Empowerment counselling in nursing well-child visits for healthy family lifestyles

Sónia Patrícia Lino Borges Rodrigues

Orientadores: Professora Doutora Sanna Salanterä
Professora Doutora Maria Luísa Torres Queiroz de Barros

Tese especialmente elaborada para obtenção do grau de Doutor em Enfermagem

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2022

This thesis is dedicated to my family, with love and gratitude.

“Nursing care focuses on promoting the health projects that each person lives and pursues” (Ordem dos Enfermeiros, 2001, p. 11).

“Power properly understood is nothing but the ability to achieve purpose. It is the strength required to bring about social, political, and economic change” (King Jr, 2010, p. 37).

ABBREVIATIONS

ACeS	*Agrupamentos de Centros de Saúde,* Health Centre Clusters
ANOVA	One-way Analysis of Variance
APA	American Psychological Association
BCT	Behaviour Change Tecnique
BMI	Body Mass Index
BACP	British Association for Counselling and Psychotherapy
CES	*Comissão de Ética para a Saúde,* Ethics Committee for Health
CI	Confidence Interval
CINAHL	Cumulative Index to Nursing and Allied Health Literature
COSI	Childhood Obesity Surveillance Initiative
COSMIN	COnsensus-based Standards for the selection of health status Measurement INstruments
CRC	Convention on the Rights of the Child
DGS	*Direção-Geral da Saúde,* Directorate-General of Health
DK	Don't Know
DSIA	*Direção de Serviços de Informação e Análise,* Information and Analysis Services Department
DSPDPS	*Direção de Serviços de Prevenção da Doença e Promoção da Saúde,* Directorate of Disease Prevention and Health Promotion Services
EFA	Exploratory Factor Analysis
EMBASE	The Excerpta Medica Database
ESPS	Empowering Speech Practices Scale
FNPA	Family Nutrition and Physical Activity
GFI	Goodness-of-fit index
GUIDED	Guidance for reporting intervention development studies in health research
KMO	Kaiser-Meyer-Olkin
MEDLINE	Medical Literature Analysis and Retrieval System Online
MRC	Medical Research Council
NCD	Non-Communicable Disease
OECD	Organization of Economic Cooperation and Development
PCA	Principal Components Analysis
P3C	Parent's Perception of Primary Care
PNSIJ	*Programa Nacional de Saúde Infantil e Juvenil,* National Children and Young People Health Programme
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
RCT	Randomised Controlled Trial
RMSEA	Root-mean-square Error of Approximation

RQ	Research Question
SDG	Sustainable Development Goal
UN	United Nations
UCSP	*Unidade de Cuidados de Saúde Personalizados,* Customized Health Care Unit
USF	*Unidade de Saúde Familiar;* Family Health Unit
WCV	Well-child visit
WHO	World Health Organization

ABSTRACT

Background: Empowerment counselling has long been assumed to improve people's health and is encouraged to be adopted in routine healthcare. However, the questions as to whether empowerment reliably benefits preschool children and families' health and whether it is being addressed in nursing well-child visits for healthy family lifestyles are yet to be addressed. The overall purpose of this thesis is to contribute toward the clarification and advance of empowerment counselling in nursing well-child visits for healthy family lifestyles. This thesis consisted of three studies.

Aims: To synthesize the existing evidence on health interventions using the empowerment concept with preschool-age children and families (sub-study 1). To develop a Portuguese translation and adaptation of the Empowering Speech Practices Scale and investigate its construct validity and reliability (sub-study 2). To describe and compare nurses' and families' perceptions regarding the degree of empowerment counselling in well-child visits for healthy family lifestyles and explore its associations with nurses' and families' sociodemographic and nutritional characteristics (sub-study 3).

Design and Methods: We conducted a systematic literature review (sub-study 1), and an observational cross-sectional survey study (sub-study 2 and 3) with 82 families attending a 5-year-old well-child visit and 25 nurses from 12 health functional units situated in Portugal's Central Region and the Metropolitan Area of Lisbon.

Results: In sub-study 1, only ten intervention studies met the criteria for inclusion, with 50% showing positive effects. Children's participation was scarce. Overall, studies provided limited details on theory application. Sixteen promising behaviour change techniques were identified. Findings from sub-study 2 supported the Portuguese Empowering Speech Practices Scale internal reliability and construct validity, suggesting it has potential usefulness as a measure of empowerment counselling in 5-year-old well-child visits. Sub-study 3 showed that both nurses and families perceived empowerment had been practised to a high degree in the nursing well-child visits. Still, the domain of participatory practices of empowerment counselling can be expanded. The family's limited familiarity with the health system, having children with overweight, and the well-child visits being conducted in Customized Health Care Units were associated with lower empowerment counselling scores.

Conclusions: The findings of the studies give valuable insights to plan further work needed to prove the effectiveness and meaningfulness of using empowerment counselling in well-child visits.

Keywords: Counselling, Empowerment, Family Nursing, Healthy Lifestyle, Primary Health Care

RESUMO

Enquadramento: O *empowerment* assume elevada prioridade na estratégia mundial de saúde, sendo defendido pelos seus benefícios para a saúde e bem-estar das pessoas. O *empowerment* é um conceito relevante na saúde e na enfermagem que descreve um processo, e por vezes um resultado, através do qual, a pessoa/família/comunidade assume controlo e escolha sobre os fatores e decisões que afetam a sua saúde. No entanto, as questões sobre se as intervenções de *empowerment* melhoram efetivamente a saúde das crianças em idade pré-escolar e suas famílias e se o *empowerment* está a ser praticado nas consultas de enfermagem de saúde infantil no aconselhamento para a promoção de estilos de vida saudáveis das famílias precisam ainda de ser respondidas. Esta tese pretende contribuir para a clarificação e desenvolvimento da prática de *empowerment* nas consultas de enfermagem de saúde infantil no aconselhamento para a promoção de estilos de vida saudáveis das famílias. A tese consiste em três estudos.

Objetivos: Identificar, avaliar e sintetizar a evidência acerca das intervenções em saúde de *empowerment* nas crianças em idade pré-escolar e suas famílias (sub-estudo 1). Desenvolver uma tradução e adaptação para português da escala *Empowering Speech Practices* (instrumento que avalia as diferentes componentes do processo de *empowerment* em sessões de aconselhamento em saúde realizadas por enfermeiros) e investigar a sua validade de construto e confiabilidade (sub-estudo 2). Descrever e comparar as perceções dos enfermeiros e famílias relativamente ao nível de *empowerment* praticado nas consultas de enfermagem de saúde infantil, aos 5 anos, no aconselhamento para a promoção de estilos de vida saudáveis das famílias, e ainda explorar a associação dos níveis de *empowerment* percebido com características socio-demográficas e nutricionais dos enfermeiros e famílias (sub-estudo 3).

Metodologia e Resultados: Realizámos uma revisão sistemática da literatura (sub-estudo 1), utilizando o *Preferred Reporting Items for Systematic Reviews and Meta-Analysis*, com o objetivo de sintetizar estudos de investigação quantitativos identificados na MEDLINE, CINAHL, Academic Search Complete, Cochrane Central Register of Controlled Trials, Nursing and Allied Health Collection, PsycINFO, PsycArticles e EMBASE. Os estudos incluídos são ensaios clínicos publicados em inglês, no período entre 1 de janeiro de 1986 e 31 de janeiro de 2019, que testaram os efeitos de intervenções de saúde com foco no *empowerment* em crianças com 3 a 5 anos de idade e seus cuidadores, independentemente do contexto e domínio da saúde em que foram implementados. Analisámos a aplicação da teoria de *empowerment*, a participação da família, as técnicas de mudança comportamental, e os seus impactos na efetividade das intervenções, através de procedimentos metodológicos estandardizados. Dez intervenções cumpriram os critérios de inclusão e foram integradas na síntese final da revisão. Não foi possível conduzir uma meta-análise devido ao número

limitado e heterogeneidade dos estudos. Metade das intervenções revelam efeitos significativos a favor das mesmas. A maioria dos estudos reporta uma sustentação teórica para a intervenção. Contudo, a descrição da aplicação da teoria nas fases de planeamento, implementação e avaliação da intervenção apresenta-se limitada relativamente à quantidade de informação fornecida. De um modo geral, a participação das crianças na intervenção foi reduzida. Esta revisão sugere que um uso de maior número de técnicas de mudança comportamental melhora os resultados da intervenção. Foram identificadas 16 técnicas de mudança comportamental potencialmente eficazes. A heterogeneidade das intervenções, contextos, populações e medidas limitou a possibilidade de realizarmos interpretações robustas sobre as melhores abordagens de *empowerment* nas crianças em idade pré-escolar e famílias.

Realizámos, ainda, um estudo observacional e transversal (sub-estudo 2 e 3) em unidades funcionais de dois Agrupamentos de Centros de Saúde situados na Região Centro de Portugal e na Área Metropolitana de Lisboa. Este estudo foi aprovado pela Comissão de Ética para a Saúde da Administração Regional de Saúde de Lisboa e Vale do Tejo (registo n. 11654/CES/2018). Participaram no estudo enfermeiros envolvidos na consulta de saúde infantil dos 5 anos de idade, com mais de seis meses de experiência profissional nos cuidados de saúde primários, e que deram o seu consentimento informado. Foram também incluídos no estudo os pais, ou representantes legais, da criança com ≥ 5 e < 6 anos de idade sem doença ativa, com agendamento de consulta de saúde infantil dos 5 anos de idade com um dos enfermeiros participantes, com habilidades para ler e compreender português e que deram o seu consentimento informado. Na visita regularmente prevista, os pais e os enfermeiros avaliaram a mesma consulta de enfermagem utilizando a versão portuguesa da *Empowering Speech Practices Scale*, que integra duas subescalas (a ação do enfermeiro e a ação da família) em asserções paralelas. Os questionários também incluíram as versões portuguesas dos instrumentos *Parental Longitudinal Continuity on Primary Care* e *Family Nutrition and Physical Activity Screening*, questões antropométricas e sócio-demográficas. Os dados foram recolhidos entre janeiro-2018 e outubro-2019 a partir de uma amostra por conveniência de 82 famílias e de 25 enfermeiras em 12 unidades funcionais de saúde.

No sub-estudo 2 analisámos a validade de construto da versão portuguesa da *Empowering Speech Practices Scale,* designadamente a validade estrutural e o teste de hipóteses, utilizando, respetivamente, a análise fatorial exploratória e a técnica de grupos conhecidos. Testámos ainda a confiabilidade do instrumento (consistência interna) usando o valor de alpha de Cronbach. No sub-estudo 3 utilizámos estatística descritiva, testes t para amostras emparelhadas, análise de variância e análise de regressão.

A validade de constructo da versão portuguesa da *Empowering Speech Practices,* de 44 itens, foi apoiada pela identificação de dois fatores de *empowerment* no aconselhamento (ação do

enfermeiro e ação da família) numa análise fatorial exploratória, que apresenta 73,79% de variância explicada, e por uma associação significativa e forte entre as duas subescalas (rho = 0.72, $p < .001$). As duas subescalas foram sensíveis às diferenças de grupos conhecidos (i.e., enfermeiras com *vs.* enfermeiras sem formação académica em *empowerment* na educação para a saúde da pessoa) e cada uma apresentou consistência interna excelente (alpha de Cronbach = .91). Os resultados do nosso estudo fornecem evidências preliminares da confiabilidade e validade deste instrumento, sugerindo que este pode ser útil para informar o desenho e disseminação de intervenções de *empowerment* no aconselhamento em saúde para a promoção de estilos de vida saudáveis da família, nas consultas de saúde infantil dos 5 anos de idade. No entanto, recomenda-se a realização de estudos adicionais com testes psicométricos ao instrumento.

Os resultados do sub-estudo 3 mostraram que as famílias e enfermeiras perceberam um nível elevado de *empowerment* praticado na consulta de saúde infantil dos 5 anos de idade. Os elementos do processo de *empowerment* mais praticados foram os da subescala ação dos enfermeiros (e.g., construção de uma atmosfera positiva) e os menos praticados foram os da subescala ação das famílias (e.g., revelação). Identificou-se uma discrepância entre as avaliações realizadas pelas enfermeiras e pelas famílias relativamente aos aspetos 'fornecimento de informação individualizada', 'revelação' e 'colocação de questões', com as famílias a relatarem pontuações mais elevadas. A menor familiaridade da família com a unidade funcional de saúde e com a enfermeira, famílias com crianças com pré-obesidade, e a consulta de saúde infantil decorrer em Unidade de Cuidados de Saúde Personalizados, foram associados a pontuações mais baixas nas duas subescalas de *empowerment* no aconselhamento em saúde para a promoção de estilos de vida saudáveis da família.

Os resultados do estudo ilustram as potenciais vantagens do *empowerment* na saúde e bem-estar das crianças em idade pré-escolar e suas famílias. Os resultados apoiam a validade inicial da versão Portuguesa da *Empowering Speech Practice Scale,* a primeira escala que mede o *empowerment,* no aconselhamento em saúde para a promoção de estilos de vida saudáveis da família, praticado nas consultas de enfermagem de saúde infantil dos 5 anos de idade, a partir das percepções dos enfermeiros e famílias. Os resultados fornecem, ainda, evidência de que o *empowerment* no aconselhamento em saúde para a promoção de estilos de vida saudáveis das famílias aparenta estar a ser realizado nas consultas de enfermagem dos 5 anos de idade. Contudo, existe margem para melhorias, particularmente nos domínios da adequação das informações aos fatores pessoais e ambientais das famílias e práticas participativas das famílias, designadamente, a participação efetiva e significativa das crianças.

Conclusões: O nosso estudo oferece um olhar renovado sobre uma abordagem tradicional, intemporalmente essencial, e congruente como os valores da enfermagem, o *empowerment* no aconselhamento em saúde, cujo reconhecimento como uma estratégia que permite às famílias controlo e escolhas sobre os seus processos de saúde, e mecanismo para reduzir as desigualdades, tem de ser sustentado. O nosso estudo sugere que a prática profissional dos enfermeiros parece estar alinhada com esta abordagem. Os resultados do estudo são úteis para a condução de futuros esforços, nos domínios da investigação, prática clínica, educação e política de saúde, essenciais para a implementação efetiva e significativa do *empowerment* no aconselhamento para a promoção de estilos de vida saudáveis das famílias nas consultas de saúde infantil. Embora esta competência não seja nova para os enfermeiros, ela constitui-se uma oportunidade e forma de a enfermagem demonstrar e desenvolver a sua força na promoção da saúde das crianças e famílias.

Palavras-chave: Aconselhamento, Empoderamento, Enfermagem de Família, Estilo de Vida Saudável, Cuidados de Saúde Primários

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LIST OF ORIGINAL PUBLICATIONS

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1. Borges Rodrigues, S., Parisod, H., Barros, L., & Salanterä, S. (2021). Examining Empowerment Interventions with Families and Preschool Children: Systematic Review of Randomized Controlled Trials. *Health Education & Behavior*, 10901981211031444. Advance online publication. https://doi.org/10.1177/10901981211031444

2. Borges Rodrigues, S., Parisod, H., Barros, L., & Salanterä, S. (2021). Measuring empowerment counselling in routine primary health care: Psychometric properties of a Portuguese adaptation of the empowering speech practices scale. *Journal of Pediatric Nursing*, S0882-5963(21)00144-5. Advance online publication. https://doi.org/10.1016/j.pedn.2021.04.031

3. Borges Rodrigues, S., Parisod, H., Barros, L., & Salanterä, S. (2020). Two sides of the same well-child visit: Analysis of nurses' and families' perspectives on empowerment in health counselling. *Journal of Advanced Nursing*, *76*(12), 3448–3463. https://doi.org/10.1111/jan.14554

Under the supervision of Professor Sanna Salanterä and Professor Luísa Barros, the candidate conceived and designed the studies, collected data, conducted data analysis, and wrote the first draft of the journal articles. Co-authors of the journal articles (SS, LB, and HP) contributed to redrafting the manuscript and approved the final versions.

INTRODUCTION

All over the world, people value living longer and healthier lives. Globally, health is one of the most important determinants of happiness and life satisfaction (Helliwell et al., 2017). Non-communicable diseases (NCDs; e.g., cardiovascular diseases, cancer, chronic respiratory disease, chronic kidney disease, and type 2 diabetes) are the leading cause of morbidity and mortality worldwide (NCD Countdown 2030 Collaborators, 2018). These conditions are responsible for approximately two-thirds of deaths and almost half of the healthy life years lost worldwide (measured in disability-adjusted life years[1]; Global Burden of Diseases 2015 Risk Factors Collaborators, 2016). Besides the pain and suffering that NCDs cause in individuals and families, it represents the loss of productivity and escalating healthcare costs (Rainer et al., 2017).

Although NCDs become symptomatic in later life, they mainly originate in early life (Kelishadi, 2019). Unhealthy diet, insufficient physical activity, smoking, alcohol intake, high body mass index (BMI), childhood undernutrition, high systolic blood pressure, high fasting plasma glucose, high total cholesterol, and air pollution are serious risk factors for NCDs development and, according to research, are the leading causes of attributable disability-adjusted life years (Global Burden of Diseases 2015 Risk Factors Collaborators, 2016). Therefore, prevention, tracking, and the response to these largely modifiable behavioural risks (i.e., health lifestyles) and metabolic/biological risks have been considered a global and national health priority. The United Nations (UN, 2015) has included NCDs as targets in the 2030 Sustainable Development Goals (SDGs).

For the achievement of the health-related SDG, effective primary health care was identified as foundational, with the empowerment of individuals, families, communities, and civil society stressed as the advocated approach to tackle the global burden of NCDs (World Health Organization [WHO] 2018a; WHO, 2018b).

Empowerment refers to the process of helping a person discover his/her strengths, capacities, and resources so that he/she can take control of his/her health and well-being. The rationale for advocating empowerment in health is the belief that people are capable, have the right to manage their own lives, and are the principal resource for health. The call for strengthening the primary health care finds support on the evidence that more and better primary health care practices are associated with improved health-related outcomes (Starfield et al., 2005; Kruk et al., 2010), with lifestyle counselling interventions showing promising value (Melvin et al., 2017). Alongside population-based interventions[2] for addressing NCDs' risk factors, it is

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[1] The sum of years of life lost and years lived with disability.

[2] population-based interventions consist of policies across all sectors (e.g., to improve population health and health equity, such as regulation of food products' composition; regulation against

recommended that primary health care providers offer individual health care interventions, including risk stratification[3] and tailored lifestyle counselling; such interventions are encouraged to be integrated opportunistically into routine practices of the primary health care agenda (WHO, 2016a).

Children are considered a primary target population to prevent NCDs since biological risks of NCDs can be passed through generations, and risk behaviours related to NCDs develop early in life, tracking from childhood to adulthood (WHO, 2016b). Establishing healthy lifestyles and modifying unhealthy lifestyles starting in early life may provide the best possible trajectories of life-course health and prevent NCDs. The recommendations address the provision of family-based lifestyle management services because children inherit socioeconomic status, cultural norms, and health habits from families (WHO, 2016b). A child's family, namely primary caregivers, have a major influence on the development, maintenance, and change of a child's lifestyles, including modelling health behaviours, creating the environment for health behaviours (e.g., choosing what foods are made available to children), and encouraging and reinforcing healthy or unhealthy behaviours (de Vet, 2011; Golan, 2004; Skouteris et al., 2011; Ventura & Birch, 2008). Given the interdependency and bidirectional effects of interactions between a child and his family (Sameroff, 2010), it follows that lifestyle interventions which target the child and his/her family may be beneficial for both caregiver(s) and the child. Furthermore, investing in a child's health at an early age has a major cumulative effect on throughout the child's life and extending to future generations and society as a whole (Clark et al., 2020).

The well-child visits (WCVs) in primary health care are an established health service platform with an advantageous position to identify children at risk of developing NCDs and provide family lifestyle counselling. The WCVs provide a service accessible to most children and families, equitable, inexpensive, integrated, regular, and continued. Given the nature of WCV, i.e., provision of developmental and preventive services for children, and enhancement of parents' competencies and capabilities, to ensure that children meet their full developmental potential and optimal health status, families may perceive this service as legitimate and as such feel confident to share their experiences regarding health lifestyles. Also, parents tend to prioritise their children's health and are therefore more motivated to practice healthy lifestyles. Furthermore, the lasting family-provider relationships in WCVs can strengthen the family trust in the health professional – how the family perceives provider intentions and behaviours – which is acknowledged as a key for the successful co-production of care (Josefsson et al., 2021). If a child and family trust the health care professional, it can be easier to share their

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commercial harm to children like marketing of sugar-sweetened beverages, tobacco, alcohol, damaging social media; urban planning and infrastructures that encourages physical activity, etc.

[3] risk stratification consists of an assessment of anthropometric, metabolic and behavioural risk factors to predict risk for NCDs to classify the clients' risk and define strategies for intervention (WHO, 2016a).

experiences and the decision-making. Regular and continued contact with primary care professionals within this context is crucial for lifestyle management.

Despite the strong political commitment, primary care seems to be underused to tackle behavioural risk factors of NCDs. The few studies that have examined lifestyle counselling in primary care did so in the adult population and suggested that this intervention is insufficient in coverage and quality (Brotons, 2005; Brotons et al., 2012; Fleming & Godwin, 2008; Keyworth et al. 2018; Melvin et al. 2017; Noordman et al., 2012; Osborn, 2014). Conversely, people expect to get lifestyle counselling in this particular setting, as suggested by the EUROPREVIEW study results (Brotons et al., 2012).

Research has given little attention to what concerns lifestyle counselling directed particularly to children and families in primary care. Dedicated clinical guidelines for WCVs, with the explicitness of effective strategies to empower families and children towards healthy lifestyles, are also notably absent. There is uncertainty about the most appropriate techniques to empower families, particularly young children, might be. Whether empowerment is applied by nurses in lifestyle counselling in WCVs remains an open question that needs further clarification.

Our study contributes to the knowledge and development of empowerment counselling interventions in WCVs towards children and families' healthy lifestyles by: a) exploring the evidence for the effectiveness and nature of empowerment health interventions with families and preschool children; b) determining the psychometric properties of the Portuguese Empowering Speech Practices Scale (ESPS) among nurses and families in the 5-year-old WCV context; c) investigating the degree of empowerment counselling perceived by families and by nurses in 5-year-old WCVs; and d) examining the influence of family's and nurse's sociodemographic and nutritional status on the degree of empowering counselling in 5-year-old WCVs.

Our study will be limited to preschool-age children and their families. Although we recognize that promotion of healthy lifestyles should start early in the life cycle (i.e., preconception) and is relevant at all stages, the preschool age has been identified as one of the three sensitive periods of the life-course[4] to address the risk of obesity (WHO, 2016b). Biological and developmental reasons underpin the recommendation to address this period. Biologically, the period before the adipocyte rebound is considered critical for developing obesity (Boonpleng, 2012); children who are overweight at age 5 are four times more likely to become obese in life than children with a healthy weight (Cunningham et al., 2014). From the development point of view, at this stage, the child establishes the long-term habits related to diet, physical activity, and sedentarism, and is more amenable to interventions focused on behaviour changes

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[4] The commission to tackle childhood obesity identified three critical time periods: preconception and pregnancy, infancy and early childhood and older childhood, and adolescence.

(Barnett, 2009; Birch & Fisher, 1998; Birch & Ventura, 2009; Mattocks et al., 2008; Nicklaus et al., 2005; Reilly, 2008). These arguments are supported by a recent systematic review showing that interventions that include diet and physical activity components can reduce the risk of obesity (zBMI and BMI) in children under six years of age (Brown et al., 2019). Besides, research results suggest that interventions related to lifestyles with children aged 4-5 years are cost-effective (Hollingworth et al., 2012).

Our study will also focus on nurses as actors in the WCVs. In Portugal, well-child care is usually provided by family physicians and by nurses, as a team or independently, with anticipatory guidance often carried out by nurses. Other countries have different organizations for well-child care, and there is no consensus about the better way to provide the most effective care (Turley et al., 2018). However, the trend across countries is decreasing medical resources for well-child care, with growing responsibility for nurses. This situation gives ground for optimizing a nursing professional scope of practice, “acting in order to empower the individual, the family, and community, to adopt healthy lifestyles” [while working in interprofessional teams] - which is recognized by the Portuguese regulation as competence of general care nurses (Regulamento n.º 190/2015, 2015, p. 10088). Therefore, in Portugal, nurses are expected to assume a significant role in providing empowerment counselling in their routine care. Nevertheless, integrating empowerment counselling into WCV daily practice within a limited time and with other demanding clinical recommendations may be challenging to accomplish.

This thesis is based on three published articles about the studies performed and has six chapters. In Chapter 1, we situate the study in the literature and research and explain the context of our study. In this regard, we undertook a cross-disciplinary approach - drawing on areas of human and health sciences, such as nursing, education, sociology, psychology, biology, and epidemiology - to review and provide a summary of the central concepts, theories, and frameworks underpinning our study. We also situate the study in the context of the existing evidence by sharing the results of other studies closely related to ours. Based on these, we nominate the gaps in the knowledge of current literature. Chapter 1 also establishes the context of the study, identifying the contextual factors surrounding our research. In Chapter 2, we present the study aims and research questions. Chapter 3 deals with the methodological issues of the study that sought to examine some of the theoretical tensions outlined in the previous chapters; we present the design of the study, the population and sample, data collection, data analysis, and ethical considerations. Chapter 4 presents the results of the data analysis. In Chapter 5, we discuss the study's key findings considering relevant literature and identify the study’s strengths and limitations. Chapter 6 contains the main conclusions, and a more in-depth personal perspective on empowerment counselling in WCVs. In this chapter we also draw implications and recommendations to inform empowerment counselling research, practice, education, and policymaking.

Our intention in this thesis is not to provide definitive answers to the issue of empowerment counselling in WCVs for child and family healthy lifestyles. Instead, we aim to give a platform to essential work in this area, which contributes to its theorization, offers an insight into some of the practices currently taking place, and offers guidance for developing and evaluating future empowerment counselling interventions delivered by nurses in WCVs. We hope to create a space for dialogue between theory and practice that sensitises health professionals to the effective implementation of empowerment counselling in WCVs and the positive impact of its realization.

Whereas the studies in this thesis reflect the practice in WCVs before the onset of COVID-19, we believe the findings are still relevant for strengthening and support the needed efforts on primary health care in a post-pandemic world.

CHAPTER 1 – REVIEW OF LITERATURE

Understanding theoretical frameworks that can inform the development of interventions to enable people to have healthy lifestyles is the first step to support meaningful research. Therefore, this chapter focus on a brief review of the principal concepts, theories, and conceptual frameworks or models that, reflecting the ideology and values of health promotion and nursing, have guided our study. In particular, it highlights the lifestyle and life course as determinants of health and well-being and empowerment in counselling as an effective strategy in children and families' health promotion. From each concept/theory/framework, specific considerations for practice and research directions will be presented to enhance the effective and meaningful use of empowerment counselling toward healthy lifestyles with families and children. This chapter also examines the available empirical evidence about the claimed empowerment counselling in WCV and outlines the gaps and rationale that have created the impetus for the current study. The study’s context, at the national and local levels, is also described in this chapter.

1.1 Lifestyle and Life Course as Determinants of Health and Well-Being

Those working in health promotion recognize that facilitating an individual's health behaviours modification to maintain or enhance his or her health is challenging. The theoretical lenses of health lifestyle and life course offer a preliminary understanding of this challenge. The health lifestyle theory (Cockerham, 2005, 2013) and the life-course health development theory (Halfon et al., 2018) were selected to inform our study since they acknowledge the complex dynamics of both individual and social factors with health behaviours and are particularly relevant on our study topic.

1.1.1 Health Lifestyle Theory

With the longer life spans of people today, health is perceived as an investment and an achievement. People are expected to work to achieve and maintain a positive health lifestyle.

Health lifestyles are commonly recognized as health-related behaviours regularly practised by every person (or group), without presupposing a conscious aim (Cockerham, 2006; Green & Kreuter, 1991). Decisions and practices about diet, physical activity, smoking, alcohol and drug abuse, risk of accidents, coping with stress, having preventive check-ups, and the like are examples of health lifestyles (Cockerham, 2006). Lifestyles are identifiable patterns of behaviours that co-occur in sets, influence one another, and are maintained with some consistency over time (Mollborn et al., 2014). These behaviours can positively or negatively impact individuals' health outcomes and the health of others (WHO, 1998). Positive health lifestyle behaviours – so-called salutary factors – are the opposite of risk behaviours and are oriented toward achieving or maintaining overall health (Antonovsky, 1996; Gochman, 1997). Healthful and unhealthful behaviours can coexist in the same person, making health lifestyles complex and sometimes internally inconsistent (Mollborn & Lawrence, 2018).

When discussing health and lifestyles, one central question arises: Are the decisions people make about health lifestyles a matter of life choices (i.e., under autonomous control; a person has free will to practice healthy or unhealthy patterns of behaviour) or a product of life chances (i.e., conditioned by social, cultural and environmental aspects)?

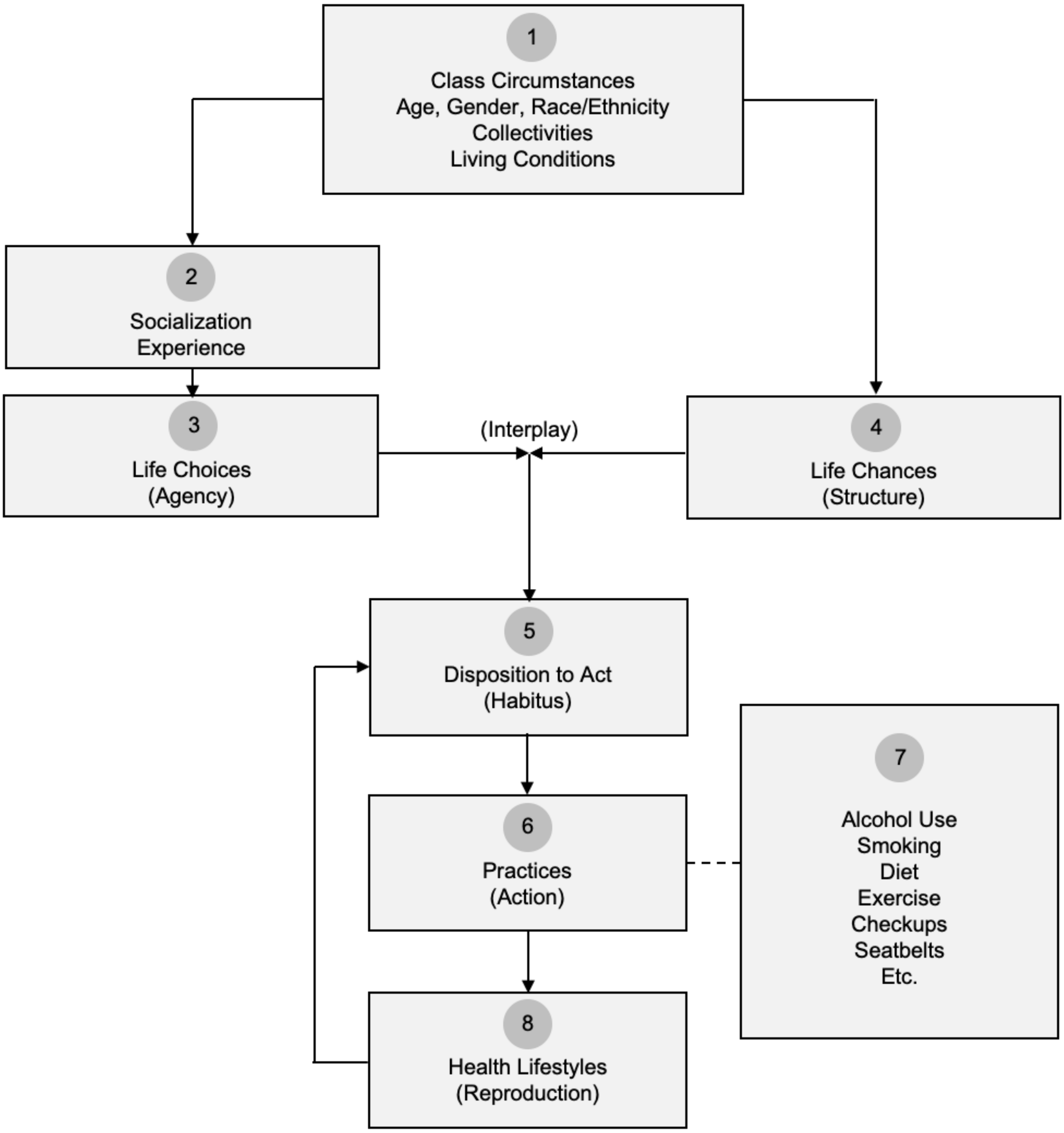
The theory developed by Cockerham (2005, 2013) proposes an answer to that question. This theory defines health lifestyles as “collective patterns of health-related behaviour based on choices from options available to people according to their life chances” (Cockerham, 2005, p. 55). This definition is grounded in Weber's work on life choices and life chances and Bourdieu's concept of *habitus.* It emphasises the dialectic relationship between life choices (agency) and life chances (structure) that generate an overall pattern of regular health-related practices (Cockerham, 2013). While the person has the capability of choosing his or her lifestyle through agency (i.e., a process in which an individual reactivates his or her past patterns of thought and action, imagines possible future actions in which patterns of thought or action can be reconfigured, critically evaluates his or her present reality and the alternative possibilities, and chooses behaviour), the choices are limited by what is possible and socially appropriate (Cockerham, 2013, 2014). Based on Giddens' work, this theory points out that life chances (i.e., the structure, which is the transferable rules or codes of social life and human and material resources such as knowledge, dexterity, equipment) can either constrain or enable lifestyle choices and therefore configure health lifestyles in particular ways.

According to Cockerham (2006, 2013), as shown in Figure 1.1, people are born in a (1) pre-existing social structure, and therefore, structural variables, namely a) class circumstances, b) age, gender, and race/ethnicity, c) collectivities (e.g., religion, family, kinship, work, and politics), and d) living conditions, influence the social context through which (2) socialization and experience occur. Through socialization and experience, the person develops the capacity to perform agency, i.e., to critically evaluate and choose his or her course of action. Therefore, structural variables indirectly impact (3) life choices and directly establish (4) life chances.

The interaction between choices and chances produces (5) individual dispositions toward action (i.e., Bourdieu's notion of *habitus*, meaning the habitual action that is subconsciously followed and anticipated when performing routine tasks unless deeper attention is needed). The dispositions are mental perception schemes that routinely guide a person's choices and options without presupposing great thought to attain them; they are developed and maintained in memory through socialization, experience, and the reality of the person's circumstances. The *habitus* produces (6) practices (action), involving (7) alcohol use, diet, and other health-related actions. The health-related actions can have positive or negative health outcomes and constitute patterns of (8) health lifestyles.

Figure 1.1

Health Lifestyle Model



Note. Adapted from "Bourdieu and an update of health lifestyle theory" by W.C. Cockerham, in W.C. Cockerham (Ed.), Medical sociology on the move (p. 140), 2013, Springer. Copyright 2013 by Springer.

People tend to follow common patterns of lifestyles without stopping to think about them. Nevertheless, these patterns of behaviours are not fixed and can be subject to change (WHO, 1998). The person's experiences (i.e., action or inaction) about a particular health practice allow the individual to reject, modify or reproduce a particular health practice by the *habitus* through a feedback process (Cockerham, 2013).

One merit of Cockerham's theoretical model is that he demonstrates how structural variables, besides individual factors, influence health lifestyles. Particularly, the class position is emphasized as the most important predictor of health lifestyles. Cockerham (2005, 2013) supports this by citing a large body of research showing that the upper and upper-middle classes have healthier diets, more leisure-time exercise, more opportunities for rest and coping successfully with stress, utilize preventive care more often, have fewer problems with drinking and smoking. Because of their advantages, they change their health behaviour more rapidly when diagnosed with a health problem.

This theory acknowledges several other important social factors. For instance, and with particular interest to our study, parental influence is claimed by this theory and supported by research literature as decisive in shaping children's health lifestyles (Cockerham, 2013). Along with other structural variables, parents provide the social context for socialization and experience, as depicted by Cockerham's framework. Through family, the child learns the social norms and cultural practices, namely those related to health behaviours (Cockerham, 2013). Thus, parents influence children's health lifestyles by facilitating or impeding children's health behaviours, role modelling behaviours, imposing behaviours on children (e.g., second-hand smoke exposure, witnessing violence), and conveying beliefs and attitudes towards health behaviours (Mollborn et al., 2021). Parents have the moral responsibility for their children's health behaviour and are monitored and judged by their social groups (Mollborn & Lawrence, 2018). The meanings of positive parenting and positive health behaviours vary across social groups (Mollborn & Lawrence, 2018). Nevertheless, families from different social classes have different resources and knowledge that influence parents' management of their children's health behaviours (Mollborn & Lawrence, 2018). Mollborn and collaborators (2014) found that the socially disadvantaged background of parents and low resources predicted compromised health lifestyles among pre-schoolers.

The family influence through primary socialization may be weakened later as children's social relationships and developmental context change, as children increase agency to determine their health behaviours and change their identities. Nonetheless, the children's internalization of family's norms and understandings of meanings of health, and the “received” health lifestyle, have a major impact in forming children's dispositions to act, likely shaping their present and later health lifestyles (Cockerham, 2013; Mollborn et al., 2021). Previous studies on the development of health lifestyles, by Abella and Heslin (1984) and Wickrama and colleagues (1999), have shown the similarities between parents and their adult children's health behaviours, suggesting the intergenerational transmission process of health lifestyles. Health behaviours may change across life through other influences and preferences, but the effect of earlier lifestyles that become embodied in children's *habitus* must be overcome (Mollborn et al., 2021).

From our perspective, one important consideration taken from Cockerham's theoretical framework is acknowledging that health behaviours are interrelated, and therefore the focus should be not on one single behaviour but the underlying lifestyle. Second, health lifestyles are developed in early life and through the life-course; in comparison to adults, children's health lifestyles are even more complex since they are “a mixture of parents and children's agency, structural constraints, and identities, with parents' influence waning and children's influence growing with age” (Mollborn et al., 2014, p. 388). Third, there is a need for professionals and researchers to recognize and examine the multiple factors that shape people's health lifestyle practices and consider the dynamic nature of health lifestyles when analysing them. Fourth, this model shows that when people practice lifestyles, they are usually operating from their subconscious; when counselling, people are induced to operate from the pre-frontal cortex to analyse if there are habits that no longer work for them, if other options are available and to create new plans of action to achieve the desired outcome. However, these autopilot patterns are familiar, predictable, and therefore, safer and desirable to our subconscious, and there is where resistance comes. Giving people tools to create change is vital to fight that natural resistance. For interventions promoting healthy lifestyles to be effective, strategies that consider both people's agency and structure are vital. For individuals to have the realistic choice to promote and protect their health, chances must be provided through supportive environments (i.e., through the mobilization of human and material resources), particularly for those of lower social classes. We have to make sure healthy choices are the most accessible choices. Therefore, children and families with greater needs must be identified, and the scale and intensity of universal interventions should be tailored to their needs. Finally, this framework suggests the unique importance of understanding the development of health lifestyles and taking action early in the life course.

1.1.2 Life-course Health Development Framework

In the last 60 years, there has been a transformation in the understanding of the causes of disease and in the knowledge on the contributors to health, which reflects the historical, social, and cultural worldview, the scientific advances, the improvements in healthcare, and the changing capacity of the health systems (Halfon et al., 2014; Halfon & Forest, 2018). The oversimplified biomedical models of the genesis of disease drove the first era of health care (in the early 20th century), which resulted in treating acute illness, injuries, and infectious diseases. With the increase of life expectancy, the dominance of NCDs, and research development (from biological, behavioural, and social sciences disciplines), multiple biopsychosocial models of health soon followed. These models have influenced the second era of health care (latter half of the 20th century), giving attention not only to acute services but also to the management of chronic diseases and prevention of behavioural risk choices with a particular focus on adults and the elderly (Halfon et al., 2014). In the third era of health (2000 going forward), owing to progress in controlling communicable and NCDs and the salience of health disparities, the challenge is to promote and optimize the health and well-being of individuals and populations. The need to maintain and expand health as a “resource for everyday life” (Breslow, 2004; Halfon et al., 2014; Nutbeam & Muscat, 2021) became more salient with the ongoing COVID-19 pandemic that is disproportionally affecting people with NCDs and intensifying inequalities. A WHO (2020c) study has shown that the services for the prevention and management of NCDs are being constrained, and people are facing increased exposure to risk factors for NCDs such as stress, unhealthy diet, and lack of physical activity and alcohol use. This pandemic highlighted the challenges we have in NCDs. In moving forward, health care services must invest in NCDs prevention and management to improve the population's health (WHO, 2020c).

The recent developments in life-course health science, namely the emerging theoretical framework of Life-course Health Development (LCHD), provide a more robust rationale for guiding health care professionals, researchers, and policymakers to respond to this challenge (Halfon et al., 2018). The LCHD is a transdisciplinary framework that synthesis the knowledge from the fields of biology, genetics, epigenetics, neurodevelopment, sociology, psychology, and epidemiology, about the individual and contextual processes involved in the development of health over the life course (Halfon et al., 2014; Halfon & Forest, 2018).

