

*(Please submit the application in English)***Hong Kong Baptist University**Faculty Research Grant *Category II*

Application Form

(Funding Limit: \$150,000)

1. Project Title:

The Effectiveness of an E-Intervention on Health Behavior Promotion in Chinese University Students

2. Name(s) of Applicant(s):

	Name	Department & Post Title	HKBU Staff I.D. No.
Principal Investigator: (with title e.g. Prof., Dr., Ms., Miss)	Dr Duan Yanping (段艷平)	Assistant Professor PE	118411
Co-investigator(s): (with title e.g. Prof., Dr., Ms., Miss)	Mr Chen Xu	Associate Professor Department of Physical Education Nantong University	
	Dr Cui Degang	Associate Professor Physical Education Section Wuhan University	
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	Prof Lippke Sonia	Professor Jacobs Center on Lifelong Learning and Institutional Development Jacobs University Bremen	
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3. Abstract of research:

(Please provide a short abstract of ½ page or 200 words. The abstract should be comprehensible to a non-specialist)

Through internet and mobile phone SMS technology, and by using the Health Action Process Approach model as a theoretical backdrop, this 8-week theory-based intervention study aims at developing a healthy lifestyle by supporting physical activity (PA) and a healthy dietary for Chinese university students.

Students will be recruited at general PE classes. The online registration and personal information will be completed within the first two weeks of one semester (T0). Then students will be randomly assigned into one of three groups. (1) Intervention group I (IG-I): sequentially with PA first (4 weeks) followed by diet (4 weeks); (2) IG-II: sequentially diet first (4 weeks) and then PA (4 weeks); (3) the control group (CG) will not participate in any support program during the intervention period and the 1-month extension. Besides, all groups will be contacted to collect data at the beginning of the intervention (T1), at the end of intervention (T2), and at one month after the intervention (T3). Data collection will be completed on the e-health learning website through electronic questionnaires.

We will examine whether the students in the two intervention groups improve their motivation for PA and healthy diets in comparison to the control group; whether, with the help of an intervention program, students are able to increase their PA levels and healthy diet consumption, and whether there are different effects between the two intervention programs. We believe the study findings will provide an e-health learning approach to support Chinese university students to maintain their health behavior in daily life.

4. The project aims, its long-term significance:

(State the aims, identify the key issues and problems being addressed and list the possible outcomes of the research project, as well as its significance and value) (Maximum 600 words or 1 page)

Key issues and problems:

A successful transition from late adolescence to adulthood is essential for university students. Physical activity and healthy diet can support this process and lead to positive health outcomes. However, considerable evidence has revealed a significant decline in PA behavior participation among university students worldwide (Vankim, Laska, Ehlinger, Lust & Story, 2010). Additionally, study in China revealed that approximately half of the university students do not eat fruits every day and one third of students do not eat dark vegetables for long time (Li, 2014). Such a pattern of unhealthy lifestyle habit, which is reinforced during university, has a significant effect on behavior and health in later adulthood (Epton, Norman, Dadzie et al., 2014). Therefore, it is critical for university students to be motivated to adopt and maintain healthy lifestyle during this transition period.

The project aims:

The aim of this project is to examine the effectiveness of two website & SMS prompts-based e-health learning courses (intervention groups I-II, IG-I: sequential first physical activity, then dietary; IG-II: sequential first dietary, then physical activity) compared to a control group condition. Individuals who participate in e-health learning programs should be encouraged to develop a healthy lifestyle in their daily life, with a primary focus being on motivation, behaviour change and quality of life.

The possible outcomes of the research project are to provide knowledge on:

1. Participants in the intervention groups (IGs) gain a higher motivation for physical activity and healthy diet in comparison with a control group.
2. Participants in the intervention groups (IGs) increase their physical activity levels and healthy diet consumption in comparison with a control group.
3. Participants in the intervention groups (IGs) gain higher perceived quality of life in comparison with a control group.
4. The order of the addressed behavior (IG-I, IG-II) results in different effects.

Long-term significance:

This study will be the first step in an e-health learning intervention for physical activity and dietary behaviour change in Chinese university students. By using innovative theory-based e-health learning technology, new insights for health education can be gained. In the long term, this study's results will provide information on the usability of e-health learning interventions among university students to develop and support their healthy lifestyle habit in daily life.

In addition, this study will apply the Health Action Process Approach (HAPA; Schwarzer, 2008) model, which has been proved to be applicable to diverse participants in different health behaviours, so that contributions can be made to the development of the HAPA model in health behaviour research among Chinese university students.

To our knowledge, very few studies have provided a direct test of the difference between sequential e-health learning programs for changing multiple health behaviors (e.g., Vandelanotte, De Bourdeaudhuij, Sallis, Spittaels, & Brug, 2005). This study will explore whether the order of the sequential programs (IG-I, IG-II) results in different effects.

5. Objectives (State the objectives in point form):

- Objective 1:** 1. To test whether participants in the intervention groups (IGs) improve their motivation for physical activity and healthy diets compared to the control group.
- Objective 2:** 2. To test whether participants in the intervention groups (IGs) increase their physical activity levels and healthy diet consumption compared to the control group.
- Objective 3:** 3. To test whether the intervention program can improve participants' perceived quality of life.
- Objective 4:** 4. To test whether the order of the addressed behaviours (IG-I, IG-II) results in different effects.

6. Background of research, research plan and methodology: : (Maximum 6 pages, excluding references)

[Summary of related work that has already been done and an outline of previous and alternative approaches to the problem -

(a) By others (give key references)

(b) By the investigator(s) (give key references)

(c) Progress report (for on-going projects)]

[Explain, in terms of the educated layman, the novel idea which you will be introducing to tackle the problem in question. Please include key references. Attach a draft questionnaire should the research plan involve a survey/interview.]

Background of research

(a) Work done by other researchers (with key references)

This intervention study will be based on the Health Action Process Approach (HAPA; Schwarzer, 2008; Figure 1). The basic idea of this approach is that during the process of health behaviour change, people go through different phases in which their thoughts, feelings, and behaviours differ on each level. The HAPA Model distinguishes between motivational processes, in which the intention (goal setting) is the main focus, and volitional processes, in which the initiation and the maintenance (goal pursuit) of the behaviour are central. Within the volitional phase, a distinction between people who have the intention to perform a specific behaviour but do not act (intenders) and people who already perform the behaviour (actors) can be made.

This distinction allows the tailoring of interventions to the variables which are relevant in a specific stage. For example, people who have not formed the intention to change their behaviour (non-intender) benefit most from interventions which increase their risk perception, increase self-efficacy, and promote positive attitudes (e.g., Schwarzer, Cao, & Lippke, 2010). On the other hand, people who already have the intention to change their behaviour, benefit the most from planning interventions (Lippke, Schwarzer, Ziegelmann, Scholz, & Schüz, 2010); such intervention should help them to set goals, determine priorities, and to translate their action plans into behaviour. For people who are currently active, self-regulatory skills are substantial for their maintenance process. The behaviour will mainly be directed by self-efficacy, because it regulates how effort is invested and how persistence is managed if barriers and setbacks occur. Meanwhile, promoting perceived social support from social environment is critical to prevent relapse (Schwarzer, 2008).

Several studies have confirmed the effectiveness of stage-based interventions based on the HAPA model in improving healthy dietary (Wiedemann, Schüz, Sniehotta, Scholz, & Schwarzer, 2009), physical activity (Lippke et al., 2010), and other health behaviours (e.g., Payaprom, Bennett, Alabaster, & Tantipong, 2011).

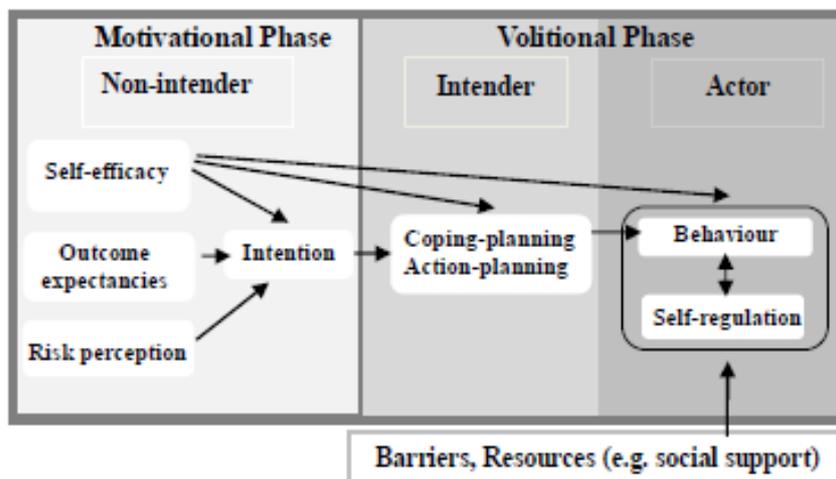


Figure 1: The Health Action Process Approach (Schwarzer, 2008)

However, it is still uncertain how multiple health behaviours (PA and dietary) can best promote (Vandelanotte et al., 2005). Concepts such as the transfer of learning content from one behaviour field to another (Fleig, Kerschreiter, Schwarzer, Pomp, & Lippke, 2014) or compensatory cognitions (“I have to do some activity now because I have eaten so many candies”) have received little attention (Fleig, Küper, Lippke,

Schwarzer, & Wiedemann, 2015). However, first studies indicate that it is useful to address these concepts explicitly in interventions (e.g., Nigg, Lee, Hubbard, & Min-Sun, 2009).

