

令和 5 年 6 月 14 日現在

機関番号：22604

研究種目：基盤研究(C) (一般)

研究期間：2016～2022

課題番号：16K04150

研究課題名 (和文) Development and efficacy of community-based integrated care system
interprofessional program for care prevention (kaigo-yobou) based in
social-innovation.

研究課題名 (英文) Development and efficacy of community-based integrated care system
interprofessional program for care prevention (kaigo-yobou) based in
social-innovation

研究代表者

ペイター ボンジェ (Bontje, Peter)

東京都立大学・人間健康科学研究科・教授

研究者番号：00388703

交付決定額 (研究期間全体) : (直接経費) 3,100,000 円

研究成果の概要 (和文) : 包括ケアには、連携の教育が不可欠であるが、必要な汎用性の高い専門職間 (IP) 教育の開発のため、オンラインIP教育プログラムのモデルを開発することであり、本研究の目的は、当該プログラムにおける学習の質を評価することであった。小グループに、ケアプランの共同設計と再設計を課すことで、彼らの連携に関する体験学習と、それに対する動機付けを誘発する (Cause)。互いから、共に、自分自身について、互いについて、インタラクティブな学習となる (Mechanism)。IPケアプランの見直しが必要になったため、連携能力の学習はさらに強化される。学習者は連携スキルと自分の遂行に対する洞察を獲得する (成果)。

研究成果の学術的意義や社会的意義

Interprofessionalism (IP) informed the development of the program based on the Health Care Team Challenge (HCTCT) format.

In addition to developing a model online IP education-program, we demonstrated the utility of a realist approach to evaluation of the programs efficacy.

研究成果の概要 (英文) : Education for collaboration is essential to integrated community care, but the development of versatile interprofessional (IP) education that can accommodate learners from different locations with different schedules is needed. The overall objective was to develop a model online IP education-program. We evaluated the quality of learning in said program based on the Health Care Team Challenge format. Evaluation was grounded in a realist approach. Tasking small groups of learners of different health care professions in a safe (online) environment, to design a care plan, triggers their experiential learning of collaboration, and motivation for it (Cause). Lectures, their motivation and commitment set the stage for interactive learning (Mechanism). Learning of collaborative competency is enhanced in response to a twist in the patient situation necessitating revision of the IP care plan. Thus, learners acquire collaborative skills and insights into their performance (Outcome).

研究分野：Health care education

キーワード：Interprofessional, realist approach IPL IPE

様式 C - 19、F - 19 - 1、Z - 19 (共通)

1. 研究開始当初の背景

The development of integrated community care necessitates the development of versatile interprofessional education that can accommodate learners from different geographical locations with different daily work/study schedules.

2. 研究の目的

The overall objective was to develop a model online training-program and the aim of the study was to evaluate its quality of promoting learning for interprofessional practice. the research aim was, "What works (or not) and in which circumstances), and the data were quantitative and qualitative, and formative and summative assessment of participants' learning.

3. 研究の方法

Social innovation and interprofessionalism informed the development of the online training program based on the Health Care Team Challenge (HCTCT™) format. The evaluation of the efficacy of the program was grounded in a realist approach (Pawson & Tilley, 1997).

Accordingly, to test whether and how the program worked (or not) the research aim was phrased for analysis as, "What works (or not) and in which circumstances), and the data were quantitative and qualitative, and formative and summative assessment of participants' learning.

INTERVENTION/PROGRAM: HEALTH CARE TEAM CHALLENGE™.

The HCTCTM was adopted as the main method of learning because of its versatility in designing scenarios for interprofessional learning

The HCTCTM is an event where learners are allocated in interprofessional teams. They are tasked to develop a support-plan for a case. The case is usually fictitious but realistic and in the present study modeled on local service users.

Teams were created in advance and presented their plans online to an audience consisting of their peers, team facilitators and researchers.

Immediately after their presentation teams were presented additional information, i.e., a twist, to the case-scenario. This twist challenged them to re-design their plan and to utilize their collaborative skills on the spot.

The number of HCTCTM teams is flexible, but in the present study there were four, which was considered a good balance of different illustrations of teamwork and the constraints of time management.

The 5-week program program consisted of three 2-hour evening session spaced at a two and then a three week-interval with some self-study in-between.