Life-course is related to socially defined events and roles in which a person participates through life (Giele & Elder, 1998). According to the LCHD framework, health is defined as a dynamic set of capacities (i.e., instrumental attributes, such as motor function, emotional regulation, and cognitive function) that develop over a lifetime (begins before conception and continues through the lifespan) in a complex, non-linear and self-organizing process (Halfon et al., 2014; Halfon & Forest, 2018). These capacities change through the life-course (i.e., mature, weather, degrade) and have the promise to enable individuals to interact successfully with their biological, physical, and social environments, realize their potential, and satisfy their goals and needs (Halfon & Forest, 2018). Therefore, health development “is a life course-informed phenomenon that results from transactions between the organism and its internal (i.e., gene, molecular, cellular, organ system, and physiologic networks) and external environments (i.e., family, social, cultural, and physical networks and environments)” (Halfon & Forest, 2018, p. 27). In simplified words, this means life experiences and environmental interactions have the potential to change the individual at the molecular and cellular level (i.e., biological embedding), and therefore, influence individual health development and health outcomes over time. The principles of the LCHD framework are summarized in Table 1.1.

Table 1.1

Principles of the Life Course Health Development Framework

Principle	Brief description
Health Development	Health development integrates the concepts of health and developmental processes into a unified whole.
Unfolding	Health development unfolds continuously over the lifespan, from conception to death, and is shaped by prior experiences and environmental interactions.
Complexity	Health development results from adaptative, multilevel, and reciprocal interactions between individuals and their physical, natural and social environments.
Timing	Health development is sensitive to the timing and social structuring of environmental exposures and experiences.
Plasticity	Health development phenotypes are systematically malleable and enabled and constrained by evolution to enhance adaptability to diverse environments.
Thriving	Optimal health development promotes survival, enhances well-being, and protects against disease.
Harmony	Health development results from the balanced interactions of molecular, physiological, behavioural, cultural, and evolutionary processes.

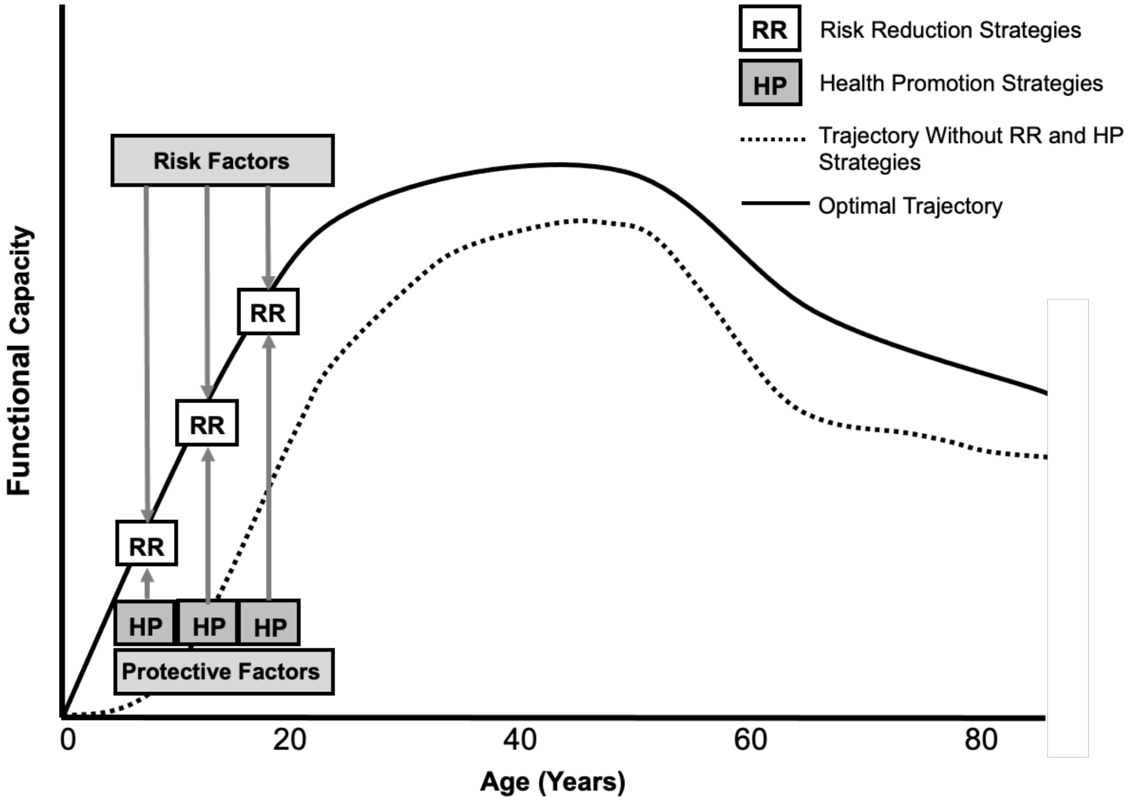
Note. Adapted from "The Emerging Theoretical Framework of Life Course Health Development" by N. Halfon and C. B. Forrest, in N. Halfon et al. (Eds.), Handbook of Life Course Health Development (p. 21), 2018, Springer. Copyright 2018 by the Springer.

The LCHD model proposes that health development is characterized by phases, dimensions, and organization levels. Health development has four major functional phases: (1) Generativity (preconception and prenatal period); (2) Acquisition of capacity (early childhood and adolescence through early adulthood); (3) Maintenance of function (middle years); and (4) Managing decline (later years of life) (Halfon et al., 2014). Although there is some overlap between phases, the acquisition and optimization of capacities concentrate in earlier years, and therefore environments and experiences during early life have a central role in subsequent lifelong health and well-being (Halfon & Hoschstein, 2002; Halfon et al., 2014). Health development occurs in multiple dimensions, namely genetic, biological, physical, psychological, social, and cultural, and at multiple interacting levels of organization such as molecular/genetic, social, and ecological levels (Halfon et al., 2014). One important dimension of the LCHD model is the health development trajectories that describe the changes in health capacities throughout the life course. For Halfon and colleagues (2014), health trajectories fluctuate over time as a result of the interplay between two competing forces: (a) the protective factors that enable people to realize their potential and well-being (e.g., family resilience and cohesion, parent education, health services, healthy lifestyles, family income, social support); and (b) the risk factors on health development that can negatively influence health status and future health (e.g., poverty, maternal depression, lack of health services, toxic stress, social exclusion, unsafe environment) (Halfon et al., 2014). Illness is more likely to appear when protective factors are few and risks are many. As a result, the disparities that children from different social stratification experience regarding health and development outcomes are not surprising (Boyce & Hertzman, 2018). Early minimizing of the impact of adversity, increasing protective factors, and targeting health-promotion interventions at individual and population-level, within sensitive periods of health development (periods of biological and social transition, when developing systems are most adaptable and plastic, i.e., most sensitive to risk and protective factors), have the potential to prevent disease and optimize lifelong health (Halfon et al., 2018).

Figure 1.2 illustrates how risk reduction strategies can decrease the influence of risk factors on health development trajectory and how health promotion interventions can optimize the health development trajectory, promoting positive long term health outcomes (Halfon et al., 2000). Without risk reduction and health promotion strategies, the health development trajectory will be suboptimal.

Figure 1.2

The Health Development Trajectory



Note. Adapted from “The health development organization: an organizational approach to achieving child health development” by N. Halfon, M. Inkelas and M. Hochstein, 2000, The Milk Quaterly, 78(3), p. 455. Copyright 2000 by the Milbank Memorial Fund.

Promoting LCHD is a moral obligation to improve the population's health and well-being. Childhood offers a unique opportunity for influencing the health trajectory across the life course (Halfon et al., 2000). From an economic perspective, the evaluation of early childhood intervention studies suggests that the returns to the investment in early child development are substantial (Racine, 2016).

In summary, the LCHD model highlights the relevance of investing in health promotion and disease prevention through a life-course approach. This is in alignment with the SDG 3, aimed to “ensure healthy lives and promote well-being for all at all ages” (UN, 2015), and with the Minsk Declaration that urges member states of the WHO European region to make use of the life-course approach (WHO, 2015). The LCHD theoretical perspective recognizes the importance of investing in maternal and child health – an early and timely action – to improve child health and well-being, maximize benefits across the child's lifespan, and prevent the intergenerational cycles of disadvantage. Genetic and environmental conditions in birth are important but are not destiny. The level of investment in child health capital can change the health life course. Supporting the children's optimal health development can potentially transform individual and population health outcomes (Halfon et al., 2014). The LCHD framework acknowledges the importance of action across multiple determinants to promote health and well-being, and therefore the need of acting in partnership with all sectors of society and government (e.g., agriculture, communication, education, employment, environment, finance, health, housing, justice, social welfare, tax, industry, transports, urban planning). It also highlights the usefulness of multiple settings approaches to life-course for intervention. In early childhood, strengthening health care delivery systems and support from families and the community are particularly relevant (Halfon et al., 2000).

Although the importance of health lifestyle interventions taken early in the life course is clear, there are important challenges in translating the evidence and principles of LCHD into health systems practice, namely funding and resources gap. Widespread, sustainable, and effective solutions to reduce NCDs' modifiable risk factors, namely unhealthy lifestyles, are needed. The primary health care services are particularly well placed to reach children and families – namely within the WCVs – and improve children's health development trajectories. The WCVs' purpose – to promote children's optimal health and well-being – is both present and future-oriented. In the context of WCVs, health professionals interact with children and families in sensitive periods of health development when environmental exposures and experiences can influence health. WCV has a proactive approach, giving primacy to anticipatory interventions to support and strengthen the family. It is an already established and stable program. It is recognized as a legitimate context to offer family counselling, minimizing the potentially associated stigma of participation in a particular parenting program, which may be seen as punitive or indicative of parenting failure for families. The family’s regular contact with the practitioner strengthens the family-practitioner trust relationship and provides an opportunity for family's engagement and comprehensively management of lifestyles. Consequently, evidence-based interventions to promote children and healthy family lifestyles may feasible and affordable be integrated into the existing system of WCVs, accelerating the achievement of better health and well-being for all ages.

After we have learned from the Health Lifestyle Theory and the Life-course Health Development Framework that early childhood is an opportunity to promote positive health outcomes through the life span, our challenge is to find effective ways to do it.

1.2 Empowerment in Health Counselling as an Effective Health Promotion Strategy

Health and governmental policies have encouraged the adoption of empowerment counselling in routine primary healthcare. Despite the emphasis and increased popularity of “empowerment” and “counselling”, surprisingly, there is a lack of clarity and misleading surrounding the application of these constructs in daily health practice. A fuller understanding of counselling and empowerment and its relationship with nursing, health promotion, and children and families' health is critical for developing effective and meaningful health promotion interventions and evaluating their results. The following section introduces a short review of key concepts, theories, evidence, frameworks for practice, debates, and challenges on the complexity of families and children's empowerment in health counselling.

1.2.1 The Nature of Counselling

There has been a reluctance to use “counselling” in nursing as the term is conventionally linked with a profession (i.e., acting as a counsellor). We believe this debate highlights concerns about power and status about professions rather than approaches to help giving practices. In further exploring the meaning of counselling, clarity can be added.

The British Association for Counselling and Psychotherapy (BACP) defines counselling as “An interaction in which one person offers another person time, attention and respect, with the intention of helping that person explore, discover and clarify ways of living more successfully and towards greater well-being” (Freswater, 2003, p. 5). In this definition, we can recognize similarities within the notion of the therapeutic relationship in nursing, a form of interpersonal communication instrumental in nursing to promote health or wellness (e.g., Benner, 1984; Paterson & Zderad 1988; Peplau, 1988; Watson, 1985). In 1999, the BACP made explicit, within its code of ethics, that other help-giving professions, such as nursing, can use counselling skills in their functional role (Freswater, 2003).

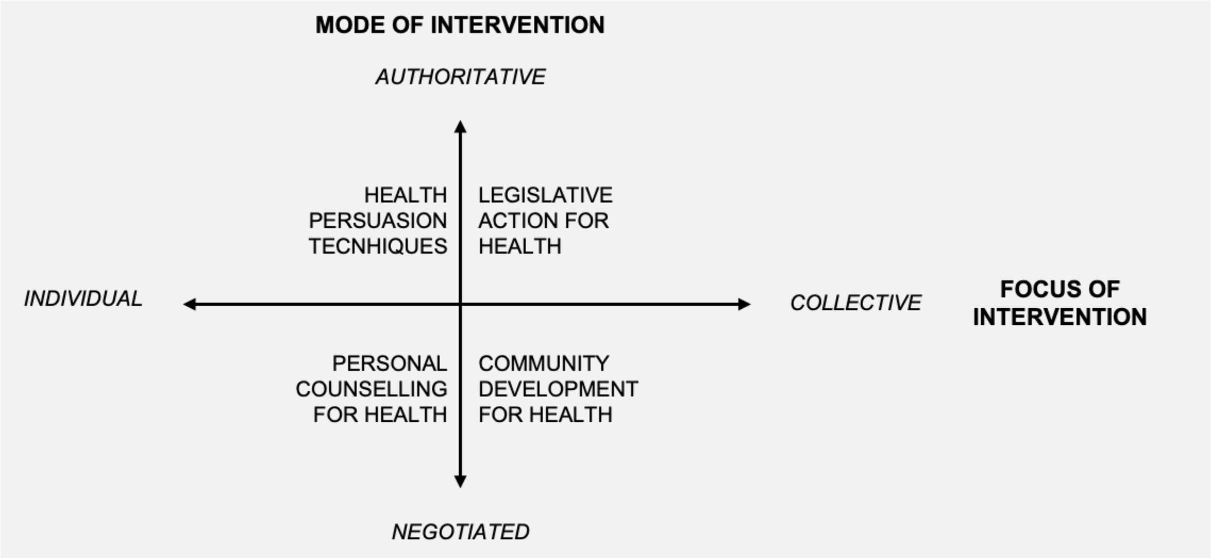
Citing Smail (1993), Peavy (1996) identifies three essential counselling skills of enormous value for those seeking help: (a) clarification of people’s feelings, life issues and contexts; (b) provision of hope and encouragement; and (c) delivery of comfort and support. Nurses, by the nature of their profession, use counselling skills in their daily practice for helping and supporting the other person to gain clear insight into him/herself and his/her life situation and decide further action to help him/herself construct own solutions to health issues and improve the quality of life (Burnard, 2005; Freswater, 2003). Hence, counselling is a major feature of nursing that can be combined with other nursing interventions. In the words of Burnard (2005) and Soohbany (1999), counselling is "part of the nursing fabric".

Counselling is contemplated in the Nursing Interventions Classification (NIC), defined as "The use of an interactive helping process focusing on the needs, problems, or feelings of the patient and significant others to enhance or support coping, problem-solving, and interpersonal relationships" (Butcher et al., 2018, p. 346).

The counselling skills may be applied in a variety of nursing situations (e.g., guiding parents in their decision regarding the children's immunisation and healthy development, when helping someone cope with a chronic illness, supporting families in the breaking of bad news, dealing with loss and bereavement). According to Sidell (1997), counselling skills are also essential for providing support and helping people adopt, maintain or change behaviours, beliefs, attitudes, or feelings related to lifestyles. The "personal counselling for health" is considered a strategy of health promotion in which " individual clients (whether alone or in groups) are invited to engage in active reflection and review of their personal lifestyle and their individual scope for change" (Beattie, 1991, p. 168; see Figure 1.3).

Figure 1.3

Beattie's (1991) Model of Health Promotion



Note. Adapted from "Knowledge and control in health promotion" by Beattie, A., in J. Gabe, M. Calnan and M. Bury (Eds.), The sociology of the health service (p. 167), 1991, Routledge. Copyright 1991 by the Routledge.

Further clarification of counselling interventions in nursing towards healthy lifestyles can be gained through Irving and Long (1993):

> Counselling as a humanistic approach to the holistic health of the individuals focuses on the internal world of the patient/client. On where the person is at that particular moment of time, on how the client perceives his/her health status, and on how he/she feels and thinks [focus on life review and on the narrative of the client]. It also facilitates the person to explore and consider different issues around obvious health related concerns and to establish why he or she actually made the decision to adopt a health devaluing behaviour [identification, clarification and interpretation of his/her situation]. It allows a person time to grow towards self-value and as a consequence of this, the person may be motivated to make the transition from practicing a negative health devaluing behaviour to placing value on his/her health [systematic reflection on the scope for personal choice and change] subsequently adopting positive health valuing actions [accomplishing the changes desired by him/her]. (p. 128)

Among the existing health professionals, nurses are particularly well-positioned for health promotion interventions. They have close contact with individuals and are considered competent for this role due to their professional philosophy, knowledge, and skills (Pender et al., 2013). Therefore, it is important to invest in nurses' therapeutic potential in health promotion by optimizing their counselling skills.

It is claimed that a significant proportion of the distress experienced by many clients that seek help can be conceptualized in terms of powerlessness, i.e., loss of power and control (Strawbridge, 1999). Empowerment has been embraced as the capacity, the primary goal, and the criterion of successful counselling interventions – to enhance a client's power (McWhirter, 1991; Strawbridge, 1999). Therefore, a greater understanding of empowerment may help nurses counsel more effectively, more appropriately and facilitate positive health outcomes (McWhirter, 1991).

1.2.2 The Nature of Empowerment

In 1986, empowerment was considered one primary goal of health promotion by the WHO in the Ottawa Charter and continues to be a valued orienting concept widely applied in the policy, research, and practice discourses of health (see, for example, the Astana Declaration, the WHO Framework of Integrated People-Centred Health Services, the SDG3 Global Action Plan; WHO, 2016c, 2018a and 2018b).

The concept of empowerment has been much used in diverse “human helping” disciplines (e.g., nursing, medicine, sociology, social work, psychology, education, rehabilitation) within a wide range of service provision, research, and advocacy (e.g., health promotion, long-term health conditions and disabilities, family or domestic violence, management and economics, human rights such as feminism, anti-racism, people living in poverty, gay and lesbian people, and the elderly). It is commonly associated with positive human development and change processes (McWhirter, 1991). Although much employed, the concept has been criticized for lacking clear consensus on its definition, operationalization, and measurement (Brodsky & Cattaneo, 2013). This has led to difficulties in consistently applying the construct in practice and synthesising the evidence.

Recently, the Health Promotion Glossary (Nutbeam & Muscat, 2021), designed to clarify the terms used in health promotion in an attempt to build a consensus on terminology, defined empowerment as:

> A process through which people gain greater control over decisions and actions affecting their health. (…) Empowerment results from social, cultural, psychological or political processes through which individuals and social groups are enabled to express their needs, present their concerns, devise strategies for involvement in decision-making, and achieve political, social and cultural action to meet those needs. (p. 9)

The Glossary (Nutbeam & Muscat, 2021) also makes the distinction between two levels of empowerment, the individual and the community, where the former means “individuals' ability to make decisions and have control over their personal health decisions”, and the latter refers to “the individuals acting collectively to gain greater influence and control over the determinants of health in their community” (p. 9). When compared with the previous version of the Glossary (Nutbeam, 1998), the only revision that has been made concerning the empowerment term was an added comment about the linkage and reciprocity between individual and community empowerment, i.e., it is argued that empowered individuals create empowered communities, and vice-versa. Despite the 35 years that have passed since the Health Promotion Glossary has first defined empowerment (Nutbeam, 1986), the clarity of its meaning is still diluted and vague, and the transference of the concept into practice remains a major challenge. Although we recognize that the definitions presented in the Glossary are not intended to be exhaustive, it seems that health professionals still have a superficial understanding of empowerment and lack clarity on how to accommodate this concept within the practice of counselling.

Given the centrality of the concept to our work, what follows is a brief review of the literature on empowerment, in an attempt to clarify its meaning and its application in the context of nursing, as a framework for counselling toward the promotion of children and families' health.

In the counselling literature, empowerment has been defined as:

> the process by which people, organizations, or groups who are powerless or marginalized (a) became aware of the power dynamic at work in their life context, (b) develop the skills and capacity for gaining some reasonable control over their lives, (c) which they exercise, (d) without infringing on the rights of others, and (e) which coincides with actively supporting the empowerment of others on community. (McWhirter, 1994, p. 12)

As is suggested by this description and by the term itself, empowerment is about power. The conceptualization of “power” in health counselling draws on “agency perspectives of power”

(Spencer, 2013, p. 24), i.e., in the “ability of individuals to decide and act out of their own interest and produce intended and foreseen effects’ in their surroundings” (Wrong, 2002, p. 2).

McWhirter's definition aligns with the invoked ideas of pioneering scholars on empowerment, such as Freire (1970) and Rappaport (1981), about increasing the power of marginalized populations with an emphasis on political awareness and action toward social justice. The “powerless” that McWhirter (1994) describes refers to those “ being unable to direct the course of one's life due to social conditions, power dynamics, lack of skills, and/or lack of belief that one can change one's life”, and the “marginalized” means those who are “excluded from positions of power socially, politically, economically, or otherwise” (p. 12).

The focus on the power dynamics recognizes that the “problems” and “issues” of the person are primarily in the systems rather than in the person (i.e., the problem is not because of deficits within a person but because the systems fail to create opportunities for competencies to be acquired or displayed); the person problems are seen as means of coping with his/her reality, and the solutions may be achieved through actions by the person and changes in the systems (McWhirter, 1994).

Empowerment in counselling is built on faith in the person's power, i.e., faith in the capacity and ability of the person to cope with his/her life problems, to create, recreate, and transform his/her life (McWhirter, 1991, 1994). Health care practitioners (and other professionals) should embrace the assumption that all people have existing strengths and capabilities and the capacity to become more competent (Dunst et al., 1992).

In the health context, the need for social justice to improve people's health is widely recognised. When counselling for health, the transformation of the structural and political inequalities begins in the liberation of the client from the negative impact of a paternalistic model, i.e., from the power imbalance between the client and the health professional, that prioritises the “expert” views of the health professional over the views of the client (Chiapperino & Tengland, 2015; Rappaport et al., 1984). Gibson's (1991) proposal definition of empowerment in the context of nursing embraces this idea:

> A social process of recognizing, promoting and enhancing people's abilities to meet their own needs, solve their own problems and mobilize the necessary resources in order to feel in control of their own lives… a process of helping people to assert control over the factors which affect their health. (p. 359)

In other words, empowerment equalizes the power differential in counselling, through recognizing clients as “experts, as survivors of their circumstances with a wide variety of skills, capacities, experiences, and resources”, and “incorporating educational strategies and skill-building that foster clients' ability to advocate for themselves and others” (McWhirter, 1994, pp. 28-29).

Therefore, the professional, who generally is in a position of relative power, leaves his/her dominant role and instead becomes an enabler, supporting or facilitating the client participation in the problem formulation, goal setting, decision process, and actions, to making and carrying out healthier lifestyle choices (Tengland, 2008, 2016; Laverack, 2005; McWhirter, 1998). Alongside, the clients “should be aware of their potential role in co-creating value within the healthcare service system; as well, they should be willing to actively participate in the provision of care, co-planning, co-designing, and co-delivering health services” (Palumbo, 2017, p. 3). This reconfiguration of the relationships between health care professionals and clients implies a shift toward a patient-centred approach to care (Anderson & Funnel, 2005). One important thing to remember is that power cannot be given by the health professional to the person but must be gained by those who seek it (Laverack, 2005). As argued by Laverack (2005), the motivation to change one's lifestyle, to gain control must come from within the client” (p. 114). The health professional's role is to help create the conditions to build the client's capacity, inner strengths, and sense of self-worth, to gain greater control (power) over decisions and resources that influence his/her health and life (Laverack, 2005). Nevertheless, some people may not want to be empowered, and the choice always rests with the client (Laverack, 2005).

The client's empowerment in the health context has been argued to increase the effectiveness of care, improve the quality of health services, enhance health outcomes and increase the sustainability of the healthcare system (i.e., save available resources) (Adinolfi et al., 2016). However, the impact of empowering interventions on health has yet to be demonstrated (Lindacher et al., 2017; Werbrouck et al., 2018). Part of the difficulty in research on this topic is that empowerment has been applied and measured in different ways, which hampers our understanding of the effectiveness of empowerment interventions in health counselling.

To advance the research and practice of empowerment in health counselling, there must be consensus on the core elements of this process. There is a wide range of conceptual perspectives from which empowerment can be practised and investigated as a professional approach. We believe the Empowerment Process Model, a comprehensive model proposed by Cattaneo and Chapman (2010), might be a suitable guiding framework for appraising the complexity of empowerment within children and families' health promotion and promising to develop interventions.

The Empowerment Process Model articulates empowerment in the diverse meanings of the construct, both as a process and outcome; it integrates consensual central elements of the empowerment process, based on the literature in diverse fields; is relevant across a wide range of services and fields; articulates both internal (psychological) and external (social) components of the process; is customizable for different domains, i.e., can be adapted for a specific population and setting (Cattaneo & Chapman, 2010; Cattaneo & Goodman, 2015; Zimmerman & Warschausky, 1998).

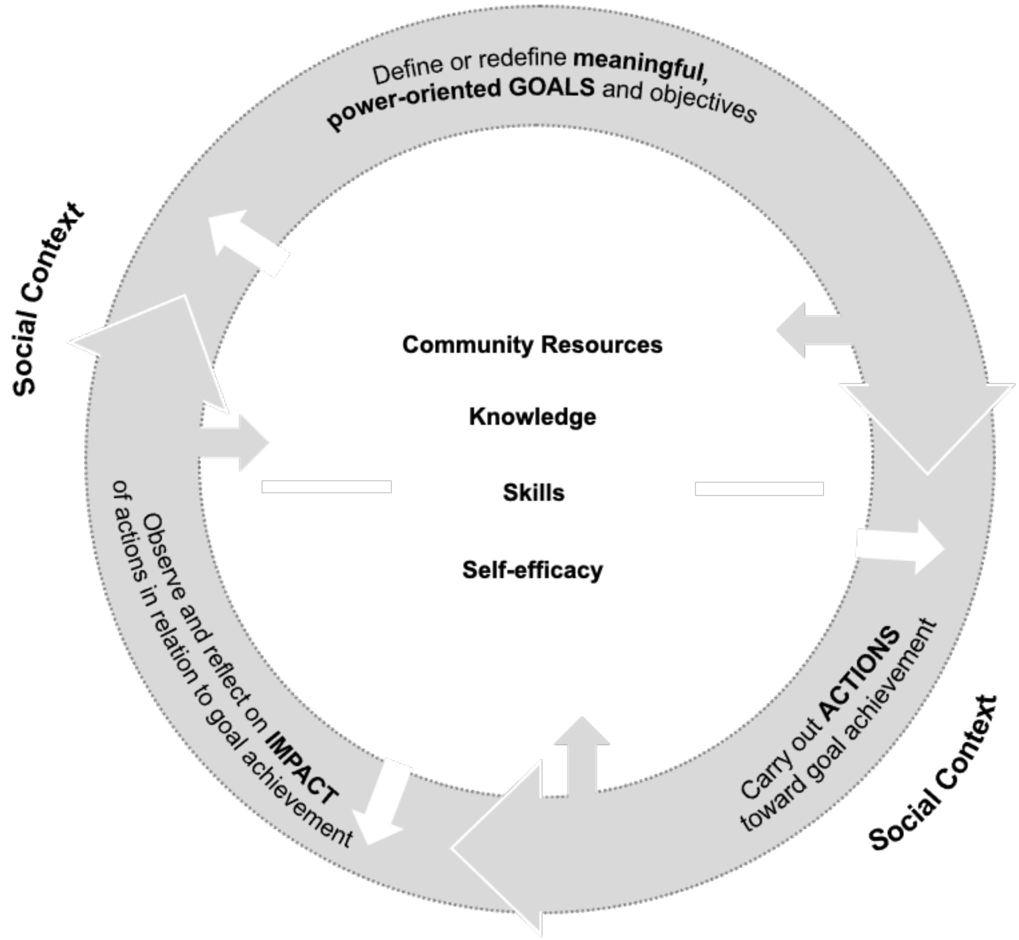
The Empowerment Process Model describes empowerment as

> an iterative process in which a person [group] sets a personally meaningful goal-oriented toward increasing power, takes action, and makes progress toward that goal, drawing on his or her evolving self-efficacy, knowledge, skills, and community resources and supports, and observes and reflects on the impact of his or her actions. (Cattaneo & Goodman, 2015, p. 88)

The empowerment process is not linear, involving "an interchange between the person (or group) seeking power, their social context, and their internal and contextually based resources" (Cattaneo et al., 2014, p. 435). It is assumed to be a circular and iterative process, as is shown in Figure 1.4. The outcome of the process of empowerment is a personally meaningful increase in power, at the individual and social levels, that a person obtains through his or her own efforts (Cattaneo & Chapman, 2010; Cattaneo, et al., 2014).

Figure 1.4

The Empowerment Process Model



Note. Adapted from "Status quo versus status quake: Putting the power back in empowerment" by L. Cattaneo, J. M. Calton and A. Brodsky, 2014, Journal of Community Psychology 42(4), p. 435. Copyright 2014 by the Springer.

The core components in the process of empowerment, according to the Empowerment Process Model, are: (a) setting personally meaningful, power-oriented goals; (b) self-efficacy; (c) knowledge; (d) skills; (e) community resources (f) action; and (g) impact (Cattaneo & Chapman, 2010; Cattaneo & Goodman, 2015). Next, we will briefly summarize each component of the process.

Based on this model, the empowerment process is driven by awareness of the desire for change and the person's definition of goals (a single or a set of goals and subgoals). These goals must be related to power (i.e., might increase one's influence in social relations) and personally meaningful to those who should explore possibilities and choose the best option based on his/her unique circumstances. In this way, the person will be committed and motivated to engage in the behavioural components of the model (i.e., gaining knowledge, competence, and taking action; Cattaneo & Chapman, 2010). Once the goals have been defined, the person’s ability to act and the effectiveness of his/her action will rely on his/her self-efficacy, skills, knowledge, and community resources (Cattaneo & Goodman, 2015). Self-efficacy is the extent to which each one person feels capable of reaching a particular goal, with a strong grounding theory and evidence that links the concept to motivation and performance (Bandura, 2002). Knowledge is the understanding of what is required to reach goals – knowing what to do – and often involves an understanding of the social context, the power dynamics related to the goals, the possible ways to attain the goals, the resources needed, and how to access them (Cattaneo & Chapman, 2010). Skills are the concrete capabilities needed to reach that particular goal – knowing how to do it – thus, identifying skills deficits and developing or strengthening skills are critical in this process (Cattaneo & Chapman, 2010; Cattaneo & Goodman, 2015). Community resources are also part of this process and include formal systems and informal supports such as family, friends, neighbourhood (Cattaneo & Goodman, 2015). In order to reach goals, actions must be taken. Following the individual's actions, he/she must reflect on one's progress, namely assessing the internal experience, the external change, and unexpected results (positive or negative), and the eventual need to redefine goals or actions (Cattaneo & Chapman, 2010; Cattaneo & Goodman, 2015). The social context in which the person lives (e.g., cultural values, class, race) influences all the components of the empowerment process; they can impact the personal goals and access to resources (Cattaneo & Chapman, 2010).

In health counselling relationships, empowerment can be perceived not only as a psychological experience (empowerment as an intrapsychic change) but also a social phenomenon (empowerment as a change in person's social influence) that can be facilitated/guided by practitioners/help givers (empowerment as a professional practice). Dunst, Trivette and Deal stated in 1988 that “it may not just be a matter of whether needs are met but rather the manner in which mobilization of resources and support occurs that is a major determinant of empowering families” (p. 44). Accordingly, Laverack reaffirmed in 2005, “it is the relationship between practitioners and their clients that is the empowering mechanism to achieve control over influences on their lives" (p. 54). Therefore, a clear understanding of the literature exploring the professional translation of empowerment in health counselling with children and families – the professional practices that enable families to make their own decisions and act to improve their health and their lives – is needed.

The relational/interpersonal level of empowerment described in the literature as "relational power-sharing" (Conger & Kanuago, 1988), and "proactive helping style" (Dunst et al., 1988), and the related professional practices labelled as "help-giving practices" (Dempsey, 1995; Dunst et al., 1988; Dunst et al., 1996; Trivette et al., 1996), "enabling practices" (Dunst et al., 1988; Aujoulat et al., 2008), "empowering practices" (Dunst et al., 1988), "effective helping relationships" (van Ryan & Heaney, 1997) and "family-centred practices" (Dunst et al., 2007) will be further explored.

Dunst and collaborators made an extensive review of the family support literature (Dunst et al., 1988) and family centred practices measures (Dunst & Espe-Sherwindt, 2016) - predominantly in the field of early intervention and family practices - and identified two important components of practitioners' attitudes, behaviours, and practices believed to be associated with the empowerment of families. The authors designated these two types of family-centred practices as "relational help-giving practices" and "participatory help-giving practices" (Dunst et al., 1996).

Relational practices, also entitled "relationship-building practices", include practitioners' behaviours such as active and reflective listening, compassion, empathy, respect, and practitioner positive beliefs and sensitivity about family members' strengths, values, and capabilities (Dunst & Espe-Sherwindt, 2016).

Participatory practices, also nominated as "capacity-building participatory practices", include behaviours that actively involve family members in informed choices and decision-making and engage them in mobilizing existing strengths and abilities, as well as developing new capabilities, to obtain support, resources, and services to achieve their desired goals and outcomes. These interventions are individualized, flexible, and responsive to the family's concerns and priorities (Dunst & Espe-Sherwindt, 2016).

The relationship between parents' judgment of practitioner' use of family-centred practices and family outcomes (e.g., child and parent psychological health and well-being, child behaviour and development, parent-child interactions, family functioning) has been the focus of many reviews. Research synthesis on this subject demonstrates that there is a substantial relationship between family-centred practices and family positive outcomes and that both relational and participatory practices are associated with desirable outcomes (Dempsey & Keen, 2008; Dunst & Trivette, 2009a; Dunst et al., 2007; Trivette et al., 2010). Nevertheless, it seems that participatory practices make the most extensive contributions to the desired outcomes of family-centred practices (Dempsey & Keen, 2017). Moreover, reviews indicate that the association between relational and participatory practices and positive family outcomes is mediated by parents' self-efficacy beliefs and parenting competence and confidence beliefs. Thus, family-centred practices have positive consequences for families through the improvement of self-efficacy beliefs and parent's sense of confidence and competence (Dempsey & Keen, 2017; Dunst & Espe-Sherwindt, 2016; Dunst & Trivette, 2009a; Dunst et al., 2019a, 2019b; Mas et al., 2019; Trivette et al., 2010).

The extent to which helping professionals use family-centred practices has also been a focus of research. Results from studies have shown that professionals face many challenges that interfere with the consistent application of family-centred practices, particularly participatory practices that seem to be used less frequently than relational practices (Dempsey & Keen, 2017; Dunst & Espe-Sherwindt, 2017; Dunst et al., 2007). Effective implementation of empowerment practices is, therefore, a major need.

In summary, from the revised literature and evidence, several aspects of the application empowerment in counselling by nurses must be considered. First, facilitating the empowerment of families by nurses to manage their health lifestyles requires an understanding of the reality and values of the family, awareness of a desire for change, and identification of their priorities (Brodsky & Cataneo, 2013). Nurses must define goals with the family instead of for the family. If nurses focus on aims that are not priorities for the family, claims of empowerment are a misnomer, and this can be considered disempowerment (Cattaneo et al., 2014). Empowerment is a process that can be facilitated, but it cannot be coerced. Second, nurses must assess the family's knowledge, skills, self-efficacy, and resources and the family needs relevant to her goal (Cattaneo & Goodman, 2015). If the family does not have appropriate support, nurses must collaborate with other professionals and systems to develop the necessary resources in other sectors, such as education, social services, community organizations, and support groups. Third, nurses must use both relational and participatory family-centred practices, emphasising participatory practices as they are more likely to develop a family's sense of competence and confidence that influence health-related outcomes. Fourth, nurses must accompany the family in her path to goals, assess where the family is, and allow for the possibility that the impact assessment may conduct to a re-assessment of goals, resources, and actions (Cattaneo & Goodman, 2015).

Having defined empowerment in the context of counselling families with children, we are ready to examine empowerment specifically applied to children and, by doing so, advance the clarification of the concept towards a more meaningful use in health promotion with children.

1.2.3 Empowerment and Children

Children's health and well-being is a central focus of the SDGs, a globally agreed framework that aims to ensure secure, fair, and healthy lives for future generations (Clark et al., 2020). Investing in children is the most powerful investment of society, as it has immediate, lifelong, intergenerational, and economic benefits. The realization of the foundational principles of the UN Convention on the Rights of the Child (CRC) - the world's most ratified human rights treaty – is recognized as a way to achieve children's health and well-being, that unites almost all countries in a joint commitment (Clark et al., 2020). The UN CRC declares that all children (aged 0-18 years) have four foundational rights, the right to survival, protection, development, and participation. In what concerns children's health, according to the UN CRC, children have not only the right to promotive, preventive, protective, curative, rehabilitative, and palliative health but also, children themselves (as well as their families) have the right to be involved in decisions and actions that affect their health and well-being, both as individuals and as a group (UN, 1989).

It is argued in international health promotion practice and policy reports that children's empowerment/participation (concepts of empowerment and participation are frequently used interchangeably in the discourse) is a crucial principle to promote children's health and well-being (e.g., the European Child and Adolescent Health Strategy 2015-2020 by WHO, 2014). Although children's empowerment is rarely theoretically explained and operationalized, it appears aligned with a participatory approach of children in health-related decision-making and practices. Through this frame, participation is seen as a way of children's empowerment.

In light of these considerations, the Council of Europe Strategy for the Rights of the Child 2016-2021 identified children's participation as the second priority to guarantee the child’s rights (Council of Europe, 2016). Nevertheless, as stated in the Council of Europe Strategic Action Plan on Human Rights and Technologies in Biomedicine 2020-25, there is uncertainty on addressing children's participation rights on matters concerning their health and care (Council of Europe, 2019). Finding the right balance between protection for children, who still lack the full agency of adults, and autonomy, for human beings in development who are subjects of rights, is a challenge, mainly when both rights of the child and the rights and responsibilities of the child's legal representatives must be considered (Council of Europe, 2019). Additionally, managing the three-way relationship (child, parent, health professional) is not easy because of the complex power dynamics involved and by the adults' instinct for children's protection (Young et al., 2003).

Therefore, it is essential to understand why empowering children in health through participation is so important; what “meaningful” participation means; why the consideration of evolving capacities of children is relevant for the understanding of children's agency; how children's participation can be translated into practice and how to do it to achieve an effective, safe, ethical, inclusive, and impactful participation.

Regarding the conceptualization of children's empowerment and health promotion, in 1992, Kalnins and collaborators argued that a shift is required,

> from thinking about children as recipients of health promotion efforts on their behalf to accepting children as active participants in the whole process. In turn, this will entail the acknowledge of children's concerns [and views] about health as valid in their own right; and a recognition of their competence to make and implement decisions. (pp. 53-54)

Central in this regard is the provision of an international human right, outlined in Article 12 of the UN CRC, adopted by the UN General Assembly in 1989 – assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight according to the age and maturity of the child (UN, 1989).

Article 12 challenged the dominant conception of childhood, from seeing children as objects of adult care and protection - whose life is shaped by laws, parents, and professionals, based on what adults' judge to be the best interest of the child - by seeing children as citizens - as competent social actors living in relationships of interdependence with adults, with their own concerns, interests, views, and with rights and capacities to influence decisions about their lives, the lives of others and the society (Larkins et al., 2014).

There has been a reluctance to child participation implementation in health practice despite recognition of the international law, that it is fundamental to human dignity and healthy child development (UN, 1989), and therefore an obligation of the States parties (i.e., the countries that have ratified the UN CRC) to assure it; conversely children express willingness to be involved in health-decision making and care (Coyne, 2006, 2008; Coyne & Gallanger 2011; Stålberg et al., 2016).

Among the possible reasons cited for the scarcity of realization of children's right to participation in health care are: (a) adults' views that children lack competence, knowledge, judgment, or experience to participate; (b) involving children in decision-making is too burdensome for children; (c) children's participation may put them at risk of harm with possible adverse effects; (d) parents and health professionals know what is best for children; and (e) giving children a voice may lead to disrespect behaviours (Coyne, 2008; Gabe, 2004; Lansdown, 2010, 2011).

There is an impressive portfolio of studies that suggests these perspectives are unfounded (e.g., Alderson et al., 2006; Coad et al., 2008; Coyne 2008; David et al., 2018; Edbrooke-Childs et al., 2016; Moore & Kirk, 2010; Wyatt et al., 2015). These studies have shown that recognizing the right of children to express their views, experiences, and perspectives, and to participate according to their evolving capacities, may lead to benefits for children, families, community, population, and democracy. Promoting children's active participation in their own health makes children feel acknowledge as human beings, respected and happier. Including children in discussions and decisions concerning their healthcare leads to better decision-making and health quality improvement; children have a unique knowledge experience, views, and ideas that adults cannot have sufficient insight into. Therefore, decisions informed by children will be more effective, relevant and sustainable. The building of opportunities for children to access information and participate actively in planning and programming for their health relieves children's anxiety, increases children's understanding, confidence, and cooperation in health plans, strengthens accountability and transparency of care, and leads to better health outcomes. Giving children the possibility to participate helps develop children's self-esteem and autonomy competencies for taking responsibility for self-care and future decision-making. Providing children opportunities to participate in healthcare matters and decisions about their care is a way to prepare them for democratic participation, learn how to negotiate decision-making with others, respect and tolerate others, and contribute to social developments. Nevertheless, few empirical assessments of the impact and effectiveness of children's participation in health exist, and the field still requires more evidence (Wyatt et al., 2015).

