

Perioperative anxiety in adolescents: Designing a nursing intervention program using the Medical Research Council Framework



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Introduction

The memories of a perioperative experience may affect not only how adolescents think and act in the present, but also interfere with their development, compromise their future and have implications for their health and well-being. Evidence shows that more than 80% of adolescents reported high levels of anxiety at the time of anesthetic induction to surgery^[1].

Objective

To design a nursing intervention program to prevent anxiety in the perioperative in adolescents aged 14 to 18, using the Medical Research Council (MRC) framework.

Methods

The design of the Program to Prevent Perioperative Anxiety in Adolescents (3P2A) is based on the development enriched phase of the MRC framework^[2,3,4]. A multi-phase study was planned. Different methodological approaches, namely qualitative and quantitative, are organized to use according to each one element within the development phase of the complex intervention framework:

Problem identification and definition – Quantitative and qualitative will be developed to descriptive study to explore and describe the levels and the experience of anxiety in the perioperative process in adolescents' aged 14 to 18. In the quantitative descriptive study we will use the State Trait Anxiety Inventory for children (STAIC) and Visual Analogue Scale – Anxiety (VAS-A) to evaluate the levels of anxiety. In the qualitative study, the authors will conduct interviews with adolescents and his parents, separately, describe the characteristics of the experience.

Systematically identifying the evidence – Two systematic reviews are being developed. A scoping review to map the range of non-pharmacological interventions used in a perioperative period to prevent anxiety in adolescents and an integrative review to identify the adolescents' needs and synthesize the current evidence.

Identifying or developing theory – The Neuman Systems Model from Betty Neuman was selected to underpin the intervention.

Determine the needs – A qualitative descriptive study using the interview technique will be conducted to determine the difficulties and the needs of the adolescents. The authors will also describe the determinants that influence the adherence to an intervention to prevent anxiety in the perioperative period.

Examine current practice and context – To explore the context in which the nursing intervention program will be implemented, the authors conduct the interviews with adolescents and their parents and focus groups with pediatric nurses. We will also analyze the documents: guidelines, policy documents and registries in order to understand the context in where the nursing intervention program will be executed.

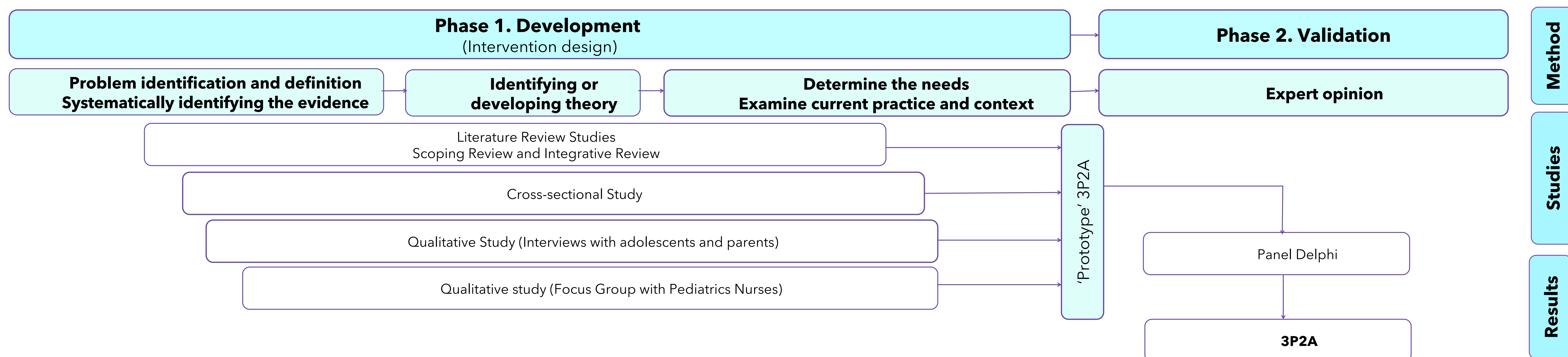


Fig1. Framework for 3P2A development based on the MRC method^[2,4]

Results

According to the MRC guidelines, the development of complex interventions is useful to enhance the probability of success. The selection of this framework gives the authors a better chance to produce an intervention that can be well adopted, appropriate to its context and effective.

Conclusions

Due to the high levels of adolescents' anxiety in the perioperative period, it is important to design and systematically develop interventions to reduce it. All the investment in the development phase of complex interventions is time-consuming. However, it gives authors The chance to improve the interventions before conduct a full trial^[4]. The development of non-pharmacological interventions to prevent anxiety in the perioperative period using the MRC framework gives a better chance of producing a nursing intervention program that it is well-adopted answering to the population needs and fitted to its context.

References: [1] Fortier MA, Martin SR, MacLaren Chorney J, Mayes LC, Kain ZN. Preoperative anxiety in adolescents undergoing surgery: a pilot study. *Pediatric Anesthesia*. 2011;21(9):969-73. [2] Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M, et al. Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ*. 2008;337:a1655. [3] Richards DA, Hallberg IR. *Complex Interventions in Health: An overview of research methods*. 1st edition ed. New York. 2015. 370 p. [4] Bleijenberg N, de Man-van Ginkel JM, Trappenburg JCA, Ettema RGA, Sino CG, Heim N, et al. Increasing value and reducing waste by optimizing the development of complex interventions: Enriching the development phase of the Medical Research Council (MRC) Framework. *Int J Nurs Stud*. 2018;79:86-93. [5] Neuman B, Fawcett J. *The Neuman systems model*. fifth edition ed. 2011. 445 p.