Further details of the 3 sessions and activities can be made available on request

HCTC session 1:

- Explanation of the HCTCTM and, introduction of the HCTCTM scenario
- Breakout session: designing care-plan.
- Plenary: additional explanations, comments and addressing any questions

HCTC session 2:

- Each team's 5 minutes presentation
- Introduction of twist to the case-scenario and breakout session: revising care-plan
- 5-minute presentations of teams' revised care-plans

HCTC session 3:

- Review of sessions 1 and 2, feedback on reflection reports and on care-plans
- Best team announcement
- Wrap-up lecture on collaboration dynamics

DATA-GATHERING AND ANALYSIS:

A Table presenting the frame for data-analyses, can be made available on request.

Three questionnaires were conducted using Google forms. A focus group was conducted online with ZOOM. Reflection reports were completed in Word documents and submitted as email attachments.

RIPLS (Readiness for Interprofessional Learning Scale) assesses learners' readiness for IPL.

The hypothesis, 'Participation in the program enhances motivation/readiness for IPL among participating students' was tested by t-test following verifying normal distribution using the Kolmogorow-Smirnov test of this RIPLS-data.

CBIPE (Community-based Interprofessional Education):

The hypothesis "Participation in the program leads to an improvement in collaborative skills' was tested by t-test following verifying normal distribution using the Kolmogorow-Smirnov test of this CBIPE-data.

Impact of Program Questionnaire (IPQ): This was a fit-for purpose designed questionnaire consisting of 14 questions organized in 3 sections. The first sections explored changes/improvements in participants' attitude knowledge and awareness of IPCP, and the second explored learning of collaborative skills. Participants were asked to rate their level of (dis-) agreement on a 5-point scale. To mitigate the risk of socially desirable answering and to get access to perceived facilitators, constraints and mechanisms and outcomes the ratings had to be illustrated with a written concrete example.

In the third section respondents were asked for their biggest change, how they might further learn about IPCP, and any further comments they might want to share.

The scores were analyzed using descriptive statistics, with all other than the completely disagree options being treated as indicating a learning effect. The freely written comments were thematically analyzed.

Reflection reports:

One of the researchers, an expert in reflective learning and IPE/IPCP, with the assistance of one of her research students (not part of the research team) thematically analyzed the reflection reports for facilitators, constraints and mechanisms and outcomes.

Focus-group: One focus group was conducted afterwards in which participants were asked to discuss the following topics put forth by the moderators:

Their general learning experience, particularly how they experienced the competitive element and the twist

The discourse organically evolved into discussing:

how they overcame any challenges, and any facilitators or constraints they had perceived.

The two moderators, together with one co-author not involved with the focus group thematically analyzed the verbatim transcribed focus group transcripts for facilitators, constraints and mechanisms and outcomes.

4 . 研究成果

Quantitative results

The pre-post comparison of RIPLS and CBIPE scales indicate moderate to large effect sizes for enhanced readiness and collaborative skills, respectively, albeit that the scores indicating enhanced readiness do not pass the 0.05 p-value for statistical significance.

表

	Before	After	p-value	Effect size (r)
RIPLS 日本語版	82(71-93)	83(74-92)	0.083	0.42
地域基盤型 IPE 自己評価尺度	50(41-59)	56(46-66)	0.004	0.70

備考: Effect size は効果量 r を使用し, $r = 0.10$ を効果量小, $r = 0.30$ を効果量中, $r = 0.50$ を効果量大と判断した.

As for the IPQ questionnaire evaluating to what extent students learned from this program. The results indicate students agreed to achieving the learning objectives, with strong agreement on increasing their knowledge (Q1.2), understanding (Q1.3) and motivation (Q1.4) for collaborative practice, with their opinion on collaborative practice not changing much (Q1.1).

On the other hand, as for skills' learning objectives they reported agreement on communicative (Q2.3) and collaborative skills (Q2.1 & Q2.4), and for objectives where students partially agreed reasons indicated scores were lower because there had been no learning opportunity (or they did not recognize it), i.e., Q2.5 (I don't remember having had a leader role) and Q2.6 (there were no conflicts in our group). We reason that Q2.4 on patient-centred skills was at best partially agreed to, because the scenario they worked on concerned a paper-patient (not an actual patient).