For the e-health interventions approach (website plus SMS) applied in health behaviour change, in the last decade, a growing body of research has proved its efficacy in diverse populations (e.g., Lustria, Cortese, Noar, & Glueckauf, 2009; Webb, Joseph, Yardley, & Michie, 2010). However, there is a void of e-health interventions for PA and dietary behaviour change among Chinese university students.

Schwarzer R. (2008). Modeling Health Behaviour Change: How to Predict and Modify the Adoption and Maintenance of Health Behaviours. *Applied Psychology: An International Review*, 57: 1–29.

Schwarzer R, Cao DS, & Lippke S. (2010). Stage-matched minimal interventions to enhance physical activity in Chinese adolescents. *Journal of Adolescent Health*, 47: 533-539.

Lustria MLA, Cortese J, Noar SM, & Glueckauf RL. (2009). Computer-tailored health interventions delivered over the web: Review and analysis of key components. *Patient Education and Counseling*, 74: 156-173.

Webb TL, Joseph J, Yardley L, & Michie S. (2010). Using the Internet to promote health behaviour change: A systematic review and meta-analysis of the impact of theoretical basis, use of behaviour change techniques, and mode of delivery on efficacy. *Journal of Medical Internet Research*, 12(1): e4.

(b) Work done by the investigators (with key references)

During the past several years, the investigators of this study have conducted a series of related research. Targeting Chinese college student samples, Dr. Duan, the principal investigator, carried out two cross-sectional studies to verify the stage-specific characteristics of PA behaviour change within the HAPA model (Duan, 2006; Duan, Lippke et al., 2011). In addition, Dr. Duan conducted two quasi-experimental studies to evaluate intervention effects for PA behaviour promotion among Chinese university students (Duan, Lin & Cui, 2005; Duan, Liu & Wei, 2010).

Prof. Lippke, a co-investigator of this study, has made a large contribution to the field of multiple health behaviour research. In the past, based on the HAPA model, she has successfully and intensively implemented interventions involving motivational and volitional phases of health behaviour change (PA and dietary behaviour) in different settings, such as rehabilitation (e.g., Lippke, Fleig, et al., 2010; Lippke, Fleig, et al., 2015). During April 2012 and March 2015, Dr. Duan was involved in an international collaboration project (RENATA), which was managed by Prof. Lippke. This project was to test the effectiveness of an online field experiment in Germany, Netherland and China to provide an example for the potentials of online applications in health promotion. As one of the research output, the study protocol of RENATA project has been published (Reinwand, Kuhlmann, Wienert, de Vries, & Lippke, 2013). In China, with an internal grant from Hong Kong Baptist University, the PI completed a pilot study of this e-health learning program among Chinese cardiac rehabilitation-aftercare patients in December 2014. This pilot study provided preliminary support in terms of (1) reliability and validity of all Chinese version questionnaires and (2) feasibility of the research methods. All these related research output allows investigators to implement e-health program among Chinese university students to test the intervention effectiveness.

Duan Y.P. (2006). Stage Models of Physical Activity Behavior and Their Application to Chinese Adults (doctoral dissertation). Bayreuth: Bayreuth University Press. Germany.

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- Duan, Y.P., Liu, L.F., & Wei, X.N. (2010). An Intervention Study on the Promotion of University Students' Physical Exercise Intention. *The Journal of Wuhan Institute of Physical Education*, 44(12), 43-46. (in Chinese).
- Lippke, S., Fleig, L., Pomp, S., & Schwarzer, R. (2010). Validity of a stage algorithm for physical activity in participants recruited from orthopedic and cardiac rehabilitation clinics. *Rehabilitation Psychology*, 55(4), 398-408.
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- Reinwand D, Kuhlmann T, Wienert J, de Vries H, & Lippke S. (2013). Designing a theory- and evidence-based tailored eHealth rehabilitation aftercare program in Germany and the Netherlands: study protocol. *BMC Public Health*, 13:1081. DOI: 10.1186/1471-2458-13-1081

Methodology

Participants

University students who are not professional athletes and have no contraindication with respect to PA or fruit and vegetable consumption will be eligible to participate in the study. As the study involves an online website and mobile phone SMS, only students with access to the Internet and a mobile phone will be enrolled. For the main study, the sample size will be estimated by using G*Power 3.1 software with MANOVA approach (repeated measure). For achieving small effect size of 0.15 (Lippke, Fleig, Wiedemann, & Schwarzer, 2015), with a power ($1 - \beta$) of 0.8 and alpha of 0.05, the total sample size will be 306. Assuming a drop-out rate of approximately 30%, a total of 399 participants will be required for the study evaluation.

The study participants will be recruited from Physical Education classes with the assistance of PE lecturers. Students will come from Wuhan University in the center of China and Nantong University in the east of China.

Procedure

(1) Validation stage

Three steps will be carried out prior to conducting main study. Step 1: Validating questionnaires and intervention materials in order to match university student population. Researchers first adjust some inappropriate materials, then two students will be asked about their understanding of the questionnaire and intervention materials to ensure the content validity of measurements. Step 2: Setting up a website. Based on the previous e-health study among Chinese cardiac rehabilitation patients, all technological functions of website will be built and implemented. Step 3: Testing website function. Researchers will check all website programs to ensure the operation of website function before launching main study.

(2) Main study stage

On the first PE class in one semester, students will be informed about the study by their lectures with relevant information materials. After making agreement with PE lectures, those students who are willing to participate in and complete this program will get additional 10 marks as bonus in the final PE exam. Once individuals show their interest and consent, they will sign up in a study information sheet and be

required to complete online registration and personal information within the first two weeks (T0). Then students will be randomly assigned into one of three groups. (1) Intervention group I (IG-I): sequentially with PA first (4 weeks) followed by diet (4 weeks); (2) IG-II: sequentially diet first (4 weeks) and then PA (4 weeks); (3) the control group (CG) will not participate in any support program during the intervention period and the 1-month extension. Besides, all groups will be contacted to collect data at the beginning of the intervention (T1), at the end of intervention (T2), and at one month after the intervention (T3). Data collection will be completed on the e-health learning website through electronic questionnaires.

Besides, all groups will be further contacted for collecting data at the beginning of intervention (T1), at the end of intervention (T2), 1 month after the intervention (T3). All data collection will be completed on the e-health website with the use of electronic questionnaires.

Intervention

The intervention will address the basic elements of the HAPA model via the use of behaviour change techniques. In line with Abraham and Michie (2008), we use several behaviour change techniques like providing information about behavioural risk and benefit of behaviour change, prompting intention formation, prompting barrier identification, providing instructions how to perform a behaviour, prompting specific goal setting and review of behavioural goals, providing feedback on performance, prompting practice and providing follow-up prompts, prompting to plan social support and finally prompting relapse prevention, also based on strategies used by other effective computer tailoring programs (Schulz, Kremers, van Osch, Schneider, van Adrichem, de Vries, 2011).

Each of the two intervention groups (IG I-II) will receive an eight-week support program. Participants are required to access the online program once per week and take part in one of the intervention modules. The intervention aims to increase participants' risk perception of cardiovascular diseases, support positive outcome expectancies towards physical activity (PA) and fruit and vegetable intake (FVI), and guide participants in defining and reflecting on their own goals, action plans and coping plans. Further, self-efficacy regarding the participant's ability to perform and maintain the two targeted behaviours will be addressed. Table 1 presents a short overview about the weekly intervention content.

