháng 11 năm 2011. Chúng tôi đánh giá với mục đích tìm hiểu những trải nghiệm của Anh/Chị về khoá học và những suy nghĩ của Anh/Chị về hoạt đông thể lực.

Cuộc phỏng vấn sẽ diễn ra trong khoảng một tiếng, và được ghi âm lại. Việc tham gia phỏng vấn là hoàn toàn tự nguyện; Anh/Chị có thể dừng bất cứ lúc nào mà bạn không muốn tham gia hoặc không muốn trả lời một vài câu hỏi nào đó. Các thông tin được ghi âm lại cũng như tính danh của Anh/Chị sẽ được giữ bí mật khi báo cáo nghiên cứu.

Đây là một nghiên cứu định tính được thực hiện giữa sự phối hợp của viện Karolinska - Thuỵ Điển và Trường Đại học Y Hà Nội – Việt Nam. Kết quả và báo cáo của nghiên cứu sẽ được công bố trên các tạp chí trong nước và quốc tế.

Mọi chi tiết thắc mắc về cuộc phỏng vấn xin Anh/Chị liên hệ email: idatruenjuliasvensson@gmail.com

#### **Informed consent**

This interview is designed to evaluate an education program on physical activity on prescription that you participated in November 2011. The evaluation aims to find out how you have experienced the course and your thoughts on physical activity.

The interview will take approximately one hour, and the interview will be recorded.

This interview is voluntary; you can at any point chose that you would not like to participate or decide that you do not wish to answer some of the questions.

The information recorded is confidential and you will be anonymous in the final report.

This is a qualitative study conducted as cooperation between Karolinska Institute, Sweden and Hanoi Medical University, Vietnam. The final report might be published in national and international journals.

If you would like to contact me after this interview please email idatruenjuliasvensson@gmail.com.

#### Đối tượng tham gia nghiên cứu:

Tôi đã đọc các thông tin trên, cũng như được nghe mô tả kỹ về nghiên cứu. Tôi đã được quyền đặt các câu hỏi và được giải thích rõ ràng, dễ hiểu. Tôi hoàn toàn đồng ý tham gia vào nghiên cứu.

#### **Participant:**

I have read the foregoing information, or it has been read to me. I have had opportunities to ask questions and any questions I have had has been answered to my satisfaction. I consent voluntary to be a part of this study.

Ký tên /Signature Họ tên đầy đủ/Name in print Ngày phỏng vấn/Date

#### Nghiên cứu viên:

Tổi đã cung cấp đầy đủ cũng như đọc chính xác các thông tin cần thiết cho đối tượng tham gia nghiên cứu. Tôi để cho đối tượng được quyền đặt các câu hỏi về nghiên cứu và đã trả lời các câu hỏi một cách chính xác nhất trong khả năng của mình.

Tôi đảm bảo các đối tượng không bị ép buộc phải tham gia nghiên cứu và việc tham gia nghiên cứu của các đối tượng là hoàn toàn tự nguyện.

Đối tượng tham gia nghiên cứu đã được cung cấp một bản sao của thoả thuận nghiên cứu này.

#### **Researcher:**

I have given the potential participant the information or accurately read out the information. I have given the participant the opportunity to ask questions about the study and I have answered those questions correctly and to the best of my ability.

I confirm that the participant has not been coerced into giving consent and that the consent has been given freely and voluntary.

A copy of this informed consent has been given to the participant.

Ký tên/Signature

Họ tên đầy đủ/Name in print Ngày phỏng vấn/Date Julia Svensson

#### **Attachment B – Interview Guide**

#### **Starting question**

Please tell me about your experience of the course?

#### Theme: Knowledge about physical activity on prescription

Please tell me about what you knew about physical activity on prescription before you started the course?

Please tell me about what you know about physical activity on prescription now?

#### Theme: Learning activites from the course

Was there something particular in the course that helped you to learn these things? What? Can you give examples? Activities in the course that you remember particularly? Was there anything in the course that made it more difficult to learn these things? What? Can

you give examples?

#### Theme: Usefulness of the course

Tell me about how you use physical activity in your job?

#### Theme: Obstacles when implementing the knowledge

Tell me about any obstacles you have encountered when working with physical activity? How did you handle these obstacles?