



HMRF – Grant Skills Training Workshop

“What do you need to have in your application”

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How to write an excellent grant proposal?

An excellent
grant proposal

An exciting story



Three major
components

An exciting story ...



13b) Introduction
13c) Aim & Hypotheses



13d) Plan of Investigation
13e) Existing facilities
13f) Justification for requirement



13g) Impact & dissemination plan to end users

Introduction

- A highly important session to ‘**Win the Heart**’ of the Grant Review Board.
- Identify a critical issue which:
 - ▶ Match with the thematic priorities of the HMRF.
 - ▶ “critical” → discuss how ‘**Big**’ is the issue in **three Dimensions**.

Dimensions	Content
Extensiveness	Number, Epidemiological parameters
Potential for evolvement	Predicted growth of the problem
Impact	Adverse consequence at different levels: <ul style="list-style-type: none">• Individual• Family• System• Society



Introduction

- Convince the reviewers that there are missing pieces to resolve the critical issue
 - ▶ A critical review of **the up-to-date** research evidence which addresses the issue.
 - ▶ Make a strong argument about:
 - ▶ **What** are the missing pieces?
 - ▶ **Why** identifying the missing pieces are important?



The missing piece

- ▶ The Expectation-Evidence Paradox on the sleep-promoting effect of exercise urges for more stringent scientific evaluation on this lifestyle intervention. The positive findings of the pilot study **imply the need for a full-scale randomized controlled trial** to examine the effects of moderate-intensity exercise on sleep. Future study also needs to **avoid using black-box approach but to examine the mediating process in the exercise-sleep relationship**, so that **how and why this lifestyle intervention affect late-life sleep can be elucidated**. **Acceptability of exercise intervention among older adults need to explore** so as to **facilitate the subsequent knowledge transfer**.

What are the missing piece

Why it is important



The missing piece

- ▶ Add "originality" / "Innovation" to your application

HMRF [Originality]	Health Promotion [Innovation]
<p>A substantial level of evidence suggests the role of physical activity in addressing the risk factors of insomnia, <u>the empirical effects of home-based exercise on sleep quality has not been investigated.</u></p>	<p>A substantial level of evidence suggests the ben of physical activity in promoting sleep quality, <u>the evidence has not been translated for promoting sleep in a sustainable way for older adults in our community.</u></p>

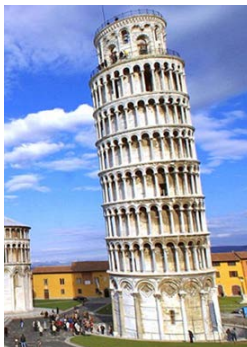


The missing piece

Relevance of the missing piece to local context.

*“...the patient empowerment model and tele-care, will be **coherent with the strategies advocated by the health care service in Hong Kong** for chronic disease management. In view of the **inadequacy of current health care practices**, there is an urgent need to”*

Work out the critical issue & missing piece with the service stakeholder from Day One!!



The missing piece

- Make a strong argument about how to address the missing piece.

Justification for the research hypothesis

- Why the variables are related in the specified manner?
- Why the proposed intervention can improve the outcomes?



Theoretical framework or
conceptual framework

Aims and Hypotheses to be tested

- ▶ Keep the wheels spinning...
 - ▶ Present the aims & research questions that are coherent with the missing pieces.
 - ▶ Putting down research hypotheses that are based on the conceptual/ theoretical framework in your background.

Plan of investigations

- “Orientate the reviewer about the “roadmap” to answer your research questions”



Frustrations of the Applicants vs the Reviewers: A “Two Sides of the Same Coin” phenomenon

Why questioned the arrangement for sampling, its so trivial that

Why they challenge the clarity of intervention? They should aware of the word limit.