Table1 Intervention content

Weekly sessions	Weekly content
Session 1 PA and Session 5 F&V Session 1 F&V and Session 5 PA	Questionnaire and personalized feedback, increase risk perception and outcome expectations, defining own health outcomes
Session 2 PA and Session 6 F&V Session 2 F&V and Session 6 PA	Personalized feedback, defining action plans
Session 3 PA and Session 7 F&V Session 3 F&V and Session 7 PA	Personalized feedback, evaluation and self-reflection about action plans, adjusting action plans, defining personal barriers, developing personal coping plans, evaluation and reflection about coping plans
Session 4 PA and Session 8 F&V Session 4 F&V and Session 8 PA	Personalized feedback, adjusting coping plans, thinking about social support and development of a list of potential supporters from the social environment (Session 8: T2 questionnaire)

Note: PA stands for physical activity; F&V stands for fruit and vegetable consumption.

The intervention will be enriched by different kinds of feedback: ipsative feedback will be used to provide participants with an overview of their development with regard to PA and FVI (DiClemente, Marinilli, Singh, & Bellino, 2001). At the beginning of each session participants will be asked about PA or FVI during the preceding seven days. After that, they will receive tailored feedback about their behaviour. Normative feedback will be provided to give information about whether the behaviour meets the recommendations for both target behaviours (Schulz, Schneider, de Vries, van Osch, van Nierop, & Kremers, 2012). Feedback will not only be based on the assessment at the beginning of the intervention T1 but also given dynamically with the use of information that will be assessed during the intervention. In this way the feedback is based on the newest information and contains more relevant information. "Mr. Su, you ate 3 portions of fruit and vegetable per day. This is a bit more than the last time. Great! But remember, it would be good for you to eat at least 5 portions fruit and vegetable a day. E-health learning program can support you to achieve this goal." In addition, a figure will present the prior behaviour, the behaviour of the past weeks, and whether participants fulfill the recommended amount of PA or FVI.

During the intervention, participants will also simultaneously receive a SMS message via mobile phone each week reminding them of their weekly sessions. SMS reminders will also be sent to participants at T3.

Measures

All measurement instruments have been validated in a previous pilot study with Chinese cardiac rehabilitation participants. Full details of questionnaires are provided in the attachment. The standardized electronic questionnaires consist of four parts.

1. Demographic information: These items include gender, age, study year, university name, marital status, self-reported body height (in cm) and body weight (in kg).

2. Social-cognitive variables related to physical activity and dietary behaviour

Stage algorithm: For PA, participants will be asked "Please think about your typical weeks: Did you engage in PA at least 5 days per week for 30 minutes or more?" Regarding dietary, participants will be asked "Please think about what you have typically consumed during the last weeks: Did you eat five portions of fruit and vegetables per day?" Responses are based on a rating scale with verbal anchors ("No, and I do not intend to start"; "No, but I am considering it"; "No, but I seriously intend to start"; "Yes, but only for a brief period of time"; "Yes, and for a long period of time") and are designed like a rating scale (Lippke, Ziegelmann, Schwarzer, & Velicer, 2009).

Outcome expectancies will be measured by two Pros items and two Cons items for each behavior (Pros: Cronbach's α for PA= 0.76; Cronbach's α for F&V= 0.93. Cons: (Cronbach's α for PA= 0.47; Cronbach's α for F&V= 0.42). (Schwarzer, Lippke, & Luszczynska, 2011). **Self-efficacy:** Self-efficacy will be differentiated into motivational, maintenance and recovery self-efficacies. Motivational self-efficacy will be measured by one item for each behavior. Maintenance self-efficacy will be measured by two items for each behavior (Cronbach's α for PA= 0.64; Cronbach's α for F&V= 0.88). Recovery self-efficacy will be measured by two items for each behavior (Cronbach's α for PA= 0.75; Cronbach's α for F&V= 0.86). (Schwarzer, 2008). **Intention** will be assessed by 3 items for each behaviour (Cronbach's α for PA= 0.34; Cronbach's α for F&V= 0.58). (Lippke et al., 2009). **Risk perception** is adapted from Perloff and Fetzer (1986) and will be measured by 5 items (Cronbach's α = 0.84). **Planning:** Planning will be distinguished into action planning and coping planning. Action planning will be assessed by 3 items for each behavior (Cronbach's α for PA= 0.93; Cronbach's α for F&V= 0.93). Coping planning will be assessed by 3 items for each behavior

(Cronbach's α for PA= 0.92; Cronbach's α for F&V= 0.94). (Schwarzer, 2008). **Perceived social support** will be measured by 3 items for each behavior (Cronbach's α for PA= 0.87; Cronbach's α for F&V= 0.89). (Jackson, Lippke, & Gray, 2011).

3. Past health Behaviour

The level of PA will be measured with the short version of IPAQ questionnaire (Mäder, Martin, Schutz, & Marti 2006). Participants will be asked to estimate the amount of days and spend time for vigorous, moderate and walking activities during the past seven days. To assess the fruit and vegetable consumption during the past seven days, four items will be used. Participants will be asked to count the number of consumed portions or glasses fruit and vegetable a day. It will be distinguished between fruit, fruit/vegetable juice, cooked or steamed vegetable, and raw vegetable (Rafferty, Anderson, McGee, Miller, 2002).

4. Variables related to health

Compensatory health beliefs will be measured by 4 items with Cronbach's α = 0.55. (Knäuper, Rabiau, Cohen, & Patriciu, 2004). **Quality of life:** Respondents will be firstly asked about their general quality of life as "How would you rate your quality of life?", then 7 items in physical health subdomain will be used. (Cronbach's α = 0.89). (WHOQOL-BREF; World Health Organization, 1993).

Statistical analysis:

Data analysis will be performed using SPSS 21.0. Descriptive statistics will be used to describe the baseline characteristics in the study. We will assess whether there are significant differences between the intervention groups compared to the control group according to physical activity and nutrition by means of linear regression analysis in PASW.

The effects of the intervention will be evaluated by performing several analyses of MANOVA and MANCOVA measured at three points in time (8-week apart pre-post measures, and four weeks follow-up; T1-T3). In particular, in order to assess the impact of the intervention on social-cognitive outcomes and perceived well-being, a MANOVA will be conducted. Stages (non-intender, intender, and actor) and treatment (IG-I, IG-II, and CG) will be chosen as between-subject factors. Outcome measures including intentions, self-efficacy, planning, outcome expectations, compensatory cognitions, social support, and quality of life will be treated as dependent variables. Furthermore, to be able to assess the impact of the intervention on behavioural outcomes, a MANCOVA will be conducted. Physical activity, fruit and vegetable consumption will all be treated as dependent variables. Baseline behaviours will be regarded as covariate variables. Intervention and gender will be treated as independent variables. In addition, moderated multiple mediation analysis will be performed (Independent variable: intervention; Moderators: stage; Dependent variable: behavioural and social-cognitive outcomes).

Baseline characteristics of participants who dropped out will be compared with participants who finished the intervention to examine whether drop out is at random or determined by specific characteristics.

Research Schedule:

Month 1-9: Validation of questionnaire and intervention materials; website set-up and function test

Month 10-13: Implementation of main study

Month 14-19: Data analysis; report writing; dissemination of research finding

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Dear students:

Hello !

The aim of our questionnaire survey is to learn about your health status and some influential factors related to physical activity and dietary behaviour. There are no right or wrong in your answers, so ***please answer truthfully.***

The following questionnaires contain four parts. (1) Physical activity behaviour and relevant factors; (2) dietary behaviour and relevant factors; (3) variables related to health; (4) demographic factors.

Please read items carefully before replying.

Thank you for your cooperation!

Part I Physical Activity Behaviour and Relevant Factors

1. Stage of change in physical activity

Please think about your typical weeks, did you engage in physical activity at least 5 days per week for 30 minutes or more (or 150 minutes during the week), in such a way that you were moderately exhausted?

1. No, and I do not intend to start.....
2. No, but I am considering it.....
3. No, but I seriously intend to start.....
4. Yes, but only for a brief period of time.....
5. Yes, and for a long period of time.....

2. Physical activity behaviour

We are interested in finding out about the kinds of physical activities that people do as part of their everyday lives. The questions will ask you about the time you spent being physically active in the last 7 days. Please answer each question even if you do not consider yourself to be an active person. Please think about the activities you do at campus, such as, to get from place to place, and in your spare time for recreation, exercise or sport.

Think about all the vigorous activities that you did in the last 7 days. Vigorous physical activities refer to activities that take hard physical effort and make you breathe much harder than normal. Think only about those physical activities that you did for at least 10 minutes at a time.

(1). During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, aerobics, or fast bicycling?

_____ days

No vigorous physical activities

(2). How much time did you usually spend doing vigorous physical activities on one of those days?

_____ hours per day

_____ minutes per day

Think about all the moderate activities that you did in the last 7 days. Moderate activities refer to activities that take moderate physical effort and make you breathe somewhat harder than normal. Think only about those physical activities that you did for at least 10 minutes at a time.