It is encouraging that in the past 30 years, all over the world, the promotion of children's empowerment/participation has been embraced as values of health care institutions, goals of health research projects and programs, with a growth of interest. However, implementation of meaningful participation continues to be an unsatisfied aim for most children in health services. In practice, children are widely denied opportunities for participation, particularly at a very young age. Adults (i.e., parents and health professionals) rarely take appropriate actions to take real account of children's views or to give them an effective part in decision-making processes (Carlsson et al., 2018; Coyne et al., 2014; Coyne & Gallanger, 2011; Feenstra et al., 2014; Koller, 2017; Moore & Kirk, 2010; Quaye et al., 2018; Schalkers et al., 2016; Virky et al., 2015; Wyatt et al., 2015). The opportunity to participate depends mostly on the “goodwill” of some health professionals who decide to involve them. Such arbitrary variations require urgent changes. While promoting children's participation rights in health requires fundamental alterations in traditional practices, the challenge is far greater with younger children who frequently have less voice in everyday lives. Nevertheless, the CRC employs the right to participation in children, and the term also includes younger children, which is further supported in the Convention General Comment Nº. 7 when it is stated that:

> The convention requires that children, including the very youngest children, be respected as persons in their own right. Young children should be recognized as active members of families, communities, and societies, with their own concerns, interests, and points of view. (UN CRC, 2006, p. 3)

Excluding children from participation in healthcare, based on the judgment of his/her capacity founded on age, precludes children from having the opportunity to develop skills in participatory health processes. Children need opportunities to learn how to participate in health decision-making and care with the guidance of adults. It is imperative that children's participation, without discrimination, be implemented in practice.

To ensure the effective implementation of children's rights, the Council of Europe Committee of Ministers elaborated recommendations to guide member states on the participation of children under the age of 18 (Council of Europe, 2012). In this document, the participation concept is explicitly defined as:

> Individuals and groups of individuals having the right, the means, the space, the opportunity and, where necessary, the support to freely express their views, to be heard and contribute to decision making on matters affecting them, their views being given due weight in accordance with their age and maturity. (Council of Europe, 2012, p. 6)

The most frequent definitions of children's participation in the academic literature are close to the wording of Article 12 and generally related to the relational processes and power relationships between the children and practitioners, with the word empowerment often found in the children's participation discourses. As Lansdown (2010) states, the realization of children's participation rights “necessitates a transfer of greater power for children to have influence in their lives” (p. 13). According to Pölkki and collaborators (2012), children's participation “ relates to power and empowerment” (p. 108). In the words of Shier (2019), “the most significant benefit of participation is its contribution to the empowerment of children and young people, enabling them to develop a role as agents of social change rather than subjects of social control” (p. 3).

The Council of Europe Committee of Ministers' recommendations on the participation of children establishes that children being afforded a voice and being taken seriously applies to all children, i.e., any person under the age of 18 years, without exception of any kind such as ethnicity, sex, language, religion, social origin or another status (Council of Europe, 2012). Every child has the capacity to form a view of an issue affecting him/her; the child does not need to have a comprehensive understanding; even the very youngest, even when he/she is not able to communicate verbally, even with intellectual disabilities, he/she is capable of forming views, feelings, insights, interpretations, and ideas, and able to communicate them through a vast range of languages (Clark & Moss, 2001; UN CRC, 2006). As Lansdown (2011) states, the right to participate “requires recognition and respect for non-verbal forms of communication such as play, body language, facial expression, or drawing or painting, through which very young children make choices, express preferences and demonstrate understanding of their environment” (p. 21). Every child is capable of taking part in situations within its own competence (Ford et al., 2018). The way children participate will vary depending on their ages, interests, abilities, circumstances and require different levels of support and forms of information (Council of Europe, 2012).

In the Committee of Ministers' Recommendation 2012, it is emphasized that Article 12 does not contradict the children's right to protection; participation must be realized in accordance with all the protections in the CRC (Council of Europe, 2012). As is stated by Lansdown (2010):

> It is necessary to balance the right to participation with the right to protection, recognizing that it can be as harmful to make excessive or inappropriate expectations of children as to deny them the right to take part in decisions they are capable of making. (p. 18)

Children do not have the freedom to make all decisions independently, and their participation does not diminish adults' responsibilities. Article 5 of the UN CRC acknowledges the rights and responsibilities of parents or guardians to provide appropriate direction and guidance to their children to support them to exercise their rights in a manner that respects the evolving capacities of the child so that the child can exercise his or her rights as he/she acquires the competence and willingness to do so (Council of Europe, 2012; Lansdown, 2011). The children's best interest should be the primary consideration (Council of Europe, 2012). This increases the responsibilities of parents to scaffold children's participation sensitively and appropriately, taking into account their individual capacities, experiences, and context. Therefore, this entails that health professionals support, encourage, guide, and model parents to perform this child-rearing responsibility, which is stated in Article 18 of UN CRC (Council of Europe, 2012; Lansdown, 2011).

The recommendations on the implementation of children's participation also stress that children must be able to express their views freely, without being manipulated or subjected to pressure from others and be protected from harm, including reprisals and violation of their right to privacy (Council of Europe, 2012). Furthermore, like many adults, the right to children participate is not an obligation; the child can choose whether or not to realize this right.

When children choose to participate is not enough to listen to children. Article 12 states that children's views must be given due weight and should inform decisions about them. It is necessary to consider their concerns, their interest and take these views into account in subsequent actions (Council of Europe, 2012). To guarantee that children's participation is effective, safe, ethical, inclusive, meaningful, and impactful, the UN CRC (2009) identified nine basic requirements for participation (see Table 1.2).

Table 1.2

Principles of Children's Participation

Principle	Brief description
Transparent and informative	Children must be given full, accessible, diversity-sensitive, and age-appropriate information about their right to express their views freely and for their views to be given due weight, and about how this participation will take place, its scope, purpose, and potential impact.
Voluntary	Children should never be coerced into expressing views against their wishes and they should be informed that they can cease involvement at any time.

(continued)

Table 1.2 (continued)

Principles of Children's Participation

Principle	Brief description
Respectful	Children's views must be treated with respect and they should be provided with opportunities to initiate ideas and activities. Adults working with children need to gain an understanding of the socio-economic, environmental, and cultural context of children's lives.
Relevant	The issues on which children have the right to express their views must be of real relevance to their lives and the local context; participation should enable children to draw on their knowledge, skills and abilities. In addition, space needs to be created to enable children to highlight and address the issues they identify as relevant and important.
Child-friendly	Environments and working methods should be adapted to children's capacities. Adequate time and resources should be made available to ensure that children are adequately prepared and have the confidence and opportunity to contribute their views. Consideration needs to be given to the fact that children will need differing levels of support and forms of involvement according to their age and evolving capacities.
Inclusive	Participation must be inclusive, avoid existing patterns of discrimination, and encourage opportunities for marginalized children, including both girls and boys, to be involved. Children are not a homogenous group and participation needs to provide for quality for all, without discrimination of any grounds. Programmes also need to ensure that they are culturally sensitive to children from all communities.
Supported by training	Adults need preparation, skills, and support to facilitate children's participation effectively, to provide them, for example, with skills in listening, working jointly with children, and engaging children effectively in accordance with their evolving capacities.
Safe and sensitive to risk	In certain situations, expression of views may involve risks. Adults have a responsibility towards the children with whom they work and must take every precaution to minimize the risk to children of violence, exploitation, or any other negative consequence of their participation. Action necessary to provide appropriate protection will include the development of a clear child-protection strategy that recognizes the particular risks faced by some groups of children, and the extra barriers they face in obtaining help.
Accountable	A commitment to follow-up and evaluation is essential. Children are entitled to be provided with clear feedback on how their participation has influenced any outcomes. Wherever appropriate, children should be allowed to participate in follow-up processes or activities. Monitoring and evaluation of children's participation need to be undertaken, where possible, with children themselves.

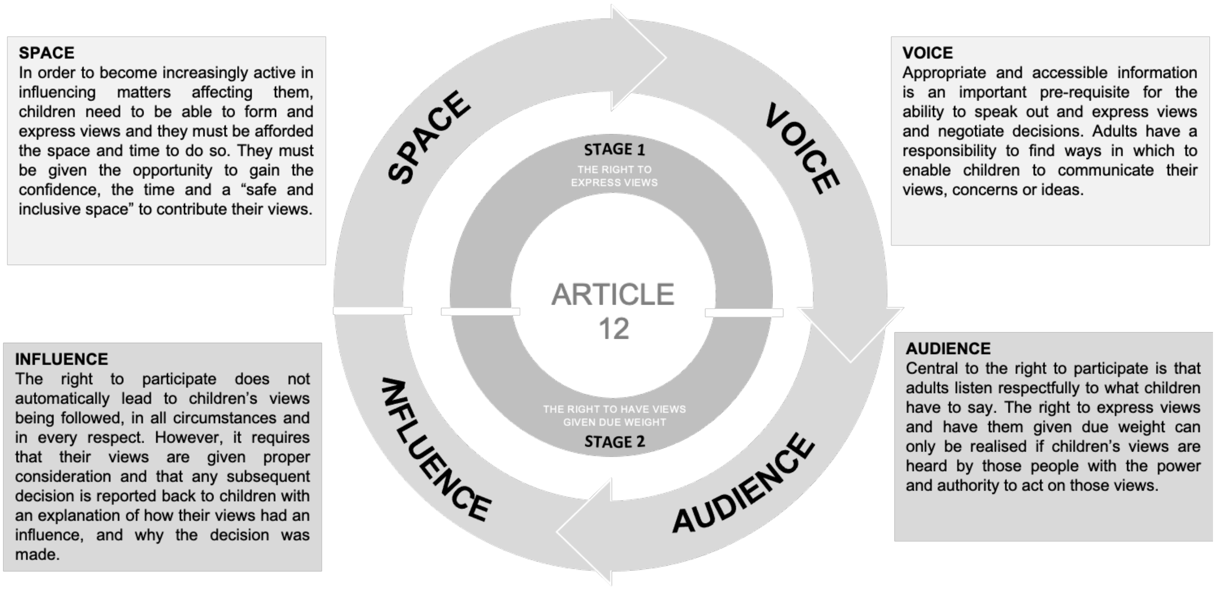
Note. Adapted from General Comment No. 12 The right of the child to be heard. UN/CRC/C/GC/12 (pp. 29-31), by United Nations Committee on the Rights of the Child, 2009, United Nations. Copyright 2009 by UN CRC.

Several models have been developed in an attempt to understand, analyse and apply children's participation. The most commonly referred models of children's participation are Hart's (1992) Ladder of Young People Participation, Treseder's (1997) Degrees of Participation, Shier's (2001) Pathways to Participation, Lundy's (2007) Model of Participation, and Lansdown's (2011) Three Modes of Participation. The last two models have been more widely endorsed by policymakers and practitioners looking to promote children’s participation.

Lundy's Model of Participation (2007) was specifically developed to help practitioners to implement the children’s right to participate in decision-making in a meaningful and effective way. It focuses on four interrelated and chronological elements of the rights expressed in Article 12 of the UN CRC that must be put in place if children's participation rights are to be realized. First, space (children must be given safe and inclusive opportunities to form and express their views), second, voice (children must be facilitated to express their views freely in a medium of choice), third audience (the views must be actively listened to) and fourth influence (the views must be acted upon, as appropriate; see Figure 1.5).

Figure 1.5

Lundy's Model of Participation



SPACE
In order to become increasingly active in influencing matters affecting them, children need to be able to form and express views and they must be afforded the space and time to do so. They must be given the opportunity to gain the confidence, the time and a “safe and inclusive space” to contribute their views.

VOICE
Appropriate and accessible information is an important pre-requisite for the ability to speak out and express views and negotiate decisions. Adults have a responsibility to find ways in which to enable children to communicate their views, concerns or ideas.

INFLUENCE
The right to participate does not automatically lead to children’s views being followed, in all circumstances and in every respect. However, it requires that their views are given proper consideration and that any subsequent decision is reported back to children with an explanation of how their views had an influence, and why the decision was made.

AUDIENCE
Central to the right to participate is that adults listen respectfully to what children have to say. The right to express views and have them given due weight can only be realised if children’s views are heard by those people with the power and authority to act on those views.

Note. Adapted from Participation Framework: National framework for children and young people's participation on decision-making (p. 15), by the Government of Ireland, 2021, Hug na n’Óg. Copyright 2021 by the Department of Children, Equality, Disability, Integration and Youth, Governament of Ireland. Adapted from Listen-Act-Change Council of Europe Handbook on children's participation for professionals working for and with children (p. 16), by A. Crowley, C. Larkins and L. Pinto, 2020, Council of Europe. Copyright 2020 by the Council of Europe.

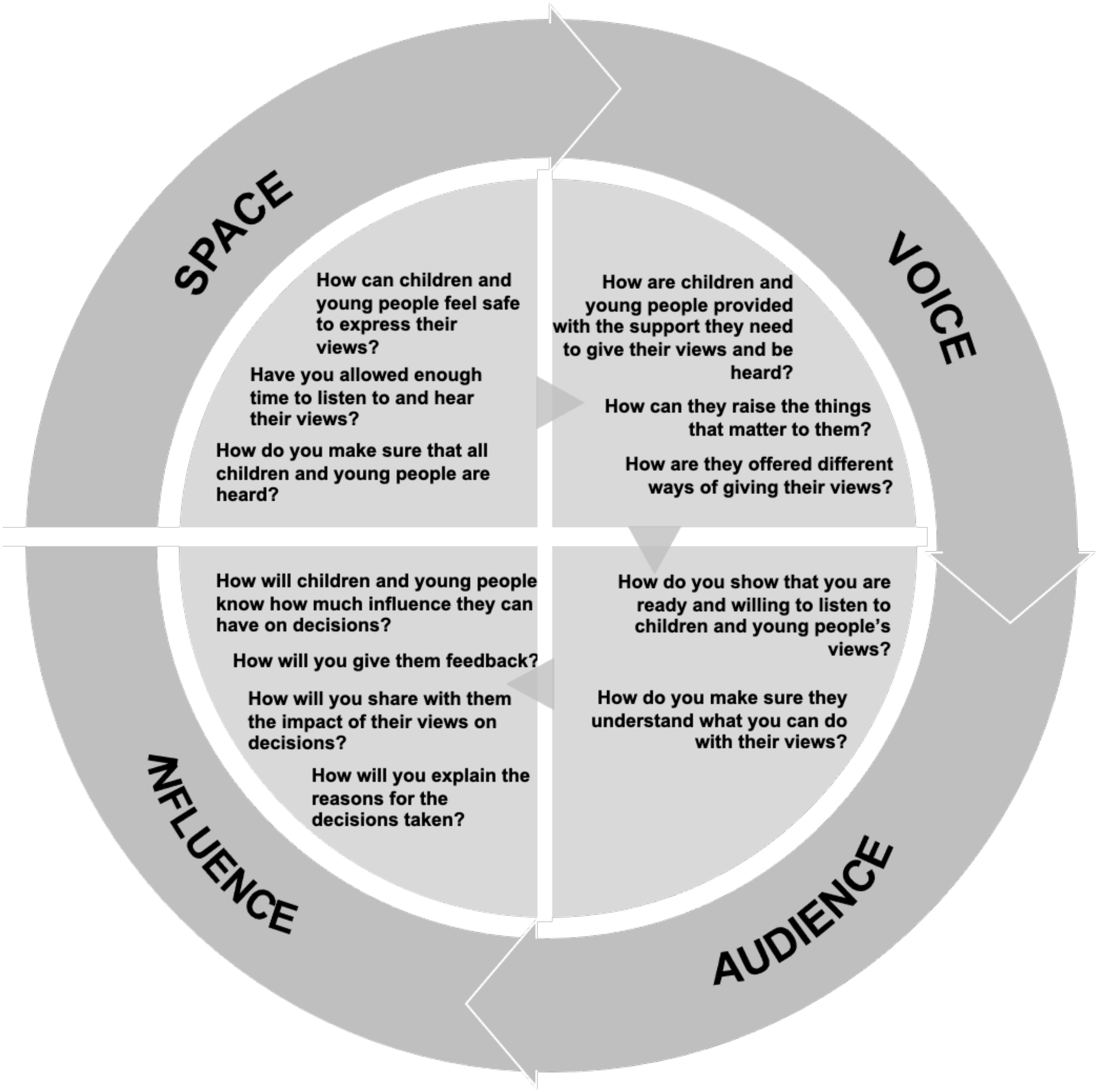
Lundy (2007) also states that Article 12 must be considered in the light of other Convention provisions, namely Article 2 (non-discrimination), Article 3 (best interest), Article 5 (right to guidance), Article 13 (right to seek, receive and impart information) and Article 19 (protection from abuse).

The concepts from Lundy's model are flexible to any form of participation for all children and in any context where children participate; it is evidence-based and user friendly (Lundy, 2007). This model is also the foundation of the Irish Government's National Framework for Children and Young People's Participation in Decision Making (Government of Ireland, 2021). Several international organizations have adopted it, such as the European Commission, Council of Europe, WHO, and the United Nations International Children’s Emergency Fund. For these reasons, we believe it can be useful to consider Lundy's model in practice and research concerning children's participation in health services.

Lundy has recently developed three framework checklists (e.g., the Everyday Spaces Checklist, Figure 1.6) and a series of children feedback forms to assist those working with and for children in effectively planning, conducting, and evaluating children participation (for more details, see Government of Ireland, 2021).

Figure 1.6

Everyday Spaces Checklist

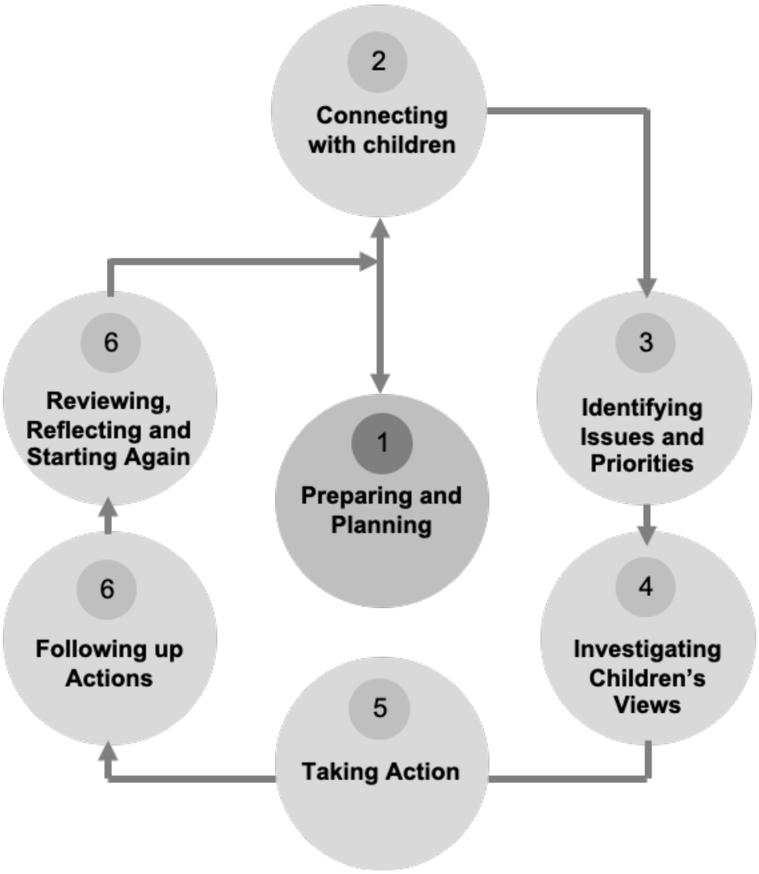


Note. Adapted from Participation Framework: National framework for children and young people's participation on decision-making (p. 20), by the Government of Ireland, 2021, Hug na n'Óg. Copyright 2021 by the Department of Children, Equality, Disability, Integration and Youth, Governament of Ireland.

The Recommendations on children's participation also state that if participation is to be effective, meaningful, and sustainable, it needs to be perceived as a process and not a one-off event (Council of Europe, 2012). Child participation comprises repeated cycles of preparing and planning, connecting with children, identifying goals and priorities, investigating ideas, taking action, following up action, reviewing and sharing outcomes (see Figure 1.7).

Figure 1.7

Participation as a Process



Note. Adapted from Listen-Act-Change Council of Europe Handbook on children's participation for professionals working for and with children (p. 16), by A. Crowley, C. Larkins and L. Pinto, 2020, Council of Europe. Copyright 2020 by the Council of Europe.

According to Crowley, Larkins and Pinto (2020), in each stage of the rolling participation process, it is important to assess the quality of participation offered (i.e., space, voice, audience, and influence) and the forms of influence that children can achieve. Different forms of influence are available to children according to the context, goals, time, resources, and children's interests (Crowley et al., 2020). These forms of child participation "offer different degrees of opportunity for children to influence matters affecting them, and, accordingly, differing degrees of empowerment; however, they are each appropriate to different circumstances" (Lansdown, 2011, p. 147).

According to Lansdown (2011), the modes or ways of children's influence in participation processes are the following: (a) consultative participation - a process in which adults seek children's views to ascertain knowledge and understanding of their lives and experience. It is characterized by being adult initiated, adult-led, and managed, lacking any possibility for children to control outcomes. It recognizes that children's perspectives need to inform adult decision-making but does not allow for sharing or transferring decision-making processes to children, although the results are made transparent to children; (b) collaborative participation - with this approach, a greater degree of partnership between adults and children is provided, with children being given the opportunity for active engagement at any stage of a decision or service. It is characterized by the adult initiated partnership with children, empowering children to influence or challenge both processes and outcomes, increasing levels of self-directed action by children. This form of participation provides the opportunity for shared decision-making with adults and for children to influence both the process and outcomes in a given activity; and (c) child-led participation - with this approach, children are provided with space and opportunity to pursue their own objectives, initiate their activities, and advocate for themselves. It is characterized by the fact that children define issues of concern and strategies for responding to them, themselves, adults act as facilitators, resource-providers, and counsellors rather than leaders, and children control the process.

As Coyne (2006) states, health professionals need to consider children's participation “not as all or nothing, but as a process that evolves over time according to the circumstances and needs of the children” (p. 69). Through this process of child participation, *feedback* is considered by Lundy (2018) a critical moment that provides transparency in the decision-making process and accountability. Lundy (2018) proposes a four “Fs” feedback process for consultation/decision-making process with children: (a) full – children should be provided with comprehensive feedback outlining which of the children's views were accepted and which were not accepted, and the reasons underlining these decisions; (b) friendly – the feedback received by children should be in format and language they understand; they should be informed of the findings of a survey or consultation and how their views were given due weight; (c) fast - feedback should be given to children as soon as possible as children grow up and move on quickly; (d) followed-up – children should receive ongoing feedback and information through the policy- or decision-making process. This step is an opportunity to demonstrate how the children's voices were given due weight and open space for continuing the process (Lundy, 2018).

In summary, the realization of children's participation rights, namely participation in decisions and actions concerning their own healthcare, is only voluntary for children themselves (i.e., a right that the child can exercise by choice based on proper information). Under the UN CRC, the realization of children's participation rights is a legal obligation of State parties, namely healthcare professionals and families (UN, 1989). As Lundy (2007) states, participation is not the gift of adults; it is the child's right; it is an issue of entitlement, and if it is an entitlement, how do we make it happen?

While there is a clear commitment about the participation rights of children and that all children are born with this right, the competencies to participate need to be fostered and learned by children, with adults having the responsibility to offer children opportunities to support and develop the skills and competencies to exercise their participation rights actively. Children can express their views, so they must be listened to how they perceive their health, what they see as health problems/concerns, and what they would like to know about health. At the same time, health professionals need to also focus on risk factors and healthy behaviours to protect children, regardless of whether children feel the need for such interventions. This is particularly important because children lack functionality in the frontal lobe, causing less cognitive control than adults, are less future-oriented than adults and are more prone to peer acceptance, which often results in a higher propensity to risk-taking (Krockow et al., 2019).

In addition to being responsive to children's perceived needs/concerns/views, health professionals must aim for effective, ethical, safe, meaningful, and impactful children participation in their health care. This implies an acceptance that children are competent to participate in their health care. It requires human resources to support children, preparedness of health professionals in children participation (i.e., training and capacity-building), time and financial resources to create age-appropriate information, and child-friendly environments that encourage and offer opportunities for children to build and demonstrate capacities. These environments must go beyond the more traditional dialogues based on verbal communication to incorporate the child-centred and playful arts-based methods in which children feel comfortable – through drawing, painting, storytelling, photography, games, and others. This requires openness and inclusion from organizations and health professionals. To cite Percy-Smith and Malone (2001), "authentic participation involves inclusion – wherein the system changes to accommodate the participation and values of the children – rather than integration – wherein children participate in predefined ways in predefined structures" (p. 18).

Fulfilling children's participation rights requires genuine commitment to act on children's interests. It is in children's best interest to be enabled to exercise their rights, and adults must ensure they can do it safely. Developing children participatory processes compels more than one-off activity or a one-off project, and it must become embedded in the health care practice for all children in all situations and as an ongoing process.

Participation is not a neutral practice. When facilitated by health professionals and parents with the right purpose and appropriately, it can empower children. As Gallagher (2008) argues, the power dynamics in children's participation are more complex than children possessing or not possessing power, which is fluid, dynamic, negotiated, and contextual. In this sense, a more realistic account of children's participation may acknowledge the complexity, diversity, and changeability accompanying any practice. Just because we cannot predetermine the "right" way to do it, it does not imply that we cannot offer practices from which children and adults can profit. We must continue to learn to listen and give voice to each child, tailoring care to the individual needs of each one, in each situation, and in everyday encounters. We need to respect more, trust more, and have more confidence in children and collaborative work.

Fulfilling children's participation rights in routine health services (indeed, in everyday spaces and situations) and recognising their right to be citizens of today is arguably of the utmost importance to achieve children's health and well-being.

1.4 The Study Context

Reporting context is critical to understand most phenomena of health care and to develop health interventions. Therefore, this section attempts to briefly summarize our study's contextual factors, from the external environment level to the practice setting level.

1.4.1 The Portuguese Public Health

Our study was carried out in Portugal, a high-income country (World Bank, 2020) with a resident population of 10 276 617 people, from which approximately 1 755 409 are below 18 years (Instituto Nacional de Estatística, 2019).

Portugal has a democratic regimen since 1974 that assumes that health protection is a right for all (Decreto de aprovação da Constituição n. º 86, 1976). All residents from Portugal have access to health care through the National Health Service, a mainly tax-financed system, which the Constitution describes as universal, comprehensive, and “approximately” free of charge (art. 64º, Decreto de aprovação da Constituição n. º 86, 1976). The National Health Service in Portugal is managed at the regional level through five Regional Health Administrations (*Administrações Regionais de Saúde*): North, Centre, Lisbon and Tagus Valley, Alentejo, and Algarve, with the control of the central government, through the Ministry of Health (Simões et al., 2017).

Portugal is a member of the European Union and the WHO, whose directives regarding health policies strongly influence national policies (Simões et al., 2017).

During the last 40 years, Portugal has made remarkable progress in health indicators, reducing mortality rates and increasing life expectancy at birth (Simões et al., 2017). The Portuguese average life expectancy at birth is 80.5 years old, one year above the Organization of Economic Cooperation and Development (OECD) average (Ministério da Saúde, 2018a). Better health systems quality and improved policies within and beyond the health systems have contributed to these gains. However, there remain significant challenges in Portugal's health systems. The speed of population ageing, due to the increase of life expectancy, the decrease of birth rate, and emigration, is disturbing; it is expected that by 2050 the share of the population aged 65 and over will exceed one-third (OECD, 2019). Whilst life expectancy has increased over time, healthy life expectancy has performed less well. Portugal is one of the OECD countries with fewer years of healthy life after 65 years old (OECD, 2019). In 2017, over 15.3% of the population aged more than 15 years self-rated health as “poor”, higher than the average across the OECD of 8.7% (OECD, 2019). Furthermore, there are still inequalities in health status in the Portuguese population between men and women and the most vulnerable groups. Those more likely to suffer from poor health are the elderly and children in poverty, those living in rural regions, ethnic minorities, migrants, and the long-term unemployed (OECD, 2019). Besides, family deprivation, unemployment, and child poverty were exacerbated during the recent financial crisis and the COVID-19 pandemic.

According to the latest available data, NCDs (e.g., cancer, heart attack and stroke, chronic respiratory problems, and diabetes) are the main causes of death and morbidity (Ministério da Saúde, 2018a). Mortality amenable to health care and health promotion interventions has improved in Portugal, but the country still has a high avoidable mortality rate. In 2017, the average aged-standardized mortality rate from preventable causes was 100 deaths per 100 000 people, and the mortality rates from treatable causes were much lower, at 69 per 100 000 people (OECD, 2019).

Unhealthy lifestyles, namely smoking, alcohol consumption, unhealthy diet, and physical inactivity, are the critical determinants of many chronic diseases that can be modified and avoided. The trends of these lifestyles in Portugal are not encouraging.

1.4.2 Lifestyles and Health Behaviours in Portugal

Obesity rates−a major risk factor for the development of many chronic diseases−were in 2017 considerably higher in Portugal than the OECD average (55.6%), with 67.6% of the Portuguese adults over age 18 classified as overweight or obese (BMI ≥ 25; OECD, 2019). Levels of obesity in the adult population have been gradually increasing in Portugal, accompanying the trend of other countries. Childhood overweight and obesity rates are among the highest in OECD and Europe. More than one-third (38.1%) of children aged 5-9 years living in Portugal in 2016 were classified as overweight (including pre-obesity and obesity; Lopes et al., 2017). The proportion of overweight children across OECD countries was 31.4% (OECD, 2019). However, between 2008 and 2019, Portugal had an inverted trend in childhood overweight and obesity prevalence. From 2008 to 2019, the study on Childhood Obesity Surveillance Initiative (COSI) Portugal reported an 8.3% reduction in the prevalence of overweight (including pre-obesity and obesity) children aged 6-8 years (37.9% to 29.6%) and 3.3% reduction in obesity (from 15.3% to 12.0%) (COSI, 2019). The evolution of data on childhood obesity still requires special attention to ensure the sustainability of this improvement trend.

In what concerns a healthy diet, in 2017, on average, 70.9% of Portuguese adults (over age 15) consumed at least one piece of fruit per day, in comparison with 57.1% across the OECD. However, the daily vegetable consumption recorded lower rates than the average across OECD countries (59.6%), with only 55.2% of Portuguese adults eating at least one portion of vegetables per day (OECD, 2019). Information on children's food frequency collected through parent's report, in the COSI study in 2016 revealed that more than 80% of children (aged between 6 and 8 years) consumed vegetable soup and fresh fruit four or more times a week. Nonetheless, about 80% of children had a high consumption of processed foods and high in sugar three times a week. Also, 19.9% of children had consumed soft drinks with added sugar more than four times a week (Rito et al., 2017).

Physical activity is one of the most pressing population health challenges in Portugal. Portuguese physical activity levels are among the lowest in OECD. In 2017, only 57.1% of Portuguese adults engaged in the recommended guidelines for the practice of moderate physical activity; on average, across OECD countries, 66% of adults were sufficiently active (OECD, 2019). According to the Portuguese National Food and Physical Activity Survey 2015-2016, the prevalence of the 6 to 9 years old that met the recommendations of 60 minutes of moderate to vigorous physical activity was only 59.3% (Lopes et al., 2017).

Although smoking rates are declining, 16.8% of the Portuguese population aged 15 years and over still smoke daily, from an average of 18.0% in OECD countries (OECD, 2019). In 2015 it was found that 14.1% of Portuguese students from public education aged 13 years old had already smoked (Direção de Serviços de Informação e Análise, [DSIA], & Direção de Serviços de Prevenção da Doença e Promoção da Saúde, [DSPDPS], 2018).

Also disturbing is the prevalence of alcohol consumption. Though the recorded alcohol consumption has decreased in Portugal over the last decade, the values remain well above the desired. Alcohol consumption in Portugal in 2017, measured through sales data, was close to the OECD average of 8.9, reporting 10.7 litres of pure alcohol per person, aged 15 years and over, per year (OECD, 2019). In 2015, 20.1% of Portuguese adolescents aged 13 years had consumed alcohol in the last 12 months (DSIA & DSPDPS, 2018).

In what concerns health literacy (i.e., the cognitive and social skills that determine the individual's ability to access, understand, and use correct information to promote and maintain good health; Nutbeam, 1998), the 2014 European Health Literacy Survey demonstrated a need for improvement in the country. Portugal had the lowest share of people with excellent levels of health literacy, 8.6%, compared with other European countries with an average of 16.5%. Also, Portugal had a higher share of people with problematic levels of health literacy (38.1%), compared to an average of 35.2% across European countries (Nunes et al., 2014).

These trends have increased the interest of the Portuguese health system in focusing on health promotion and disease prevention strategy through the life cycle, on reducing health inequalities, on making care more effective, more efficient, more appropriate to the populations served and closer to the citizens (DSIA & DSPDPS, 2018; Ministério da Saúde, 2018a).

1.4.3 The Portuguese Primary Health Care System

Primary health care is recognized as the central pillar of the Portuguese National Health System, a foundation for attaining health gains (Ministério da Saúde, 2018a). Primary care in

Portugal ensures surveillance of health status, health promotion, disease prevention, and management of health problems (Simões et al., 2017).

Many initiatives that support the reorientation of health services towards health promotion, disease prevention, and person-centred care come from the National Health Plan (2012-2016, extended until 2020), which set as main goals the reduction of risk factors for NCDs, specifically childhood obesity and exposure to tobacco, and the promotion of the citizen participation and empowerment (Ministério da Saúde, 2015). The Prevention and Control of Smoking Program (Direção-Geral da Saúde [DGS], 2021a) and the Promotion of Healthy Eating Program (DGS, 2021b) are national priority health programs since 2012, been added in 2016 the Physical Activity Promotion National Program (DGS, 2017), and the Health Education, Health, Literacy, and Self-care National Program (Despacho nº. 3618-A/2016). However, the intervention approaches of these programs, in what concerns children population, have been mainly directed for environmental changes. Within the scope of local strategies to be applied at the individual level in primary health care, for instance, to reduce and manage obesity, Portugal had created in 2015 a system for the identification, management, and control of pre-obesity: The Integrated Care Process of Pre-Obesity (DGS, 2016). However, this multi-component lifestyle weight management system is only applicable to the adult population, and still, the activity of structured consultations is not widespread.

Since 2005, Portugal has been through reforms focusing on the primary health care system to make it more responsive to population needs at local, regional, and national levels (OECD, 2015). The public primary health care is currently provided at Health Centre Clusters, *Agrupamentos de Centros de Saúde*, (ACeS) (Decreto-Lei No. 28/2008). Each ACeS embraces different functional units, with organizational and technical autonomy, that act in inter cooperation to provide integrated care for the local population. These functional units include: (a) Family Health Units, *Unidades de Saúde Familiar* (USFs), and the Customized Health Care Units, *Unidades de Cuidados de Saúde Personalizados* (UCSPs), which are the facilities for “provision of personalized [medical and nursing] health care to the population enrolled in a given geographical area” (Decreto-Lei nº 298/2007, art. 4; Decreto-Lei nº 28/2008, art. 10); (b) Community Care Units, *Unidades de Cuidados na Comunidade* (UCCs), which provides health care and psychological and social support at home and community level, especially to people, families, and vulnerable groups at higher risk, or with physical and functional dependence or illness, that requires close monitoring (Decreto-Lei nº 28/2008, art. 11); (c) Public Health Units, *Unidades de Saúde Pública* (USPs), responsible for the elaboration of plans in public health areas, epidemiological surveillance, management of intervention programs in the prevention, promotion and protection of populations' health (Decreto-Lei nº 28/2008, art. 12); and (d) Units of Shared Care Resources, *Unidades de Recursos Assistenciais Partilhados* (URAPs) that include psychologists, social workers, physiotherapist, occupational therapist, who provide care, advisory services and assistance to all other functional units (Decreto-Lei nº 28/2008, art. 13).

The USFs are a result of the ongoing primary care reform for the provision of better primary care service to the population, where multidisciplinary teams (including doctors, nurses, and administrative staff), voluntarily established, are committed to standards of service and progressively more demanding results of effectiveness and efficiency, with financial incentives associated with performance and productivity (Decreto-Lei nº 28/2008). There are two types of USF–model A and model B–in place. These models differ in the level of autonomy, contractual services, and rewarding compensations. Model A corresponds to a phase of learning and improvement of the family health teamwork; model B requires that the teams show increased organizational maturity, the family practice is effective and accepts a more demanding level of contractual performance (Decreto-Lei nº 28/2008). The USFs are taking root around the country but, at the time of our study, they still coexist with the UCSPs, which are the “old model” of primary care provision, constituted by professionals that have not transited to the USF model (professionals not willing or unable to organize in USFs due to deficits in structural and human resources conditions; Biscaia & Heleno, 2017).

The UCSPs also provide individual and family health within a multi-professional team of doctors, nurses, and administrative staff with the same care mission. However, UCSPs, when compared to USFs, generally have more patients enrolled (and some of the patients might not be registered with a doctor/health team), have lower levels of autonomy and participative management, and professionals are paid a fixed salary.

The UCSP's and USF's performance monitoring indicators are very similar; however, goals from UCSPs are more modest. Studies have shown better performance and results of USFs compared to UCSPs, which may contribute to more inequalities in access to quality health care (Monteiro, 2020; OECD, 2015; Observatório Português dos Sistemas de Saúde, 2019). However, the unit's performance might have been influenced by the inherent characteristics of their population and resources, which were not controlled (Monteiro, 2020).

1.4.4 The Well-Child Visits in Portugal

Part of the basic portfolio of USFs and UCSPs clinical services is the provision of health promotion and disease prevention of children, young people, and their families through well-child visits (WCVs), which are universally accessible to children in the country and their families.

The good practice guidance (i.e., principles, strategies, and tools) of WCVs is outlined in the National Children and Young People Health Programme, *Programa Nacional de Saúde Infantil e Juvenil* (PNSIJ), a normative document that assists health care professionals in planning and carrying out the health supervision visits (DGS, 2013).

The WCV principles acknowledge the value of each child and family, the children's self-determination, the collaborative work with the parents/families, and the coordination among professionals and agencies, inside and outside the health sector, that contribute to children's health and well-being (DGS, 2013). The practice in the care of children in WCV includes attending the parental and child concerns, taking the health, family, and social history relevant to the age-specific health visit, developmental screening and surveillance, observation of parent-child/youth interaction, performing the children's physical examination, monitoring of growth, immunizations, counselling (namely providing anticipatory guidance recommendations to parents and children in a wide range of topics), and care coordination (DGS, 2013). The periodicity schedule for WCVs varies within the life course of the child. There are 18 age-based recommended WCVs (DGS, 2013). These are mainly office visits occurring through regular office hours.

The WCVs aim to contribute to positive health outcomes related to children's physical and emotional well-being and optimal functioning within the family, school, and community. Many of the monitoring, intervention and anticipatory guidance for the WCVs were chosen from the leading health indicators. Therefore, these consultations have the opportunity to operate as a critical link between the health of the individual (child and family) and public policy health goals. From these health outcomes, attaining a healthy weight and pursuing healthy behaviours related to diet and physical activity are identified as priorities in the Portuguese WCVs (DGS, 2013). Therefore, the PNSIJ encourages health professionals provide counselling related to diet and physical activity at every age-specific health supervision visit (DGS, 2013).

Nevertheless, national or international clinical practice guidelines on evidence-based methods to assist professionals in these interventions are missing. There are no experimental evaluations of empowerment counselling interventions used in daily WCVs and their effects on children and families' health outcomes for integrating them into primary care workflow (Brown et al., 2018). Whether and how these interventions can be successfully implemented in routine WCVs remains largely unanswered. This warrants a study review to consider what is known about empowerment health interventions with preschool-age children and families and plan future research directions. However, to our knowledge, no review studies to date have been done on the subject.

Although research has shown most parents expect and value having lifestyle counselling in primary care, the studies consistently have highlighted that the opportunity to provide lifestyle counselling in well-child visits is often unfulfilled (Combs-Orme et al., 2011; Olson et al., 2004; Riley, 2019; Shuster et al., 2000). Moreover, parents with lower socioeconomic status have been linked to the report of the greatest unmet needs for anticipatory guidance, shortest visits and fewer discussion topics in WCVs, suggesting that there may be variation in the delivery of counselling depending on the population (e.g., Olson et al., 2004; Shuster et al., 2000). In

Portugal, there is no substantial evidence documenting whether and to what extent nurses use empowerment counselling in routine WCV to promote healthy lifestyles. Questions also persist on how counselling practices are related to families, nurses and organizational factors (e.g., families and nurses' sociodemographic and nutritional status, type of functional unit). Another reason for limited knowledge is that there is no validated measure of families' and nurses' perception of empowerment counselling in well-child visits. Such a measure would support the development and evaluation of potential interventions in this domain. For example, by assessing the families' and nurses' perception of empowerment counselling in WCVs, interventions could be designed to meet those needs. Quantification of empowerment in counselling would also facilitate research about the factors that influence such nurses' and parents' perceptions of the realization of such practices. Researchers could also use this instrument in clinical trials to compare the effectiveness of interventions. Besides research, such an instrument might have clinical utility. Health care organizations could characterize and compare perceptions of parents and nurses. Such a measure would hold potential for identifying areas of need and inform care planning.