I already state the analysis for the research questions, why they said no information

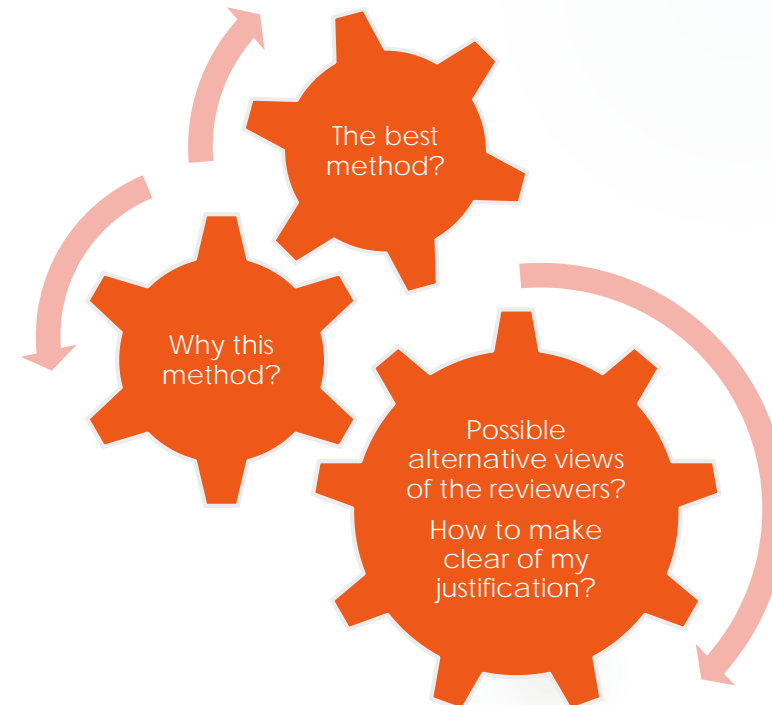


How do they recruit the samples from three hospitals?

Method: A clear & effective roadmap to answer the research questions

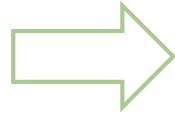
- Four key characteristics :
 - ▶ Comprehensive and precise;
 - ▶ Feasible even though it may be challenging;
 - ▶ Highly reliable (scientific rigor);
 - ▶ Convincing (with strong justifications)

Keep Challenge Yourself



An illustration: Sampling

List out the selection criteria



Explain why.

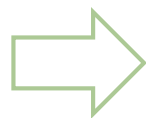
Eligible patients will be Chinese people aged 55 or over, ..., with a confirmed medical diagnosis of CHF of at least 6 months standing, and with NYHA Class II-IV symptoms. **The last two criteria exclude those who may not perform self-care because they are lack of illness experience or have too mild symptoms.**

explanation



An illustration: Sampling

List out the effect size



Explain why, list out the assumptions for SS estimation.

Power analysis guides the sample size estimation. According to three similar studies, the effects size (Cohen's d) of self-care programmes ... on [outcomes] ... at the 3-month study end-points were 1.24, 0.89, 0.45, and 0.54 respectively.¹³⁻¹⁵ Current study aims to detect a small to medium effect size of 0.40 on the primary and secondary outcomes. ... assuming there is no between-group difference on the outcomes at the baseline after randomization ...

explanation

assumption



Intervention – In Text and In Appendix

- Using **Appendix** to overcomes the word limits
- In text:
 - ▶ Who is the intervener?
 - ▶ Based on any guidelines?
 - ▶ State the core components with brief descriptions **in sequence**?
 - ▶ State ways to ensure integrity and fidelity of intervention. (e.g. attaining moderate-intensity level of Ex, ways to optimize clients' compliance)