(1). During the last 7 days, on how many days did you do moderate physical activities like carrying light loads, bicycling at a regular pace, or doubles tennis? Do not include walking.

_____ days

No moderate physical activities

(2). How much time did you usually spend doing moderate physical activities on one of those days?

_____ hours per day

_____ minutes per day

Think about the time you spent walking in the last 7 days. This includes at work and at home, walking to travel from place to place, and any other walking that you have done solely for recreation, sport, exercise, or leisure.

(1). During the last 7 days, on how many days did you walk for at least 10 minutes at a time?

_____ days

No walking

(2). How much time did you usually spend walking on one of those days?

_____ hours per day

_____ minutes per day

3. How high do you perceive your risk that at some point in the future ...

	Very unlikely			Moderately unlikely			Very likely
1. ... your levels of cholesterol will be too high	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
2. you will suffer a heart attack	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
3. ... your blood pressure will be too high	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
4. ... you will suffer a stroke	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
5. ... you will develop a heart disease	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇

4. Intention of physical activity

Which intentions do you have for the near future?

I intent to do for at least 30 minutes a day on minimum 5 days a week (or at least 150 minutes a week)...

	not true			exactly true
1. ... perform strenuous physical activity (heart beats faster, sweating)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
2. ... be moderately physically active (not fatiguing, mild sweating)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
3. ... be mildly physically active (hardly strenuous, no sweating)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

5. Outcome expectancies of physical activity

If I am physically active 5 days a week for 30 minutes or more, then...

	Totally disagree				Totally agree
1. ... this is good for my health.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. ... I feel better afterwards.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. ... it will cost me a lot of time (e.g. changing clothes, reaching the sport venue).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. ... this will be a financial burden.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

6. Self-Efficacy of physical activity

Motivational Self-Efficacy

I feel certain that I can be physically active a minimum of 5 days a week for 30 minutes, ...

	Totally disagree				Totally agree
1... even if it is difficult.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

Maintenance Self-Efficacy

I feel certain that I can be physically active permanently a minimum of 5 days a week for 30 minutes, ...

	Totally disagree				Totally agree
2... even if it takes a lot of time till I am used to it.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3... even if I have worries and problems (e.g. proposed date and time).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

Recovery Self-Efficacy

I feel certain that I can again be physically active a minimum of 5 days a week for 30 minutes, ...

	Totally disagree				Totally agree
4... even if I changed my concrete plans several times.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
5... even if I was not physically active for several weeks.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

7. Plans of physical activity

For the next month I already planned in detail ...

	Totally disagree				Totally agree
1. ... which concrete physical activity I will pursue (e.g. walking).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. ... where I will be physically active (e.g. in the gym).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. ... on which days I will be physically active (e.g. every Tuesday and Friday).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. ... when I have to be especially cautious not to stop being active.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
5. ... what I can do in difficult situations, in order to remain true to my own resolutions	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
6. ... how I can stay active, even if something happened	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

8. Perceived Social Support of physical activity

	not true			exactly true
1. My partner supports me to stay physically active	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
2. People from my family supports me to stay physically active	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

3. People like my classmates and friends helps me to stay physically active ₁ ₂ ₃ ₄

Part II Dietary Behaviour and Relevant Factors

1. Stage of change in dietary behavior

Please think about what you have typically consumed during the last 7 days, Did you eat five portions of fruit and vegetables per day?

1. No, and I do not intend to start.....
2. No, but I am considering it.....
3. No, but I seriously intend to start.....
4. Yes, but only for a brief period of time.....
5. Yes, and for a long period of time.....

2. Dietary behaviour

On how many days during the last 7days have you been eaten fruits and vegetables?

- Less than 1 day
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

On those days you ate fruits and vegetables, how many portions do you eat?



_____ portions (One portion accounts for approximately one hand of fruit or vegetable)

3. Intention of dietary behaviour

Which intentions do you have for the near future? I seriously intent to, ...

	not true			exactly true
1. ... eat at least 5 portions of fruit and vegetable daily .	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
2. ... eat fruit and vegetable at every meal.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
3. ... drinking each day at least one glass of fruit- or vegetable juice	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

4. Outcome expectancies of dietary behaviour

If I daily eat 5 portions of fruit and vegetable, then ...

	Totally disagree				Totally agree
1. ... this is good for my health.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. ... I feel better afterwards.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

3. ... this will cost me a lot of time (e.g. buying, preparations).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. ... this will be a financial burden.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

5. Self-Efficacy of dietary behaviour

Motivational Self-Efficacy

I feel certain that I can eat at least 5 portions of fruit and vegetable a day, ...

	Totally disagree				Totally agree
... even if it is difficult.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

Maintenance Self-Efficacy

I feel certain that I can permanently eat 5 portions of fruit and vegetable a day, ...

	Totally disagree				Totally agree
1. ... even if it takes a lot of time till I am used to it.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. ... even if I have worries and problems (e.g. proposed date and time).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

Recovery Self-Efficacy

I feel certain that I can again eat 5 portions of fruit and vegetable a day, ...

	Totally disagree				Totally agree
1. ... even if I changed my concrete plans several times.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. ... even if I ate no or less fruits and vegetables on several days.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

6. Plans of dietary behaviour

For the next month I already planned in detail, ...

	Totally disagree				Totally agree
1. ... what I will eat (e.g. cereals, fruits).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. ... at which meals I will eat fruits and vegetables (e.g. additional salad).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. ... how I will prepare the food.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. ...when I have to pay attention not to fall into old eating habits	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
5. ...what I can do in difficult situations, in order to remain true to my own resolutions	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
6. ...how I can eat healthy, even if something happened	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

7. Perceived social support of dietary behaviour

How do you perceive your environment?

	not true			exactly true
1. My partner supports me to eat healthy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
2. People from my family supports me to eat healthy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
3. People like my classmates and friends help me to eat healthy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Part III Variables Related to Health

1. Compensatory Health belief

	Totally disagree				Totally agree
1. I can compensate for not being very active by eating less.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. An unhealthy diet can be balanced by physical activity.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. If you are eating healthy it is not as important to be physically active.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. When you are physically active you can eat without many restraints.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

2. WHOQOL-BREF (general quality of life + physical domain)

	Very poor				Very good
1. How would you rate your quality of life?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
The following questions ask about how much you have experienced certain things in the last four weeks.	Not at all				An extreme amount
2. To what extent do you feel that physical pain prevents you from doing what you need to do?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. How much do you need any medical treatment to function in your daily life?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
The following question asks about how completely you experience or were able to do certain things in the last four weeks.	Not at all				An extreme amount
4. Do you have enough energy for everyday life?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
	Very poor				Very good
5. How well are you able to get around?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
	Very dissatisfied				Very satisfied
6. How satisfied are you with your sleep?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

-
7. How satisfied are you with your ability to perform your daily living activities? ₁ ₂ ₃ ₄ ₅
8. How satisfied are you with your capacity to work? ₁ ₂ ₃ ₄ ₅
-

Part IV Demographic factors

1. Your name: _____
2. Please indicate your sex: male/female
3. How old are you? _____
4. Body height: _____ cm; Body weight: _____ kg
5. Please indicate your marital status
 - Single
 - Close relationship, not living together
 - Close relationship, living together
 - Marital partnership/Common law marriage
6. Please indicate your study year.
 - Year 1
 - Year 2
 - Year 3
 - Year 4
7. Please indicate the name of your university
 - Wuhan University
 - Nantong University

亲爱的同学:

您好!

我们本次调查旨在了解您的健康状况和一些与体育运动行为、健康饮食行为相关的影响因素。您对以下调查所作的回答，并无正确和错误之分，我们只需要您的**真诚**回答。

下面呈现的问卷包含了四个方面的内容（1）体育运动行为和相关因子；（2）健康饮食行为和相关因子；（3）与健康状况有关的变量；（4）人口统计学变量。请仔细阅读每份问卷，并按要求回答。

感谢您的合作!

第一部分 体育运动行为及相关因子

1. 体育运动的阶段变化

您是否会进行每周至少 5 次，每次至少 30 分钟的中等强度体育运动？请您根据平时的情况进行选择。

- 1 我没有做到，也并未打算这样.....
- 2 我没有做到，但正考虑这样.....
- 3 我没有做到，但真的很想这样.....
- 4 我能够做到，但只持续了很短的时间.....
- 5 我能够做到，并且长期这样.....