More research is needed in this important area. Providers of WCV in the country may face the same difficulties identified in international research as barriers to the provision of behavioural counselling in paediatric primary care. For instance, the high number of recommended services for the limited amount of time available in each WCV and the time-consuming nature of counselling makes the provision of these services during consultations challenging (Cooper et al., 2006; Horwitz et al., 2015; Nasir et al., 2016; Norlin et al., 2011).

Another significant constraint is the financial disincentive (Norlin et al., 2011). In Portugal, there is a scarcity of performance indicators related to these professional practices; the health care outcomes of children's preventive care that have been given visibility are the rates of children's consultations, particularly those occurring in the children's first and second years of life, the monitoring of children's BMI, and rates of immunization (Administração Central do Sistema de Saúde, 2017). Traditionally, empowering lifestyle counselling in WCV is not supported by increased payment and incentives. The current focus of health investment is on the actual consumption of services and not on the long-term health outcomes that health services might contribute.

Furthermore, it is not clear which health professionals are responsible for families' counselling toward healthy lifestyles. The provision of WCVs is usually divided between doctors and nurses, but there is no normative indication of which health care professionals should deliver each recommended service. Commonly, in Portugal, the first contact professional is the nurse, who provides developmental screening, monitoring of growth, anticipatory guidance and immunizations, with doctors serving mainly as specialists for complex medical problems. However, the division of practices and degree of coordination of care between nurses and doctors varies among the health care teams, which leads to differences in performance system and quality of care.

In Portugal, the primary care nurses hold at least a bachelor's degree of four years (generalist nurse) since 1999, and a few hold a postgraduate nursing degree in the specialities of community nursing, medical-surgical nursing, rehabilitation nursing, child and paediatric health nursing, maternal and obstetric health nursing, and mental and psychiatric health nursing. The empowerment of individuals and families to adopt healthy lifestyles is a core competence of Portuguese generalist nurses (Regulamento n.º 190/2015, 2015). Under the primary health care reform, a new philosophy of organizational and provision of care in the USFs and UCSPs - the Family Nurse[5] - reinforced the significance of nursing contributions to health promotion and disease prevention (Decreto-Lei nº. 118/2014). However, there have been difficulties in defining areas of responsibility sharing in the provision of primary health care between nurses and doctors (Ordem dos Enfermeiros, 2015). Only in 2018 with the publication of the specific competencies of the Specialist Nurse in Community Nursing, in the area of Family Health Nursing (Regulamento n. º 428/2018, 2018), and recently with the development and accreditation of the curricular plans for Post-graduation or Masters in Family Health Nursing, it seems possible to consolidate the practice of the Family Nurse.

Research indicates that practitioners struggle to integrate counselling in WCVs because of gaps in education and training (Nasir et al., 2016). Given the central position of empowerment in counselling in the Portuguese nurses' general competencies profile and the practice of Family Nurse, nursing curricula in Portuguese undergraduate and post-graduate nursing degree programs must provide opportunities for students to develop and practice these health promotion skills (WHO, 2000). However, health promotion in nursing curricula is insufficiently studied in Portugal, and the techniques used by nurses in primary care are also scarcely reported.

In summary, integration of empowering counselling toward healthy lifestyles in WCVs, namely obesity prevention, is recommended and encouraged in Portugal by health care standards and nurses' professional responsibilities. Nonetheless, its current feasibility and impact are undetermined. It is time for increased empirical focus on empowerment counselling toward healthy lifestyles in WCVs. Opportunity exists to intervene and potentially impact health within the context of WCVs.

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[5] Family Nurse – the nursing professional who, as part of the multidisciplinary health team, assumes responsibility for providing comprehensive nursing care to families, at all stages of life and in all community contexts (article 2º, Decreto-Lei nº. 118/2014).

CHAPTER 2 – AIMS OF THE STUDY

Our study has a three-fold purpose: first to explore the evidence on the effectiveness and nature of empowerment health interventions with preschool-age children and families; second, to translate, adapt and evaluate the psychometric properties of a measure of families' and nurses' perceptions of empowerment in counselling in the 5-year-old WCV, the Portuguese ESPS; third to gain insight into the performance of empowerment counselling in the 5-year-old WCV, during nurses' consultations; all to contribute to advance the clarification and practice of empowerment counselling toward families' healthy lifestyles in WCVs.

This exploratory research, with a literature study (sub-study 1) and observational studies (sub-studies 2 and 3), focus on answering the following questions:

1.a Do empowerment health interventions with families and preschool-age children induce favourable health-related outcomes?

1.b. What theories, modes of family involvement in interventions, and behaviour change techniques are commonly used and are more effective?

2. What is the reliability and construct validity of the Portuguese translated and adapted ESPS among nurses and families in a 5-year-old WCV context?

3. a. What is the degree of empowerment counselling perceived by families and nurses in 5-year-old WCVs?

3.b. Are there differences between the nurses' and families' views of the same process of empowerment counselling?

3.c. How do family's and nurse's sociodemographic and nutritional status relate to the degree of empowerment counselling in 5-year-old WCVs?

CHAPTER 3 – MATERIALS AND METHODS

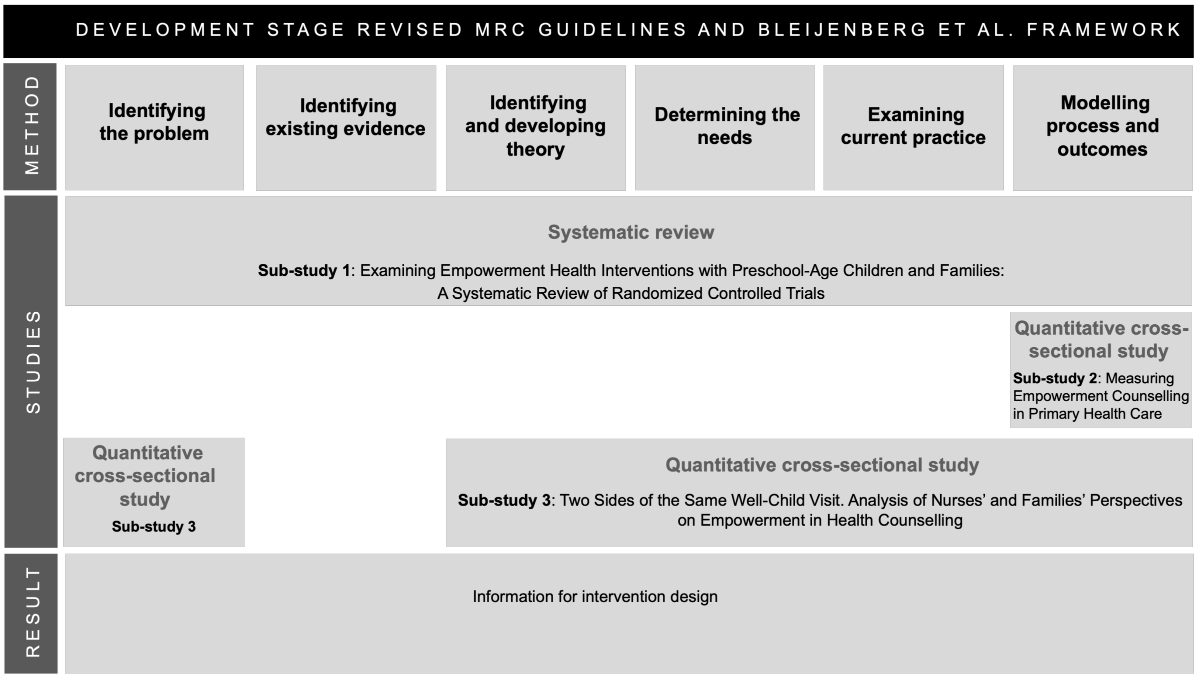
In this chapter, we outline the rationale for the research methods. We begin by recapping the focus of our study and identifying the frameworks used to define the methods; we explain the study's design. We then detail the study setting, the population and sample, the data collection instruments, the procedures and variables in the study, and data analysis methods used in each of the sub-studies. The ethical considerations relevant to this study are also discussed.

3.1 Design(s)

The overall purpose of our study is to explore the theory, evidence, and context to underpin the development of empowerment counselling in WCVs for healthy family lifestyles. The implementation of empowerment counselling in WCVs can be highly complex since it is expected to be made of multiple components (e.g., evidence-based guidelines, professional expertise, action processes) that can be influenced by different organizational factors (e.g., financing, management, training, workflow), individual factors (e.g., delivers and users' motivation, expectations, satisfaction), and contextual factors (e.g., political, social and geographical). To make our study rigorous, relevant, and pragmatic, we followed the revised guidance on developing complex interventions of the United Kingdom Medical Research Council (MRC; Craig et al., 2008). The MRC framework describes appropriate methods and practices to support the development and evaluation of complex interventions within health; it is the most widely used guidance and has been recommended in nursing (Corry et al., 2013; Richards & Borglin, 2011). The development stage of the MRC framework informed the design of our study. The development stage is challenging to define. It is proposed to be the process between the idea for an intervention to “the point where it can reasonably expect to have a worthwhile effect” (Craig et al., 2008, p. 9). It is known that adequate developmental work before proceeding to feasibility studies or full-scale evaluations opens the possibility of a more effective intervention that fits within the delivery context (Bleijenberg et al., 2018; Craig et al., 2008). Therefore, the development phase and the contexts in which a complex intervention takes place have been given greater attention. Alongside the stages identified by the updated MRC framework development phase (i.e., “identifying the evidence base”, “identifying/developing theory”, and “modelling process and outcomes”), we considered Bleijenberg et al. 's (2018) suggested approaches to enhance the development phase of complex interventions for the field of nursing studies. Based on reviewing existing development models, Bleijenberg and collaborators (2018) added three new elements to the MRC framework, i.e., “problem identification and definition”, “determination of needs”, and “examination of current practice and context”. Grounded on these two frameworks, we defined a study to give us solid evidence, a strong theoretical and contextual fitting base to support the development of empowerment counselling in WCV. How each sub-study fits into these frameworks are summarised in Figure 3.1.

Figure 3.1

Studies Conducted Mapped on the MRC and Bleijenberg et al. 's Framework



In sub-study one, we conducted a systematic literature review. The purpose of this study was to identify, appraise and synthesize the evidence on health interventions, using the empowerment concept as an approach or an outcome, with preschool-age children and families. The systematic review provided a comprehensive overview of the existing relevant evidence about similar interventions (Craig et al., 2008); also, it enabled us to achieve a theoretical understanding of the likely process that might support health interventions based on empowerment and allowed us to collect evidence regarding intervention components that might be effective (Craig et al., 2008).

The primary purpose of sub-study 2 − a quantitative, survey design, cross-sectional study − was to examine the reliability in terms of internal consistency and the construct validity of the Portuguese translated and adapted ESPS among families attending a 5-year-old WCV conducted by nurses. This study offers preliminary evidence of the adequacy of an instrument to assess empowerment counselling in WCVs.

The purpose of sub-study three, a quantitative, survey design, cross-sectional study, was twofold: to empirically evaluate the degree of empowering counselling perceived by families with 5-year-old children and by nurses in WCVs, using the Portuguese ESPS; and to examine its associated factors (whether the sociodemographic characteristics of participants in WCVs, the characteristics of the WCV, the home and family obesogenic environment risk, and participant's BMI, are related to the degree of empowering counselling in WCVs, in a sample of nurses and families of 5-year-old children). This study was used to further identify and define the problem, gain insight into the current intervention practice in WCVs, through the family and the nurse perspectives, and explore its determinants.

Our mixed-methods study adopted a pragmatic approach to research where the choice of research methods relied on the most appropriate ones for the research questions, rather than being restrained to a specific methodology (Creswell & Creswell, 2018).

To strengthen our study's quality and transparency reporting, we followed the Guidance for reporting intervention development studies in health research (GUIDED; Duncan et al., 2020). We applied the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009; Page et al., 2021) for presenting the findings of the sub-study 1 (see Appendix I for PRISMA checklist). We also used the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines (von Elm et al., 2014) to report the findings of sub-studies 2 and 3 (see Appendix II for STROBE checklist). Finally, we followed the international expert consensus on taxonomy and definitions of measurement properties outlined by the COnsensus-based Standards for the selection of health status Measurement INstruments (COSMIN) project (Mokkink et al., 2010) in the reporting of psychometric properties of sub-study 2.

3.2 The Study Setting

The setting for the sub-study 2 and 3 was the 5-year-old WCV, particularly the nurse consultations, delivered in Functional Units (USFs and UCSPs) from two ACeS. The two ACeS were purposively selected based on their health care systems' relative similarities, willingness to participate in the research study and accessibility for the researcher (SBR). Both organizations belong to the Regional Health Administration of Lisbon and Tagus Valley, covering a geographical area from Portugal's Central Region and the Metropolitan Area of Lisbon. The included organizations provide services for a diverse rural, suburban, and urban population with a socio-economically and ethnically diverse population range.

3.3 Population and Sample

The target population of the sub-studies 2 and 3 comprised nurses who provided WCVs at a participating Functional Unit (USF or UCSP) and families presenting for a 5-year-old WCV. When the study data collection started, approximately 23 655 children between 5 and 9-years-old were registered at these organizations through 29 Functional Units (approximately 40% UCSPs), in which about 161 nurses were involved in WCVs (Ministério da Saúde, 2018b).

Inclusion criteria were nurses involved in the 5-year health visit, having more than six months of professional experience in primary care, and giving their informed consent to participate.

Eligible families consisted of healthy children aged ≥ 5 and < 6 years, and their parents or legal guardians (hereafter referred to as parents) who were accessing the unit for the 5-year-old WCV with one of the participating nurses and gave their informed consent (children provided verbal assent). Families were excluded if adults were unable to speak, write, and read Portuguese; or if the child had a terminal illness, severe psychiatric illness, or chronic disorder(s) that required substantial daily management, and/or that would severely limit his/her ability to improve lifestyles behaviours.

The selection of the participants required different sampling types, and it was done in two stages: nurses were selected initially by convenience sample, followed by families through consecutive sampling. Figure 1 from publication 2, page 3, depicts the selection process of nurses and families.

After obtaining the study's approval from the Ethics Committee for Health and the local authorities (i.e., Executive Directors and Clinical Council Nurses from the two ACeS), an information letter about the study was sent to the coordinators of the USFs and UCSPs asking for permission to contact the nurses. Nurses were then briefed about the study by a mailed invitational letter sent by the functional unit managers on behalf of the research team, followed by a personal meeting with the researcher (SBR) to explain the study further. From the 161 nurses considered for eligibility, only 39 initially agreed to participate in the study. All those expressing an interest in participation reviewed and signed informed consent before participating in the study. However, 14 nurses dropped out before completing the study procedures, leaving 25 nurses (percentage of sample approached that participated, 17%). The participating nurses were asked to identify and inform the researcher about the subsequent 5-year-old WCVs to recruit up to four families. This selection procedure would ensure diversity of counselling among the participating nurses. Nurses used the electronic records to identify potential family participants based on the regularly scheduled 5-year-old WCV and informed the researcher through e-mail or phone. To maximize retention of nurses, the researcher contacted each participating nurse regularly, by e-mail or phone, to keep them updated on the number of recruited families.

On the day of the 5-year-old WCV, the researcher (SBR) approached the potential family participant in the waiting room of the Functional Unit before the consultation took place. The researcher presented as a nurse researcher and provided oral and written information about the purpose of the study and the procedure. After a pre-screening interview to ascertain interest in enrolling in the study and the fulfilment of eligibility criteria, participants were directed to review and sign the informed consent form. The consent form was signed before the data collection and the consultation. Of the 132 families considered for eligibility, 82 participated in the study (81.2% of sample approached).

Therefore, our study included a total sample of 25 nurses from 12 different Functional Units (seven USFs, five UCSPs) and 82 families attending 5-year-old WCVs (on average three consultations per nurse, range 1–4). The participating nurses' sociodemographic characteristics are presented in Table 1, publication 3, page 3451. All nurses respondents were female. Respondent’s work experience in nursing ranged from 11 - 36 years (*M* = 21.94 , *SD* = 5.93) and in primary health care from 0.5 - 19 years (*M* = 9.34 , *SD* = 5.77).

The participating families' sociodemographic characteristics are presented in Table 2, publication 3, page 3452. Among the children scheduled for the WCV and participating in the study, 46 were male, and 36 were female, with a mean age of 5.46 (*SD* = 0.32). Concerning parents’ characteristics, most of those responding to the questionnaires (91.5%) were mothers whose mean age was 37 years (*SD* = 5.67). The children's parents were well educated (95% with completed upper secondary education), with only 10 (12.3%) reporting an unemployment status and 20 (24.7%) reporting a migrant background. Four families (4.9%) were single parents.

3.4 Data Collection

3.4.1 Search Strategy and Selection Criteria (Sub-study 1)

In sub-study 1, we conducted a systematic review of peer-reviewed literature, following the PRISMA guidelines (Moher et al., 2009), to identify randomised controlled trials (RCTs) with an explicitly stated empowerment approach or outcome targeting preschool-children (3- to 5-year-old) and their families/caregivers' health. In this review, we considered only RCTs to minimize confounding and report high-quality evidence. We included interventions in any geographical location that focused on health promotion, prevention, or treatment and measured empowerment or any health-related behaviour or outcome. We reviewed only studies published in English between 1986 and 2019 to highlight how empowerment has been addressed in preschool-age children and family health since the publication of the Ottawa Charter.

A review protocol was prepared by the research team but was not registered.

We searched electronic databases including the Medical Literature Analysis and Retrieval System Online (MEDLINE), the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Academic Search Complete, Cochrane Central Register of Controlled Trials, Nursing and Allied Health Collection, the American Psychological Association (APA) PsycINFO, the APA PsycArticles, and the Excerpta Medica Database (EMBASE). Our electronic search strategy included terms that referenced families and children, empowerment, health intervention, and randomised controlled trial. The search terms were adapted for each search engine (see Appendix A for the detailed search in MEDLINE, publication 1, online supplemental file). The search was performed in May 2018. On January 31, 2019, we conducted an updated search applying the same search strategy to identify studies published in the previous year.

Citations were exported using the citation management software EndNote X9 (Clarivate Analytics, USA). Initially, we eliminated citations in duplicate, and then we screened all tittles and abstracts and excluded irrelevant articles. After that, we performed a screen of full-text articles using a standardized form based on our inclusion criteria. In addition to database searches, we searched the reference lists of the included studies to identify other potentially eligible RCTs. Each reference was assessed for eligibility by one reviewer (SBR) and checked by another; a third reviewer resolved any disagreements.

3.4.2 Instrumentation (Sub-studies 2 and 3)

For sub-study 2 and 3, data were collected using self-administered paper-based questionnaires for nurses and families, using existing and adapted instruments.

3.4.2.1 Sociodemographic Information

The questionnaires contained items on nurses' and families' sociodemographic information compiled for this research study. Nurses' sociodemographic details included gender, age, educational attainment, number of years working in nursing, in primary care and in the current functional unit, and previous empowerment education and/or obesity training. Participating parents were asked demographic questions about themselves, their 5-year-old child, and the household. Parent-focused demographics included relationship to the 5-year-old child and age. The child-focused demographics included sex, age, country of birth, and preschool attendance. The household-focused sociodemographic were: (a) educational level (the highest educational level of the household using the International Standard Classification of Education); (b) occupational class (the highest occupational class of the household employing the Portuguese Professional Classification); (c) household composition (i.e., the number of the family members in the household). Vulnerable conditions of the household were also assessed, namely: (a) migrant background (derived from open questions about parents' country of birth and assumed if one or both parents were born in a different country from Portugal); (b) unemployment status (assumed when one of the parents was currently unemployed); and (c) one parent-family (if only one adult person was living in the household).

3.4.2.2 Empowerment Health Counselling

We used a translated and adapted version of the ESPS to assess the parents' and nurses' perceived degree of empowering counselling in WCVs.

3.4.2.2.1 Original Instrument—the Empowering Speech Practices Scale. The original instrument, ESPS, was developed in Finland to measure empowerment in dyadic (nurse and patient) counselling sessions in the hospital setting (Kettunen et al., 2006). Items of the scale were created in alignment with empowerment theory and counselling analytic studies (Kettunen et al., 2001, 2003, 2006). The ESPS consists of 44 items, with two subscales (i.e., nurse action and family action), assessing eight different domains of empowerment (i.e., nurse action: *setting expectations for discussion* [3 items], *constructing a positive atmosphere* [9 items], *offering individualized information and advice* [6 items], *facilitating reflection* [2 items], and *respecting patient competence* [5 items]; and patient action: *disclosure* [13 items], *asking questions* [3 items], and *interrupting* [3 items]) (Kettunen et al., 2006).

The ESPS is a self-report scale responded independently by nurse and client, post-counselling, within two separate versions, using parallel statements. Both (the nurse and the client) assess their action and the other's action in the counselling session on a 3-point scale (*yes*, *no,* and *ambiguous* answers). The score is formed in this way: (a) each item is scored one point when the nurse and the patient answered *yes;* (b) each item is scored minus one point when the nurse and the patient answered *no*; (c) the item is scored zero in all other cases; (d) total score is obtained by the sum of all items. Higher scores represent a higher degree of perceived empowering counselling (Kettunen et al., 2006).

The ESPS was found to have good reliability in terms of internal consistency (Cronbach's α = .88) and acceptable construct validity in the Finish population; the scale was assessed through factor analysis, which showed a two-factor solution, accounting for 59% of the variance, with a reasonable fit, $\chi2(18) = 25.14$, $p = .12$, GFI = 0.94, RMSEA = 0.055 (Kettunen et al., 2006).

3.4.2.2.2 Translation and Adaptation Procedure of the Empowering Speech Practices Scale into Portuguese. The original authors of the Finnish version of the ESPS provided the instrument and permitted the use, translation, and adaptation of the ESPS for this study purpose. The questionnaire was translated and linguistically validated into Portuguese using the Beaton et al.'s guidelines for cross-cultural translation and adaptation of self-report measures through six main stages: (a) forward translation; (b) synthesis; (c) backward translation; (d) expert committee review; (e) pre-final testing; and (f) review, proofreading, and finalization (Beaton et al., 2000).

In brief, in the forward translation stage, two Finish-Portuguese bilingual translators produced two independent translations of the original ESPS, including instructions and item content. One of the translators was a language professional, naïve in empowering counselling; the other was a researcher with knowledge of the measured concept. Both summarized their comments regarding their translation choices, difficulties, and doubts in a written report. In the synthesis stage, the first author and the two forward translators compared the two translated versions and produced one reconciled translation. Preference was given to simpler and clearer words.

The synthesis process was also summarized in a written report. In the stage of back translation, one bilingual translator, a researcher with knowledge in empowering counselling but blind to the original version of the questionnaire, independently translated the reconciled Portuguese version, obtained in the previous stage, into Finnish. In the next stage, the expert-committee review, a panel of two nurses and one psychologist with experience in practice and research of health promotion in primary care, and the translators involved in the previous stages reviewed the conceptual, semantic, and content equivalence of the translated scale and the original version of ESPS. In consolidating the translations and developing the pre-final version of the questionnaire, the advisory board adapted some items from the original ESPS. The purpose was to develop a generic instrument to be used in routine primary health care consultations with families within the context of health promotion. Therefore, 13 statements referring to the treatment of the illness were adapted to reflect the context of health promotion, and the word *patient* was modified to *family.* For example, the item in the original nurse action subscale, “I encouraged the patient to come up with ideas for treatment options”, was modified to “I encouraged the family to come up with ideas to plan a healthy lifestyle”. The item in the original nurse action subscale of the ESPS, “I presented alternatives for treatment”, was modified to “I presented alternatives for improving family's health”.

The adapted version of the ESPS had 44 items and a 4-point scale (1 = *totally disagree*; 2 = *partially disagree*; 3 = *partially agree*; 4 = *totally agree*), with an additional response choice, *don't know* (DK). The increased number of scale points and the added DK answer were modifications made to the original rating scale to offer more response alternatives and increase the reliability and validity of the data (Preston & Colman, 2000).

There were two possible uses of the Portuguese ESPS to measure the empowering counselling: (a) individually assessed by families and nurses; and (b) taking equally into account both the family and the nurse assessment. In the former possibility, the scale score for each participant leaves out the DK responses and averages only those items with known answers (Schafer & Graham, 2002). In the late possibility–a compared assessment between participants that reflects the extent to which nurse and client disagree or agree on whether the empowerment action was performed–the DK answers are interpreted as an indicator of neutrality or ambivalence. A coding procedure was developed (see Appendix A, publication 3, p. 3463).

Scores for the Portuguese ESPS were calculated by obtaining the mean of all items overall and within subscales. Scores of the mean of all items using the Portuguese ESPS individually assessed by families and nurses could range between 1 and 4, with higher scores indicating the perception of higher levels of empowering counselling. Agreement scores could range from -2 (both the nurse and family *totally disagree* that the empowerment action was realized) and 2 (both the nurse and family *totally agree* that the empowerment action was realized).

The pre-final version of the translated and adapted questionnaire was field testing in a pilot study using cognitive debriefing. Nine families of 5-year-old children and three nurses within 5-year-old WCVs, purposively sampled, were administered the draft of the questionnaire (family and nurse's versions). Participants were asked about the comprehension of the instructions, each item, and response options. While responding, participants were interviewed on how they interpreted, recalled, and responded to those items (Willis, 2005). Further, participants were asked about the relevance, appropriateness of the items, layout, and length of the questionnaire. The questionnaire, as a whole, revealed good acceptance by both families and nurses. All items were regarded as appropriate and relevant, and generally easy to understand and answer, regardless of the nurses' and parents' age and education level. The time to complete the questionnaire was regarded as acceptable by both. No significant changes to the pre-final version of the Portuguese ESPS were made after the pilot study. All questions were retained when preparing the final version of the questionnaire.

Finally, the final version of the questionnaire and the written report of the process of translation and adaptation, containing the methods used and undertook decisions, were appraised by the advisory board. The committee determined that all the steps were generally followed, and a reasonable translation was achieved.

3.4.2.3 Characteristics of the Well-Child Visits

The number of adults and children attending the consultation and the setting type of Functional Unit (i.e., UCSP or USF) in which the WCV took place were respectively answered by parents in the questionnaire and recorded by the researcher through the participant's identification code number. Parents' report of the length of time they have been bringing their children to the same health centre and a regular nurse was assessed by a translated and adapted version of the parent's longitudinal continuity in primary care subscale from the Parent's Perception of Primary Care measure (P3C; Seid et al., 2001). The P3C was originally developed in English. This self-administered subscale measure consists of two items (continuity to place of care, and continuity to regular provider) answered on a 5-point Likert scale (0 = *no particular place (person)*; 1 = *less than 6 months*; 2 = *6 months to 1 year*; 3 = *1–2 years*; 4 = *2–3 years*; 5 = *more than 4 years*). The responses are converted to a 0–100 scale (0 = *0*; 1 = *20*; 2 = *40*; 3 = *60*; 4 = *80*; 5 = *100*). The score is obtained by the mean of the non-missing values on that scale, with 100 representing the best quality service received in primary care in the component of longitudinal continuity (Seid et al., 2001). The P3C has demonstrated acceptable reliability (high internal consistency) and is well validated in the general paediatric community (Seid et al., 2001), and vulnerable samples (Seid & Varni, 2005; Cronbach's alpha coefficient report of .73 for the subscale). Validity was demonstrated via the known-group methods (i.e., P3C scores were higher for children with a regular physician, and for children with health insurance, versus those without), and through demonstrating that the measure is related to health-related quality of life using the Pediatric Quality of Life Inventory (Seid et al., 2001; Seid & Varni, 2005; Varni et al., 2001). The instrument translation into Portuguese was accomplished using forward-backwards translation following standard methods (Beaton et al., 2000). Items were adapted to be used with parents attending a 5-year-old WCV conducted by nurses. The item "If there is some particular place that you take your child for most all his/her health care, how long has this been your child's place for health care?" was adapted into "Há quanto tempo esta unidade de saúde tem sido o lugar onde leva a criança (que tem hoje a consulta) para fazer a vigilância de saúde?" [How long this health unit has been the place where the child (who has a consultation today) takes his/her health surveillance?]. Changes were also made to the other item: "If there is one particular person that you think of as your child's regular doctor or nurse, how long has this person been your child's doctor or nurse?" was adapted into "Há quanto tempo esta pessoa é a enfermeira(o) da criança que hoje tem a consulta?" [How long has this person been the nurse of the child who has the consultation today?]. Additionally, the response scale "0 = no particular place (person)" was replaced with "0 = primeira vez [first time]".

3.4.2.4 Home and Family Obesogenic Environment Risk

A translated and adapted version of the Family Nutrition and Physical Activity (FNPA) screening tool (Borges Rodrigues et al., 2018) was used for the assessment of home '*obesogenic*' environments (i.e., home and family environments and behaviours that can predispose childhood overweight and obesity).

The FNPA screening tool is a self-administered questionnaire developed in the USA following a comprehensive evidence analysis of modifiable factors that have been shown to predict children's risk of becoming overweight or obese (Ihmels et al., 2009a; Peyer & Welk, 2017). The FNPA consists of 20 questions assessing ten distinct constructs relating to family-based practices and children's behaviours that have shown strong evidence as predictors of childhood overweight and obesity (Ihmels et al., 2009a). These constructs include: (a) family meals; (b) family eating practices; (c) food choices; (d) beverage choices; (c) restriction and rewards; (d) screening time; (e) healthy environment; (f) family physical activity; (g) child physical activity; and (h) family schedule and sleep routine (Ihmels et al., 2009a; Peyer & Welk, 2017). Each construct is measured through 2 items. Statements are responded on a 4-point Likert scale on frequency of behaviour (1 = *never/almost never*; 2 = *sometimes*; 3 = *often*; 4 = *very often/always*). Six items are reverse coded so that higher scores on all items represent more favourable behaviours and environments (Ihmels et al., 2009a). Scores for each construct can be obtained by summing the scores of the two items of the construct. An overall score of home '*obesogenic*' environments may be obtained and can range from 20 to 80. A low total score is interpreted as a high-risk family environment and behaviours. A high total score represents a more favourable family environment and behaviours (Ihmels et al., 2009a).

No cut-points have yet been identified to distinguish between healthy and unhealthy family environments and behaviours; it is up to the researcher's discretion the interpret FNPA results (Peyer et al., 2021).

Several studies were conducted to assess the psychometric properties of the FNPA in children and families. The reliability, in terms of internal consistency, of the FNPA has been acceptable, with Cronbach's alphas coefficient report of .72 to .81 in American home environment samples, and test-retest reliability has shown very high agreement (.80 to .90) (Ihmels et al., 2009a; Jackson et al., 2017; James et al., 2013; Peyer & Welk, 2017; Tami et al., 2015). FNPA has been tested for construct validity and the total FNPA scores were found to correlate negatively with child BMI and adiposity measures (Ihmels et al., 2009a, 2009b; Jackson et al., 2017; Peyer & Welk, 2017; Tucker et al., 2017; Yee et al., 2011; Yee et al., 2015).

3.4.2.5 Anthropometry

The height and weight of participants (the 5-year-old children, parents, and nurses) were used to calculate the BMI, an internationally accepted measure as a proxy for adiposity (Rolland-Cachera, 2011).

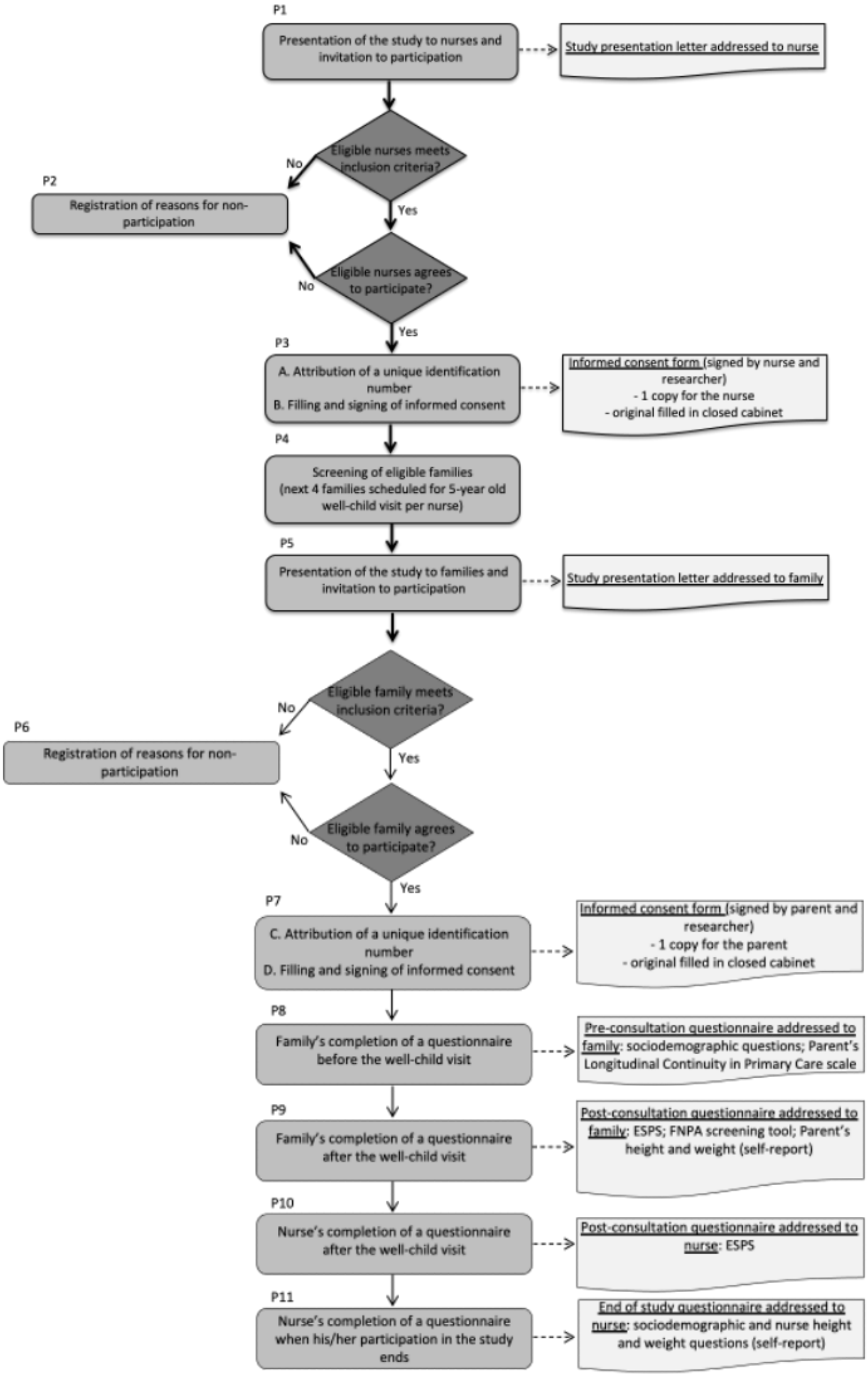
Child weight (Kg) and height (m) were measured by nurses during the WCVs, using a calibrated electronic scale and a wall stadiometer, respectively. The researcher completed a case report form to document children's anthropometry information that the nurse provided from archival records at the end of the study. The researcher introduced these data into the WHO's Antroplus software to calculate sex- and age-specific child BMI percentile (WHO, 2020a). Each child's BMI was then classified into underweight, normal weight, overweight, or obesity using the international BMI cut-offs according to the WHO criteria (de Onis et al., 2007; de Onis & Lobstein, 2010).Parents and nurses' BMIs were calculated using self-reported height and weight. BMI was obtained as weight (Kg) divided by height squared (m^2). According to the WHO criteria, parents and nurses' BMI was classified as underweight (BMI < 18.5 kg/m^2), normal weight (BMI 18.5–24.9 kg/m^2), overweight (BMI 25.0–29.9 kg/m^2), or obesity (BMI $\geq$ 30.0 kg/m^2) (WHO, 2020b).

3.4.2 Procedures Administering the Survey Instruments

Data were collected by the researcher, SBR, between January 2018 and October 2019 (see Figure 3.2 for an overview of data collection procedures).

Figure 3.2

Flowchart of Data Collection Procedures



Before attending the regularly scheduled WCV, participating families were asked to fill out a questionnaire to report their sociodemographic characteristics, and the characteristics of the WCV (approximately 5-min duration to fill out). After the WCV, families answered the Portuguese ESPS, the FNPA screening tool, and the self-report of the parents' height and weight (approximately 25-min duration to fill out). When both parents participated in the consultation, only one was designated as the respondent, by family choice, so that there was only one questionnaire for each household. However, all family members were allowed to discuss the answers. Families were required to fill in the paper versions of the questionnaires, in the health centre facilities, on their own, but receiving assistance from the researcher (SBR), who addressed any concerns/questions from participants upon request.

Participating nurses were asked to fill in the Portuguese version of the ESPS (10-min duration) after each WCV that was part in the study. When the nurses' participation in the study ended, they were asked to complete a final questionnaire containing sociodemographic-, and anthropometry-related questions (5-min duration).

All questionnaires were paper-based, anonymous, and returned to the researcher in a closed envelope.

Before use in the survey, all questionnaires were field-tested within nine consultations (e.g., three nurses, nine families) to evaluate if the procedure could be incorporated into daily practice and to assess face validity and ease of comprehension of the questionnaires. Final minor instrument revisions were made to improve questions, format, and instructions.

3.4.4 Variables in the Study

To clarify how the data collection relates to the variables and research questions, Table 3.1 illustrates the cross-reference between the variables, research question, and specific survey items (Creswell & Creswell, 2018).