	1.1)	1.2)	1.3)	1.4)	2.1)	2.2)	2.3)	2.4)	2.5)	2.6)	2.7)	total
平均 (mean)	2.47	3.06	3.35	3.41	2.59	2.41	2.94	2.76	2.18	1.59	2.82	29.59
標準偏差 (SD)	1.01	0.75	0.61	0.62	0.87	0.80	0.83	0.83	1.01	1.06	1.01	4.91
中央値 (median)	3	3	3	3	3	2	3	3	2	1	3	29
最大 (max)	4	4	4	4	4	4	4	4	4	4	4	40
最小 (min)	0	2	2	2	1	1	1	1	0	0	0	23
得点範囲	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-4	0-44

Qualitative results:

Contexts:

The online environment was favorably perceived for learning collaboration competencies, with bonus of interacting with students from other universities at distant locations.

Yet, it came also with challenges as timing of contributing (saying something) could be difficult because in the online conference tool (ZOOM) one cannot sense the nonverbal signs whether others want to say something too.

Chairing a group work session and the discussions involved were perceived as striking learning situations.

Mechanisms:

Respond to demand: Students felt compelled to create care plans that addressed the needs of the patient in the scenario as good as possible. This included the twist, which was also perceived as constraining their thinking because of anxiety about the limited time to revise their care plan.

Repetition: On the other hand of the twist, the repetition involved with revising the care plan was perceived by some as reinforcing the learning of collaboration after the initial creating the care plan.

Togethering. While students experienced culture shock due to different perspectives and ideas, they indicated having endeavored for unity in their team by accommodating, inviting and respecting each other's opinions, strengths and weaknesses, and to create consensus on the overall goals and direction of their care plan. On the other hand, students' lack of confidence and knowledge could constraint them in expressing their opinions.

Leadership. Given good relationship/unity in teams there was little need for a leader to lead.

Outcomes:

Improved collaborative condition, which was achieved through the joint effort

of 'togetherness', and through combining the various expertise to solve the patient's problems, and also through:

- Individual learning, such as of professional knowledge and skills, expanding one's views/perceptions, increased awareness of why interprofessional practice is needed collaborative skills, and learning of one's own strengths and weaknesses, including in relation to one's personality/character, perspectives and thinking patterns.
- Students also identified further individual learning needs for their future practice.

Synthesis of above results

Based on the above results we conclude that the three propositions have been achieved.

In conclusion we present the following Cause-Mechanism-Outcome (CMO) statement:

Tasking small groups of learners of different health care professions, gathered in a safe (online) environment, to collaboratively design and re-design a care plan, triggers their experiential learning of collaborative skills, and motivation for it. Introductory lectures, their motivation and commitment to providing quality care set the stage for interactive processes of learning from, with and about each other and oneself. Learning of collaborative competency is further enhanced through repetition of learning in response to a introducing a twist to the patient information necessitating revision of the IP care plan.

However, considering the configuration of Contexts-Mechanisms-Outcomes (CMO) against the initial program theory and analytic results recommendations will be made in future peer-reviewed publication.

- Clarify 'leadership' and the role of facilitators also to the participants before commencing the group work.
- Give groups, particularly inexperienced students, more time to revise their care plan after the twist, , and considering spacing these at least one week apart. In addition to reducing anxiety about time pressure such spacing overtime would also provide opportunity for experiencing reflective practice.
- Incorporate a twist that facilitates participants to articulate different levels of collaboration (as per Leutz framework).
- Adding a quality of collaboration assessment in order to expand students insights into individual collaborative competencies towards the quality of the actual collaboration/team work.
- Involving a real patient would facilitate the learning of patient-centered practice.

Although this study did not produce universally applicable findings, we suggest that teams could also work face to face with teams in different locations connecting for the plenary sessions online.

5. 主な発表論文等

〔雑誌論文〕 計0件

〔学会発表〕 計0件

〔図書〕 計0件

〔産業財産権〕

〔その他〕

コロナとPIの健康状態のため、原著論文や学会での報告はまだできていない状態である

6. 研究組織

	氏名 (ローマ字氏名) (研究者番号)	所属研究機関・部局・職 (機関番号)	備考
研究分担者	小林 法一 (Kobayashi Norikazu) (30333652)	東京都立大学・人間健康科学研究科・教授 (22604)	
研究分担者	石橋 裕 (Ishibashi Yu) (50458585)	東京都立大学・人間健康科学研究科・准教授 (22604)	
研究分担者	宮本 礼子 (Miyamoto Reiko) (70404944)	東京都立大学・人間健康科学研究科・准教授 (22604)	

7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8 . 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関
---------	---------