2. 体育运动行为

我们想了解人们日常生活中会进行哪些体育运动。下述问题意在获悉您在过去 7 天所进行的体育运动情况，即使您认为自己不是一位积极参加体育运动的人，也请认真回答下面的每道题目。您所参加的可以是与学习有关的一些活动，也可以是在闲暇时从事的体育娱乐活动，可以在寝室或室外空地上进行的，也可以是在两地往返的过程中进行的（例如步行或者骑自行车往返）。

请您回想一下在刚刚过去的 7 天里，您所进行过的大强度的体育运动（非常消耗体能且呼吸明显比平时急促）每次持续时间至少为 10 分钟

- (1). 在这 7 天里，您有几天进行过大强度体育运动（例如，负担重物、大强度有氧运动、快速骑自行车等）？

_____ 天

我没有进行过大强度体育运动。

- (2). 您进行一次大强度体育运动的持续时间通常为多少？

_____ 小时/每天

_____ 分钟/每天

请您回想一下在刚刚过去的 7 天里，您所进行过的中等强度体育运动（适中的体能消耗，呼吸较平时略有急促）每次持续时间至少 10 分钟。

- (1). 在这 7 天里，您有几天进行过中等强度体育运动（例如，搬运较轻的物品、中等速率骑自行车、网球双打，但不包括散步）

_____ 天

我没有进行过中等强度体育运动。

- (2). 一次中等强度体育运动的持续时间通常为多少？

_____ 小时/每天

_____ 分钟/每天

请您回想一下在刚刚过去的 7 天里，您所进行过的低强度体育运动，例如，步行往返于两地，或者以休闲娱乐/体育锻炼为目的的散步。

(1). 在这 7 天里，您有几天进行过每次持续至少 10 分钟的散步？

_____ 天

我没有散步

(2). 每次散步的持续时间通常为多少？

_____ 小时/每天

_____ 分钟/每天

3. 下面的问题涉及到您对疾病的危险感知。请思考一下，您的身体今后出现下面问题的可能性有多大。请选择最符合您情况的选项。

	绝对 不会			有可能			完全 可能
1. 发生高脂血症的可能性	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
2. 心脏病急性发作的可能性	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
3. 发生高血压的可能性	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
4. 发生中风的可能性	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
5. 发生心血管病的可能性	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7

4. 对体育运动的意向

在不久的将来，哪种意向与您相符？

我打算进行....，一周 5 次，每次 30 分钟（每周持续时间至少为 150 分钟）

	完全 不符合			完全 符合
1 ...大强度的体育运动（心跳加速并且大量的汗）	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
2 ...中等强度的体育运动(会流汗但不会精疲力竭)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
3 ...低强度的体育运动(费力很少且不会流汗)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

5. 对体育运动的结果期待

如果我能做到每周至少 5 天，每次至少 30 分钟的体育运动，我认为...

	完全 不同意				完全 同意
1 ... 这有益于我的健康	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

2 ... 我会感觉更好	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3 ... 这会耗用我过多时间(例如, 换衣服的时间, 往返于运动场所的时间)。	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4 ... 这将是经济负担	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

6. 体育运动的自我效能

动机自我效能

我确信自己能完成每周至少 5 次, 每次至少 30 分钟的体育运动, 即使...

	完全 不同意				完全 同意
1 ... 在遇到诸多困难时	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

保持自我效能

我确信自己能完成每周至少 5 次, 每次至少 30 分钟的体育运动, 并坚持下去, 即使...

	完全 不同意				完全 同意
2 ... 这会耗用我很多时间	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3 ... 当我遇到困扰或麻烦时 (例如, 有约会或时间另有安排)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

恢复自我效能

我确信自己能够再次完成每周至少 5 次, 每次至少 30 分钟的体育运动, 即使...

	完全 不同意				完全 同意
4 ... 当我多次改变运动项目时	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
5 ... 当我有一段时间没有参加运动时	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

7. 体育运动的计划

我已经为下个月进行体育运动制定了详细计划 ...

	完全 不同意				完全 同意
1. ... 在哪里运动	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. ... 参加哪种运动	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. ... 在哪几天运动	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. ... 在特殊情况下, 怎样坚持运动 (如, 外出度假时, 定计划做运动)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

5. ...在困难情况下，怎样坚持运动（如，学业很忙时，抽出时间做运动） 1 2 3 4 5
6. ...在做运动时，遇到一些突然状况，怎样能继续坚持运动（例如，跑步时，突然下雨。这时可以回到家，继续做一些伸展运动） 1 2 3 4 5

8. 下列问题询问您在运动方面得到怎样的支持。

	完全不符合			完全符合
1. 我的伴侣（如：配偶或关系亲密的男朋友/女朋友）帮助我坚持做运动	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
2. 我的家人（如：兄弟姐妹，父母）帮助我坚持做运动	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
3. 我的同学和朋友帮助我坚持做运动	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

第二部分 健康饮食行为与相关因子

1. 健康饮食行为的阶段变化

您每天是否可以做到吃 5 份（一份约等于一把水果/蔬菜）水果和蔬菜？请您根据上周比较普遍的情况进行选择（单选）

1. 我没有做到，也并未打算这样.....
2. 我没有做到，但正考虑这样.....
3. 我没有做到，但真的很想这样.....
4. 我有能够做到，但只持续了很短的时间.....
5. 我有能够做到，并长期这样.....

2. 健康饮食行为

在刚过去的 7 天，您有几天吃过吃水果和蔬菜？

- 不到 1 天
- 1 天
- 2 天
- 3 天
- 4 天
- 5 天
- 6 天
- 7 天



当您吃水果或蔬菜时，您会吃__ 份（一份约等于一把水果/蔬菜）

3. 对健康饮食行为的意向

在不久的将来，哪种意向与我相符，我打算...

	完全 不符合			完全 符合
1. ... 每天至少吃 5 份水果和蔬菜 .	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
2. ...每餐都吃水果和蔬菜	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
3. ... 每天都至少喝一杯果汁或蔬菜汁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

4. 对健康饮食行为的结果期待

如果我每天都吃 5 份水果和蔬菜，那么，我认为...

	完全 不同意				完全 同意
1. ... 这有益于我的健康	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. ... 我会感觉更好	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. ... 这会耗用我过多时间 (例如，购买水果和蔬菜所耗用的时间)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. ... 这将是个经济负担	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

5. 健康饮食行为的自我效能

动机自我效能

我确信自己每天都能吃 5 份水果和蔬菜，即使...

	完全 不同意				完全 同意
1 ...在遇到诸多困难时	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

保持自我效能

我确信自己每天都能吃 5 份水果和蔬菜，并坚持下去，即使...

	完全 不同意				完全 同意
2 ... 我需要花很长时间去适应这样的饮食习惯	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3 ... 当我遇到困扰或麻烦时 (例如，有约会或时间另有安排).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

恢复自我效能

我确信自己能够再次完成每天吃 5 份水果和蔬菜，即使...

	完全 不同意				完全 同意
4. ...当我多次改变饮食计划时	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
5. ... 当我有几天没有做到（没吃，或吃的量不够）时	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

6. 健康饮食行为的计划

我已经为下个月制定了详细计划…

	完全 不同意				完全 同意
1. ...在哪一餐吃水果和蔬菜	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. ...吃什么水果和蔬菜	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. ...用什么方法准备水果和蔬菜（例如，榨果汁， 蒸煮或炒蔬菜）	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. ...特殊情况下怎样避免不良饮食习惯（例如，外出 度假期间，尽量多吃蔬菜和水果）	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
5. ...在困难情况下，怎样能坚持健康饮食的意向（例 如，学业很忙时，抽时间吃水果）	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
6. ...在健康饮食过程中，当遇到一些突然状况，怎样 能吃得健康（例如，与同学或朋友在外聚餐时， 尽量多吃蔬菜和水果）	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

7. 可知觉到的健康饮食行为的社会支持

	完全 不符合				完全 符合
1. 我的伴侣（如配偶，关系亲密的男朋友/女朋友）帮 助我坚持健康饮食	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	
2. 我的家人（如：兄弟姐妹，父母）帮助我健康饮食	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	
3. 我的同学和朋友帮助我吃得健康	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	

第三部分 与健康状况有关的变量

1. 下面是询问您如何看待饮食和运动之间的关系。

	完全 不同意				完全 同意
1. 少进食可以弥补运动不足	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. 体育运动可以平衡不健康的饮食行为	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. 只要饮食健康，积极参加体育运动也不是这么重要的	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