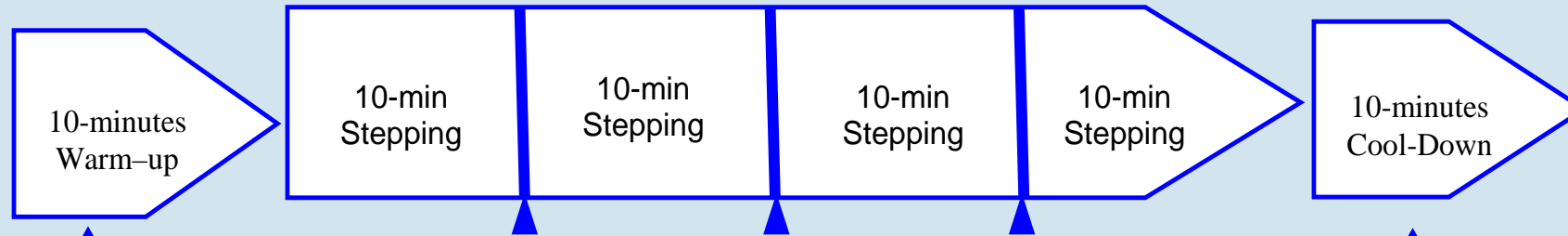
**Invite someone not in your project team to comment read the intervention,
Check if they understand how your intervention will be conducted.**



Intervention (in Appendix)

Additional Appendix 1: Protocol of Exercise Training

“Moderate-Intensity 7.5-cm-high Bench Stepping Exercise Program for Seniors”



If needed, maximum 5-min rest is allowed in-between exercise bouts

Exercise intensity

Subject's exercise intensity will be monitored by **Borg Rate of Perceived Exertion (RPE)**, reaching 12-14 (i.e., “somewhat hard”)

Moderate exercise intensity will be achieved by subject's self-adjustment of the stepping pace with the attending RA's assistance

The exercise duration will be increased gradually from 20-min to 40-min (targeted duration) in the initial 4 weeks of the 16-weeks training program

Exercise methods

Basic training to perform the following procedure of bench stepping exercise will be provided by the trainer in the first session. Subjects will follow the standard instructions below for performing bench stepping exercise:

1. Keep the head in a neutral position with the gaze forward. Not drop the head or hyper-extend the neck.
2. Chest up and shoulder pulled back. Naturally swing the upper limbs to maintain the body balance.
3. Start with right leg as the leading leg. Maintain proper form, never hold your breath. Breathe just naturally as walking down the street or up a hill.
4. Pull the whole right foot flat on the bench. Step up through the heel of the right foot. Not push off with the trailing leg.
5. Bring the trailing leg to the top of the bench and place the whole left foot flat on the bench. Step down with the lead leg. Keep the foot flat on the floor and on the bench.
6. Bring the trailing leg down to the floor.
7. The trailing leg now becomes the leading leg and the movement is repeated on the other side.

Warm-up Exercise:

Stretching exercise & stationary mobilizing exercise for trunk and limb joints at both upper and lower bodies (e.g., shoulders, elbows, wrists, hips, knees, and ankles)

Cool-down Exercise:

Slow walking exercise & stationary trunk and limb mobilizing exercises involving joints of shoulders, elbows, wrists, hips, knees, and ankles.



Intervention

- Gain confidence of the reviewers for complicated intervention:
 - ▶ Pilot study;
 - ▶ Describe facilitation to ensure a smooth delivery;
 - ▶ Describe the mechanism to monitor the fidelity.
 - ▶ Describe the mechanism to safeguard and manage adverse events.
 - ▶ Elaborate the support and collaboration with the involved stakeholders.



Data analysis

- Structure the analysis in the same **sequence** as your research questions.
- Make sure **all the collected data** are being mentioned in this session.
- Provide justification about **why a particular test** is being used.
- If the study used **mixed-method**, make sure all quantitative and qualitative analysis are well described.
- Consider inviting **a statistician of relevant background** to the project team if sophisticated analysis is needed.



Impact & Dissemination Plan

- Major challenge:
 - ▶ After the long battle with Section 13a-f, run out of energy / time to write the 13g.
 - ▶ Just re-literate & summaries how important to address the missing piece. (Section 13b)



How much time you would invest if ...