Table 3.1

Variables, Research Questions, and Items on Survey

Variable Name	Research Question	Item on Survey
Independent variable 1: Sociodemographic characteristics of nurses conducting the 5-year-old WCVs	Descriptive research question 1: What are the sociodemographic characteristics of nurses?	*End of study questionnaire addressed to nurse* (Appendix III) See Questions A1- A6: sex, age, educational level, number of years working in nursing, in the field of primary care and current functional unit, and achievement of empowerment and obesity training
Independent variable 2: Sociodemographic characteristics of families attending the 5-year-old WCVs	Descriptive research question 2: What are the sociodemographic characteristics of families?	*Pre-consultation questionnaire addressed to family* (Appendix IV) See questions A1, A2: respondent's relation to the 5-year-old children and age See questions A7, A10: child sex, age, country of birth, and preschool attendance See questions A4, A6, A8, A3, A5: household educational achievement, occupational class, composition, vulnerable conditions (i.e., migrant backgrounds, unemployment and one parent-family
Independent variable 3: Characteristics of the WCV	Descriptive research question 3: What are the characteristics of the WCV?	*Pre-consultation questionnaire addressed to family* (Appendix IV) See questions A9, B1, B2: the number of adults and children attending the consultation, continuity in primary care (translated and adapted version of the parent's longitudinal continuity in primary care subscale from the P3C). *Coded ID participant:* The setting type of functional unit
Independent variable 4: home and family obesogenic environment risk	Descriptive research question 4: What is the home and family obesogenic environment of the 5-year-old child attending the WCV?	*Post-consultation questionnaire addressed to family* (Appendix V) See questions B1- B20: home and family obesogenic environmental risk (translated and adapted version of the FNPA screening tool)

(continued)

Table 3.1 (continued)

Variables, Research Questions, and Items on Survey

Variable Name	Research Question	Item on Survey
Independent variable 5: Participants BMI	Descriptive research question 5: What is the BMI of the participants in the WCV?	*End of study questionnaire addressed to nurse* (Appendix III) See questions B1, B2: nurse's weight and height *Post-consultation questionnaire addressed to family* (Appendix V) See questions C1-C4: parent's weight and height *Data provided by the nurse at the end of the study* The child's weight and height measured by nurses
Dependent variable 1: Family's perceived empowering counselling	Descriptive research question 6: What is the degree of empowering counselling perceived by families in 5-year-old WCV?	*Post-consultation questionnaire addressed to family* (Appendix V) See questions A1 to A44: family's perceived empowering counselling (translated and adapted version of the ESPS)
Dependent variable 2: Nurse's perceived empowering counselling	Descriptive research question 7: What is the degree of empowering counselling perceived by nurses in 5-year-old WCV?	*Post-consultation questionnaire addressed to nurse* (Appendix VI) See questions A1 to A44: nurse's perceived empowering counselling (translated and adapted version of the ESPS)
Dependent variable 3: Family's and Nurse's perceived empowering counselling – compared assessment	Descriptive research question 8: What is the degree of empowering counselling perceived by families and by nurses in 5-year-old WCVs?	*Post-consultation questionnaire addressed to family* (Appendix V) See questions A1 to A44: family's perceived empowering counselling (translated and adapted version of the ESPS) *Post-consultation questionnaire addressed to nurse* (Appendix VI) See questions A1 to A44: Nurse's perceived empowering counselling (translated and adapted version of the ESPS)

(continued)

Table 3.1 (continued)

Variables, Research Questions, and Items on Survey

Variable Name	Research Question	Item on Survey
Relating (or comparing) the Dependent variable 1: Family's perceived empowering counselling to the Dependent variable 2: Nurse's perceived empowering counselling	Inferential question 9: Are there differences in the degree of empowering counselling perceived by families and nurses in 5-year-old WCVs?	*Post-consultation questionnaire addressed to family* (Appendix V) See questions A1 to A44: family's perceived empowering counselling (translated and adapted version of the ESPS) *Post-consultation questionnaire addressed to nurse* (Appendix VI) See questions A1 to A44: nurse's perceived empowering counselling (translated and adapted version of the ESPS)
Relating (or comparing) the Independent variable 1: sociodemographic characteristics of nurses conducting the 5-year-old well-child visits, to the Dependent Variable 3: Family's and nurse's perceived empowering counselling – compared assessment	Inferential question 10: Do the nurses' sociodemographic characteristics influence the degree of empowering counselling in 5-year-old WCVs?	*End of study questionnaire addressed to nurse* (Appendix III) See Questions A1- A6: sex, age, educational attainment, number of years working in nursing, in the field of primary care and in current functional unit, and achievement of empowerment and obesity training *Post-consultation questionnaire addressed to family* (Appendix V) See questions A1 to A44: family's perceived empowering counselling (translated and adapted version of the ESPS) *Post-consultation questionnaire addressed to nurse* (Appendix VI) See questions A1 to A44: nurse's perceived empowering counselling (translated and adapted version of the ESPS)
Relating (or comparing) the Independent variable 2: Sociodemographic characteristics of families attending the 5-year-old well-child visits, to the Dependent Variable 3: Family's and nurse's perceived empowering counselling – compared assessment	Inferential question 11: Do the families' sociodemographic characteristics influence the degree of empowering counselling in 5-year-old well-child visits?	*Pre-consultation questionnaire addressed to family* (Appendix IV) See questions A1, A2: respondent's relation to the 5-year-old children and age See questions A7, A10: child sex, age, country of birth, and preschool attendance See questions A4, A6, A8, A3, A5: household educational achievement, occupational class, composition, vulnerable conditions (i.e., migrant backgrounds, unemployment and one parent-family) *Post-consultation questionnaire addressed to family* (Appendix V) See questions A1 to A44: family's perceived empowering counselling (translated and adapted version of the ESPS) *Post-consultation questionnaire addressed to nurse* (Appendix VI) See questions A1 to A44: nurse's perceived empowering counselling (translated and adapted version of the ESPS)

Table 3.1 (continued)

Variables, Research Questions, and Items on Survey

Variable Name	Research Question	Item on Survey
Relating (or comparing) the Independent variable 3: Characteristics of the WCV, to the Dependent Variable 3: Family's and nurse's perceived empowering counselling – compared assessment	Inferential question 12: Do the WCVs' characteristics influence the degree of empowering counselling in 5-year-old WCVs?	*Pre-consultation questionnaire addressed to family* (Appendix IV) See questions A9, B1, B2: the number of adults and children attending the consultation, continuity in primary care (translated and adapted version of the parent's longitudinal continuity in primary care subscale from the P3C). *Coded ID participant:* The setting type of functional unit *Post-consultation questionnaire addressed to family* (Appendix V) See questions A1 to A44: family's perceived empowering counselling (translated and adapted version of the ESPS) *Post-consultation questionnaire addressed to nurse* (Appendix VI) See questions A1 to A44: nurse's perceived empowering counselling (translated and adapted version of the ESPS)
Relating the Independent variable 4: Home and family obesogenic environment risk, to the Dependent Variable 3: Family's and nurse's perceived empowering counselling – compared assessment	Inferential question 13: Does the home and family obesogenic environment risk of the 5-year-old child attending the WCV, influence the degree of empowering counselling?	*Post-consultation questionnaire addressed to family* (Appendix V) See questions B1- B20: home and family obesogenic environmental risk (translated and adapted version of the FNPA screening tool) *Post-consultation questionnaire addressed to family* (Appendix V) See questions A1 to A44: family's perceived empowering counselling (translated and adapted version of the ESPS) *Post-consultation questionnaire addressed to nurse* (Appendix VI) See questions A1 to A44: nurse's perceived empowering counselling (translated and adapted version of the ESPS)

(continued)

Table 3.1 (continued)

Variables, Research Questions, and Items on Survey

Variable Name	Research Question	Item on Survey
Relating (or comparing) the Independent variable 5: Participants BMI, to the Dependent Variable 3: Family's and nurse's perceived empowering counselling – compared assessment	Inferential question 14: Does the BMI of the child, his/her parents and nurse participating in the 5-year-old WCV influence the degree of empowering counselling?	*End of study questionnaire addressed to nurse* (Appendix III) See questions B1, B2: nurse's weight and height *Post-consultation questionnaire addressed to family* (Appendix V) See questions C1-C4: parent's weight and height *Case report form - data provided by the nurse at the end of the study from archival records* The child's weight and height measured by nurses *Post-consultation questionnaire addressed to family* (Appendix V) See questions A1 to A44: family's perceived empowering counselling (translated and adapted version of the ESPS) *Post-consultation questionnaire addressed to nurse* (Appendix VI) See questions A1 to A44: nurse's perceived empowering counselling (translated and adapted version of the ESPS)

3.5 Data Analysis

For sub-study 1, the systematic literature review, we applied a narrative synthesis method through thematic summaries. Meta-analysis (statistical pooling) was considered inappropriate in our review, given the heterogeneity of analysed studies (i.e., various types of interventions, contexts, instruments and outcomes). Therefore, we descriptively examined the studies, extracting data from primary studies in tabular form, using textual description and vote-counting techniques to understand similarities, differences and patterns (Popay et al., 2006; Thomas, et al. 2012). Main data items extracted included: information on setting, aim, theory application, research participants, intervention and control groups, follow-up period, main outcomes, and important summary measures of results (i.e., group-by-time interaction effects reported by the authors and/or determination of the overall mean difference using Review Manager software; version 5.3.5, the Cochrane Collaboration). Theory application was explored from reviewing the concept of empowerment mobilized. We also used three adapted items from the theory-coding framework by Michie and Prestwich (2010) to evaluate theory application in empowerment interventions to promote children and families' empowerment and health; this framework is commonly used in systematic reviews to assess the effectiveness of theory-based interventions. Our adapted scheme specifies whether: (a) the theory was mentioned; (b) the theory was mobilized for intervention planning and implementation; and (c) the theory was mobilized for evaluation. We used the McLean and collaborators (2003) framework to evaluate the involvement of family members in interventions. The Behavior Change Tecnique (BCT) taxonomy, version 1, was used to code BCTs from all interventions (Michie et al., 2013). The study outcomes were categorised by outcome measures (i.e., empowerment; psychological constructs of empowerment; well-being and quality of life; health and illness management; health care utilization; and cost-effectiveness). To evaluate the methodological quality of the studies included in our systematic review, we used the Revised Cochrane Risk of Bias tool for randomised trials (Sterne et al., 2019). Studies were classified into one of the following categories: (a) low risk of bias; (b) some concerns; and (c) high risk of bias. Studies were not excluded from the review based on the quality assessment. A study was considered as having positive results if at least one of the outcomes of interest showed a statistically significant (*p*- value of < .05) beneficial effect for the intervention group. We used the Martin and collaborators (2013) method to assess the potential effectiveness of individual BCTs in interventions (i.e., the number of times a BCT was a component of an effective intervention divided by the number of interventions, effective and noneffective, in which the BCT was a component). A team member (SBR) made a full assessment, and the other members performed the audit of data extraction. Disagreements were resolved by consensus.

For sub-study 2 and 3, quantitative, observational, survey studies, we performed statistical analysis using IBM SPSS Statistics 26 for Windows (IBM, 2019). The descriptive analysis of data for all independent and dependent variables was conducted through frequency and percentages, reported for categorical variables and means, standard deviations, or non-parametric alternatives (median and interquartile range), reported for continuous variables. We examined normality distribution scores converting skewness and kurtosis to a z-score as follow, $Z_{Skewness} = Skewness - 0 / SE_{Skewness}$ and $Z_{Kurtosis} = Kurtosis - 0 / SE_{Kurtosis}$; and using the Kolmogorov-Smirnov with Lilliefors Significant Correlation and Shapiro-Wilk test (distribution normality was assumed when values of skewness and kurtosis fell within the acceptable range of -1.96 to +1.96, and result tests of normality were non-significant; Field, 2018). We tested the homogeneity of variance using Levene's test (significance values for Levene's test greater than .05 were interpreted as homogeneity of variance assumption were not violated; Tabachnick & Fidell, 2014).

Reliability checks for the internal consistency of the used scales, and subscales, was conducted through the Cronbach's alpha coefficient. The internal consistency estimates were evaluated based on Nunnally and Bernstein's (1994) recommendations where values below .70 were considered inadequate, values between .70 and .80 were considered acceptable, and above .80 were considered adequate.

The underlying structure of the Portuguese ESPS (sub-study 2 on psychometric evaluation of the Portuguese ESPS) was explored using the exploratory factor analysis (EFA). Before conducting EFA, we confirmed the suitability of data for factor analysis by using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (values above .60) and Bartlett's test of sphericity ($p < .05$; Tabachnick & Fidel, 2014). To explore the underlying factor structure, we performed a principal components analysis (PCA). To identify the number of factors to retain, we used Kaiser's criterion (retaining eigenvalues above 1) and the Cattel scree plot (retaining only components above the change in the shape of the plot; Tabachnick & Fidell, 2014). The obtained solution was obliquely rotated with Oblimin rotation to assess interpretation of the obtained solution; items were considered for removal from the scale if they loaded above 4 on any factor or substantially cross-loaded on two or more factors (Tabachnick & Fidell, 2014). The associations among total mean scores of each derived subscale and among the total mean score of each factor and the ESPS total mean score were inspected using Spearman Rank Order Correlation (rho) due to evidence of non-normal value distributions; evaluation of correlation coefficients used criteria suggested by Cohen (1988), i.e., coefficients between .10 and .29 were considered small, between .30 and .49 were considered moderate, and between .50 and 1.00 were considered a large effect.

In addition, known groups validity was tested by assessing the ability of the Portuguese ESPS to discriminate between groups of nurses who indicated that they had versus had not academic training in empowerment patient education. Mann-Whitney *U* tests were applied to compare scores across groups.

For testing our inferential research questions from sub-study III, we applied a bootstrapping procedure to the data since they violated the assumption of normality. The choice of tests used was based on the nature of the research question and the type of score of independent and dependent variables (Creswell & Creswell, 2018). Specifically, to investigate differences in the Portuguese ESPS score between nurses and families, we used a paired-samples t-test. To investigate differences in the Portuguese ESPS (nurse and family compared assessment) according to nurses' sociodemographic characteristics, families' sociodemographic characteristics, the WCVs' characteristics, home and family obesogenic environment risk, and the BMI of the child, parents and nurse participating in the 5-year-old WCV, we used one-way analysis of variance (ANOVA) with the Games-Howell post hoc test for explanatory categorical variables. We used simple linear regression analysis for independent continuous variables. These analyses were used to identify factors independently associated with each of the subscale scores of ESPS, i.e., nurse action and family action subscale.

For missing data, we used the exclude cases pairwise option. Statistical significance was considered at $p < .05$. We also calculated and reported the effect sizes and the confidence intervals.

The analytic process of sub-study 1, 2, and 3 are described in detail in publications 1, 2, and 3, respectively.

3.6 Ethical Considerations

Following the ethical principles from the Declaration of Helsinki (World Medical Association, 2013), several ethical issues were addressed through the research process to protect human rights (Creswell & Creswell, 2018).

3.6.1 Before Beginning of the Study

Our research plan was reviewed and approved by the Lisbon and Tagus Valley's Ethics Committee for Health, a duly qualified committee, independent of the researchers (registration n. 11654/CES/2018; see Appendix VII for a copy of the research approval letter). To establish trust and credibility, our research protocol was also submitted for appreciation by the National Program for the Promotion of Healthy Eating from the General Directorate of Health, and obtained recognizance and scientific partnership (Appendix VIII). Permission was obtained from individuals in authority to gain access to sites and to study participants, namely, the Executive Directors and Nursing members of the Clinical Council from the two participating ACeS, and the Coordinators from the USFs and UCSPs.

3.6.2 Beginning the Study

We were confident that our research problem would benefit those studied–nurses and families–besides the researchers. There were no significant risks–physical, psychological, legal, or social–for the participants, resulting from participating in the research. The study had the potential to develop scientific knowledge in this area with practical application that was superior to potential risks (e.g., time-consuming and the burdens to the research participants). To monitor the risks and benefits of the study, in the pre-test, we carefully monitored the procedures and participants were interviewed about their participation experiences. All research participants valued the opportunity to contribute to the development of practices and considered that it outweighted the time-consuming associated with participation.

When we presented our study and collected consent to participation, we did not pressure participants into giving permission. We intended to get voluntary participation in the study. Potential participants were explained verbally and in the written instructions of the study presentation letter and consent form that their participation was voluntary, i.e., they could decide not to participate or to participate in the study, and that this decision would not impact their actual or future nurse-family relationship and care received, or work relationships within the local authority. The participants were informed that the researchers would share no information to health professionals and professional stakeholders. Before providing data, we ensured all participants had read the study presentation letter, understood the information, had the opportunity for questioning, and signed an informed consent form. These forms contained the following information: identification of researchers, the purpose of the study, anticipated benefits for participating, description of participant involvement, identification of potential risks and discomforts to the participant, the right to refuse to participate, procedures to ensure anonymity and confidentiality of the research participant, assurance of the possibility of withdrawing consent to participate at any time without reprisal, information about the planned dissemination of the study results, and the provision of names and contacts of persons if questions arise (see Appendices IX and X). As the study involved data from the child, we requested informed consent from the legally authorized representative and assent from children (i.e., the child's affirmative agreement for participation). A copy of the document signed both by the legally authorized representative/nurse and by the researcher was retained by both parties (see Appendices XI and XII).

The study presentation and seek of informed consent were conducted by the researcher (SBR), who had an independent relationship with the participants to prevent consent under duress and to ensure full information was provided. The researcher presented as a nursing researcher and as a separate identity to the organizations where the recruitment took place.

3.6.3 Collecting the Data

During the data collection, we tried to conduct the research, disrupting the site and flow of participants' activities as little as possible. Data collection happened during the regular flow of scheduled WCVs, and the researcher (SBR) assumed data collection tasks to minimize the disturbance of the health professionals' activities and guarantee appropriate ethics. Participants were asked some of their time to respond to the questionnaires. To minimize the burden to families, while the parents filled out the questionnaire, the researcher kept its presence to clarify any questions and entertain the children. Participants were told that they had the right to refuse to answer any specific question. To protect their privacy and confidentiality, families and nurses' participants were assigned personal identification codes, with no use of participants' names or initials in the data. The questionnaires were returned to the researcher in a closed envelope, and data was held securely. Participants were ensured that the data would not be made accessible to others. At the end of the survey, the researcher ensured that participants were not distressed by their participation in the study. None of the participants revealed concerns about their participation. No rewards/compensation were offered for participating. Only verbal appreciation for providing valuable data was given to participants, and the researchers committed to sharing the final research report with them.

3.6.4 Analysing the Data

Our data analysis followed a predefined plan of analysis, guided by our research questions, to avoid reporting only positive results.

3.6.5 Reporting, Sharing and Storing the Data

During reporting research, we tried to use appropriate and unbiased language, particularly in the domain of obesity, promoting “people-first language” (e.g., rather than say “obese children”, we stated, “children with obesity”). Paper questionnaires and consent forms were kept separately in locked filing cabinets. Data held on computers was anonymized and password protected. Only researchers have access to this information. The data will be kept for five years after the study is published and subsequently destroyed appropriately. Research results will not be published or presented in a manner that identifies the study participants. We plan to submit a final report containing a summary of the study's results and conclusions to the Ethics Committee. We are also committed to publishing and disseminating the research results with the study participants and the general community. Our research team does not have a conflict of interest surround this research.

3.7. Summary of Materials and Methods

The design, participants, data collection and analysis method used in each sub-study are summarized in table 3.2.

Table 3.2

Study Designs, Samples, Data Collections and Analysis Methods of the Sub-studies, and Papers Reporting the Results

Research Question (RQ)	Sub-study	Design	Sample	Data collection	Analysis method	Reported in
RQ1 - Do empowerment health interventions with preschool-age children and families induce favourable health-related outcomes? What theories, modes of family involvement in interventions, and behaviour change techniques are commonly used and are more effective?	I	Systematic literature review	RCTs studies in empowerment interventions (n = 10)	Systematic literature search	Narrative synthesis - thematic summaries	Publication 1
RQ2 - What is the reliability, in terms of internal consistency, and construct validity, of the Portuguese translated and adapted ESPS among families in 5-year-old WCV context?	II	Observational Survey design, exploratory and descriptive, cross-sectional	Families attending a 5-year-old WCV (n = 82) and primary care nurses (n = 25)	Translated and adapted version of the ESPS, structured paper-based questionnaire	Descriptive statistics, Cronbach's alpha coefficients, EFA and the known-groups validity	Publication 2
RQ 3 - What is the degree of empowering counselling perceived by families and nurses in 5-year-old WCVs? How do client and professionals' characteristics relate to the degree of empowering counselling in 5-year-old WCVs?	III	Observational Survey design, exploratory correlational, cross-sectional	Same sample as in sub-study II	Translated and adapted versions of the ESPS, parent's longitudinal continuity in primary care subscale from the P3C, the FNPA screening tool, structured paper- based questionnaire	Descriptive statistics, paired-samples t-test, Pearson's correlation analysis, analysis of variance, and regression analysis	Publication 3

CHAPTER 4 – RESULTS

In this chapter, we report the findings from the three sub-studies. Results will be presented according to the research questions (RQ 1-3):

- Do empowerment health interventions with families and preschool-age children induce favourable health-related outcomes? What theories, modes of family involvement in interventions, and behaviour change techniques are commonly used and are more effective? (RQ 1, Sub-study 1, subchapter 4.1.)

- What is the reliability and construct validity of the Portuguese translated and adapted ESPS among nurses and families in a 5-year-old WCV context? (RQ 2, Sub-study 2, subchapter 4.2.)

- What is the degree of empowering counselling perceived by families and nurses in 5-year-old WCVs? Are there differences between the nurses' and families' views of the same process of empowerment counselling? How do family's and nurse's sociodemographic and nutritional status relate to the degree of empowering counselling in 5-year-old WCVs? (RQ 3, Sub-study 3, subchapter 4.3.)

4.1 Examining Empowerment Health Interventions with Families and Preschool-age Children – A Systematic Review of Randomised Controlled Trials (Sub-study 1)

The inclusion of RCTs in this systematic review is summarised in Figure 1, publication 1, page 5. We identified 2746 citations from electronic searching. After eliminating duplicates, 1674 titles and abstracts were screened, 1582 were excluded. Following the full-text review of 95 studies based on our selection criteria, 13 articles of 10 unique RCTs were included in this review (A - Adam et al., 2019; B – An et al., 2017; C – Burton et al., 2018; D – Graham-Bermann et al., 2019; E – Herbert et al., 2011; F – Knowlden et al., 2015, 2016, 2018; G – McCallion et al., 2004; H – Morgan et al., 2019, Young et al., 2019; I – Swallow et al., 2014; J – Zare et al., 2017).

A detailed methodological quality assessment is presented in Appendix B, publication 1, online supplemental file. In brief, only one study was categorised as *low risk* of bias. Of the 10 unique RCTs, one was classified as *some concerns,* and eight (80%) were classified as *high risk* of bias. Most studies exhibited a high risk regarding the measurement of the outcome (e.g., blinding not successfully implemented and its potential implications for assessment of outcomes).

4.1.1 Overall Characteristics of Included Trials

The RCTs included in this systematic review are described in Table 1 and Table 2, publication 1, pages 6-11. In summary, most studies had less than 100 participants (*n* = 18-121). More than half of the RCTs (6/10) were published after 2017. The majority of the studies were done in high-income economies (Canada, United States, United Kingdom, Australia, Korea), with only one study (J) done in an upper-middle-income country (Iran).

Interventions differed substantially in intervention content and outcomes. The majority of interventions addressed secondary and tertiary health prevention levels, with few focusing on primary health prevention (E, F, H). Seven interventions (B, C, D, E, F, G, J) were implemented in one setting (e.g., home, hospital/research facility, community, and web or a mobile platform), while three were implemented in multiple settings (i.e., hospital + web, [A]; research facility + home, [H], and hospital + home + web, [I]).

Outcome measures varied across trials. Only four interventions (B, F, G, I) measured empowerment as an outcome, mainly using the Family Empowerment Scale; in two (B, I) of them, empowerment was a primary outcome. Many RCTs assessed well-being and quality of life (C, D, G, J) and health and illness management (A, E, F, H) as primary outcomes. Only one intervention measured outcomes among children (H); the majority focused on outcomes on parents or caretakers. Follow-up measurements were considered in only three interventions (D, F, H). Only one RCT (F) followed participants beyond 12 months after the intervention.

The intensity of interventions was very heterogeneous, varying between one week to 20, and from two to 12 sessions. Interventions were delivered by a variety of healthcare professionals (individually or in a team) or researchers, and self-administration (i.e., web-based).

4.1.2. Effects of Empowerment Interventions

Findings in the empowerment-based randomised controlled trials were heterogeneous, with half of the studies showing significant improvements in at least one indicator of health (C, F, G, H, J). From the four studies having self-reported empowerment as an outcome of interest (B, I, G, F), two revealed a significant intervention effect (G, H). From the five studies (B, C, D, G, H) measuring self-reported well-being and quality of life outcomes, three studies (C, G, H) revealed significant posttrial changes. From the five studies (A, B, E, F, H) assessing health and illness management outcomes, only two studies (F, H) showed significant improvements.

4.1.3 Theory Application in Empowerment Interventions

The extent of theory used within the selected interventions was explored by reviewing the concept of empowerment applied in the studies and using a scheme adapted from theory coding by Michie and Prestwich (2010; see Table 1, publication 1, pp. 6-7).

Out of the 10 studies reviewed, only four (A, C, I, J) explicitly defined the concept of empowerment; no definition highlighted a child-centred approach.

When considering the application of theories for research, the included interventions revealed low levels of explicit application of theory, with only two studies (J, H) showing a moderate application of theory. Eight interventions (B, D, E, F, G, H, I, J) explicitly refer to the use of theory/theoretical model, with six (B, C, D, F, G, J) reporting a single theory and three (E, H, I) using combined theories. The more commonly cited theories were the social cognitive theory (Bandura, 2001; *n* = 3 (F, H, I)) and the family system intervention model (Dunst & Trivette, 2009b; *n* = 3 (B, E, G)), both with support (but not general) for their effectiveness. Other theories were also mentioned, although less frequently: empowerment process model (Cattaneo & Goodman, 2015; *n* = 1 (D)), self-determination theory (Deci & Ryan, 1985; *n* = 1 (H)), the model of family–professional collaboration in paediatric rehabilitation (An & Palisano, 2014; *n* = 1 (B)), the online parent empowerment model in chronic kidney disease management (Swallow et al., 2014; *n* = 1 (I)), the self-management empowerment model (Ravanipour et al., 2008; *n* = 1 (J)), and Freire's (1970) educational theory (*n* = 1 (E)).

Regarding linking theoretical constructs to intervention techniques, only two studies explicitly did it. (J, H) Only four studies (B, E, F, G) reported measuring theoretical empowerment constructs pre and post-intervention. The diversity and restricted number of studies limited the possibility to determine the effectiveness of theory-based empowerment interventions.

4.1.4 Family Involvement in Empowerment Interventions

To explore how the family have been involved in empowerment health interventions (RCTs) and identify the optimal way of family involvement to improve preschool children and family's health, we applied the taxonomy developed by McLean et al. (2003), which included family involvement, format, attendance at sessions, and the target of BCTs (see Table 3, publication 1, p. 13). In only four trials, the intervention was delivered to parent and child dyad (B, C, H) or both parents and child (I), and BCTs or strategies were taught to the child and the parent(s). One intervention targeted a grandparent (G). Only two studies (F, A) did not incorporate a face-to-face component within the experimental condition, recurring to distant intervention formats such as website (A, F), and phone calls (A). Six studies incorporated face-to-face and distance components within interventions.(B, C, E, H, I, J) Only one trial (H) invited no enrolled mothers and siblings to join one group session. Playful and arts-based methods of children participation, such as cartoons, games, digital technologies, drawing, painting, storytelling and creating murals, were used in some studies.(B, H, I)

Based on the available evidence, it was impossible to identify the most successful family involvement component.

4.1.5 Behaviour Change Techniques used in Empowerment Interventions

The behaviour change techniques used in interventions were not always reported completely. Based on the available reports, 42 unique BCTs were coded from all 10 interventions, with an average of 14.2 BCTs per intervention in effective interventions and 12.4 BCTs per intervention in non-effective interventions (range of 7 (A, J) to 22 (H) BCTs). A summary of the BCTs coded in effective and non-effective interventions can be seen in Table 4, publication 1, pages 14-15.

The behaviour change techniques used most commonly in interventions (effective and non-effective) were: instruction in how to perform the behaviour, which was coded in all interventions (*n* = 10); social support (unspecified, emotional, practical; *n* = 9); credible source (*n* = 9); problem solving (*n* = 7); action planning (*n* = 7); goal setting (behaviour; *n* = 6); feedback on behaviour (*n* = 6); and social comparison (*n* = 6).

The behaviour change techniques applied to children were goal setting, problem solving, social support practical or emotional, instruction in how to perform the behaviour, demonstration of the behaviour, behavioural practice or rehearsal, graded tasks, credible source, material incentive, reduce negative emotions, and self-talk.(B,C,H,I)

According to our review criteria, we identified 16 BCTs as potential effective (see Appendix C, publication 1, online supplemental file). The BCT most likely to improve the effectiveness of interventions were: information about health consequences; goal setting; information about antecedents; reduce negative emotions; restructuring the physical environment; restructuring the social environment; identification of self as role model; demonstration of the behaviour; action planning; self-monitoring of behaviour; emotional or practical social support; instruction in how to perform the behaviour; information about social and environmental consequences; information about emotional consequences; and behavioural practice or rehearsal.

4.2 Measuring Empowering Counselling in Routine Primary Health Care – Psychometric Properties of a Portuguese Adaptation of the Empowering Speech Practices Scale (Sub-study 2)

The Portuguese adaptation of the ESPS was evaluated for construct validity and reliability.

4.2.1 Construct validity of the Portuguese Empowering Speech Practices Scale

Construct validity of the Portuguese ESPS (nurse's and families' compared assessment) was assessed using two approaches: (a) exploratory factor analysis (structural or factorial validity); and (b) known-group technique (hypothesis testing validity). The suitability of the data for factor analysis was confirmed with a high Kaiser-Meyer-Olkin measure of sampling adequacy, KMO = .85, and a significant Bartlett's test of sphericity, $\chi 2(28) = 378.00$, $p < .001$. The PCA identified two factors with recorded eigenvalues exceeding 1, suggesting a two-factor model according to Kaiser's criteria. The two factors explained 73.79% of the total variance (factor 1 was the dominant factor, explaining 61.13% of the variance, and factor 2 explained 12.66% of the variance). Based on Cattell's criteria, the scree plot suggested that two factors should be retained for further investigation. To assist in the interpretation of these two components, oblimin rotation of the two-factor solution was performed. The resulting pattern matrix was interpretable, with most empowerment dimensions loading strongly on only one factor (see Table 1 for the component loadings, publication 2, p. 5). The bidimensionality of the scale achieved was consistent with the factor structure suggested by original scale developers (Kettunen et al., 2006). Component 1 was characterized by items concerning nurses' behaviours. Component 2 was characterized by items concerning families' behaviours.

The Portuguese ESPS subscales were strongly, positively, correlated, rho = .72, n = 76, *p* < .001. There was also a strong, positive correlation between the factor 1 and the Portuguese ESPS total score, rho = .89, n = 76, *p* < .001, and between the factor 2 and the Portuguese ESPS total score, rho = .93, n = 76, *p* < .001.

These results suggest that the Portuguese ESPS consisted of two subscales. The first was named *nurse action*, similar to the original study, and comprised five dimensions: setting expectations for discussion, constructing a positive atmosphere, offering individualized information and advice, enabling family's reflection, and respecting family's competence. As in the original study, the second scale was named *family action* and consisted of the disclosure, asking questions, and interrupting dimensions. These two sub-scales may be combined to obtain a total score.

Investigation of the Portuguese ESPS (nurses' and families' compared assessment) ability to distinguish between the scores of consultations conducted by nurses with academic training in empowerment patient education (n = 56, 73.68%) and those that had not (n = 26, 34.21%) supported the known groups validity in the expected direction. A Mann-Whitney *U* test indicated that the Portuguese ESPS-total scores for the nurses with academic training in empowerment patient education (*Mdn* = 1.68, n = 56) and nurses without academic training in empowerment patient education (*Mdn* = 1.27, n = 20) were significantly different (*U* = 295.5, *p* = .002, *z* = -3.12, *r* = .36). Statistically significant differences were also obtained between the two groups of nurses for the nurse action subscale scores (nurses with academic training in empowerment patient education: *Mdn* =1.80, n = 56; nurses without academic training in empowerment patient education: *Mdn* =1.58, n = 20; *U* = 324.00, *p* = .005, *z* = -2.78, *r* = .32) and the family action subscale scores (nurses with academic training in empowerment patient education: *Mdn* = 1.61, *n* = 56; nurses without academic training in empowerment patient education: *Mdn* = 1.00, *n* = 20; *U* = 337.00, *p* = .009, *z* = -2.63, *r* = .30). The effect sizes ranged from 0.30 to 0.36, which are considered medium effect sizes as defined by Cohen (1988).

4.2.2 Reliability of the Portuguese Empowering Speech Practices Scale

Both subscales of the Portuguese ESPS (based on the findings of EFA) and total scale presented excellent internal consistency (Portuguese ESPS - nurse action subscale Cronbach's alpha = .94, Portuguese ESPS - family action subscale Cronbach's alpha = .91, Total Portuguese ESPS Cronbach's alpha = .91). Deletion of any of the items would not increase the dimensional or overall Cronbach's alpha.

4.2.3 Distribution of the Portuguese Empowering Speech Practices Scale

The median total scores on the Portuguese ESPS - nurses' assessment was 3.62 (*IQR*: 3.38, 3.78; range 3 to 4, possible range 1 to 4), and the median total scores on the Portuguese ESPS - families' assessment was 3.89 (*IQR*: 3.52, 3.97; range 2 to 4, possible range 1 to 4). Missing value analysis showed that on the Portuguese ESPS - nurses' assessment, none of the items had more than 17% of missing data, and on the Portuguese ESPS - families' assessment, none of the items had more than 19% of missing data.

The median total scores on the Portuguese ESPS (nurses' and families' compared assessment) was 1.59 (*IQR*: 1.26, 1.80; range 0.61 to 2, possible range -2 to 2), with participants endorsing high levels of empowering counselling. Table 2, from publication 2, page 5, describes the descriptive statistics for the Portuguese ESPS (nurse's and families' compared assessment) total scores and subscales identified through PCA (i.e., nurse action and family action subscales). The level of empowering counselling in nurse action subscale (*Mdn* = 1.75; *IQR*: 1.50, 1.90; observed range 0.50 to 2; possible range -2 to 2) and family action subscales (*Mdn* = 1.53; *IQR*: 0.85, 1.80; observed range 0.13 to 2; possible range -2 to 2) was moderate to high among the participants. Both nurse action and family action subscales were negatively skewed, where most respondents recorded high scores on the scale, suggesting high levels of empowering counselling in the sample studied. Between the two factors of the Portuguese ESPS, participants least endorsed the family action. Results from six participants (five families and one nurse) could not be used because of incomplete data on the Portuguese ESPS. Therefore, data on nurse and family compared assessment of ESPS were analysed for 76 consultations. Participants found the questionnaire acceptable, and the number of missing responses to items was low.

4.3 Two Sides of the Same Well-Child Visit - Analysis of Nurses' and Families' Perspectives on Empowerment in Health Counselling (Sub-study 3)

The study results on the degree of empowering health counselling perceived by families with 5-year-old children and nurses in WCVs, using the Portuguese ESPS, and its associated factors will be presented next.

4.3.1 Differences Between Families and Nurses on Perceived Degree of Empowering Health Counselling

As shown in Table 3, publication 3, page 3454, families and nurses perceived an overall high degree of empowering health counselling in the 5-year-old WCV. The median total scores on the Portuguese ESPS - nurses' assessment was 3.62 (*IQR*: 3.38, 3.78; range 3 to 4, possible range 1 to 4), and the median total scores on the Portuguese ESPS - families' assessment was 3.89 (*IQR*: 3.52, 3.97; range 2 to 4, possible range 1 to 4). However, there were statistically significant differences with regard to the perceived degree of empowering counselling in WCV, with families reporting significantly higher total ESPS scores compared to nurses (families, *M* = 3.75, *SD* = 0.52; nurses, *M* = 3.58, *SD* = 0.29; *t*(68) = 2.474, *p* = .01, BCa 95% CI [0.028, 0.207]).

Comparisons of families and nurses on the realization of the eight domains of empowering counselling, assessed by the ESPS, revealed significant differences in three domains (see Figure 1, publication 3, p. 3455). Families reported significantly higher perceived realization of offering individualized information and advice (families, *M* = 3.85, *SD* = 0.32; nurses, *M* = 3.51, *SD* = 0.37; *t*(68) = 4.214, *p* < .001, BCa 95% CI [0.132, 0.332]); disclosure (families, *M* = 3.72, *SD* = 0.42; nurses, *M* = 3.38, *SD* = 0.43; *t*(68) = 2.102, *p* = .035, BCa 95% CI [0.15, 0.284]); and asking questions (families, *M* = 3.52, *SD* = 0.59; nurses, *M* = 3.38, *SD* = 0.65; *t*(68) = 2.578, *p* = .006, BCa 95% CI [0.68, 0.348]) in the WCV. Families and nurses did not significantly differ in their perceived realization of empowering counselling practices on domains of setting expectations for discussion, constructing a positive atmosphere, enabling family's reflection, respecting family's competence, and interrupting (see Table 3, publication 3, p. 3454).

Data review concerning the evaluation of nurses' and families' ESPS compared assessment (possible range -2 to 2), revealed that the congruence between nurses' and families' ratings that empowering counselling was realized was higher for practices from the nurse action subscale than for practices from the family action subscale. The empowering counselling dimension constructing a positive atmosphere (*M* =1.81, *SD* = 0.36) had the highest mean score, followed by setting expectations for discussion (*M* = 1.80, *SD* = 0.30), respecting family's competence (*M* = 1.56, *SD* = 0.43), enabling family's reflection (*M* = 1.55, *SD* = 0.56), offering individualized information and advice (*M* = 1.52, *SD* = 0.37), interrupting (*M* = 1.52, *SD* = 0.58), and asking questions (*M* = 1.29, *SD* = 0.72). Disclosure (*M* = 1.25, *SD* = 0.51) had the lowest mean score. Divergences were more pronounced about the realization of practices that belong to the dimensions of family's disclosure and asking questions, namely, family's report of their experience of health counselling, family's assessment of issues related to past received health counselling, family's assessment of their own action concerning health, family's participation in the definition of goals to improve health, and family's asking questions about health improvement (see Table 4, items 33, 34, 35, 38 and 40, respectively, publication 3, pp. 3456-3457).

4.3.2 Associations among Nurses' and Families' Sociodemographic and Nutritional Status and the Degree of Empowering Counselling in Well-child Visits

The results of the univariate analysis to assess the associations between nurses' related factors (nurse's age, education level, paediatric nursing specialization, professional experience in nursing and primary health care, formal training in empowerment and obesity, order of consultation and nutritional status based on reported BMI) with the nurse action and family action subscale mean scores (from ESPS nurse's and family's compared assessment) are provided in Table 5, publication 3, page 3458.

Paediatric nursing specialization was significantly associated with family action subscale scores of ESPS. Participants were divided into two groups according to paediatric nursing specialization (Group 1: yes; Group 2: no). There was a statistically significant difference at the *p* < .05 level in ESPS scores for the two groups: Welch's *F* (1, 65) = 11.70, *p* = .001. The effect size, calculated using eta squared, was .15. It revealed a difference between the mean score for Group 1 (*M* = 1.22, *SD* = 0.52) and Group 2 (*M* = 1.59, *SD* = 0.35), in which WCV conducted by nurses with paediatric specialization recorded a lower degree of empowering counselling in family action subscale compared with those without it.

The study revealed that nurses' formal training in empowerment and obesity was significantly associated with the nurse action subscale scores of ESPS. Participants were divided into three groups according to nurses' reported training in empowerment and obesity (Group 1: no training; Group 2: empowerment/obesity only; Group 3: empowerment and obesity). There was a statistically significant difference at the *p* < .05 level in nurse action subscale scores of ESPS for the three groups: *F* (2, 75) = 4.54, *p* = .014. The effect size, calculated using eta squared, was .11. Post-hoc comparisons using the Games-Howell test indicated that the mean score for Group 3 (*M* = 1.71, *SD* = 0.26) was significantly different from Group 1 (*M* = 1.35, *SD* = 0.52). Group 2 (*M* =1.66, *SD* = 0.29) did not differ significantly from any group. Consultations conducted by nurses with formal training in empowerment and obesity had statistically higher mean scores compared with nurses not having training.

The study indicated that the type of health centre where the WCV occurred was significantly associated with both subscales of ESPS. Participants were divided into three groups according to the health centre type (Group 1: UCSP; Group 2: USF model A; Group 3: USF model B). There was a statistically significant difference at the p < .05 level in nurse action subscale scores of ESPS for the three groups: Welch's *F* (2, 39.06) = 5.37, *p* = .009. The effect size, calculated using eta squared, was .10. Post-hoc comparisons using the Games-Howell test indicated that the mean score for Group 1 (*M* = 1.52, *SD* = 0.38) was significantly different from Group 2 (*M* = 1.78, *SD* = 0.18). Group 2 differ significantly from Group 3 (*M* = 1.61, *SD* = 0.34). We also verified a statistically significant difference at the p < .05 level in family action subscale scores of ESPS for the three groups: *F* (2, 75) =7.75, *p* = .001. The effect size, calculated using eta squared, was .18. Post-hoc comparisons using the Games-Howell test indicated that the mean score for Group 1 (*M* = .99, *SD* = 0.46) was significantly different from Group 2 (*M* = 1.55, *SD* = 0.49) and from Group 3 (*M* = 1.41, *SD* = .52). Group 2 did not differ significantly from Group 3.

The order of nurses consultation significantly predicted empowerment scores by family action, β = .253, *t*(74) = 2.253, *p* = .015, BCa 95% CI [0.020, 0.196]. Order of nurses consultation explained a significant proportion of variance in family action scores, R^2 = .064, *F*(1, 75) = 5.08, *p* = .027. Therefore, the first consultations conducted by participating nurses were more likely to score lower on family action subscale.

There was no significant interaction between the total mean scores for the two ESPS subscales and nurses' age, educational level, and length of professional experience (see Table 5, publication 3, p. 3458).

Table 6, publication 3, pages 3459-3460, shows the univariate relationships between each of the ESPS subscale scores (from ESPS compared assessment of nurse and family) and the characteristics of the respondent families (child and parent sex, parent's age, household education attainment, household occupational class, family vulnerability such as unemployment status, migrant background and one-parent family, child and parental nutritional status, FNPA, parents' longitudinal continuity in primary care, and the number of family members attending the consultation).

According to the results of the univariate analysis, scores obtained in the two subscales did not differ significantly by child and parent sex, parent's age, family vulnerability (such as unemployment status, migrant background, and one-parent family), parental nutritional status, FNPA, and the number of adult family members attending the consultation.

The results of simple linear regression analysis showed that the household education attainment significantly predicted nurse action scores, β = -.27, *t*(74) = -2.46, *p* = .031, BCa 95% CI [-0.227, -0.003] with an R^2 = .08, *F*(1, 75) = 6.03, *p* = .016. Therefore, families' low levels of educational attainment were associated with higher levels of nurse action subscale scores.

Likewise, the household occupational class significantly predicted nurse action subscale scores, β = -.226, *t*(74) = -1.998, *p* = .033, BCa 95% CI [-0.066, -0.005] with an R^2 = .51, *F*(1, 75) = 3.990, *p* = .049. Then, families with low levels of occupational class were more likely to score higher on the subscale nurse action.

The study revealed that both subscales were significantly predicted by the parent longitudinal contact, β = .327, *t*(74) = 2.980, *p* = .013, BCa 95% CI [0.001, 0.006], R^2 = .107, *F*(1, 75) =

8.879, *p* = .004, for nurse action subscale; β = .401, *t*(74) = 3.771, *p* = .000, BCa 95% CI [0.003, 0.010], R^2 = .161, *F*(1, 75) = 14.217, *p* < .001, for family action subscale. Therefore, the longer time families had been bringing their children to a regular health unit and nurse was associated with higher degree of empowering counselling by nurse's and family action.

The number of children attending the consultation significantly predicted family action scores, β = .257, *t*(74) = 2.287, *p* = .003, BCa 95% CI [0.062, 0.370], with an R^2 = .066, *F*(1, 75) = 5.229, *p* = .025. Thus, families with more children attending the consultation were more likely to score higher on the subscale of family action.