4. 当运动量足够时，就可以毫无顾忌地进食。 ₁ ₂ ₃ ₄ ₅

2. 生存质量测定量表

	非常差				非常好
1. 您如何评价自己的生活质量?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
在刚过去的四周内，你在多大程度上经历了下述情况	完全不符合				完全符合
2. 身体疼痛在多大程度上影响到您?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. 您生活中多大程度上依赖于药物治疗?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
在刚过去的四周内，你在多大程度上经历了（或能够做到）下述情况	完全不符合				完全符合
4. 您生活中充满活力吗?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
	非常差				非常好
5. 您是否可以随意活动?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
	非常不满意				非常满意
6. 您对自己的睡眠质量满意吗?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
7. 您对自己处理日常生活事情的能力满意吗?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
8. 您对自己的工作能力满意吗?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

第四部分 人口统计学变量

1 姓名： _____

2 性别： 男 女

3 年龄： _____

4 你目前的身高是： _____厘米； 体重是： _____公斤

5 您的婚姻状况

- 单身
- 亲密关系，但没有一起生活
- 有亲密关系并且一起生活
- 法定婚姻关系

6 您的年级是？

- 本科一年级
- 本科二年级
- 本科三年级
- 本科四年级

7. 您就读的大学是：

- 武汉大学
- 南通大学

7. Expected duration : 19 months

Proposed starting date: 1 Jun 2016

Expected completion date: 31 Dec 2017

8. Estimated cost of the whole project (in Hong Kong dollars):

				<u>Year 1</u>	<u>Year 2</u>	<u>Total</u>
(a)	Staff* Rank	Salary per month	No. of Months			
	Research Assistant(Pt.4) X 1	\$10,908	10.0	\$109,080.0	\$0.0	\$109,080. 0
(b)	Equipment (please itemise and <u>include cost of computing equipment in the budget total</u>)					
(c)	General Expenses** (please itemise)					
	(1) Website set-up			\$18,000	\$0	
	(2) Promotional materials			\$3,000	\$0	
	(3) Transportation and accommodation expenses			\$9,920	\$0	
						\$30,920
(d)	Conference / Publication** (see Note)					
	conference and publication charges			\$10,000	\$0	\$10,000
Total:				\$150,000.0	\$0.0	\$150,000.0

* FRG normally supports research support staff at the Research Assistant level.

** PI should include the cost for the medical surveillance programme for research personnel that would involve the use of organophosphate and 2,3,7-8 TCDD as well as other highly toxic chemicals suggested by the Laboratory Safety Sub-Committee. For programme details, please contact the EHSU of the Estates Office.

Note: With effect from the 2011/2012 academic year, FRG supports conference and publication charges up to \$10,000 for PI to attend recognized international conference and to disseminate the research results.

9. (a) Justifications for each category/item of the budget in Item 8 above:

(Regarding 8(a), list the duties and time involved for the research support staff required. Also list the division of work / duties between the PI and the research support staff).

Staff Cost:

A full-time research assistant will be employed for 10 months. S/he will assist website set-up and function test (4 months), main study implementation (4 months), data management and analysis, and report writing (2 months) .

Equipment Cost:

General Expenses:

(1) An e-health learning website will be set up by a website production company in Wuhan, China. In addition, the SMS group message service will be included in this website platform.

(2) For participant recruitment, flyer will be made and distributed to university students at their PE classes. The content of flyer includes program introduction and online registration hyperlink. 3,000HK\$ in total.

(3) PI may need to visit Wuhan University and Nantong University for promoting the study.

Conference and Publication Cost :

This research topic is very popular in the field of health promotion. The investigators would like to attend an international conference and publish one article to disseminate the research results.

9. (b) Facilities and major equipment already available in addition to those requested in Item 8(b)

A work station, with a computer set will be provided to Research Assistant. No extra equipment will be needed in this project.

10. Other research funds that have already been obtained from other sources for this project (if any):

(Please give source(s) of funding and amount.)

11. Allocation for Faculty Research Grant Requested:

(Item 11 = Item 8 - Item 10)

\$ 150,000

12. Have funds been sought previously for the same or similar project(s)? If so, please state:

Organisation/ Committee applied to:	
Project Code:	
Project Title: (if different from item 1 above)	
Date of Application:	
Outcome:	

NOTE: If this proposal is similar to a proposal that has been submitted to the RGC or other funding bodies, please revisit the main concerns/suggestions previously expressed by the external reviewers. Explain whether and if so what changes have been incorporated in the current proposal.

Main concerns/suggestions previously expressed by the external reviewers

Changes incorporated in the current proposal

13. Please indicate whether this application has previously been submitted to the Research Grants Council (RGC), i.e. a General Research Fund (GRF) application: (where appropriate)

- (i) the current FRG application is a project independent of the GRF;
- (ii) the FRG is a pilot study in preparation for the GRF;
- (iii) the FRG forms part of the GRF and the application is seeking seed funding for the GRF
- (iv) the FRG and the GRF is one and the same project.

Has the proposed GRF secured any funding from the RGC?

- Yes No

If the answer is yes, please give the following figures:

(a) Original Requested Amount of GRF Project:

(b) Approved Amount of GRF Project:

(c) Top-up Funding Sought for GRF Project:

14. Declaration

If the total of the approved funding for the GRF project (b), top-up funding for the GRF project (c) and the requested amount for the current FRG (d) i.e. (b)+(c)+(d)=(e) exceeds that of the GRF original requested amount (a), the PI agrees to reimburse to the Specialist Panel the difference between the funding for the GRF/FRG [i.e. (e)] and the GRF original requested amount (a), i.e. (e)-(a)=(f) being the reimbursement to the Specialist Panels. This declaration is to prevent double funding in view of the scarcity of resources.

15. Have you submitted any HKBU-endorsed RGC related schemes such as GRF / ECS/ CRF / PPR / SPPR / TBRS / AoE / ANR / ESRC / NSFC (or equivalent) proposals as PI in the immediate past year? If no, please note Annex C “Variable Quota for FRG Projects” to see whether you are eligible for FRG application.

Submission(s) in 2014/15

<u>Scheme</u>	<u>Ref No</u>	<u>Grant Title</u>
ECS	22601015	Stage-Specific Prediction of Physical Activity Adoption and Maintenance: A Prospective Evaluation Study in Elderly People in Hong Kong

16. Number of On-going FRG Projects held by the PI in the capacity of PI (Refer to Annex C for “Variable Quota System for FRG Projects”) (including those of which completion reports have not yet been submitted. where appropriate)

0

1 Project Code: _____

2 Project Code: _____

>2 Project Code: _____

17. Details of on-going research projects (including those of which completion reports have not yet been submitted) funded by whatever sources undertaken by all investigator(s):

Chinese Medicine and Science Panel applicants: Provide also a list of FRG, RGC or other projects which PI **has completed** within the previous 2 years.

Name of investigator(s) (Indicate PI or Co-I)	Project title and project code	Grant & source(s) (HK\$)	Starting date	Expected completion date	Amount of time involved (hours/week)
Prof Lippke Sonia(PI)	Time-Limited Reduced Earning Capability Pension and Return To Work	\$800,000 German Pension Insurance Institution Bremen	1 Jun 2015	31 May 2017	5
Prof Lippke Sonia(PI)	Prevention of reduced working ability with an Expert System with telephone, motivational interviews supporting self-management	\$650,000 German Pension Insurance Institution Bremen	1 Sep 2014	31 Aug 2016	5

18. List of Outstanding FRG (Cat I & II) Completion Reports:

Project Code	Project Title	Starting Date	Completion Date	Report Submission Date (6 months from Completion Date)

19. Plans for collaboration:

(This item should be completed if two or more co-investigators are involved in the project.)

(Indicate the division of work among the PI, co-investigator(s) and research support staff and the amount of time [hours per week] each is expected to spend on this project. The role of each individual should be adequately described).

The PI, Co-Is and research assistant basically work as a team in developing the research plan. However, in carrying out the study, the job specifications for each investigator are as follows:

Dr. Yanping Duan, the PI, would be responsible for overseeing the entire research project, including the formulation of research design, selection and recruitment of subjects, conducting data collection and analyses, writing of the final report, and supervising the research assistant. She is expected to spend an average of 8 hours/week on the project.

Prof. Sonia Lippke, the Co-I, would be contributing her expertise in research design, data statistical analyses and writing of the research report. She is expected to spend an average of 3 hours/week on the project.

Dr. Cui Degang, Dr. Lin Zhihua and Mr. Chen Xu, the Co-Is, would be contributing their networking in the recruitment of students in their general PE classes, and facilitating students' engagement on this program. Each of them is expected to spend an average of 2 hours/week on this project.

A full-time research assistant would assist website set-up and function test, main study implementation (4 months), data management and analysis, and report writing. She/he is expected to spend an average of 40 hours/week on this project.