Section 13 g

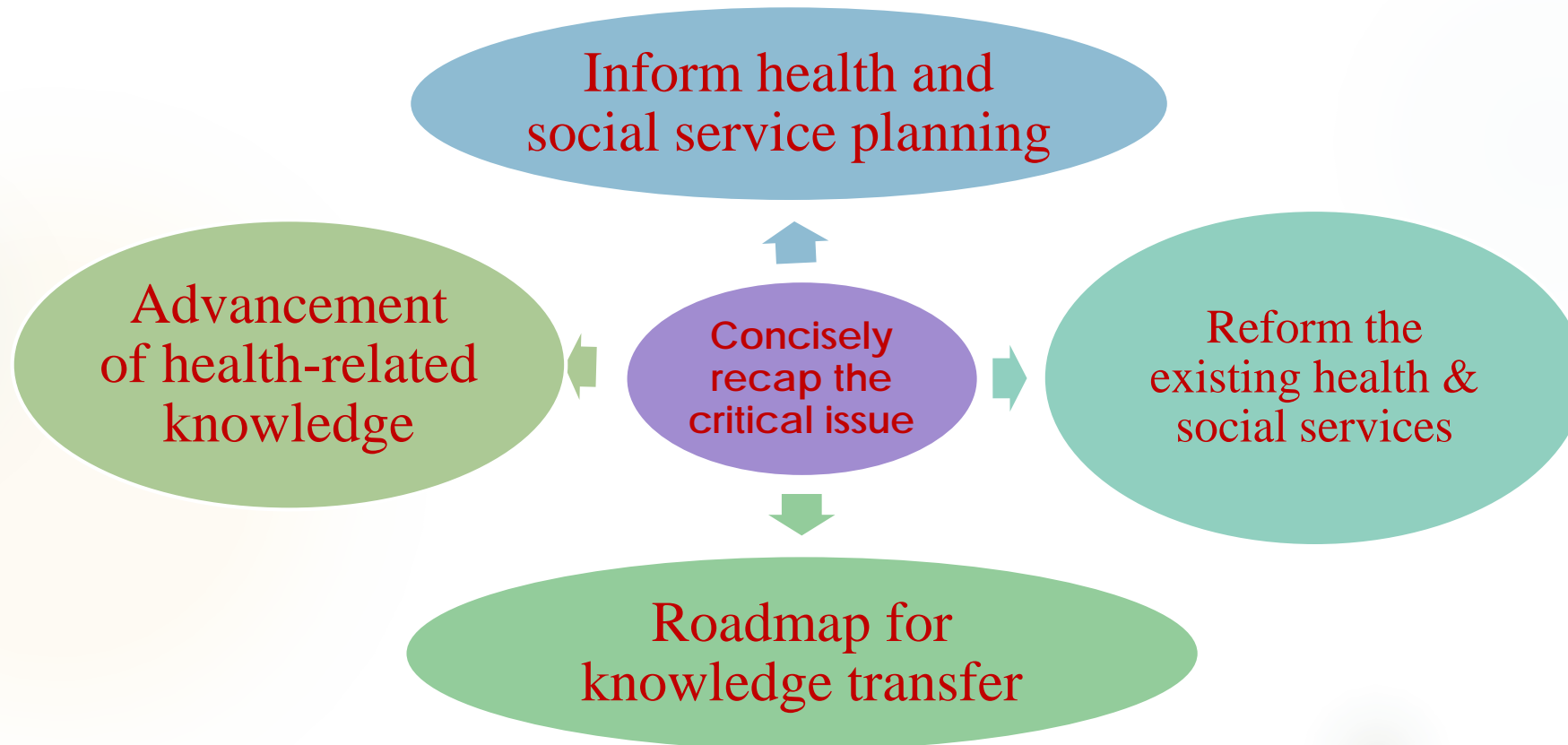


'Exit Interview' with
the Review Panel

- How important it is to support your application?
- So what after you complete the study? What will be happened to benefit the society at large?



Impact



Final words ...

- **Time is luxury** for practitioners and academicians, but “no pain no gain”.
- Develop the research idea with **the service stakeholders**.
- Despite the word limit, **write as much as** you can in the first draft.
- Critically review the first draft to **remove** any sentences or even words which **do not play a role** in the proposal.
- **Effective use of appendix** [an important buffer for page limit]
- **Peer review** by someone in your area and Not in your area.

Looking forwards to
receiving your exciting story
with a perfect ending!