Child BMI was significantly associated with both subscales. Participants were divided into four groups according to their BMI (Group 1: families of children with underweight; Group 2: families of children with normal weight; Group 3: families of children with overweight; and Group 4: families of children with obesity). There was a statistically significant difference at nurse action scores, *F* (3, 73) = 2.81, *p* = .05, and at family action scores, *F* (3, 73) = 2.77, *p* = .048, for the four participating groups based on child BMI. The effect size, calculated using eta squared, was .11 for both subscales. Post-hoc comparisons using the Games-Howell test indicated that the nurse action mean-score for the group of families of children with underweight (*M* = 1.95, *SD* = 0.03) was significantly different from the group of families of children with normal weight (*M* = 1.66 *SD* = 0.33) and the group of families of children with overweight (*M* = 1.41, *SD* = 0.29). The families of children with obesity (*M* =1.70, *SD* = 0.25) did not differ significantly from any other group. Post-hoc comparisons using the Games-Howell test indicated that the mean score of family action mean score for the group of families of children with underweight (*M* = 1.77, *SD* = 0.02) was significantly different from the group of families of children with normal weight (*M* = 1.35 *SD* = 0.53) and families of children with overweight (*M* = 0.98, *SD* = 0.47). The group of families of children with normal weight also differed significantly from families of children with overweight. The group of families of children with obesity (*M* = 1.58, *SD* = 0.45) only differed significantly from the group of families of children with overweight.

CHAPTER 5 – DISCUSSION

The overall purpose of this study was to generate knowledge for the development of empowerment counselling in WCV for healthy family lifestyles, by exploring the existing evidence (literature sub-study 1) and the routine practice (observational sub-studies 2 and 3). Sub-study 1 identified, appraised and synthesized the existing evidence from randomised controlled trials on the effectiveness and nature of empowerment health interventions with preschool-age children and families. Sub-study 2 translated, adapted and evaluated the psychometric properties of a measure of families' and nurses' perceptions of empowerment in counselling in the 5-year-old WCV setting, the Portuguese ESPS. While sub-study 3 examined the performance of empowerment counselling during nurses’ consultations in the 5-year-old WCV, from two perspectives, the nurses' and the families' (sub-study 3). In this discussion section, the study results will be interpreted in light of relevant literature. The study’s strengths and limitations will also be identified.

5.1 Reflections on Examining Empowerment Health Interventions with Families and Preschool-age Children – A Systematic Review of Randomised Controlled Trials

To the best of our knowledge, this study represents the first attempt to systematically identify and integrate data concerning the application of empowerment within the context of preschool children and families' health. This systematic review identified only 10 RCTs conducted worldwide, which were published between 2004 and 2019. The interventions included in this review were exclusively tested in higher- and upper-middle-income countries. The lack of published RCTs in developing countries is an important literature limitation. Most interventions were focused on secondary and tertiary health prevention levels with comparatively fewer interventions at the primary level. Due to the diversity of intervention content and delivery, the heterogeneity in outcomes, and the limited number of studies that addressed each outcome, we were unable to conduct a meta-analysis, and therefore, to determine whether empowerment health interventions with families and preschool-age children are effective. The intervention heterogeneity also made it difficult to compare between studies, and therefore, to explore the associations between theory application, modes of family involvement, use of BCTs, and intervention effectiveness. Furthermore, most studies included in this review were classified as having a high risk of bias which limits our confidence in the evidence.

It is surprising that in over 33 years between the publication of the Ottawa Charter and our review, we still don't have enough evidence to answer whether the inclusion of empowerment health interventions with families and preschool-age children impacts favourably health-related outcomes. Nevertheless, our review showed that half of the intervention studies succeeded in achieving at least one of the outcomes of interest, which reveals the potential of empowerment interventions to improve pre-schoolers' and their families' health. Despite the small number of studies identified in this review, it is encouraging to notice, an apparent increase in the last few years of intervention studies with a focus on the health empowerment of families and preschool children.

When considering how the studies applied the theory, it is worth noting that less than half of the studies explicitly defined the empowerment concept. Still, the definitions used revealed poor inclusivity of children as active participants. Understanding and measuring empowerment intervention effects with a focus on children, alongside the families, is mandatory. Further research to create innovative and comprehensive ways to conceptualize, address and measure health-related empowerment in children must be considered. Our analysis found several gaps in the application of theory in interventions. Although interventions in our review often reported the use of theory/theoretical model, with social cognitive theory and the family system intervention model being the most mentioned, fewer reported an explicit link of theoretical constructs to intervention design, implementation, and evaluation. As the literature suggests that interventions that use theory rigorously lead to better outcomes (Michie & Prestwich, 2010), we recommend that empowerment programs clearly select a theory, apply and report the use of theory in the design, implementation, and evaluation of empowerment interventions. The Empowerment Process Model (Cattaneo & Chapman, 2010) and the Family System Intervention Model (Dunst & Trivette, 2009b) might be promising models for use since both are built-in extent review of literature, both are focused on the processes underlying empowerment, with the latter having a clear emphasis on family context, and both can be adapted for a wide range of service provision and fields. To ensure a complete description of interventions we recommend the use of the Template for Intervention Description and Replication (Hoffmann et al, 2014).

Looking across the 10 RCTs in relation to the families' involvement, our review showed that only four interventions targeted both parent(s) and children. We found a lack of details regarding children's specific involvement in interventions; few studies included children-related outcomes measures. Taken together with the heterogeneity of interventions, we could not determine the impact of family involvement, namely children, in the intervention success, and the optimal strategies to involve families and children. This constitutes an important gap given the potential benefits of co-creating health with younger children. We recommend the use of the Lundy model of child participation (Government of Ireland, 2021; Lundy, 2007) and a thorough description of the ways children are involved in interventions (e.g., format of children's participation, behaviour change techniques applied), assessment of the quality of child participation and child involvement in interventions’ evaluation.

When analysing the behaviour change techniques to investigate the association between the use of BCTs and intervention effectiveness, we found that interventions that showed more improvements in health-related outcomes incorporated more BCTs. This is in line with the results of another review on interventions to empower adult patients with diabetes (Werbrouck et al., 2018). Our findings suggest that the use of more BCTs may represent a strategy for improving health-related outcomes. Nevertheless, the advantage of the use of more BCTs should be explored further. We found 16 potential effective BCTs for empowerment interventions with families and preschool children. These were: information about health consequences; goal setting; information about antecedents; reducing negative emotions; restructuring the physical environment; restructuring the social environment; identification of self as a role model; demonstration of the behaviour; action planning; self-monitoring of behaviour; emotional or practical social support; instruction in how to perform the behaviour; information about social and environmental consequences; information about emotional consequences; and behavioural practice or rehearsal. Previous reviews have also identified goal setting and action planning as potential effective BCT for empowerment in patients (Werbrouck et al., 2018). However, they only included interventions with adult patients with diabetes.

Our findings highlight the potential relevance of including BCTs, in empowerment interventions directed to child and family health, that are related not only with goal setting and planning (i.e., agree on a goal expressed in the behaviour to be achieved and define a detailed plan of performance of the behaviour), but also with: provision of information (i.e., give information about health consequences of performing the behaviour, and information about situations that predict the performance of the behaviour); demonstration of the behaviour (i.e., provide an observable performance of the behaviour via film, role play, etc.); restructuring the environment (i.e., change the physical and social environment in order to facilitate the performance of the desired behaviour and limit the undesired behaviour); regulation of emotions (i.e., reduce negative emotions in order to facilitate the performance of the behaviour); and identity as role model (i.e., inform that a parent's behaviour is an example to children; Michie et al., 2013). We recommend the inclusion of these BCTs in future intervention studies. The rationale for this is that by considering these promising BCTs, we may maximize effectiveness; in addition, by using these already used BCTs, we might apply BCTs most likely to be feasible, acceptable, and suitable for families and children.

The heterogeneity of empowerment interventions and measurement that was found in our study was not unexpected considering that previous systematic reviews on empowerment in adult populations also showed similar results (Bradstetter et al., 2015; Werbrouck et al., 2018). This also aligns with the literature that considers that empowerment should be tailored to the populations and contexts of the study, advocating for the development of adapted empowerment interventions and measurement tools (Cattaneo & Chapman, 2010; Lindacher et al., 2018; Zimmerman, 1995).

Our study findings support the need for more research on empowerment health interventions with preschool children and families. The context of primary care should be a focal point of research efforts. Our assessment of methodological quality emphasized the need for more methodologically rigorous studies, offering the opportunity to make firmer recommendations about the most effective interventions.

5.2 Reflections on Measuring Empowerment Counselling in Routine Primary Health Care – Psychometric Properties of a Portuguese Adaptation of the Empowering Speech Practices Scale

Measuring empowerment counselling in WCVs is an essential element to testament the effectiveness of the services provided. In this study, we developed the Portuguese ESPS, a translated and adapted version of ESPS to assess nurses' and families' perceptions about empowerment counselling practices in WCVs. We determined the psychometric properties of the Portuguese ESPS, in terms of validity and reliability, among families attending a 5-year-old WCV conducted by nurses (sub-study 2).

The Portuguese ESPS demonstrated good structural validity. The EFA revealed a two-factor solution model that explained 73.79% of the total variance among the 44 items. Our measurement structure results from two factors aligned with the findings of Kettunen et al. (2006); however, the amount of accumulated variance obtained in our study was higher (59% of the variance in Kettunen et al., 2006). In the two-factor solution, all the ESPS-nurse action theoretical construct items loaded onto the first factor and all the ESPS-family action theoretical construct items loaded onto the second factor. Our finding was coincident with the results reported by the scale developers; however, we found stronger support for the two-factor solution, with higher factor loadings, particularly regarding the disclosure dimension, which in our study showed more substantial loadings on its theoretical construct (i.e., family action factor). The two-factor solution had good conceptual interpretability; it was coincident with conclusions from literature and evidence that empowerment may be viewed into two overall dimensions, one related to relational practices, i.e., nurse action dimension - comprising the domains setting expectations for discussion, constructing a positive atmosphere, offering individualized information and advice, enabling family reflection, and respecting family competence - and the other referring to participatory practices, i.e., family action dimension - with the domains disclosure, asking questions and interrupting (Dunst et al., 2007; Kettunen et al., 2001, 2003, 2006).

The associations between the factors, demonstrated by statistically significant positive correlations between the ESPS- nurse action and ESPS- family action subscales, suggest that although distinct they are interrelated and may reflect two dimensions of a single construct. Therefore, we recommend analysing the two subscales separately when measuring the degree of empowerment counselling. Higher mean scores for each dimension in the Portuguese ESPS represent a higher agreement between nurses and families regarding a high degree of empowering counselling.

The Portuguese ESPS also proved to be sensitive in terms of known group differences; the two subscales discriminated between nurses that had educational training in empowerment patient education versus no educational training, ESPS-nurse action and ESPS-family action scores were significantly higher for consultation conducted by nurses with educational training in empowerment patient education, as logically hypothesised.

The full Portuguese ESPS and its two subscales had excellent internal consistency reliability (slightly higher than those found in the original study). Also, there was evidence that the internal consistency of the scale would not be improved if any of the items were deleted. Our findings suggest that the ESPS is a reliable measure in terms of internal consistency.

Although our findings provide preliminary support for the use of Portuguese ESPS in WCVs in Portugal, further evaluation of this instrument is warranted to accumulate psychometric evidence.

The Portuguese ESPS have important qualities, besides promising evidence of the scale reliability and validity. It retains all the original items, which were developed according to a rigorous methodology, but innovates by addressing the counselling for healthy family lifestyles. It is flexible because it can be used for assessing the process of empowerment counselling from two perspectives, the nurses' and the families' perspectives, independently, or in comparison. Finally, its constructs are conceptualized in similar ways by other health professional groups, bringing the possibility to be tested for broader audiences. For nursing, the Portuguese ESPS opens the possibility of capturing such an important phenomenon of caring – empowerment counselling - and the possibility to relate it with the families’ outcomes, providing a glimpse of nursing contribution to science and health.

5.3 Reflections on Two Sides of the Same Well-Child Visit - Analysis of Nurses' and Families' Perspectives on Empowerment in Health Counselling

To our knowledge, this is the first study on the evaluation of the degree of empowerment counselling practiced in 5-year-old WCV based on nurses’ and families’ perceptions. The instrument used to assess the degree of empowerment counselling was the Portuguese ESPS, which has acceptable psychometric properties.

This study found several noteworthy findings. Within our sample, nurses and families reported a high degree of empowerment counselling on the Portuguese ESPS, total scores and subscales. These findings may suggest that empowerment counselling practices are being integrated into nursing WCVs. Nevertheless, there seems to be room for improvement. Nurses perceived the degree of empowerment counselling in 5-year-old WCV as significantly different from those of families, with the families holding more positive evaluations. This result is consistent with the findings of a study also using the ESPS among nurses and clients in hospital counselling in Finland, which found that clients had the higher average score on ESPS (Kettunen et al., 2006). Among the eight domains of empowerment counselling, families were more likely than nurses to perceive a higher degree of empowerment in three domains, i.e., *individualized information and advice* (from nurse action subscale), *disclosure*, and *asking questions* (from family action subscale). These results may be related to the fact that nurses have more profound knowledge on the practices that are applied to their competencies and responsibilities when conducting WCVs, and therefore realize with more accuracy the lack of implementation of some empowerment counselling behaviours.

The dimensions of empowerment counselling best realized in WCV, considering nurses and families perceptions, were in descendent order, *constructing a positive atmosphere*, *setting expectations for discussion*, *respecting family's competence*, *enabling family's reflection*, *offering individualized information and advice* [dimensions from nurse action subscale], *interrupting*, *asking questions*, and *disclosure* [dimensions from family action subscale]. The analysis of nurse and family compared assessment of empowerment counselling in each WCV showed more disagreement or doubt on the implementation of practices from the *disclosure* and *asking questions* domains. There seems to be room for improvement of empowerment counselling practices in WCVs, namely in the dimension of *individualized information and advice*, *interrupting*, *asking questions*, and *disclosure*.

Concerning *offering individualized information and advice*, both nurses and families agreed that families had been offered information that they needed, that the questions the families presented had been understood, and that families had been encouraged to ask questions. Nevertheless, the detailed charting of a family's living situation was found to be realized to a lower degree. Nurses are constantly offering information and giving advice during the WCV. Research shows that information that is provided in a tailored way, i.e., messages matched to the client's personal and socio-environmental factors, when compared to generic communication are more likely to be perceived by the client as personally relevant, engage the client in a meaningful dialogue, induce health behaviour change, and sustain the desired healthy lifestyle (Wanyonyi et al., 2011). The primary care setting provides a unique context for the delivery of tailored health messages. The more skilled the nurses are in providing tailored information and advice, the more empowering the counselling is likely to be, and therefore, the more effective and efficient might be the care delivered by nurses. Therefore, nurses should be encouraged to acknowledge the psycho and social-environmental characteristics of families and provide clear information tailored to the needs, concerns, expectations, characteristics, circumstances, and readiness to change of each family.

Concerning *interrupting*, both nurses and families in our study generally agreed that families were allowed to speak and let the nurses know when they did not understand something. However, the families' behaviour of indicating when they wanted something repeated occurred less often. The foundation of empowerment counselling is a partnership, something that is done "for" and "with" people. One of the basic processes of empowerment counselling is to engage the person in a collaborative working relationship. The families' behaviour of interrupting nurses, when necessary, can be interpreted as a reflex of positive and deep engagement, i.e., feeling comfortable and active participant in the consultation (Miller & Rollnick, 2013). This process-interrupting behaviour impacts how the counselling is constructed, influencing the content and quantity of the communication, and promotes a circular and reciprocal dialogue, i.e., the conversational space is shared by nurses and families (Kettunen et al., 2000). Achieving families' engagement requires an atmosphere of warmth, genuineness, mutual trust, respect, and confidence (Burnard, 2005; Miller & Rollnick, 2013).

Regarding *asking questions* both groups agreed that families were allowed to ask questions. Nevertheless, the families' behaviour of asking questions about health improvement might be enhanced in WCVs. Questioning is perceived by Feste and Anderson (1995) as a critical empowerment tool for facilitating the client empowering process. Offering families the possibility to ask questions provides positive regard and acceptance for them (Kettunen et al., 2001), encourages them to participate in the communication process (Feste & Anderson, 1995; van Ryn & Heaney, 1997), and allows the direction of counselling to reflect the families' questions (Kettunen et al., 2000).

About *disclosure*, most nurses and families in our study agreed that families disclosed their own opinions, views, and situations. Nevertheless, there seems to be room for improvement in the domains of families sharing their experience of health counselling, families assessing issues related to past received health counselling, families' assessment of their action concerning health, families talking about their feelings concerning health and families taking part in definition of goals to improve health. A key component of the empowerment process, as defined by Cattaneo and Chapman's empowerment model, is the definition of personally meaningful and power-oriented goals (Cattaneo & Chapman, 2010). In assisting families to identify their goals, a safe and supportive environment is needed so that the families share and reflect on their concrete health situation and feelings, become aware of a desire for change, identify their health priorities, reveal their experiences and capabilities to operate in it, and explore possibilities to change it (Cattaneo & Chapman, 2010).

Our study result of nurse action behaviours being practiced more often than family action behaviours is consistent with the original study findings using the ESPS (Kettunen et al., 2006). Besides, other studies comparing practitioners' use of relational and participatory family-centred behaviours, which content is similar to the two-factor structure of ESPS, respectively, *nurse action* and *family action,* indicate that participatory family-centred behaviours are less common than relational family-centred behaviours (Dunst et al., 2007).

The perceived high levels of relational practices of empowerment counselling, revealed in our study, are aligned with the intrinsic nature and central component of nursing - human caring relationships (Leininger, 1980; Smith, 1999; Swanson, 1999; Watson, 2013). As shown by our study, the caring relationship, a nursing and healthcare phenomena, often unmeasured and difficult to assess (Watson, 2019), seems to remain in today's nursing practice, despite some perceived doubts of its loss. However, our study results insinuate that nurses may not actively perform participatory practices in WCV. This may be because of several reasons, such as the time available in the WCV, or even less frequent emphasis and training on participatory empowerment practices in nursing education, leading to nurses' less priority or competency for addressing these issues in the WCVs. Participatory empowerment practices comprise advanced counselling activities, such as comprehensive assessment, co-decision making, co-care planning, that require higher levels of knowledge and skill and more time of care. Previous studies on health care professionals providing opportunistic behaviour change interventions during routine primary healthcare consultations suggest that time, workload pressures, and the dominance of biomedical aspects in consultations are important barriers to implementing these practices (Elwell et al., 2013; Keyworth et al., 2019). Future research should examine the reasons for lower levels of implementation of participatory practices, as by knowing them, efforts could be made to improvement on the nurses' compliance.

Even though the relational practices of empowerment counselling (reflected on the nurse action subscale from ESPS) are considered core practices in the process of families' empowerment (Kettunen, 2006; Dunst et al., 1992), the family participatory practices (reflected on family action subscale from ESPS) according to the theory of empowerment are of utmost importance (Dunst et al., 1992). Results from a meta-analysis indicated that both relational and participatory elements of empowerment counselling are associated with positive parent, family, and child behavioural functioning. Furthermore, the meta-analysis showed outcomes are mediated by parents' self-efficacy beliefs; however, participatory practices are a more important determinant (Dunst et al., 2007). For empowerment counselling to be effectively enacted in WCV, both relational and participatory practices should be present.

Our study found differences in the perceived degree of empowerment counselling between different subgroups of nurses. For instance, nurses with paediatric specialization obtained a lower degree of empowerment counselling on the family action subscale than nurses without it. Nurses with formal training in both patient empowerment and obesity education demonstrated higher levels of empowering counselling, when compared with nurses without training, but only for the nurses' subscale. These results require further investigation, but considering them, it would appear that education of paediatric nurses and educational programs on patient empowerment and obesity education, in our sample is doing little to the improvement of participatory practices. Therefore, efforts should be made in education and training programs to prepare nurses to provide participatory practices as much as relational practices.

Our study also found that participating nurses from USFs were more likely than nurses from UCSPs to have higher scores on the nurse action and family action subscales. Although this finding requires additional investigation to confirm the association, it suggests that integration of empowerment counselling practices in WCV may benefit from professionals’ commitment to higher standards of services and financial incentives. This is in line with studies that suggest an association between performance pay and improvements in the quality of care provided (Scott et al. 2011). Nevertheless, we believe that for the effective implementation of lifestyle empowerment counselling the contractualized indicators for the ACeS must be reconsidered. Currently, the contractualized indicators focus mainly on easily measurable quantitative indicators, many of them of a procedural nature and linked to diseases. Very few indicators are related to caring needs and processes from clients’ and nurses’ perspectives. Moreover, they do not seem to reflect the clients’ preferences for primary health care. Research suggests that the attributes of primary health care considered most important for patients are from a process dimension, such as shared decision making and professional’s attention paid to patients’ views (Jung et al., 2003; Kleij et al., 2017). In addition, the link of the current indicators to monetary incentives can influence the performance of nurses for certain health interventions which may jeopardize the effectiveness of nursing care and people’s access to the health care they really need, which may contribute to increase health inequalities (Caix-Couturier et al., 2000). We find this ethically, politically, and socially questionable. We believe these indicators should be defined in accordance with health disciplines, the evidence base, health priorities, and the citizens. Efforts must continue to address the burden of noncommunicable diseases and to promote and protect the right of people to healthier lives and well-being. Disease prevention, health promotion, and the empowerment of individuals, families, and communities to maintain and enhance their health and well-being are actual priorities and commitments in the Portuguese health development agenda. Therefore, they should be reflected in specific indicators as part of performance and quality assessment. Appropriate incentives, available resources, and supportive leadership for health professionals to effectively respond to these priorities also deserve attention.

It is interesting to note that in our study the families who had been bringing their children to a regular health unit and nurse for a longer time obtained a high degree of empowerment counselling on the nurse action and family action subscales. A usual and continuous source of primary health care may therefore make an important contribution to families' empowerment. This is in line with the primary health care reforms that have been carried out in Portugal, with the aim of improving the quality and continuity of health care, namely by the creation and evolution of the USF's, the increased coverage of the Portuguese population with a family doctor and the creation of the Family Nurse figure.

Our study results showed that families with lower levels of education and occupational class (used as proxy measures of socioeconomic status) were both associated with higher degrees of empowerment counselling on the subscale of nurse action. This result suggests a particular emphasis on enabling relational practices for those who may experience the greatest inequalities in health. Apparently, the fact that an unhealthy lifestyle may have a higher prevalence in lower socioeconomic groups did not result in more participatory behaviours in counselling. It would be expected that this family subpopulation, which typically experiences social contexts with fewer resources, would benefit from interventions to overcome these realities and promote family healthy lifestyles. In addition, our results showed that there was no significant relationship between empowerment counselling degree and other family conditions of vulnerability, such as unemployment of a family member, migrant background, or one-parent family. A previous systematic review of studies exploring whether patient' socio-economic status influences medical communication has found that patients from lower social classes experienced less positive socio-emotional utterances, more directive and less participatory consulting style (Willems et al., 2005). This same research has attributed to patients from lower social classes a less active communication, less affective expressiveness, and less information elicitation from doctors. A literature review of studies investigating the relationship between culture, ethnicity, and doctor-patient communication, found that doctors were less affective when interacting with ethnic minority patients and those patients were also less verbally expressive, assertive, and affective (Schouten & Meeuwesen, 2005). These previous research findings denote potential socioeconomic and cultural inequalities in health care communication. However, our findings suggest that families were not negatively discriminated based on social determinants and cultural characteristics. This is an interesting result given the need to, at least, not reinforce health inequalities in the clients' experience of health services. Nevertheless, it is recommended that nurses be aware of the communication differences of families with lower SES and empower families through relational and participatory practices.

In our study, the child's BMI seemed to affect the degree of empowerment counselling. Families of children with underweight obtained higher scores on both subscales when compared to families of children with normal weight or overweight. Additionally, families of children with overweight obtained lower scores in the family action subscale compared to families of children with normal weight or with obesity. The reduced amount of empowerment counselling directed to families of children with overweight was a surprising result. Also unexpected was the fact that the parental nutrition status and FNPA risk had no significant impact on empowerment counselling degrees. It was expected that families at high risk for noncommunicable diseases (including anthropometric assessment through children and parents BMI, and environmental and behavioural assessment of factors associated with childhood overweight and obesity, through the FNPA screening tool) would experience higher levels of empowerment counselling to gain more control and choices over their lifestyle's decisions. The obtained results suggest that more attention needs to be directed toward opportunistic risk stratification for noncommunicable diseases and empowerment counselling for families at high risk for NCDs in the WCVs. The development of effective programs in primary care that support the empowerment counselling toward healthy lifestyle of such families is needed. We suggest the integration of FNPA screening tool into WCV. The use of this screening and counselling tool in WCVs in Pennsylvania has proven to be an effective, low-intensity, and low-cost obesity prevention approach (Bailey-Davies et al., 2019).

Other family and nurse-related factors measured in this study, including child and parent sex, parent age, nurse age, nurse educational level, and nurse length of professional experience had no significant effect on empowering counselling degree as measured by the Portuguese ESPS. However, more research in larger and more diverse sample is needed to determine the impact of families and nurses' characteristics in empowering counselling in WCVs. The use of multilevel modelling to investigate the impact of these factors on empowering counselling is recommended. Additional research should use self-report and observational data to examine these and other factors that may contribute to empowerment counselling in WCVs, so that appropriate strategy can be implemented.

5.4 Validity of the Study

Our study provides unique and important findings about a critical area of family health with a limited evidence base. The study design was informed and developed based on rigorous and current frameworks, namely the MRC and Bleijenberg's guidance on developing complex interventions (Craig et al., 2008; Bleijenberg et al., 2018). We followed reporting standards to improve the quality of the study methodology and transparency, namely the GUIDED (Duncan et al., 2020), the PRISMA guidelines (Page et al., 2021; Moher et al., 2009), the STROBE guidelines (von Elm et al., 2014). We also applied the McLean and collaborators (2003) framework to evaluate the involvement of family members in interventions, the BCT taxonomy v1 to code BCT from all interventions (Michie et al., 2013), and followed the international expert consensus on taxonomy and definitions of measurement properties outlined by the COSMIN project (Mokkink et al., 2010). Although our efforts to increase the quality of the study through all the stages of research (i.e., design, data collection, data analyses, and data interpretation), there are methodological considerations that must be acknowledged to better contextualize the underlying findings and to refine the design of subsequent studies.

5.4.1 Potential Bias in the Review Process (Sub-study 1)

Our systematic review has some limitations. First, our review was restricted to RCTs explicitly using the term “empowerment”, and differences in the use of terminology may have excluded important studies. Second, we only included studies published in English and in peer-reviewed journals, so we might have not examined all empowerment health interventions with preschool-age children and their families. Third, the reduced number of the included studies, and the diversity in intervention characteristics, made it impossible to conduct a meta-analysis and limited comparisons between them. This constrained our ability to examine the role of application of theory, family involvement, and use of BCTs on intervention effects. Forth, it is possible that some components of interventions (e.g., application of theory, family involvement, BCTs used) might have been applied in intervention but not have been coded by us, since we have based our coding using only the information available in published reports; the studies included in this review did not always report interventions entirely. Finally, when interpreting our findings concerning the potential effectiveness of BCTs, limitations of the analysis method must be considered: (a) some BCTs might not have been identified if they were poorly reported; (b) the synergic effects of BCTs were not considered; and (c) the difficulty in determining the fidelity and quality of delivery of some interventions.

5.4.2 External Validity (Sub-studies 2 and 3)

Following the framework of Onwuegbuzie and McLean (2003) for assessing the quality of quantitative research, the external validity of sub-studies 2 and 3 is discussed below.

5.4.2.1 Population and Ecological Validity

The generalizability of our study findings is limited. Due to feasibility issues, the study focused on two ACeS, from Portugal's Central Region and the Metropolitan Area of Lisbon, out of 55 possible ACeS in Portugal (Biscaia & Heleno, 2017). Consequently, the study results might not be generalizable to other Portuguese primary health care organisations and other geographic areas. In this study, we used a non-probability sampling from the accessible population, and although we applied broad inclusion criteria to obtain a sample that more closely resembled mundane reality, we cannot generalize our results to individuals who do not have the characteristics of our participants. Another potential key limitation was the small sample size. Therefore, external replications of the study are needed in larger and more diverse samples and settings to accumulate evidence.

The fact that the study was conducted in naturalistic practice (i.e., in daily routine primary care practice) denotes good ecological validity and consequently major advantages for the generalizability of results. Although our study results still need to be interpreted within its context, our approach to measuring empowering counselling in WCVs is innovative and the findings may be useful in other settings.

5.4.2.2 Temporal Validity

Our study was conducted in one period (i.e., cross-sectional study). Therefore, replication studies are needed to find if findings can be generalised across time. Although our data provided a comprehensive assessment of empowering counselling, the operationalised measure provided a snapshot at the time of measurement, i.e., at one consultation per family. However, empowering counselling goes beyond what happens in a single session. Possibly, the families' lifestyles have already been discussed in previous WCVs. Therefore, it is important to understand the development of empowering counselling across nurse-family relationship time.

5.4.2.3 Researcher Effects

To minimise differences in which distinct researchers give different instructions to the participants, one researcher (SBR) was responsible for all face-to-face data collection procedures. However, researcher bias might have occurred during the data collection. It is important to remember that the researcher remained with the respondent during survey completion and was available to answer questions. Therefore, the researcher's characteristics and actions might have affected unintentionally, or unconsciously, the behaviour and responses of participants.

5.4.2.4 Reactive Arrangements

The simple fact of participating in a study affects participants from their normal behaviour (i.e., the Hawthorne effect). Participants intentionally or unintentionally might have modified their behaviour to match how they were expected to behave (i.e., conformity and social desirability), which could lead to an increase in performance during the consultation, which also threatens internal validity.

5.4.3 Internal Validity (Sub-studies 2 and 3)

Following the framework of Onwuegbuzie and McLean (2003) for assessing the quality of quantitative research, the internal validity of sub-studies 2 and 3 is discussed below.

5.4.3.1 Instrumentation Validity

The choice of instruments in this study was grounded in their theoretical foundations, their use in our study population, practicability, and sound psychometric properties. The non-Portuguese questionnaires were translated and adapted into Portuguese using the recommended and internationally recognised procedure for cross-cultural translation and adaptation of self-report measures from Beaton and collaborators (2000). The procedure ensured conceptual and contextual equivalence, rather than a literal translation of the instrument. To reduce measurement bias, we made every effort to maintain the data collection procedure consistent, namely by using standardized performance procedures and the same researcher for collecting data. Another way to reduce survey error and response error was using cognitive interviews and field pre-tests (Willis, 2018). Cognitive interviewing provided valuable information to increase the face, content validity, and acceptability of the instruments. In addition, we conducted psychometric tests for the instruments used. Generally, the instruments showed appropriate levels of internal consistency reliability, and the Portuguese ESPS also revealed adequate construct-related validity and cross-cultural validity. However, we were unable to assess the concurrent validity of the Portuguese ESPS since there is no gold-standard instrument for empowering counselling in Portugal. Therefore, we suggest research to evaluate the agreements between the results of empowering counselling obtained from the Portuguese ESPS and the conversation analytic study of audio/video-recorded nurse-family consultations.

5.4.3.2 Information Bias

The findings of this study (sub-study 2 and 3) are based on self-report data from nurses and families, obtained through questionnaires, which brings the potential risk of bias such as social desirability responding (i.e., tendency to respond in a manner that is perceived as desirable; Paulhus, 1991). However, self-report data is valuable in assessing empowering counselling given the nature of the concept. To minimize social desirability bias, we guaranteed anonymity and confidentiality at the time of data collection. This way, participants might have been less likely to alter their behaviour and responses as a result of participating in the study. Also, we used multiple data sources (families and nurses self-report data) to measure empowering counselling, which may increase the validity of the results (Althubaiti, 2016).

We acknowledge that we relied on one adult family member to respond on behalf of the family unit participating in the WCV (i.e., use of proxy reports). Even though family members were allowed to discuss answers to the questionnaire, we cannot assure that the reports given by the respondent are representative of other family members' perceptions (Coob, 2018). Our decision was based on convenience, as the collection of data from more than one family member could be experienced as more stressful and time-consuming, which could lead to higher non-response rates and lower-quality responses (Ruel et al., 2016). Given the nature of the relation between parents and children, we relied that the proxy report would be accurate. Nevertheless, we recognize that future studies should acknowledge the self-report of both targets and proxies, particularly the children. The measurement of the attribute (e.g., empowering counselling) in children should not be identical of the used with the adult; the use of questions and methods that are not coercive and are appropriate to children's developmental stage are advised (Walton, 2014; Wong et al., 2010).

5.4.3.3 Selection Bias and Sample Size

This study was conducted with a relatively small non-probability sample of nurses and families, so the sample may not be fully representative of all nurses and families in the ACeS where the study took place. Furthermore, all participating nurses were female. Although this is in line with the high number of female primary care nurses in Portugal - in Portugal only 13.2% of nurses working in ACeS are male; Ordem dos Enfermeiros, 2018 - it would be important to analyse the nurse gender effects in lifestyle empowering counselling.

This study did not have a large response rate, particularly for nurses. The reasons for nurses refusing/withdrawing participation were mainly attributed to nurses' heavy workload and feeling worried that performance would be judged. For families' the reasons were parents' work schedules that did not allow them enough time to participate and feeling uncomfortable/unwilling to participate in the research study. We were not able to compare the individuals who refused or withdrew from the study to those who remain. As a result, nurses and families who declined to participate may have different characteristics. Those who participated in the study might have been more interest or commitment to health quality, which could have led to an over-representation of those with a positive disposition for health communication and co-production of care. This might have influenced the results. It is also important to notice that the Ethics Committee did not allow monetary and material incentives in our study, which is a procedure that can substantially reduce refusals (Singer, 2018). Nonetheless, other studies targeting nurses in primary care have similar participation rates (e.g., Westland et al., 2018), suggesting this could be acceptable for our study. Nevertheless, the required sample size to perform an EFA which range from 2 to 20 subjects per item was in our study near the limit (Hair et al., 1995). The fact that our data was strong, i.e., displayed high communalities without cross-loadings, supported a smaller sample size used (MacCallum et al., 1999). Due to the small sample size, we could not perform the confirmatory factor analysis to further investigate the factorial structure of the Portuguese ESPS.

CHAPTER 6 – CONCLUSIONS

The present thesis summarizes research intended to strength empowerment counselling in well-child visits (WCVs) for healthy family lifestyles. This study has examined several questions related to the effectiveness, measurement, and practice of empowerment counselling with families and preschool children. In this chapter, we present an overview of the arguments that support our study, concisely answer our research questions, explain the contribution that our work makes to the literature, and discuss the implications: namely the recommendations for further research, clinical practice, education, and policy.

In 2016, the Sustainable Developmental Goals (SDGs) acknowledged the challenge of Non-Communicable Diseases (NCDs), specifically SDG target 3.4 enumerated that premature mortality from NCDs should be reduced by one third by 2030 by utilizing prevention and treatments which focus on mental health and well-being. Unfortunatelly, recent estimates suggest most countries will not be able to achieve SDG target 3.4 (NCD Countdown 2030 collaborators, 2020). We urgently need effective and feasible interventions to produce better health outcomes and halt the growing threat of NCDs. In order to address the scale and range of the NCD problem, it is necessary to adopt new approaches. That is, implement accessible, equitable, and population-based prevention approaches within the life-course and the entire continuum of care, from primary to secondary and specialist hospital care (NCD Countdown 2030 collaborators, 2020).

As an attempt to accelerate national efforts towards SDG target 3.4, we propose the strengthening of WCVs capacity in primary care to engage more effectively and meaningfully with their commitment to support healthy family lifestyles. The WCV is a well-positioned setting for scalable and sustainable implementation of family lifestyle interventions. The focus on promoting healthy lifestyles in the early life course, and through longitudinal and integrated care, has the potential to boost the immediate and future health of children and families; healthier families mean a better economy and society. We advocate empowerment counselling to be used in WCV as a strategy for the promotion of healthy lifestyles. The traditional paradigm of “health through people’s empowerment” (De Vos et al., 2009) has been the policy-of-choice to promote health since the 1986 WHO Ottawa Charter. Portuguese healthcare policy instruments take this as a central concept and it is core to the Portuguese general nursing competences profile.

Briefly, empowerment builds on the belief that a person has endless possibilities for development and simply needs an environment that improves an individual’s control over their life/health (Rappaport, 1987). Health systems are for people, so primary healthcare should empower individuals/families to set and pursue their relevant health interests. When focusing on child health we must recognize family contexts shape children’s health-related lifestyles. In early childhood, children develop their control over their life/health, a process that continues through adolescence with parents and health professionals playing a crucial role in supporting children's participation in health. The health care system, along with other social determinants of health, such as education, employment, social protection, have the responsibility to make the healthier lifestyle choice the easier choice for parents and children. Primary health care provides a platform that supports this multisectoral action on health and well-being.

Interpretation of parental empowerment in the context of WCVs entails parents developing critical awareness, a critically evaluation of their reality, an in-depth understanding of their present health situation and habits that might not serve their family any longer allowing for new conscious choices. This empowerment also depends upon the development of knowledge, skills, and the ability to identify, mobilize and obtain health-promotion resources that enhance and sustain a healthy lifestyle within their family. Child empowerment should be a process that promotes children's effective and meaningful participation, where they can have an influence and feel themselves capable of having an influence. Therefore, empowerment of families in the context of WCVs means empowering parents and children to be in control of their health situation.

The study of empowerment counselling in WCVs is particularly relevant given that recent studies have demonstrated that increases in parental empowerment of low-income households (i.e., helping parents realize control over their life situation and act to promote a healthier lifestyle) facilitate healthy parenting practices, namely parenting practices that favour healthy weight (e.g., food, physical, and sleep parenting practices; Gago et al., 2021). Therefore, access to empowerment counselling is not only a child and family right, but also a moral imperative that might contribute to health equity.

Nevertheless, the global trends of NCDs, together with the 35 years since the Ottawa Charter publication, and the 32 years since the UN CRC, leaves us to question if the empowerment health strategy is effective with families and children and if we've been able to apply it effectively. Research on health-related empowerment in children and families, particularly in the context of WCVs, needs more comprehensive investigation. Yet, when we started our study, there were no systematic literature reviews on the topic, there were no validated measures to evaluate empowerment counselling in WCVs, and the research on the factors that affect empowerment counselling in this context was very limited. Filling in these gaps was needed before designing and implementing empowerment counselling programs for healthy family lifestyles in WCVs.

To address these gaps, in our study we aimed to explore the evidence on the effectiveness and nature of empowerment health interventions among preschool-age children and families (sub-study 1). Sub-study 1 contributes to the literature by expanding the existing reviews of empowerment in health. Previous reviews have examined the effects of empowerment focusing on interventions with adult individuals. Ours summarizes the evidence by mapping the evidence in preschool children and families' health. Although empowerment approaches are expected to have an important role in the promotion of children and families' health, our study results suggest that such interventions have not yet proved effective. The applicability of the available evidence in practice is therefore limited. Nevertheless, our findings give valuable information for future research that is needed to establish the claimed value of health-related empowerment interventions with families and preschool-age children. Recommendations for forthcoming studies highlighted by our review include: a) more consistency in the application of empowerment theory in the design, implementation, and evaluation of the intervention; b) effective and meaningful participation of children; c) development of comprehensive ways of measuring empowerment adapted to the context of study application; d) well-designed RCTs; e) complete report of interventions; f) measurement of intervention fidelity; and g) documentation of cost-effectiveness.

The absence of a relevant validated measurement of empowerment counselling in WCVs in Portugal motivated the development of our sub-study 2. Our study produced promising evidence of the Portuguese ESPS's validity and reliability. Thus, the Portuguese ESPS may be a useful instrument within the context of WCV to evaluate the implementation of empowerment practices from the perspective of nurses and families. The use of this tool has the potential to expand the knowledge of the current state of empowerment practices, and to identify empowerment counselling deficits, assisting in its improvement. It may be a useful instrument to obtain information on intervention fidelity, i.e., whether the intervention is delivered according to the conceptualization of empowerment. In addition, it may be used to analyse the claimed effects of empowerment counselling practices on parents, and children's health-related outcomes, for which the available evidence is so far very limited. However, to enhance the usefulness of the Portuguese ESPS, further evaluation of its psychometric properties with larger and more diverse populations (e.g., WCV's age, and other professional groups) is recommended.

Currently, nurses working in primary healthcare are strongly encouraged to conduct empowerment counselling for tackling risk factors, such as unhealthy diets, insufficient physical activity, smoking and use of alcohol, in the nurses' everyday practice, regardless of the reason for the consultation (WHO, 2016a). However, it is not known to what extent empowerment counselling for healthy family lifestyles is integrated in WCVs. To gain insight into the real implementation of empowerment counselling in the nursing 5-year-old WCV, we conducted sub-study 3. We recognize that it might be challenging having to focus on the multiple nursing interventions that are required in a WCV, within a constrained time, while at the same time performing empowerment counselling. Nevertheless, our study confirmed that the participating nurses and families perceived that empowerment counselling practices were well integrated, suggesting that nurses might be able to apply empowerment counselling in regular WCVs, outside a research context. Findings also demonstrate that there is room for improvements, namely in the nurses' provision of information tailored to the needs, expectations, and characteristics of each family, and in the participatory practices, to contribute to higher compliance to empowerment counselling in WCV. The results from our study also indicate that much remains to be learned about factors influencing the empowerment counselling of children and families in WCV.