20. International Collaboration (applicable to ARTS/SOSC/COMM/BUS/AVA)

Please provide the following supplementary information below:

- (a) a description and value of the collaboration;
- (b) connection to international institutions;
- (c) statement of outcome;
- (d) scope or potential for future collaboration;

N/A

21. Research ethics/safety approval:

Please tick '✓' the appropriate box(es) to indicate approval required, if any, from the Senate Committee on the Use of Human and Animal Subjects in Teaching and Research (HASC).

(If "none" is the response, please indicate also.)

Human Research Ethics	<input checked="" type="checkbox"/>
Animal Research Ethics	<input type="checkbox"/>
Biological Safety	<input type="checkbox"/>
Ionizing Radiation Safety	<input type="checkbox"/>
Non-Ionizing Radiation Safety	<input type="checkbox"/>
Chemical Safety	<input type="checkbox"/>
None	<input type="checkbox"/>

* If approval is required, download form(s) from the Graduate School Homepage:

- (1) HASC's Ethics (Animal) Questionnaire - HASC/ETHICS/ANI (involving ANIMAL subjects)
- (2) HASC's Ethics (Human) Questionnaire - HASC/ETHICS/HUM (involving HUMAN subjects) (New)
- (3) HASC's Safety Questionnaire (HASC/SAFETY) (New) (please note Sections 4 and 5 in particular for Chemical Safety)

**** Please note proposals from ALL Specialist Panels should first seek relevant ethical/safety approval from the HASC before the Panels can make the funding decision.**

22. Curriculum vitae of investigators:

(Please submit a brief CV* for all investigators relevant to the proposed area of research. - **one CV for each separate proposal.**)

* The brief CV should contain the following information only:

- (i) education background;
- (ii) employment history;
- (iii) publication list (for the previous 5 years.)
(**Chinese Medicine & Science Panel applicants** - indicate publications or submitted manuscripts arising from your previous or ongoing projects.) and
- (iv) research activities (for the previous 5 years).

**** Please note that an academic must have produced at least one publication/research outputs**

within the immediate past two years in order to be eligible to apply for FRG projects.

Dr. Yanping Duan

1. Education History

Ph.D., Major in Exercise Psychology, University of Bayreuth, Germany, 7/2006

Master of Education, Major in Applied Psychology, Wuhan Institute of Physical Education, China, 6/2000

Bachelor of Science, Major in Sports Psychology, Wuhan Institute of Physical Education, China, 6/1996

2. Employment History

Assistant Professor, Department of PE, Hong Kong Baptist University (9/2013-present)

Research Assistant Professor, Department of PE, Hong Kong Baptist University (9/2011– 8/2013)

3. Publication List (for the previous 5 years)

Duan, Y.P., Brehm, W., Wagner, P., Chung, P.K., Graf, S., Zhang, R., & Si, G.Y. (2015). Transition to Adulthood: Relationships among Psychosocial Correlates, Stages of Change for Physical Activity and Health Outcomes in a Cross-cultural Sample. *Journal of Physical Activity and Health*. DOI: <http://dx.doi.org/10.1123/jpah.2014-0389>.

Duan, Y.P., Zhang, R., Wei X.N., & Brehm, W. (2014). Assessing Stage Validity of Stage Model for Physical Activity Behavior: A Study on FIT Model. *Chinese Journal of Sports Medicine*. 33(6): 573-580. (in Chinese)

Duan, Y.P., Brehm, W., Strobl, H., Tittlbach, S., Huang, Z.J., & Si G.Y. (2013). Steps to and correlates of health-enhancing physical activity in adulthood: An intercultural study between German and Chinese individuals. *Journal of Exercise Science & Fitness*, 11(2): 63-77.

Liu, J.D., Chung, P.K., & **Duan, Y.P.** (2013). Validity and Reliability of the Chinese Translation of Basic Psychological Needs in Exercise Scale. *European Journal of Psychological Assessment*. 29(1), 51-57.

Duan, Y.P., Yang, J., Zhang, R., & Brehm, W. (2012). A Study on the Relationship between the Change of Physical Activity Stages and Health Status among University Students. *China Sport Science and Technology*. 48(2), 117-121. (in Chinese)

Duan, Y.P., Lippke, S., Wagner, P. & Brehm, W. (2011). Testing Two Stage Assessments in a Chinese College Student Sample: Correspondences and Discontinuity Patterns across Stages. *Psychology of Sport & Exercise*, 12 (3), 306-313.

Si, G.Y., **Duan, Y.P.**, Li, H.Y., & Jiang, X.B. (2011). An exploration into social-cultural meridians of Chinese athletes' psychological training. *Journal of Clinical Sport Psychology*, 5, 325-338.

Duan, Y.P., Liu, L.F., & Wei, X.N. (2010). An Intervention Study on the Promotion of University Students' Physical Exercise Intention. *Journal of Wuhan Institute of Physical Education*, 44(12), 43-46. (in Chinese)

4. Research Activities (for the previous 5 years)

2013-2014 Faculty Research Grant, HKBU: A Preliminary Study of an Eight-week E-health Learning Program in Chinese Rehabilitation-aftercare Patients.

2012-2013 Faculty Research Grant, HKBU: Stages of Physical Activity, Activity Patterns and Health Status: A Theory-based Empirical Study on Young People in Hong Kong.

Prof. Sonia Lippke

1. Education Background

Ph.D., Freie Universität Berlin, 6/2004

Master in Psychology, Freie Universität Berlin, 4/2000

Bachelor in Psychology, Universität Göttingen, 11/1997

2. Employment History

Professor, Jacobs Center on Lifelong Learning and Institutional Development, Jacobs University Bremen, Germany (9/ 2011– present)

Associate Professor (UHD), Faculty of Health, Medicine and Life Sciences/ Health Promotion, Maastricht University, Netherlands (8/2010 – 6/2011)

3. Publication List (for the previous 5 years)

Lippke S., Fleig L., Wiedemann A., & Schwarzer R. (2015). A computerized lifestyle application to promote multiple health behaviors at the workplace: Testing its behavioral and psychological effects. *Journal of Medical Internet Research*, 17(10), e225.

Lippke, S., Wienert, J., Kuhlmann, T., Fink, S., & Hambrecht, R. (2015). Perceived stress, physical activity and motivation: Findings from an internet study. *Annals of Sports Medicine and Research*, 2(1), 1012.

Lippke, S. (2014). Modelling and Supporting Complex Behavior Change related to Obesity and Diabetes Prevention and Management with the Compensatory Carry-Over Action Model. *Journal of Diabetes & Obesity*, 1(2), 1-5.

Lippke, S., & Plotnikoff, R. C. (2014). Testing two principles of the health action process approach in individuals with type 2 diabetes. *Health Psychology*, 33(1), 77-84.

Fleig, L., Pomp, S., & Schwarzer, R., & **Lippke, S.** (2013). Promoting exercise maintenance: How interventions with booster sessions improve long-term rehabilitation outcomes. *Rehabilitation Psychology*, 58(4), 323-333.

Lippke, S., Nigg, C. R., & Maddock, J. E. (2012). Multiple behaviour change clusters into health-promoting behaviours and health-risk behaviours: Theory-driven analyses in three international samples. *International Journal of Behavioural Medicine*, 19,1-13.

Fleig, L., **Lippke, S.**, Pomp, S., & Schwarzer, R. (2011). Intervention effects of exercise self-regulation on physical exercise and eating fruits and vegetables: a longitudinal study in orthopedic and cardiac rehabilitation. *Preventive Medicine*, 53, 182-187.

Fleig, L., **Lippke, S.**, Pomp, S., & Schwarzer, R. (2011). Exercise maintenance after rehabilitation: How experience can make a difference. *Psychology of Sport & Exercise*, 12, 293-299.

Lippke, S., Schwarzer, R., Ziegelmann, J. P., Scholz, U., & Schüz, B. (2010). Testing stage-specific effects of a stage-matched intervention: a randomized controlled trial targeting physical exercise and its predictors. *Health Education & Behaviour*, 37(4), 533-546.

4. Research Activities (for the previous 5 years)

2013-2015 German Wilhelm-Stiftung Rehabilitation Research:

Rehabilitation-aftercare for an optimal transfer into autonomous daily life (RENATA) - a German-Dutch-Chinese ehealth intervention study.

2009-2012, German Pension Insurance Grant: Improvement of a physically active lifestyle in orthopaedic and cardiologic rehabilitation patients with an expert system.