In summary, there is an opportunity to extend nurses' knowledge and skills towards the application of empowerment counselling in WCV. The adequate implementation of empowerment counselling concerning healthy family lifestyles not only requires a commitment from health care professionals, but also demands nurses' competencies.

More education efforts might be needed to provide a clear understanding of what empowerment counselling is and how it can be operationalized. We propose empowerment counselling should be part of the novice professional education and training, ongoing education and training, then at the workplace and through, offering regular practice and learning opportunities. This way, nurses' competencies to provide adequate relational and participatory practices are continuously revised, monitored, trained and passed on to future generations. We recommend the use of motivational interviewing as a method for promoting participatory practices. We suggest the use of autoscopy using videotaped consultations for self-analysis, reflection, and development of empowering skills.

Nevertheless, it is not reasonable to assume that the exposure to knowledge and skills by itself will change nurses' behaviours. Therefore, we invite future researchers to expand on the experiences, barriers, and enablers of empowerment counselling in routine WCV, from the perspective of health professional groups, children, and families using the Behaviour Change Wheel (BCW) and the Capability Opportunity Motivation-Behavior (COM-B) model of behaviour (Michie et al., 2014). This work will provide further insight into the practice of empowerment counselling in WCVs and offer helpful information on what needs to change to the success and expansion of empowerment counselling implementation. Moreover, we suggest that researchers conduct RCTs to evaluate the effectiveness of empowerment counselling interventions in WCVs. Alongside the RCTs, process evaluation studies should be conducted to provide insight into the experiences of the intervention for nurses, families, and children, the intervention feasibility, and fidelity. These studies may support the development of clinical guidelines to successfully integrate the practice of empowering counselling in WCV.

All these efforts should be supported by systems (e.g., governmental and health policy, education and training systems), organizations (e.g., management and leadership), professionals (interdisciplinary and cross-sectoral work), and people (individual, families, and community engagement).

Although we recognize the scale of this task is enormous, and there is still a long way to go, we do believe in the potential of changing health systems for and with families and children, and in prioritizing health-orientation perspective. We hope our work will contribute to a more comprehensible and deeper understanding of what empowerment counselling applied to families and children's health is and should be in practice. We believe our study may contribute to the health-related empowerment measurement science, also offering a mean of measuring and evaluating care. We hope our work will encourage the recognition that empowerment counselling is an essential and possible nursing practice in WCV. We expect our study can help to acknowledge that empowerment counselling can move forward, particularly in the domains of tailoring information to families' personal and environmental factors, and expanding family's participatory practices, namely promoting children's effective and meaningful participation.

While evidence for empowerment with families and children is still growing, we believe interventions can be developed and implemented with the existing knowledge. The recent experiences of Covid-19 not only exacerbated the need for the prevention of NCDs but also showed us we can be nimble, flexible, and adapt. Currently, there is a strong potential to implement empowerment counselling more broadly within WCVs since it is aligned with Portugal's Recovery and Resilience Plan 2020-2030 (e.g., primary healthcare reform focused on lifestyle health promotion and the citizen; investment in politics for children; Ministério do Planeamento, 2021). Our commitment and responsibilities as healthcare professionals to address empowerment counselling towards the development of healthy family lifestyles in educational, clinical, and research settings can be realized.

Although this work was conducted within the field of nursing, and is a core aspect of nursing, we believe empowerment counselling resides in that place of science and practice that is shared by all human caring/helping professionals and all persons. No more time to lose! It's time to walk the talk! We are all in this together! We must ensure empowerment counselling is at the forefront of children and families' nursing/caring practices, in recognition that every child and family has the right to an adequate standard of living and to equal opportunities.

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REFERENCES

Abella, R., & Heslin, R. (1984). Health, locus of control, values, and the behavior of family and friends: An integrated approach to understanding preventive health behavior. *Basic and Applied Social Psychology, 5*(4), 283-294. https://doi.org/10.1207/s15324834basp0504_3

Adam, S., Birch, P. H., Coe, R. R., Bansback, N., Jones, A. L., Connolly, M. B., Demos, M. K., Toyota, E. B., Farrer, M. J., & Friedman, J. M. (2019). Assessing an Interactive Online Tool to Support Parents' genomic Testing Decisions. *Journal of Genetic Counseling, 28,* 10-17. https://doi.org/10.1007/s10897-018-0281-1

Adinolfi, P., Starace, F., & Palumbo, R. (2016). Health outcomes and patient empowerment. The case of health budgets in Italy. *Journal of Health Management, 18*(1), 117–133. https://doi.org/10.1177/0972063415625524

Administração Central do Sistema de Saúde. (2017). *Bilhete de identidade dos indicadores dos cuidados de saúde primários para o ano de 2017* [Identity card of primary health care indicators for the year 2017]. Ministério da Saúde. https://www.sns.gov.pt/wp-content/uploads/2017/04/bilhete_identidade_indicadores_contratualizacao_2017.pdf

Alderson, P., Sutcliffe, K., & Curtis, K. (2006). Children as partners with adults in their medical care. *Archives of Disease in Childhood*, *91*(4), 300–303. https://doi.org/10.1136/adc.2005.079442

Althubaiti, A. (2016). Information bias in health research: definition, pitfalls, and adjustment methods. *Journal of Multidisciplinary Healthcare, 9*, 211-217. https://doi.org/10.2147/JMDH.S104807

An, M., & Palisano, R. J., (2014). Family-professional collaboration in pediatric rehabilitation: a practice model. *Disability and Rehabilitation, 36*(5), 434-440. https://doi.org/10.3109/09638288.2013.797510

An, M., Palisano, R. J., Yi, C. H., Chiarello, L. A., Dunst, C. J., & Gracely, E. J. (2017). Effects of a Collaborative Intervention Process on Parent Empowerment and Child Performance: A Randomized Controlled Trial. *Physical & Occupational Therapy in Pediatrics, 39*(1): 1-15. https://doi.org/10.1080/01942638.2017.1365324

Anderson, R. M., & Funnell, M. M. (2005). Patient empowerment: reflections on the challenge of fostering the adoption of a new paradigm. *Patient Education and Counseling, 57*(2), 153–157.

Antonovsky, A. (1996.) The salutogenetic model as theory to guide health promotion. *Health Promotion* International, *2*, 11–18. https://doi.org/10.1093/heapro/11.1.11

Aujoulat, I., Marcolongo, R., Bonadiman, L., & Deccache, A. (2008). Reconsidering patient empowerment in chronic illness: a critique of models of self-efficacy and bodily control. *Social Science & Medicine*, *66*(5), 1228–1239. https://doi.org/10.1016/j.socscimed.2007.11.034

Bailey-Davis, L., Kling, S., Wood, G. C., Cochran, W. J., Mowery, J. W., Savage, J. S., Stametz, R. A., & Welk, G. J. (2019). Feasibility of enhancing well-child visits with family nutrition and physical activity risk assessment on body mass index. *Obesity Science & Practice*, *5*(3), 220–230. https://doi.org/10.1002/osp4.339

Bandura, A. (2001). Social cognitive theory: an agentic perspective. *Annual Review of Psychology, 52*(1), 1-26. https://doi.org/10.1146/annurev.psych.52.1.1

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review, 51*(2), 269–290. https://doi.org/10.1111/1464-0597.00092

Barnett, L. M., van Beurden, E., Morgan, P. J., Brooks, L. O., & Beard, J. R. (2009). Childhood motor skill proficiency as a predictor of adolescent physical activity. *The Journal of Adolescent Health*, *44*(3), 252–259. https://doi.org/10.1016/j.jadohealth.2008.07.004

Beaton, D. E., Bombardier, C., Guillemin, F. & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine, 25*(24), 3186-91. https://doi: 10.1097/00007632-200012150-00014

Beattie, A. (1991). Knowledge and control in health promotion: a test case for social policy and social theory. In J. Gabe, M. Calnan, & M. Bury (Eds), *The sociology of the health service* (pp. 162-202). Routledge.

Benner, P. (1984). *From novice to expert, excellence and power in clinical nursing practice*. Addison-Wesley Publishing Company.

Birch, L. L., & Fisher, J. O. (1998). Development of eating behaviors among children and adolescents. *Pediatrics*, *101*(3 Pt 2), 539–549.

Birch, L. L., & Ventura, A. K. (2009). Preventing childhood obesity: what works? *International Journal of Obesity*, *33 Suppl 1*, S74–S81. https://doi.org/10.1038/ijo.2009.22

Biscaia, A. R., & Heleno, L. C. (2017). A reforma dos cuidados de saúde primários em Portugal: Portuguesa, moderna e inovadora [Primary health care reform in Portugal: Portuguese, modern and innovative]. *Ciência e Saúde Coletiva, 22*(3), 701–12. https://doi.org/10.1590/1413-81232017223.33152016.

Bleijenberg, N., de Man-van Ginkel, J. M., Trappenburg, J., Ettema, R., Sino, C. G., Heim, N., Hafsteindóttir, T. B., Richards, D. A., & Schuurmans, M. J. (2018). Increasing value and reducing waste by optimizing the development of complex interventions: Enriching the development phase of the Medical Research Council (MRC) Framework. *International Journal of Nursing Studies*, *79*, 86–93. https://doi.org/10.1016/j.ijnurstu.2017.12.001

Boonpleng, W., Park, C. G., & Gallo, A. M. (2012). Timing of adiposity rebound: a step toward preventing obesity. *Pediatric Nursing*, *38*(1), 37–42.

Borges Rodrigues, S., Barros, L., Borges Rodrigues, R., Salanterä, S., & Parisod, H. (2018, November 14-17). *Translation and cultural adaptation of the Family Nutrition and Physical Activity screening tool into Portuguese* [Poster Presentation]. 28th European Childhood Obesity Group Meeting – ECOG 2018, Porto, Portugal.

Borges Rodrigues, S., Parisod, H., Barros, L., & Salanterä, S. (2020). Two sides of the same well-child visit: Analysis of nurses' and families' perspectives on empowerment in health counselling. *Journal of Advanced Nursing*, *76*(12), 3448–3463. https://doi.org/10.1111/jan.14554

Borges Rodrigues, S., Parisod, H., Barros, L., & Salanterä, S. (2021a). Measuring empowerment counselling in routine primary health care: Psychometric properties of a Portuguese adaptation of the empowering speech practices scale. *Journal of Pediatric Nursing*, S0882-5963(21)00144-5. Advance online publication. https://doi.org/10.1016/j.pedn.2021.04.031

Borges Rodrigues, S., Parisod, H., Barros, L., & Salanterä, S. (2021b). Examining Empowerment Interventions with Families and Preschool Children: Systematic Review of Randomized Controlled Trials. *Health Education & Behavior*, 10901981211031444. Advance online publication. https://doi.org/10.1177/10901981211031444

Boyce, T, & Hertzman, C. (2018). Early Childhood Health and the Life Course: The State of the Science and Proposed Research Priorities: A Background Paper for the MCH Life Course Research Network. In N. Halfon (Eds.) et. al., *Handbook of Life Course Health Development*. (pp. 61–93). Springer.

Brandstetter, S., Rüter, J., Curbach, J., & Loss, J. (2015). A systematic review on empowerment for healthy nutrition in health promotion. *Public Health Nutrition*, *18*(17), 3146–3154. https://doi.org/10.1017/S1368980015000270

Breslow L. (2004). Perspectives: the third revolution in health. *Annual Review of Public Health*, *25*, xiii–xviii. https://doi.org/10.1146/annurev.pu.25.022604.100011

Brodsky, A. E., & Cattaneo, L. B. (2013). A transconceptual model of empowerment and resilience: divergence, convergence and interactions in kindred community concepts. *American Journal of Community Psychology*, *52*(3-4), 333–346. https://doi.org/10.1007/s10464-013-9599-x

Brotons, C., Björkelund, C., Bulc, M., Ciurana, R., Godycki-Cwirko, M., Jurgova, E., Kloppe, P., Lionis, C., Mierzecki, A., Piñeiro, R., Pullerits, L., Sammut, M. R., Sheehan, M., Tataradze, R., Thireos, E. A., Vuchak, J., & EUROPREV network (2005). Prevention and health promotion in clinical practice: the views of general practitioners in Europe. *Preventive Medicine*, *40*(5), 595–601. https://doi.org/10.1016/j.ypmed.2004.07.020

Brotons, C., Bulc, M., Sammut, M. R., Sheehan, M., Manuel da Silva Martins, C., Björkelund, C., Drenthen, A. J., Duhot, D., Görpelioglui, S., Jurgova, E., Keinanen-Kiukkanniemi, S., Kotányi, P., Markou, V., Moral, I., Mortsiefer, A., Pas, L., Pichler, I., Sghedoni, D., Tataradze, R., Thireos, E., … Godycki-Cwirko, M. (2012). Attitudes toward preventive services and lifestyle: the views of primary care patients in Europe. the EUROPREVIEW patient study. *Family Practice*, *29 Suppl 1*, i168–i176. https://doi.org/10.1093/fampra/cmr102

Brown, T., Moore, T. H., Hooper, L., Gao, Y., Zayegh, A., Ijaz, S., Elwenspoek, M., Foxen, S. C., Magee, L., O'Malley, C., Waters, E., & Summerbell, C. D. (2019). Interventions for preventing obesity in children. *The Cochrane Database of Systematic Reviews*, *7*(7), CD001871. https://doi.org/10.1002/14651858.CD001871.pub4

Brown, C. M., Raglin Bignall, W. J., & Ammerman, R. T. (2018). Preventive Behavioral Health Programs in Primary Care: A Systematic Review. *Pediatrics*, *141*(5), e20180611. Advance online publication. https://doi.org/10.1542/peds.2017-0611

Burnard, P. (2005). *Counselling skills for health professionals*. Nelson Thornes.

Burton, R. S., Zwahr-Castro, J., Magrane, C. L., Hernandez, H., Farley, L. G., & Amodei, N. (2018). The nurturing program: an intervention for parents of children with special needs. *Journal of Child and Family Studies, 27*(4), 1137-1149. https://doi.org/10.1007/s10826-017-0966-3

Butcher, H. K., Bulechek, G. M., Dochterman, J. M. M., & Wagner, C. M. (2018). *Nursing interventions classification (NIC)-E-Book*. Elsevier Health Sciences.

Carlsson, I. M., Nygren, J. M., & Svedberg, P. (2017). Patient participation, a prerequisite for care: A grounded theory study of healthcare professionals' perceptions of what participation means in a paediatric care context. *Nursing Open*, *5*(1), 45–52. https://doi.org/10.1002/nop2.106

Cattaneo, L. B., Calton, J. M., & Brodsky, A. E. (2014). Status quo versus status quake: Putting the power back in empowerment. *Journal of Community Psychology, 42*(4), 433–446. https://doi.org/10.1002/jcop.21619

Cattaneo, L. B., & Chapman, A. R. (2010). The process of empowerment: A model for use in research and practice. *American Psychologist, 65*(7), 646–659. https://doi.org/10.1037/a0018854

Cattaneo, L. B., & Goodman, L. A. (2015). What is empowerment anyway? A model for domestic violence practice, research and evaluation. *Psychology of Violence, 5*(1), 84-94. https://doi.org/10.1037/a0035137

Chaix-Couturier, C., Durand-Zaleski, I., Jolly, D., & Durieux, P. (2000). Effects of financial incentives on medical practice: results from a systematic review of the literature and methodological issues. *International Journal for Quality in Health Care*, *12*(2), 133–142. https://doi.org/10.1093/intqhc/12.2.133

Chiapperino, L., & Tengland, P. A. (2015). Empowerment in healthcare policy making: three domains of substantive controversy. *Health Promotion Journal of Australia*, *26*(3), 210–215. https://doi.org/10.1071/HE15035

Childhood Obesity Surveillance Initiative (COSI) Portugal (2019). *Childhood Obesity Surveillance Initiative Portugal*. Instituto Ricardo Jorge. http://www.ceidss.com/wp-content/uploads/2020/03/COSI-2019_-FactSheet.pdf

Clark, H., Coll-Seck, A. M., Banerjee, A., Peterson, S., Dalglish, S. L., Ameratunga, S., Balabanova, D., Bhan, M. K., Bhutta, Z. A., Borrazzo, J., Claeson, M., Doherty, T., El-Jardali, F., George, A. S., Gichaga, A., Gram, L., Hipgrave, D. B., Kwamie, A., Meng, Q., Mercer, R., … Costello, A. (2020). A future for the world's children? A WHO-UNICEF-Lancet Commission. *Lancet*, *395*(10224), 605–658. https://doi.org/10.1016/S0140-6736(19)32540-1

Clark, A., & Moss, P. (2001). *Listening to young children: The mosaic approach* (2nd ed.). National Children's Bureau.

Coad, J., Flay, J., Aspinall, M., Bilverstone, B., Coxhead, E., & Hones, B. (2008). Evaluating the impact of involving young people in developing children's services in an acute hospital trust. *Journal of Clinical Nursing*, *17*(23), 3115–3122. https://doi.org/10.1111/j.1365-2702.2008.02634.x

Cockerham W. C. (2005). Health lifestyle theory and the convergence of agency and structure. *Journal of Health and Social Behavior*, *46*(1), 51–67. https://doi.org/10.1177/002214650504600105

Cockerham, W. C. (2006). Health lifestyle theory in an Asian context. *Health Sociology Review, 15*(1), 5–15. https://doi.org/10.5172/hesr.2006.15.1.5

Cockerham, W. C. (2013). Bourdieu and an update of health lifestyle theory. In W.C. Cockerham (Ed.), *Medical sociology on the move* (pp. 127-154). Springer.

Cockerham W. C. (2014). The sociology of health in the United States: recent theoretical contributions. *Ciência & Saúde Coletiva*, *19*(4), 1031–1039. https://doi.org/10.1590/1413-81232014194.14872013

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.

Combs-Orme, T., Holden Nixon, B., & Herrod, H. G. (2011). Anticipatory guidance and early child development: pediatrician advice, parent behaviors, and unmet needs as reported by parents from different backgrounds. *Clinical Pediatrics*, *50*(8), 729–737. https://doi.org/10.1177/0009922811403302

Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *The Academy of Management Review, 13*(3), 471–482. https://doi.org/10.2307/258093

Coob, C. (2018). Answering for someone else: proxy reports in survey research. In D. L. Vannette, & J. A. Krosnick (Eds.), *The Palgrave Handbook of Survey Research* (pp. 87-93). Palgrave Macmillan.

Cooper, S., Valleley, R. J., Polaha, J., Begeny, J., & Evans, J. H. (2006). Running out of time: physician management of behavioral health concerns in rural pediatric primary care. *Pediatrics*, *118*(1), e132–e138. https://doi.org/10.1542/peds.2005-2612

Corry, M., Clarke, M., While, A. E., & Lalor, J. (2013). Developing complex interventions for nursing: a critical review of key guidelines. *Journal of Clinical Nursing*, *22*(17-18), 2366–2386. https://doi.org/10.1111/jocn.12173

Council of Europe. (2012). Recommendation of the Committee of Ministers to Member States on the participation of children and young people under the age of 18. Council of Europe. https://wcd.coe.int/ViewDoc.jsp?id=1927229

Council of Europe. (2016). *Council of Europe Strategy for the Rights of the Child 2016-2021. Council of Europe*. https://edoc.coe.int/en/children-s-rights/7207-council-of-europe-strategy-for-the-rights-of-the-child-2016-2021.html

Council of Europe. (2019). *Strategic Action Plan on Human Rights and Technologies in Biomedicine (2020-2025)*. Council of Europe. https://www.coe.int/en/web/bioethics/strategic-action-plan

Coyne I. (2006). Consultation with children in hospital: children, parents' and nurses' perspectives. *Journal of Clinical Nursing*, *15*(1), 61–71. https://doi.org/10.1111/j.1365-2702.2005.01247.x

Coyne I. (2008). Children's participation in consultations and decision-making at health service level: a review of the literature. *International Journal of Nursing Studies*, *45*(11), 1682–1689. https://doi.org/10.1016/j.ijnurstu.2008.05.002

Coyne, I., Amory, A., Kiernan, G., & Gibson, F. (2014). Children's participation in shared decision-making: children, adolescents, parents and healthcare professionals' perspectives and experiences. *European Journal of Oncology Nursing, 18*(3), 273–280. https://doi.org/10.1016/j.ejon.2014.01.006

Coyne, I., & Gallagher, P. (2011). Participation in communication and decision-making: children and young people's experiences in a hospital setting. *Journal of Clinical Nursing*, *20*(15-16), 2334–2343. https://doi.org/10.1111/j.1365-2702.2010.03582.x

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., Petticrew, M., & Medical Research Council Guidance (2008). Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ*, *337*, a1655. https://doi.org/10.1136/bmj.a1655

Creswell, J. W, & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed). SAGE publications.

Crowley, A., Larkins, C., & Pinto, L. (2021). *Listen-Act-Change Council of Europe Handbook on children's participation for professionals working for and with children*. Council of Europe. https://edoc.coe.int/en/children-s-rights/9288-listen-act-change-council-of-europe-handbook-on-childrens-participation.html

Cunningham, S. A., Kramer, M. R., & Narayan, K. M. (2014). Incidence of childhood obesity in the United States. *The New England Journal of Medicine*, *370*(17), 1660–1661. https://doi.org/10.1056/NEJMc1402397

David, J. G., Lo, M. S., & Langer, D. A. (2018). Adolescent and parent perspectives on medical decision-making for chronic illness. *Families, Systems & Health*, *36*(2), 248–251. https://doi.org/10.1037/fsh0000297

Deci, E., & Ryan, R. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. Plenum.

Decreto de aprovação da Constituição n. º 86/1976. (1976). *Constituição da República Portuguesa* [Constitution of the Portuguese Republic]. *Diário da República 1* (86, 10 de abril), 1-93. https://dre.pt/application/conteudo/502635

Decreto-Lei n.º 298/2007. (2007). Caracterização geral e criação dos agrupamentos de centros de saúde [General characterization and creation of health centre clusters]. *Diário da República, 1*(161, 22 de agosto), 5588-5596. https://data.dre.pt/eli/dec-lei/297/2007/08/22/p/dre/pt/html

Decreto-Lei n.º 28/2008. (2008). Organização e funcionamento das unidades de saúde familiar [Organization and functioning of family health units]. *Diário da República, 1*(38, 22 de fevereiro), 1182-1189. https://data.dre.pt/eli/dec-lei/28/2008/02/22/p/dre/pt/html

Decreto-Lei n.º 118/2014. (2014). Princípios e enquadramento da atividade do enfermeiro de família nos cuidados de saúde primários [Principles and Framework of the family nurse's activity in primary health care]. *Diário da República, 1*(149, 5 de agosto), 4069-4071. https://data.dre.pt/eli/dec-lei/118/2014/08/05/p/dre/pt/html

Dempsey, I. (1995). The enabling practices scale: The development of an assessment instrument for disability services. *Australia and New Zealand Journal of Developmental Disabilities, 20*, 67–73. https://doi:10.1080/ 07263869500035451.

Dempsey, I., & Keen, D. (2008). A review of processes and outcomes in family-centered services for children with a disability. *Topics in Early Childhood Special Education*, *28*, 42–52. https://doi. org/10.1177/0271121408316699

Dempsey, I., & Keen, D. (2017). Desirable outcomes associated with family-centered practices for young children with a disability. In H. Sukkar, C. J. Dunst & J. Kirby (Eds.), *Early childhood intervention. Working with families of young children with special needs* (pp. 59–71). Routledge.

de Onis, M., & Lobstein, T. (2010). Defining obesity risk status in the general childhood population: Which cut-offs should we use? *International Journal of Pediatric Obesity, 5*(6), 458-60. https://doi: 10.3109/17477161003615583

de Onis, M., Onyango, A. W., Borghi, E., Siyam, A., Nishida, C., Siekmann, J. (2007). Development of a WHO growth reference for school-aged children and adolescents. *Bulletin of the World Health Organization, 85*(9), 660-7. https://doi: 10.2471/blt.07.043497

Despacho nº. 3618-A/2016. (2016). Saúde: Programa nacional de educação para a saúde, literacia e autocuidados [Health: National health, literacy and self-care education program]. *Diário da República, 2* (49, 10 de março), 8660(5)-8660(6). https://dre.pt/application/conteudo/73833508

de Vet, E., de Ridder, D. T., & de Wit, J. B. (2011). Environmental correlates of physical activity and dietary behaviours among young people: a systematic review of reviews. *Obesity Reviews*, *12*(5), e130–e142. https://doi.org/10.1111/j.1467-789X.2010.00784.x

De Vos, P., De Ceukelaire, W., Malaise, G., Pérez, D., Lefèvre, P., & Van der Stuyft, P. (2009). Health through people's empowerment: a rights-based approach to participation. *Health and human rights*, *11*(1), 23–35.

Direção-Geral da Saúde (DGS). (2013). *Programa Nacional Saúde Infantil e Juvenil* [National Child and Youth Health Program]. Direção-Geral da Saúde. https://www.dgs.pt/documentos-e-publicacoes/programa-tipo-de-atuacao-em-saude-infantil-e-juvenil-png.aspx

Direção-Geral da Saúde (DGS). (2016). Processo Assistencial Integrado da Pré-Obesidade no Adulto. [Integrated Assistance Process for Pre-Obesity in Adults]. Direção-Geral da Saúde. https://alimentacaosaudavel.dgs.pt/activeapp2020/wp-content/uploads/2020/01/Processo-assistencial-integrado-da-pre%CC%81-obesidade-no-adulto.pdf

Direção-Geral da Saúde (DGS). (2017). *Programa Nacional para a Promoção da* Atividade Física 2017. [National program for the Promotion of Physical Activity 2017]. Direção-Geral da Saúde. https://www.sns.gov.pt/wp-content/uploads/2017/10/DGS_PNPAF2017_V7.pdf

Direção-Geral da Saúde (DGS). (2021a). *Programa Nacional para a Prevenção e Controlo do Tabagismo 2020* [National Program for the Prevention and Control of Tabacco Use]. Direção-

Geral da Saúde. https://www.dgs.pt/portal-da-estatistica-da-saude/diretorio-de-informacao/diretorio-de-informacao/por-serie-1219790-pdf.aspx?v=%3d%3dDwAAAB%2bLCAAAAAAABAArySzItzVUy81MsTU1MDAFAHzFEfkPAAAA

Direção-Geral da Saúde (DGS). (2021b). *Programa Nacional para a Promoção da Alimentação Saudável* [National Program for the Promotion of Healthy Eating]. Direção-Geral da Saúde. https://alimentacaosaudavel.dgs.pt/conheca-o-pnpashttps://alimentacaosaudavel.dgs.pt/

Direção de Serviços de Informação e Análise (DSIA), & Direção de Serviços de Prevenção da Doença e Promoção da Saúde (DSPDPS). (2018). *Saúde infantil e juvenil – Portugal* [Child and youth health – Portugal]. Lisboa: Direção-Geral da Saúde. https://www.dgs.pt/portal-da-estatistica-da-saude/diretorio-de-informacao/diretorio-de-informacao/por-serie-1007690-pdf.aspx?v=%3d%3dDwAAAB%2bLCAAAAAAABAArySzItzVUy81MsTU1MDAFAHzFEfkPAAAA

Duncan, E., O'Cathain, A., Rousseau, N., Croot, L., Sworn, K., Turner, K. M., Yardley, L., & Hoddinott, P. (2020). Guidance for reporting intervention development studies in health research (GUIDED): an evidence-based consensus study. *BMJ Open*, *10*(4), e033516. https://doi.org/10.1136/bmjopen-2019-033516

Dunst, C. J., & Espe-Sherwindt, M. (2016). Family-centered practices in early childhood intervention. In B. Reichow, B. A. Boyd, E. E. Barton, & S. L. Odom (Eds.), *Handbook of early childhood special education* (pp. 37–55). Switzerland: Springer International.

Dunst, C. J., & Espe-Sherwindt, M. (2017). Contemporary early intervention models, research, and practice for infants and toddlers with disabilities and delays. In J. M. Kauffman, D. P. Hallahan, & C. P. Pullen (Eds.), *Handbook of special education* (2nd ed., pp. 831–849). Routledge.

Dunst, C. J., Espe-Sherwindt, M., & Hamby, D. W. (2019a). Does capacity-building professional development engender practitioners' use of capacity-building family- centered practices? *European Journal of Educational Research, 8*(2), 515–526. https://doi.org/10.12973/eu-jer.8.2.515.

Dunst, C. J., Hamby, D. W., & Raab, M. (2019b). Modeling the relationships between practitioner capacity-building practices and the behavior and development of young children with disabilities and delays. *Educational Research and Reviews, 14*(9), 309–319. https://doi.org/10.5897/ERR2019.3742

Dunst, C. J., & Trivette, C. M. (2009a). Meta-analytic structural equation modeling of the influences of family-centered care on parent and child psychological health. *International Journal of Pediatrics*, *2009*, 1–9. https://doi.org/10.1155/2009/596840

Dunst, C. J., & Trivette, C. M. (2009b). Capacity-building family systems intervention practices. *Journal of Family Social Work*, *12*(2), 119–143. https://doi.org/10.1080/10522150802713322

Dunst, C. J., Trivette, C. M., & Deal, A. G. (1988). *Enabling and empowering families: principles and guidelines for practice*. Brookline Books.

Dunst, C. J., Trivette, C. M., & Hamby, D. W. (1996). Measuring the help giving practices of human services program practitioners. *Human Relations, 49*, 815–835. https://doi:10.1177/001872679604900605.

Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2007). Meta-analysis of family-centered helpgiving practices research. *Mental Retardation and Developmental Disabilities Research Reviews*, *13*(4), 370–378. https://doi.org/10.1002/mrdd.20176

Dunst, C. J., Trivette, C. M., & LaPointe, N. (1992). Toward clarification of the meaning and key elements of empowerment. *Family Science Review*, *5*(1/2), 111–130.

Edbrooke-Childs, J., Jacob, J., Argent, R., Patalay, P., Deighton, J., & Wolpert, M. (2016). The relationship between child- and parent-reported shared decision making and child-, parent-, and clinician-reported treatment outcome in routinely collected child mental health services data. *Clinical Child Psychology and Psychiatry*, *21*(2), 324–338. https://doi.org/10.1177/1359104515591226

Elwell, L., Povey, R., Grogan, S., Allen, C., & Prestwich, A. (2013). Patients' and practitioners' views on health behaviour change: a qualitative study. *Psychology & Health*, *28*(6), 653–674. https://doi.org/10.1080/08870446.2012.744008

Feenstra, B., Boland, L., Lawson, M. L., Harrison, D., Kryworuchko, J., Leblanc, M., & Stacey, D. (2014). Interventions to support children's engagement in health-related decisions: a systematic review. *BMC Pediatrics*, *14*, 109. https://doi.org/10.1186/1471-2431-14-109

Feste, C., & Anderson, R. M. (1995). Empowerment: from philosophy to practice. *Patient Education and Counseling*, *26*(1-3), 139–144. https://doi.org/10.1016/0738-3991(95)00730-n

Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th Ed.). SAGE Publications.

Fleming, P., & Godwin, M. (2008). Lifestyle interventions in primary care: systematic review of randomized controlled trials. *Canadian Family Physician Medecin de Famille Canadien*, *54*(12), 1706–1713.

Ford, K., Dickinson, A., Water, T., Campbell, S., Bray, L., & Carter, B. (2018). Child Centred Care: Challenging Assumptions and Repositioning Children and Young People. *Journal of Pediatric Nursing*, *43*, e39–e43. https://doi.org/10.1016/j.pedn.2018.08.012

Freire, P. (1970). *Pedagogy of the Oppressed* (M. Ramos, Trans.). The Seabury Press.

Freshwater, D. (2003). *Counselling skills for nurses, midwives and health visitors*. McGraw-hill education.

Gabe, J., Olumide, G., & Bury, M. (2004). 'It takes three to tango': a framework for understanding patient partnership in paediatric clinics. *Social Science & Medicine*, *59*(5), 1071–1079. https://doi.org/10.1016/j.socscimed.2003.09.035

Gallagher, M. (2008). Foucault, power and participation. *International Journal of Children's Rights, 16*(3), 395–406. https://doi.org/10.1163/157181808X311222

Gago, C. M., Jurkowski, J., Beckerman-Hsu, J. P., Aftosmes-Tobio, A., Figueroa, R., Oddleifson, C., ... & Davison, K. K. (2021). Exploring a theory of change: Are increases in parental empowerment associated with healthier weight-related parenting practices? https://nopren.ucsf.edu/sites/g/files/tkssra5936/f/wysiwyg/nopren_empower_gago_v5.pdf

Gibson C. H. (1991). A concept analysis of empowerment. *Journal of Advanced Nursing*, *16*(3), 354–361. https://doi.org/10.1111/j.1365-2648.1991.tb01660.x

Giele, J. Z., & Elder, G. H., Jr. (Eds.). (1998). *Methods of life course research: Qualitative and quantitative approaches.* Sage Publications, Inc.

Global Burden of Diseases 2015 Risk Factors Collaborators (2016). Global, regional, and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet*, *388*(10053), 1659–1724. https://doi.org/10.1016/S0140-6736(16)31679-8

Gochman, D.S. (1997). Health Behavior Research, Cognate Disciplines, Future Identity, and an Organizing Matrix. In D. S. Gochman (Ed.), *Handbook of Health Behavior Research IV* (pp. 395-425). Springer. https://doi.org/10.1007/978-1-4899-0484-3_20

Golan, M., & Crow, S. (2004). Parents are key players in the prevention and treatment of weight-related problems. *Nutrition Reviews*, *62*(1), 39–50. https://doi.org/10.1111/j.1753-4887.2004.tb00005.x

Government of Ireland. (2021). *Participation Framework: National framework for children and young people's participation on decision-making*. Hug na n'Óg. https://hubnanog.ie/wp-content/uploads/2021/04/5587-Child-Participation-Framework_report_LR_FINAL_Rev.pdf

Graham-Bermann, S., Howell, K. H., Miller-Graff, L. E., Galano, M. M., Lilly, M. M., & Grogan-Kaylor, A. (2019). The mom's empowerment program addresses traumatic stress in mothers with preschool-age children experiencing intimate partner violence. *Journal of Agression, Maltreatment & Trauma*, *28*(10), 1151-1172. https://doi.org/10.1080/109226771.2018.1494652

Green, L. & Kreuter, M. (1991). *Health promotion planning: an educational and environmental approach*. Mayfield Publishing.

Hair, J. E., Anderson, R. E., Tatham, R. L., & Black, W.C. (1995). *Multivariate Data Analysis: With Readings*. Prentice -Hall.

Halfon, N., & Forrest, C. B. (2018). The Emerging Theoretical Framework of Life Course Health Development. In N. Halfon et. al. (Eds.,) *Handbook of Life Course Health Development*. (pp. 19–43). Springer.

Halfon, N., Forrest, C. B., Lerner, R. M., Faustman, E. M., Tullis, E., & Son, J. (2018). Introduction to the Handbook of Life Course Health Development. In N. Halfon et al. (Eds.), *Handbook of Life Course Health Development*. (pp. 1–16). Springer.

Halfon, N., & Hochstein, M. (2002). Life course health development: an integrated framework for developing health, policy, and research. *The Milbank Quarterly*, *80*(3), 433–iii. https://doi.org/10.1111/1468-0009.00019

Halfon, N., Inkelas, M., & Hochstein, M. (2000). The health development organization: an organizational approach to achieving child health development. *The Milbank Quarterly*, *78*(3), 447–341. https://doi.org/10.1111/1468-0009.00180

Halfon, N., Larson, K., Lu, M., Tullis, E., & Russ, S. (2014). Lifecourse health development: past, present and future. *Maternal and Child Health Journal*, *18*(2), 344–365. https://doi.org/10.1007/s10995-013-1346-2

Hart, Roger A. (1992). Children's Participation: From tokenism to citizenship. *Innocenti Essay* no. 4, International Child Development Centre. https://www.unicef-irc.org/publications/pdf/childrens_participation.pdf

Helliwell, J., Layard, R., Sach, J. (2017). *The world happiness report 2017*. New York, Sustainable Development Solutions Network. https://worldhappiness.report/ed/2017/

Herbert, R. J., Gagnon, A. J., O'Loughlin, J., & Rennick, J. E. (2011). Testing an empowerment intervention to help parents make homes smoke-free: a randomized controlled trial. *Journal of Community Health, 36*(4), 650-657. https://doi.org/10.1007/s10900-011-9356-8

Hoffmann, T. C., Glasziou, P. P, Boutron, I., Milne, R., Perera, R., Moher, D., Altman, D. G., Barbour, V., Macdonald, H., Johnston, M., Lamb, S. E., Dixon-Woods, M., McCulloch, P., Wyatt, J. C., Chan, A. W., & Michie, S. (2014). Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. *BMJ, 348*, g1687. https://doi.org/10.1136/bmj.g1687

Hollingworth, W., Hawkins, J., Lawlor, D. A., Brown, M., Marsh, T., & Kipping, R. R. (2012). Economic evaluation of lifestyle interventions to treat overweight or obesity in children. *International Journal of Obesity*, *36*(4), 559–566. https://doi.org/10.1038/ijo.2011.272

Horwitz, S. M., Storfer-Isser, A., Kerker, B. D., Szilagyi, M., Garner, A., O'Connor, K. G., Hoagwood, K. E., & Stein, R. E. (2015). Barriers to the Identification and Management of Psychosocial Problems: Changes From 2004 to 2013. *Academic Pediatrics*, *15*(6), 613–620. https://doi.org/10.1016/j.acap.2015.08.006

IBM Corp. (2019). *IBM SPSS statistics for Windows (Version 26.0)* [Computer Software]. IBM Corp.

Ihmels, M. A., Welk, G. J., Eisenmann, J. C., & Nusser, S. M. (2009a). Development and preliminary validation of a Family Nutrition and Physical Activity (FNPA) screening tool. International *Journal of Behavioral Nutrition and Physical Activity*, *6*, Article 14. https://doi.org/10.1186/1479-5868-6-14

Ihmels, M. A., Welk, G. J., Eisenmann, J. C., Nusser, S. M., & Myers, E. F. (2009b). Prediction of BMI change in young children with the Family Nutrition and Physical Activity (FNPA) screening tool. *Annals of Behavioral Medicine*, *38*(1), 60–68. https://doi.org/10.1007/s12160-009-9126-3

Instituto Nacional de Estatística (2019). *Estatísticas Demográficas 2018* [Demographic Statistics 2018]. Instituto Nacional de Estatística. https://www.ine.pt/xurl/pub/358632586

Irving, P., & Long, A. (1993). Counselling in Health Promotion: A Nursing Perspective. *Journal of the Institute of Health Education, 31*(4), 126-132. http://dx.doi.org/10.1080/03073289.1993.10805801

Jackson, J. A., Smit, E., Branscum, A., Gunter, K., Harvey, M., Manore, M. M., & John, D. (2017). The Family Home Environment, Food Insecurity, and Body Mass Index in Rural Children. *Health Education & Behavior*, *44*(4), 648–657. https://doi.org/10.1177/1090198116684757

James, K. S., Matsangas, P., & Connelly, C. D. (2013). Childhood Obesity Risk in Overweight Mothers: Support for Screening. *Infant, Child, & Adolescent Nutrition*, *5*(6), 375–382. https://doi.org/10.1177/1941406413501865

Josefsson, K. A., Nordin, A., & Kjellstrom, S. (2021). Trust and self-efficacy as enablers and products of co-production in health and welfare services. In J. B. Jensen, & A. O. Thomassen (Eds.), *Processual Perspectives on the Co-production Turn in Public Sector Organizations* (pp. 42-58). IGI Global. https://doi:10.4018/978-1-7998-4975-9

Jung, H. P., Baerveldt, C., Olesen, F., Grol, R., & Wensing, M. (2003). Patient characteristics as predictors of primary health care preferences: a systematic literature analysis. *Health Expectations*, *6*(2), 160–181. https://doi.org/10.1046/j.1369-6513.2003.00221.x

Kalnins, I., McQueen, D. V., Backett, K. C., Curtice, L., & Currie, C. E. (1992). Children, empowerment and health promotion: Some new directions in research and practice. *Health Promotion International, 7*(1), 53-59. https://doi.org/10.1093/heapro/7.1.53

Kelishadi R. (2019). Life-Cycle Approach for Prevention of Non Communicable Disease. *Advances in Experimental Medicine and Biology*, *1121*, 1–6. https://doi.org/10.1007/978-3-030-10616-4_1

Kettunen, T., Liimatainen, L., Villberg, J., & Perko, U. (2006). Developing empowering counseling measurement. Preliminary results. *Patient Education and Counseling, 64*(1-3), 159-166. https://doi: 10.1016/j.pec.2005.12.012

Kettunen, T., Poskiparta, M., & Karhila, P. (2003). Speech practices that facilitate patient participation in health counseling–a way to empowerment? *Health Education Journal, 62*(4), 326–40. https://doi.org/10.1177/001789690306200405

Kettunen, T., Poskiparta, M., & Liimatainen, L. (2000). Communicator styles of hospital patients during nurse-patient counseling. *Patient Education and Counseling*, *41*(2), 161–180. https://doi.org/10.1016/s0738-3991(99)00076-2

Kettunen, T., Poskiparta, M., & Liimatainen, L. (2001). Empowering counselling – a case study: Nurse-patient encounter in hospital. *Health Education Research, 16*(2), 227-238. https://doi: 10.1093/her/16.2.227.