Dr. Degang Cui

1. Education History

Ph.D., Major in Sports Training, Beijing Sport University, China, 6/2010

Master of Education, Major in Sports Training, Wuhan Institute of Physical Education, China, 6/1999

Bachelor of Education, Major in Sports Training, Lu Dong University, China, 6/1996

2. Employment History

Associate Professor, Physical Education Section, Wuhan University, China (9/2011-present)

Lecturer, Physical Education Section, Wuhan University, China (9/1999– 8/2011)

3. Publication List (for the previous 5 years)

Cui,D.G., Qiu,F. (2015). Explanation and Application of Scientific Nature of Functional Training. *Journal of Sports Adult Education*. 29(6):78-83 (in Chinese)

Qiu,F,**Cui,D.G.**. (2015). Relationship among Perception of Risk in Physical Activity, Sport Injury and Exercise Behavior for Undergraduate. *Journal of Wuhan Institute of Physical Education*, 49(6), 75-81. (in Chinese)

Qiu,F,**Cui,D.G.**. (2014). Relationship Among Impression Management, Exercise Behavior and Mental Health for Female Undergraduates. *Journal of Wuhan Institute of Physical Education*, 48(2), 87-92. (in Chinese)

Cui,D.G. (2013). Negative Impact of Sports Events' Culture on College Students and Some Regulations. *Sports Forum*. 5(5), 6-9. (in Chinese)

Cui,D.G.. (2013). Influences of Various Sports Interventions toward University Students Ability Socialization. *Sports Forum*, 5(1), 4-7. (in Chinese)

Cui,D.G. (2012).The Necessity and Implement Strategy of Undergraduate Sport Culture Education. *Sports Forum*, 4(6), 1-7. (in Chinese)

Qiu,F,**Cui,D.G.**. (2012). Test and Revision of ECS under Exercise Participations Among College Students in China. *Journal of Wuhan Institute of Physical Education*, 46(12), 51-58. (in Chinese)

Cui,D.G. (2011). Analysis on Speed-Strength Training for Modern Basketball Players. *Journal of Hebei Institute of Physical Education*. 25(5): 64-68. (in Chinese)

Cui,D.G. (2011). Physical training by Stages in Modern Basketball. *Shandong Sports Science & Technology*, 33(2): 40-45. (in Chinese)

4. Research Activities (for the previous 5 years)

2015-present Wuhan University Research Grant: The Research of the Effectiveness of Integrating both Functional Training and Strength Training of Modern Basketball Player from the Perspective of Benefit.

2014-2015 Research Grant of Hubei Administration of Sport: Research of the Development of the Sports Fields in the Corporate Campuses of Hubei Province.

2010-2012 Wuhan University Research Grant: The Influence of Sports Culture on Socialization of University Student and Measures to Control it.

Dr. Zhihua Lin

1. Education History

Ph.D., Major in Ethnic Traditional Sports, Shanghai Sport University, China, 6/2009

Master of Education, Major in Ethnic Traditional Sports, Wuhan Institute of Physical Education, China, 6/1999

Bachelor of Education, Major in Martial Arts, Wuhan Institute of Physical Education, China, 6/1994

2. Employment History

Associate Professor, Physical Education Section, Wuhan University, China (9/2011-present)

Lecturer, Physical Education Section, Wuhan University, China (9/1999– 8/2011)

3. Publication List (for the previous 5 years)

Lin,Z.H. (2015). *The Art of the Warrior*. New Classic Press and Changjiang Literature and Art Publishing Company. 12. (In Chinese and English)

Lin,Z.H. (2012). An Informal Discussion about the Passive State of Health-care Qigong. *Journal of Health-care Qigong*. 4:24-27 (in Chinese)

Lin,Z.H. (2012). System Theory-based Re-cognition of Traditional Regimen and Construction of College Students' Health Self-management System. *Hubei Sports Science and Technology*. 30 (1):41-43 (in Chinese)

Lin,Z.H. (2012). Study on Training Methods of P.E. Applied to Psychological Intervention on Adolescents Suffered from Disasters. *Combat and Sports Forum*. 4(1):4-6. (in Chinese)

Lin,Z.H. (2011). "To Reach the Empty and Passive State" and the Development of Modern Brain Science. *Dojo(HK)*. 2:15-20 (in Chinese)

Lin,Z.H. (2011). Analysis of "Gas sunken tanda". *Journal of Health-care*. 1:23-24 (in Chinese)

Lin,Z.H. (2011). An Informal Discussion about the "Mind" in Health-care Qigong. *Journal of Health-care*. 4:10-12 (in Chinese)

Yu,D.H., Lin,Z.H. (2011). Study on Taoist Qigong Practice. *Shanxi Science and Technology Publishing Company*. (in Chinese)

Kong,J., Lin,Z.H. (2011). College Sports and Health. *Wuhan University Publishing Company*. (in Chinese)

Lin,Z.H., Yu,D.H. (2010). Discussion about The 24 Solar Terms. *Dhyana. Journal of Physical Education*. 8:124-127. (in Chinese)

Lin,Z.H. (2010). On the Fitness Thoughts of Zhuang Zi. *Combat and Sports Forum*. 2(7):67-69. (in Chinese)

Lin,Z.H. Yu,D.H. (2010). Tai Chi and Six Word Tactic. *Chinese Martial Arts*. 3: 40-41(in Chinese)

4. Research Activities (for the previous 5 years)

2010-2012 Humanities and Social Sciences "The Generation after 70's Program" Project, Wuhan University: Research on Traditional Sports Health and Health Education of College Students.

Mr. Xu Chen

1. Education History

Master of Education, Major in Applied Psychology, Wuhan Institute of Physical Education, China, 6/2002

Bachelor of Science, Major in Sports Psychology, Wuhan Institute of Physical Education, China, 6/1996

2. Employment History

Associate Professor, Institute of Sports Science, Nantong University, China (9/2008-present)

3. Publication List (for the previous 5 years)

Chen, X. (2015). Research on Stress Sources and Coping Style of Teenager's Sports Participation. *Asian Sports Science*. 4(5):29-35. (in Chinese)

Chen, X. (2015). Psychological Stressor and Coping of University Student Sports Participation. *China school physical education*. 5:21-24. (in Chinese)

Chen, X. (2014). Research on the Stressors and Coping of Junior High Sports Participation. *Hubei Sports Science*. 33:760-762. (in Chinese)

Chen, X., & Tang, Z.M. (2012). Lu Xun's Sports Thought and Its value. *Journal of Chengdu Sport University*. 38(10):15-17. (in Chinese)

Chen, X. (2011). Development of Children's Physical Self-esteem Research. *Journal of Physical Education Institute of Shanxi Normal University*. 26(1): 37-39. (in Chinese)

Chen, X. (2011). Taekwondo for Children's Development of Physical Self-esteem. *Sports Forum*. 3(7):42-43. (in Chinese)

Chen, X. (2010). An Analysis of Factors Influencing the Formation of Physical Exercise Habits of Middle School Students and Evaluation Index. *Journal of Kashgar Teachers College*. 31(3):74-76. (in Chinese)

4. Research Activities (for the previous 5 years)

2012-2015, Social Science Research Funding of Jiangsu Provincial Department of Education: A study on the relationship of physical and mental health of young people with the stress sources and coping strategies.

2009-2011, Education Science "11th Five-year" Plan of Jiangsu Province: An experimental study on the effect of exercise intervention on the development of adolescent physical self esteem

23. For FRG applications at or above HK\$100,000, provide a list of two external (i.e. non-HKBU) reviewers who are knowledgeable in the area of the proposal to Graduate School:

[Note] The reviewer **should preferably have no professional relationship** with any of the investigators. Where impossible, please declare the type of relationship (see below). List, under **SEPARATE COVER**, the names of those to whom invitations to serve as External Assessors **SHOULD NOT** be sent.

- | | |
|---------------------------------------|-----------------------------------|
| (1) Ph.D. Supervisor / Advisor | (4) Co-author of papers & patents |
| (2) Postdoctoral Supervisor / Advisor | (5) Professional Acquaintance |
| (3) Research Collaborator | (6) Past Colleague |
| | (7) Personal Friend |

Accurate, updated correspondence information will facilitate the assessment process.

1	Name (with title)	Dr Niemeier Brandi S.	
	Occupation/ Post	Assitant Professor	
	Area of Specialisation	Health behavior development and promotion	
	Declaration of professional relationship with the reviewer (past and present) [Note]	N/A	
	Contact Address University of Wisconsin-Whitewater Department of Health, Physical Education, Recreation and Coaching 130 Williams Center, 800 West Main Street, Whitewater, WI 53190, USA	Telephone No. (001) 262-472-1442 Fax No. E-mail Address niemeieb@uww.edu	

2	Name (with title)	Prof Vogt Lutz	
	Occupation/ Post	Professor	
	Area of Specialisation	Health Promotion	
	Declaration of professional relationship with the reviewer (past and present) [Note]	N/A	