Keyworth, C., Epton, T., Goldthorpe, J., Calam, R., & Armitage, C. J. (2018). Are healthcare professionals delivering opportunistic behaviour change interventions? A multi-professional survey of engagement with public health policy. *Implementation Science*, *13*(1), 122. https://doi.org/10.1186/s13012-018-0814-x

Keyworth, C., Epton, T., Goldthorpe, J., Calam, R., & Armitage, C. J. (2019). 'It's difficult, I think it's complicated': Health care professionals' barriers and enablers to providing opportunistic behaviour change interventions during routine medical consultations. *British Journal of Health Psychology*, *24*(3), 571–592. https://doi.org/10.1111/bjhp.12368

King Jr, M. L. (2010). *Where do we go from here: Chaos or community?* Beacon Press.

Kleij, K. S., Tangermann, U., Amelung, V. E., & Krauth, C. (2017). Patients' preferences for primary health care - a systematic literature review of discrete choice experiments. *BMC Health Services Research*, *17*(1), 476. https://doi.org/10.1186/s12913-017-2433-7

Knowlden, A., & Conrad, E. (2018). Two-Year Outcomes of the Enabling Mothers to Prevent Pediatric Obesity Through Web-Based Education and Reciprocal Determinism (EMPOWER) Randomized Control Trial. *Health Education & Behavior, 45*(2), 262-276. https://doi.org/10.1177/1090198117732604

Knowlden, A., & Sharma, M. (2016). One-Year Efficacy Testing of Enabling Mothers to Prevent Pediatric Obesity Through Web-Based Education and Reciprocal Determinism (EMPOWER) Randomized Control Trial. *Health Education & Behavior*, *43*(1), 94-106. https://doi.org/10.1177/1090198115596737

Knowlden, A. P., Sharma, M., Cottrell, R. R., Wilson, B. R. A., & Johnson, M. L. (2015). Impact Evaluation of Enabling Mothers to Prevent Pediatric Obesity Through Web-Based Education and Reciprocal Determinism (EMPOWER) Randomized Control Trial. *Health Education & Behavior*, *42*(2), 171-184. https://doi.org/10.1177/1090198114547816

Koller D. (2017). 'Kids need to talk too': inclusive practices for children's healthcare education and participation. *Journal of Clinical Nursing*, *26*(17-18), 2657–2668. https://doi.org/10.1111/jocn.13703

Krockow, E. M., Riviere, E., & Frosch, C. A. (2019). Improving shared health decision making for children and adolescents with chronic illness: A narrative literature review. *Patient Education and Counseling*, *102*(4), 623–630. https://doi.org/10.1016/j.pec.2018.11.017

Kruk, M. E., Porignon, D., Rockers, P. C., & Van Lerberghe, W. (2010). The contribution of primary care to health and health systems in low- and middle-income countries: a critical review of major primary care initiatives. *Social Science & Medicine*, *70*(6), 904–911. https://doi.org/10.1016/j.socscimed.2009.11.025

Lansdown, G. (2010). The realization of children's participation rights: critical reflection. In B. Percy-Smith, & N. Thomas (Eds.), *A Handbook of Children and Young People Participation. Perspectives from theory and practice* (pp. 11-23). Routledge.

Lansdown, G. (2011). *Every Child's Right To Be Heard*. Save the Children. https://resourcentre.savethechildren.net/node/5259/pdf/5259.pdf

Larkins, C., Kiili; J., & Palsanen, K. (2014). A lattice of participation: reflecting on examples of children's and young people's collective engagement in influencing social welfare policies and practices. *European Journal of Social Work, 17*(5), 718-736. https://doi.org/10.1080/13691457.2014.928269

Laverack, G. (2005). *Public Health. Power, Empowerment and Professional Practice*. Palgrave Mcmillam.

Leininger M. (1980). Caring: a central focus of nursing and health care services. *Nursing & Health,1*(3), 135–176.

Lindacher, V., Curbach, J., Warrelmann, B., Brandstetter, S., & Loss, J. (2018). Evaluation of Empowerment in Health Promotion Interventions: A Systematic Review. *Evaluation & the Health Professions*, *41*(3), 351–392. https://doi.org/10.1177/0163278716688065

Lopes, C., Torres, D., Oliveira, A., Severo, M., Alarcão, V., Guiomar, S., Mota, J., Teixeira, P., Rodrigues, S., Lobato, L., Magalhães, V., Correia, D., Carvalho, C., Pizarro, A., Marques, A., Vilela, S., Oliveira, L., Nicola, P., Soares, S., Ramos, E. (2016). *Inquérito Alimentar Nacional e de Atividade Física, IAN-AF 2015-2016: Relatório de resultados* [National Survey on Food and Physical activity 2015-2016: Results report]. Universidade do Porto. https://ian-af.up.pt/sites/default/files/IAN-AF%20Relat%C3%B3rio%20Resultados_0.pdf

Lundy, L. (2007) Voice is not enough: Conceptualizing Article 12 of the United Nations Convention on the Rights of the Child. *British Educational Research Journal*, *33*(6), 927-42. https://doi.org/10.1080/01411920701657033

Lundy, L. (2018). In defence of tokenism? Implementing children's right to participate in collective decision-making, *Childhood, 25*(3), 340–354. https://doi.org/10.1177/09075 68218777292.

MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological Methods, 4*(1), 84–99. https://doi.org/10.1037/1082-989X.4.1.84

Martin, J., Chater, A., & Lorencatto, F. (2013). Effective behavior change techniques in the prevention and management of childhood obesity. *International Journal of Obesity and Related Metabolic Disorders, 37*(10), 1287-1294. https://doi.org/10.1038/ijo.2013.107

Mas, J. M., Dunst, C. J., Balcells-Balcells, A., Garcia-Ventura, S., Giné, C., & Cañadas, M. (2019). Family-centered practices and the parental well-being of young children with disabilities and developmental delay. *Research in Developmental Disabilities*, *94*, 103495. https://doi.org/10.1016/j.ridd.2019.103495

Mattocks, C., Ness, A., Deere, K., Tilling, K., Leary, S., Blair, S. N., & Riddoch, C. (2008). Early life determinants of physical activity in 11 to 12 year olds: cohort study. *BMJ*, *336*(7634), 26–29. https://doi.org/10.1136/bmj.39385.443565.BE

McCallion, P., Janicki, M. P., & Kolomer, S. R. (2004). Controlled evaluation of support groups for grandparent caregivers of children with developmental disabilities and delays. *American Journal of Mental Retardation*, *109*(5), 352–361. https://doi.org/10.1352/0895-8017(2004)109<352:CEOSGF>2.0.CO;2

McLean, N., Griffin, S., Toney, K., & Hardeman, W. (2003). Family involvement in weight control, weight maintenance and weight-loss interventions: a systematic review of randomized trials. *International Journal of Obesity and Related Metabolic Disorders*, *27*(9), 987-1005. https://doi.org/10.1038/sjijo.802383

McWhirter, E. H. (1991). Empowerment in counseling. *Journal of Counseling & Development, 69*(3), 222–227. https://doi.org/10.1002/j.1556-6676.1991.tb01491.x

McWhirter, E. H. (1994). *Counseling for Empowerment*. American Counseling Association.

McWhirter, E. H. (1998). An empowerment model of counsellor education. *Canadian Journal of Counselling*, *32*(1), 12-26.

Melvin, C. L., Jefferson, M. S., Rice, L. J., Nemeth, L. S., Wessell, A. M., Nietert, P. J., & Hughes-Halbert, C. (2017). A systematic review of lifestyle counseling for diverse patients in primary care. *Preventive Medicine*, *100*, 67–75. https://doi.org/10.1016/j.ypmed.2017.03.020

Michie, S., Atkins, L., & West, R. (2014). *The behaviour change wheel: A guide to designing interventions. Silverback Publishing*.

Michie, S., & Prestwich, A. (2010). Are interventions theory-based? Development of a theory coding scheme. *Health Psychology*, *29*(1), 1-8. https://doi.org/10.1037/a0016939

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., Eccles, M. P., Cane, J., & Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine*, *46*(1), 81-95. https://doi.org/10.1007/s12160-013-9486-6

Miller, W. R., & Rollnick, S. (2013). *Motivational interviewing: Helping people change* (3rd ed.). Guilford Press.

Ministério da Saúde. (2015). *Plano nacional de saúde – Revisão e extensão a 2020*. [National health plan – Review and extension to 2020]. Ministério da Saúde. http://1nj5ms2lli5hdggbe3mm7ms5-wpengine.netdna-ssl.com/files/2015/06/Plano-Nacional-de-Saude-Revisao-e-Extensao-a-2020.pdf.pdf

Ministério da Saúde (2018a). *Retrato da Saúde, Portugal 2018* [Health Portrait, Portugal 2018]. Ministério da Saúde. https://www.sns.gov.pt/wp-content/uploads/2018/04/RETRATO-DA-SAUDE_2018_compressed.pdf

Ministério da Saúde. (2018b). *Bilhete de identidade dos cuidados de saúde primários* [Primary health care identity card]. Ministério da Saúde. https://bicsp.min-saude.pt/

Ministério do Planeamento. (2021). Plano de Recuperação e Resiliência - Recuperar Portugal, Construindo o Futuro [Recovery and Resilience Plan – Recover Portugal, Building the Future]. Ministério do Planeamento. https://recuperarportugal.gov.pt/wp-content/uploads/2021/09/ficheiro-PRR.pdf

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. *PLoS Medicine 6*(7): e1000097. https://doi.org/10.1371/journal.pmed1000097

Mokkink, L. B., Terwee, C. B., Patrick, D. L., Alonso, J., Stratford, P. W., Knol, D. L., Bouter, L. M., & de Vet, H. C. (2010). The COSMIN checklist for assessing the methodological quality of studies on measurement properties of health status measurement instruments: an international Delphi study. *Quality of Life Research*, *19*(4), 539–549. https://doi.org/10.1007/s11136-010-9606-8

Mollborn, S., James-Hawkins, L., Lawrence, E., & Fomby, P. (2014). Health lifestyles in early childhood. *Journal of Health and Social Behavior*, *55*(4), 386–402. https://doi.org/10.1177/0022146514555981

Mollborn, S., & Lawrence, E. (2018). Family, Peer, and School Influences on Children's Developing Health Lifestyles. *Journal of Health and Social Behavior*, *59*(1), 133–150. https://doi.org/10.1177/0022146517750637

Mollborn, S., Lawrence, E., & Krueger, P. M. (2021). Developing Health Lifestyle Pathways and Social Inequalities across Early Childhood. *Population Research and Policy Review*, *40*(5), 1085–1117. https://doi.org/10.1007/s11113-020-09615-6

Monteiro, B. R. (2020). Monitoring and performance indicators in family health units and the objectives of Sustainable Development Goals (SDG 3) in health: a comparative analysis in Portugal in the 2013-2018 period. *Ciência & Saúde Colectiva, 25*(4), 1221-1232. http://dx.doi.org/10.1590/1413-81232020254.31422019

Moore, L., & Kirk, S. (2010). A literature review of children's and young people's participation in decisions relating to health care. *Journal of Clinical Nursing*, *19*(15-16), 2215–2225. https://doi.org/10.1111/j.1365-2702.2009.03161.x

Morgan, P. J., Young, M. D., Barnes, A. T., Eather, N., Pollock, E. R., & Lubans, D. R. (2019). Engaging Fathers to Increase Physical Activity in Girls: The "Dads And Daughters Exercising and Empowered" (DADEE) Randomized Controlled Trial. *Annals of Behavioral Medicine*, *53*(1), 39–52. https://doi.org/10.1093/abm/kay015

Nasir, A., Watanabe-Galloway, S., & DiRenzo-Coffey, G. (2016). Health Services for Behavioral Problems in Pediatric Primary Care. *The Journal of Behavioral Health Services & Research*, *43*(3), 396–401. https://doi.org/10.1007/s11414-014-9450-7

NCD Countdown 2030 collaborators (2018). NCD Countdown 2030: worldwide trends in non-communicable disease mortality and progress towards Sustainable Development Goal target 3.4. *Lancet*, *392*(10152), 1072–1088. https://doi.org/10.1016/S0140-6736(18)31992-5

Nicklaus, S., Boggio, V., Chabanet, C., & Issanchou, S. (2005). A prospective study of food variety seeking in childhood, adolescence and early adult life. *Appetite*, *44*(3), 289–297. https://doi.org/10.1016/j.appet.2005.01.006

Noordman, J., van der Weijden, T., & van Dulmen, S. (2012). Communication-related behavior change techniques used in face-to-face lifestyle interventions in primary care: a systematic review of the literature. *Patient Education and Counseling*, *89*(2), 227–244. https://doi.org/10.1016/j.pec.2012.07.006

Norlin, C., Crawford, M. A., Bell, C. T., Sheng, X., & Stein, M. T. (2011). Delivery of well-child care: a look inside the door. *Academic Pediatrics*, *11*(1), 18–26. https://doi.org/10.1016/j.acap.2010.12.008

Nunes, L. S., Sorensen, K., Pelikan, J., Cunha, M., Rodrigues, E., & Paixão, E. (2014). Cross-cultural adaptation and validation to Portuguese of the European Health Literacy Survey. *Atencion Primaria, 46*(Espec Cong 1), 13. https://doi.org/http://www.elsevier.es/es-revista-atencion-primaria-27-pdf-S0212656714700691

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill, Inc.

Nutbeam, D. (1986). Health promotion glossary. *Health Promotion*, *1*(1), 113–127. https://doi.org/10.1093/heapro/1.1.113

Nutbeam, D. (1998). Health promotion glossary. *Health Promotion International, 13*(4), 349-364. https://doi.org/10.1093/heapro/13.4.349

Nutbeam, D., & Muscat, D. M. (2021). Health Promotion Glossary 2021. *Health Promotion International*, daaa157. Advance online publication. https://doi.org/10.1093/heapro/daaa157

Observatório Português dos Sistemas de Saúde (2019). *Relatório de Primavera 2019: Saúde um direito humano*. [Spring 2019 Report: Health a Human Right]. Observatório Português dos Sistemas de Saúde. https://www.adeb.pt/files/upload/artigos/relatorio-primavera-saude-mental-2019.pdf

Olson, L. M., Inkelas, M., Halfon, N., Schuster, M. A., O'Connor, K. G., & Mistry, R. (2004). Overview of the content of health supervision for young children: reports from parents and pediatricians. *Pediatrics*, *113*(6 Suppl), 1907–1916.

Onwuegbuzie, A. J., & McLean, J. E. (2003). Expanding the Framework of Internal and External Validity in Quantitative Research. *Research in the Schools, 10*(1), 71–89.

Ordem dos Enfermeiros. (2011). *Padrões de Qualidade dos Cuidados de Enfermagem*. [Nursing Care Quality Standards]. Ordem dos Enfermeiros. https://www.ordemenfermeiros.pt/media/8903/divulgar-padroes-de-qualidade-dos-cuidados.pdf

Ordem dos Enfermeiros. (2015). *Comunicado: Implementação das experiências-piloto do enfermeiro de família* [Communiqué: Implementation of the family nurse's pilot experiences]. Ordem dos Enfermeiros. https://www.ordemenfermeiros.pt/arquivo-de-p%C3%A1ginas-antigas/comunicado-implementa%C3%A7%C3%A3o-das-experi%C3%AAncias-piloto-do-enfermeiro-de-fam%C3%ADlia/

Ordem dos Enfermeiros. (2018). *Estatísticas de Enfermeiros*. Ordem dos Enfermeiros. https://www.ordemenfermeiros.pt/media/11139/apresenta%C3%A7%C3%A3o.pdf

Organization of Economic Cooperation and Development (OECD). (2015). *OECD reviews of health care quality: Portugal 2015. Raising Standards.* OECD Publishing. https://doi.org/10.1787/9789264225985-en

Organization of Economic Cooperation and Development (OECD). (2019). *Health at a Glance 2019: OECD indicators*. OECD Publishing. https://doi.org/10.1787/19991312

Osborn, R., Moulds, D., Squires, D., Doty, M. M., & Anderson, C. (2014). International survey of older adults finds shortcomings in access, coordination, and patient-centered care. *Health Affairs*, *33*(12), 2247–2255. https://doi.org/10.1377/hlthaff.2014.0947

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., … Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*, *372*, n71. https://doi.org/10.1136/bmj.n71

Palumbo, R. (2017). *The bright side and the dark side of patient empowerment: Co-creation and co-destruction of value in the healthcare environment*. Springer.

Paterson, J. G., & Zderad, L. T. (1988). *Humanistic nursing* (2nd ed.). National League for Nursing Press.

Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17–59). Academic Press. https://doi.org/10.1016/B978-0-12-590241-0.50006-X

Peavy, R. V. (1996). Counselling as a culture of healing. *British Journal of Guidance and Counselling*, *24*(1), 141-150.

Pender, N., Murdaugh, C., & Parsons, M. A. (2011). *Health Promotion in Nursing Practice* (6th ed.). Pearson.

Peplau, H. E. (1988). *Interpersonal Relations in Nursing*. Palgrave Macmillan.

Percy-Smith, B., & Malone, K. (2001). Making children’s participation in neighbourhood settings relevant to everyday lives of young people. *PLA Notes, 42*, 18–22. http://pubs.iied.org/G01961/?k=PLA+42

Peyer, K. L., Bailey-Davis, L., & Welk, G. (2021). Development, Applications, and Refinement of the Family Nutrition and Physical Activity (FNPA) Child Obesity Prevention Screening. *Health Promotion Practice*, *22*(4), 456–461. https://doi.org/10.1177/1524839920922486

Peyer, K. L., & Welk, G. J. (2017). Construct validity of an obesity risk screening tool in two age groups. *International Journal of Environmental Research and Public Health, 14*(4), 419-431. https://doi: 10.3390/ijerph14040419

Pölkki, P., Vornanen, R., Pursiainen, M. & Riikonen, M. (2012). Children’s participation in child-protection processes as experienced by foster children and social workers. *Child Care in Practice, 18*(2), 107–25. https://doi.org/10.1080/13575279.2011.646954

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Britten, N., Roen, K., & Duffy, S. (2006). *Guidance on the Conduct of Narrative Synthesis in Systematic Reviews: A Product from the ESRC Methods Programme*. Lancaster University. https://doi:10.13140/2.1.1018.4643

Preston, C.C., & Colman, A.M. (2000). Optimal number of response categories in rating scales: reliability, validity, discriminatory power and respondent preferences. *Acta Psychologica,104*(1), 1-15. https://doi.org/10.1016/s0001-6918(99)00050-5

Quaye, A. A., Coyne, I., Söderbäck, M., & Hallström, I. K. (2019). Children's active participation in decision-making processes during hospitalisation: An observational study. *Journal of Clinical Nursing*, *28*(23-24), 4525–4537. https://doi.org/10.1111/jocn.15042

Racine, A. D. (2016). The economics of child development. In R. D. Briggs (Ed.), *Integrated Early Childhood Behavioral Health in Primary care* (pp. 17-34). Springer.

Rappaport J. (1981). In praise of paradox: a social policy of empowerment over prevention. *American Journal of Community Psychology*, *9*(1), 1–25. https://doi.org/10.1007/BF00896357

Rappaport J. (1987). Terms of empowerment/exemplars of prevention: toward a theory for community psychology. *American Journal of Community Psychology*, *15*(2), 121–148. https://doi.org/10.1007/BF00919275

Rappaport, J., Hess, R., & Swift, C. (1984). *Studies in empowerment: steps toward understanding and action*. Haworth Press.

Ravanipour, M., Salehi, S., Taleghani, F., Abedi, H. A., Ishaghi, S. R., Schuurmans M. J., & Jong, A. D. (2008). Sense of power among older people in Iran. *Educational Gerontology, 34*(10), 923-38. https://doi.org/10.1080/03601270802243747

Rayner, M., Wickramasinghe, K., Williams, J., Mendis, S., & McColl, K. (Eds.). (2017). *An introduction to population-level prevention of non-communicable diseases*. Oxford University Press.

Regulamento n.º 190/2015. (2015). Regulamento do perfil de competências do enfermeiro de cuidados gerais [Regulation of the competence profile of the general care nurse]. *Diário da República, 2* (79, 23 de abril), 10087-10090. https://dre.pt/application/file/a/67058698

Regulamento n.º 428/2018. (2018). Regulamento de competências específicas do enfermeiro especialista em enfermagem comunitária na área de enfermagem de saúde comunitária e de saúde pública e na área de enfermagem de saúde familiar [Regulation of specific competences of the nurse specialist in community nursing in the area of community health and public health nursing and in the area of family health nursing]. *Diário da República, 2* (135, 16 de julho), 19354-19359.

Reilly, J. J. (2008). Physical activity, sedentary behaviour and energy balance in the preschool child: opportunities for early obesity prevention. *The Proceedings of the Nutrition Society*, *67*(3), 317–325. https://doi.org/10.1017/S0029665108008604

Richards, D. A., & Borglin, G. (2011) Complex interventions and nursing: looking through a new lens at nursing research. *International Journal of Nursing Studies, 48*(5), 531-533. https://doi.org/10.1016/j.ijnurstu.2011.02.013

Riley, A. R., Walker, B. L., Wilson, A. C., Hall, T. A., Stormshak, E. A., & Cohen, D. J. (2019). Parents' Consumer Preferences for Early Childhood Behavioral Intervention in Primary Care. *Journal of Developmental and Behavioral Pediatrics*, *40*(9), 669–678. https://doi.org/10.1097/DBP.0000000000000736

Rito, A., Cruz de Sousa, R., Mendes, S., & Graça, P. (2017). *Childhood obesity surveillance initiative: COSI Portugal 2016*. Instituto Nacional de Saúde Doutor Ricardo Jorge. http://hdl.handle.net/10400.18/4857

Rolland-Cachera, M. F. (2011). Childhood obesity: Current definitions and recommendations for their use. *International Journal of Pediatric Obesity, 6*(5-6), 325-31. https://doi: 10.3109/17477166.2011.607458

Ruel, E., Wagner, W. E. III, & Gilllespie, B. J. (2016). *The practice of survey research: Theory and applications*. SAGE Publications.

Sameroff A. (2010). A unified theory of development: a dialectic integration of nature and nurture. *Child Development*, *81*(1), 6–22. https://doi.org/10.1111/j.1467-8624.2009.01378.x

Schafer, J. L., & Graham, J. W. (2002). Missing data: our view of the state of the art. *Psychological Methods*, *7*(2), 147-177.

Schalkers, I., Parsons, C. S., Bunders, J. F., & Dedding, C. (2016). Health professionals' perspectives on children's and young people's participation in health care: a qualitative multihospital study. *Journal of Clinical Nursing*, *25*(7-8), 1035–1044. https://doi.org/10.1111/jocn.13152

Schouten, B. C., & Meeuwesen, L. (2006). Cultural differences in medical communication: a review of the literature. *Patient Education and Counseling*, *64*(1-3), 21–34. https://doi.org/10.1016/j.pec.2005.11.014

Schuster, M. A., Duan, N., Regalado, M., & Klein, D. J. (2000). Anticipatory guidance: what information do parents receive? What information do they want? *Archives of Pediatrics & Adolescent Medicine*, *154*(12), 1191–1198. https://doi.org/10.1001/archpedi.154.12.1191

Scott, A., Sivey, P., Ait Ouakrim, D., Willenberg, L., Naccarella, L., Furler, J., & Young, D. (2011). The effect of financial incentives on the quality of health care provided by primary care physicians. *The Cochrane Database of Systematic Reviews*, (9), CD008451. https://doi.org/10.1002/14651858.CD008451.pub2

Seid, M., & Varni, J.W. (2005). Measuring primary care for children of Latino farmworkers: Reliability and validity of the parent's perceptions of primary care measure (P3C). *Maternal and Child Health Journal*, *9*(1), 49-57. https://doi: 10.1007/s10995-005-2450-8.

Seid, M., Varni, J. W., Bermudez, L. O., Zivkovic, M., Far, M. D., Nelson, M., & Kurtin, P. S. (2001). Parents' Perceptions of Primary Care: Measuring parents' experience of pediatric primary care quality. *Pediatrics, 108*(2), 264-70. https://doi: 10.1542/peds.108.2.264

Shier, H. (2001). Pathways to Participation: Openings, Opportunities and Obligations. *Children & Society, 15*(2), 107–117. https://doi.org/10.1002/chi.617

Shier, H. (2019) Student Voice and Children's Rights: Power, Empowerment, and "Protagonismo". In M. Peters (Ed.), *Encyclopedia of Teacher Education*. Springer. https://doi.org/10.1007/978-981-13-1179-6_27-1

Sidell, M. (1997). Supporting individuals and facilitating change: the role of counselling skills. In J. Katz, A. Peberdy, & J. Douglas (Eds). *Promoting health: Knowledge and practice* (pp. 133-154). Macmillan Education.

Simões, J., Augusto, G. F., Fronteira, I., & Hernández-Quevedo, C. (2017). Portugal: Health system review. *Health Systems in Transition*, *19*(2), 1-184.

Singer, E. (2018). The use and effects of incentives in Surveys. In D. L. Vannette, & J. A. Krosnick (Eds.), *The Palgrave Handbook of Survey Research* (pp. 63-70). Palgrave Macmillan.

Skouteris, H., McCabe, M., Swinburn, B., Newgreen, V., Sacher, P., & Chadwick, P. (2011). Parental influence and obesity prevention in pre-schoolers: a systematic review of interventions. *Obesity Reviews*, *12*(5), 315–328. https://doi.org/10.1111/j.1467-789X.2010.00751.x

Smith M. C. (1999). Caring and the science of unitary human beings. *Advances in Nursing Science*, *21*(4), 14–28. https://doi.org/10.1097/00012272-199906000-00006

Soohbany, M. S. (1999). Counselling as part of the nursing fabric: where is the evidence? A phenomenological study using 'reflection on actions' as a tool for framing the 'lived counselling experiences of nurses'. *Nurse Education Today*, *19*(1), 35–40. https://doi.org/10.1054/nedt.1999.0608

Spencer, G. (2013). *Empowerment, Health Promotion and Young People: A Critical Approach*. Routledge.

Stålberg, A., Sandberg, A. & Söderbäck, M. (2016). Younger children's (three to five years) perceptions of being in a health-care situation. *Early Child Development and Care, 186*(5), 832-844. https://doi.org/10.1080/03004430.2015.1064405

Starfield, B., Shi, L., & Macinko, J. (2005). Contribution of primary care to health systems and health. *The Milbank Quarterly*, *83*(3), 457–502. https://doi.org/10.1111/j.1468-0009.2005.00409.x

Sterne, J. A. C., Savović. J., Page, M. J., Elbers, R. G., Blencowe, N. S, Boutron I., Cates, C. J., Cheng, H. Y., Corbett, M. S., Eldridge, S. M., Emberson, J. R., Hernán, M. A., Hopewell, S., Hróbjartsson, A., Junqueira, D. R., Jüni, P., Kirkham, J. J., Lasserson, T., Li, T., McAleenan, A., … Higgins, J. (2019). RoB 2: a revised tool for assessing risk of bias in randomised trials. *BMJ, 366*, l4898. https://doi.org/10.1136/bmj.l4898

Strawbridge, S. (1999). Counselling and psychotherapy as enabling and empowering. In C. Feltham (Ed.), *Controversies in psychotherapy and counselling* (pp. 294 – 303). Sage Publications.

Swallow, V. M., Knafl, K., Santacroce, S., Campbell, M., Hall, A. G., Smith, T., & Carolan, I. (2014). An interactive health communication application for supporting parents managing childhood long-term conditions: outcomes of a randomized controlled feasibility trial. *JMIR Research Protocols*, *3*(4), e69. https://doi.org/10.2196/resprot.3716

Swanson, K. (1999). What is known about caring in nursing science? In A. S. Hinshaw, S. Fleetham, & J. Shaver (Eds.), *Handbook of clinical nursing research* (pp. 31-60). Sage.

Tabachnick, B. G., & Fidell, L.S. (2014). *Using Multivariate Statistics* (6th ed.). Pearson Education Limited.

Tami, S. H., Reed, D. B., Trejos, E., Boylan, M., & Wang, S. (2015). Pilot Study: Survey Tools for Assessing Parenting Styles and Family Contributors to the Development of Obesity in Arab Children Ages 6 to 12 Years. *Ethnicity & Disease*, *25*(4), 463–468. https://doi.org/10.18865/ed.25.4.463

Tengland P. A. (2008). Empowerment: a conceptual discussion. *Health Care Analysis*, *16*(2), 77–96. https://doi.org/10.1007/s10728-007-0067-3

Tengland P. A. (2016). Behavior Change or Empowerment: On the Ethics of Health-Promotion Goals. *Health Care Analysis*, *24*(1), 24–46. https://doi.org/10.1007/s10728-013-0265-0

Thomas, J., Harden, Angela, & Newman, M. (2012). Synthesis: Combining results systematically and appropriately. In D. Gough, S. Oliver, & J. Thomas (Eds.), *An introduction to systematic reviews* (pp. 179-226). SAGE Publications.

Treseder, P. (1997). *Empowering children & young people: Promoting involvement in decision-making*. Save the Children.

Trivette, C. M., Dunst, C. J., & Hamby, D. (1996). Characteristics and consequences of help-giving practices in contrasting human services programs. *American Journal of Community Psychology*, *24*(2), 273–293. https://doi.org/10.1007/BF02510402

Trivette, C. M., Dunst, C. J., & Hamby, D. W. (2010). Influences of family-systems intervention practices on parent-child interactions and child development. *Topics in Early Childhood Special Education, 30*, 3–19. https://doi.org/10.1177/0271121410364250

Tucker, J. M., Howard, K., Guseman, E. H., Yee, K. E., Saturley, H., & Eisenmann, J. C. (2017). Association between the Family Nutrition and Physical Activity Screening Tool and obesity severity in youth referred to weight management. *Obesity Research & Clinical Practice*, *11*(3), 268–275. https://doi.org/10.1016/j.orcp.2016.09.007

Turley, J., Vanek, J., Johnston, S., & Archibald, D. (2018). Nursing role in well-child care: Systematic review of the literature. *Canadian Family Physician Medecin de Famille Canadien*, *64*(4), e169–e180.

United Nations. (1989). *Convention on the Rights of the Child*. United Nations. https://www.ohchr.org/Documents/ProfessionalInterest/crc.pdf

United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. United Nations. https://sdgs.un.org/publications/transforming-our-world-2030-agenda-sustainable-development-17981

United Nations Committee on the Rights of the Child (UN CRC). (2006) *General comment No. 7 (2005): Implementing child rights in early childhood. UN/CRC/GC/7*. United Nations. https://www2.ohchr.org/english/bodies/crc/docs/AdvanceVersions/GeneralComment7Rev1.pdf

United Nations Committee on the Rights of the Child (UN CRC). (2009). *General comment No. 12 (2009): The right of the child to be heard. UN/CRC/C/GC/12.* United Nations. https://www2.ohchr.org/english/bodies/crc/docs/AdvanceVersions/CRC-C-GC-12.pdf

van Ryn, M., & Heaney, C. A. (1997). Developing effective helping relationships in health education practice. *Health Education & Behavior*, *24*(6), 683–702. https://doi.org/10.1177/109019819702400603

Varni, J. W., Seid, M., & Kurtin, P. S. (2001). PedsQL 4.0: reliability and validity of the Pediatric Quality of Life Inventory version 4.0 generic core scales in healthy and patient populations. *Medical Care*, *39*(8):800-12. https://doi: 10.1097/00005650-200108000-00006.

Ventura, A. K., & Birch, L. L. (2008). Does parenting affect children's eating and weight status? *The International Journal of Behavioral Nutrition and physical Activity*, *5*, 15. https://doi.org/10.1186/1479-5868-5-15

Virkki, M., Tolonen, T. H., Koskimaa, T., & Paavilainen, E. (2015). Children as decision-makers in health care – An integrative review. *Clinical Nursing Studies*, *3*, 47–54. https://doi.org/10.5430/cns.v3n1p47

von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., Vandenbroucke, J. P., & STROBE Initiative (2014). The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: Guidelines for reporting observational studies. *International Journal of Surgery*, *12*(12), 1495–1499. https://doi.org/10.1016/j.ijsu.2014.07.013

Walton, N. (2014). Participation in paediatric research studies. In R. Zlotnik Shaul (Ed.). *Paediatric patient and family-centred care: Ethical and legal issues* (pp. 187-207). Springer.

Wanyonyi, K. L., Themessl-Huber, M., Humphris, G., & Freeman, R. (2011). A systematic review and meta-analysis of face-to-face communication of tailored health messages: implications for practice. *Patient Education and Counseling*, *85*(3), 348–355. https://doi.org/10.1016/j.pec.2011.02.006

Watson, J. (1985). *Nursing: The Philosophy and Science of Caring*. Colorado Associated University Press.

Watson, J. (2013). Nursing: The philosophy and science of caring. In M. C. Smith, M.C. Turkel, & Z. R. Wolf (Eds.), *Caring in Nursing Classics: An Essential Resource*, (Revised ed., pp. 243–264). Springer Publishing Company.

Watson, J. (2019). Assessing and Measuring Caring in Nursing and Health Sciences. In K. Sitzman, & J. Watson (Eds.), *Assessing and measuring caring in nursing and health sciences* (pp. 3-12). Springer Publishing Company.

Werbrouck, A., Swinnen, E., Kerckhofs, E., Buyl, R., Beckwée, D., & De Wit, L. (2018). How to empower patients? A systematic review and meta-analysis. *Translational Behavioral Medicine, 8*(5), 660-674. https://doi.org/10.1093/tbm/iby064

Westland, H., Schröder, C. D., de Wit, J., Frings, J., Trappenburg, J., & Schuurmans, M. J. (2018). Self-management support in routine primary care by nurses. *British Journal of Health Psychology*, *23*(1), 88–107. https://doi.org/10.1111/bjhp.12276

Wickrama, K. A., Conger, R. D., Wallace, L. E., & Elder, G. H., Jr (1999). The intergenerational transmission of health-risk behaviors: adolescent lifestyles and gender moderating effects. *Journal of Health and Social Behavior*, *40*(3), 258–272.

Willems, S., De Maesschalck, S., Deveugele, M., Derese, A., & De Maeseneer, J. (2005). Socio-economic status of the patient and doctor-patient communication: does it make a difference? *Patient Education and Counseling*, *56*(2), 139–146. https://doi.org/10.1016/j.pec.2004.02.011

Willis, G.B. (2005). *Cognitive interviewing a tool for improving questionnaire design*. Sage Publications.

Willis, G. B. (2018). Cognitive interviewing in survey design: State of the science and future directions. In D. L. Vannette, & J. A. Krosnick (Eds.), *The Palgrave Handbook of Survey Research* (pp. 103-106). Palgrave Macmillan.

Wong, N. T., Zimmerman, M. A., & Parker, E. (2010). A tipology of youth participation and empowerment for children and adolescent health promotion. *American Journal of Community Psychology, 46* (1-2), 100-114. https://doi.org/10.1007/s10464-010-9330-0

World Bank. (2020). *World Bank Country and Lending Groups: Country Classification 2020.* https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

World Health Organization (WHO). (1986). *Otawa Charter for Health Promotion*. WHO Regional Office for Europe. http://www.euro.who.int/__data/assets/pdf_file/0004/129532/Ottawa_Charter.pdf

World Health Organization (WHO). (1998). *Health promotion Glossary*. World Health Organization. https://www.who.int/healthpromotion/about/HPR%20Glossary%201998.pdf

World Health Organization (WHO). (2000). *Nurses and midwives for health: WHO European strategy for nursing and midwifery education*. WHO Regional Office for Europe. https://apps.who.int/iris/handle/10665/107689

World Health Organization (WHO). (2014). *Investing in Children: The European child and adolescent health strategy 2015-2020*. WHO Regional Office for Europe. https://www.euro.who.int/__data/assets/pdf_file/0010/253729/64wd12e_InvestCAHstrategy_140440.pdf

World Health Organization (WHO). (2015). *The Minsk Declaration: The Life-Course Approach in the Context of Health 2020*. WHO Regional Office for Europe. https://www.euro.who.int/__data/assets/pdf_file/0009/289962/The-Minsk-Declaration-EN-rev1.pdf

World Health Organization (WHO). (2016a). *Integrating diet, physical activity and weight management services into primary care*. WHO Regional Office for Europe. https://www.euro.who.int/__data/assets/pdf_file/0016/324304/Integrating-diet-physical-activity-weight-management-services-primary-care.pdf

World Health Organization (WHO). (2016b). *Report of the Commission on Ending childhood Obesity*. World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/204176/?sequence=1

World Health Organization (WHO). (2016c). Framework on integrated, people centred health services. World Health Organization. https://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_39-en.pdf

World Health Organization (WHO). (2018a). *Declaration on Primary Health Care*. World Health Organization. https://www.who.int/teams/primary-health-care/conference/declaration

World Health Organization (WHO). (2018b). *Towards a Global Action Plan for Healthy Lives and Well-Being for All. Uniting to accelerate progress toward the health-related SDGs*. World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/311667/WHO-DCO-2018.3-eng.pdf?sequence=1&isAllowed=y

World Health Organization (WHO). (2020a). *AnthroPlus for personal computers manual: Software for assessing growth of the world's children and adolescents*. World Health Organization. https://www.who.int/tools/growth-reference-data-for-5to19-years/application-tools

World Health Organization (WHO). (2020b). *Body Mass Index - BMI*. World Health Organization. https://www.euro.who.int/en/health-topics/disease-prevention/nutrition/a-healthy-lifestyle/body-mass-index-bmi

World Health Organization (WHO). (2020c). *The impact of the COVID-19 pandemic on noncommunicable disease resources and services: results of a rapid assessment.* World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/334136/9789240010291-eng.pdf?sequence=1&isAllowed=y

World Medical Association (2013). *Ethical principles for medical research involving human subjects*. World Medical Association. https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/

Wrong, D. (2002). *Power: Its Forms, Bases and Uses* (3rd ed.). Transaction.

Wyatt, K. D., List, B., Brinkman, W. B., Prutsky Lopez, G., Asi, N., Erwin, P., Wang, Z., Domecq Garces, J. P., Montori, V. M., & LeBlanc, A. (2015). Shared Decision Making in Pediatrics: A Systematic Review and Meta-analysis. *Academic Pediatrics*, *15*(6), 573–583. https://doi.org/10.1016/j.acap.2015.03.011

Yee, K. E., Eisenmann, J. C., Carlson, J. J., & Pfeiffer, K. A. (2011). Association between the Family Nutrition and Physical Activity Screening Tool and cardiovascular disease risk factors in 10-year-old children. *International Journal of Pediatric Obesity*, *6*(3-4), 314–20. https://doi: 10.3109/17477166.2011.590198

Yee, K. E., Pfeiffer, K. A., Turek, K., Bakhoya, M., Carlson, J. J., Sharman, M., Lamb, E., & Eisenmann, J. C. (2015). Association of the family nutrition and physical activity screening tool with weight status, percent body fat, and acanthosis nigricans in children from a low socioeconomic, urban community. *Ethnicity and Disease*, *25*(4), 399-404. https://doi: 10.18865/ed.25.4.399

Young, B., Dixon-Woods, M., Windridge, K. C., & Heney, D. (2003). Managing communication with young people who have a potentially life threatening chronic illness: Qualitative study of patients and parents. *British Medical Journal,* *326*(7384), 305–309. https://doi.org/10.1136/bmj.326.7384.305

Young, M. D., Lubans, D. R., Barnes, A. T., Eather, N., Pollock, E. R., & Morgan, P. J. (2019). Impact of a father-daughter physical activity program on girls' social-emotional well-being: A randomized controlled trial. *Journal of consulting and Clinical Psychology*, *87*(3), 294–307. https://doi.org/10.1037/ccp0000374

Zare, N., Ravanipour, M., Bahreini, M., Motamed, N., Hatami, G., & Nemati, H. (2017). Effect of a Self-Management Empowerment Program on Anger and Social Isolation of Mothers of children with Cerebral Palsy: A Randomized Controlled Clinical Trial. *Evidence Based Care Journal, 7*(3), 35-44. https://doi.org/10.22038/EBCJ.2017.26072.1598

Zimmerman M. A. (1995). Psychological empowerment: issues and illustrations. *American Journal of Community Psychology*, *23*(5), 581–599. https://doi.org/10.1007/BF02506983

Zimmerman, M. A., & Warschausky, S. (1998). Empowerment theory for rehabilitation research: Conceptual and methodological issues. *Rehabilitation Psychology*, *43*(1), 3.

APPENDICES

Appendix I

PRISMA Checklist

Prisma Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE		Examining Empowerment Health Interventions with Families and Preschool-age Children–A Systematic Review of Randomized Controlled Trials	PAPER 1
Title	1	Identify the report as a systematic review.	Title
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	Abstract
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	pp. 1-3
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	p. 3
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	p. 3
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	p. 3
Search strategy	7	Present the full search strategies for all databases, registers, and websites, including any filters and limits used.	Appendix A
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	p. 3
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	p. 3
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g., for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	pp. 3-4
	10b	List and define all other variables for which data were sought (e.g., participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	pp. 3-4
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	p. 4
Effect measures	12	Specify for each outcome the effect measure(s) (e.g., risk ratio, mean difference) used in the synthesis or presentation of results.	p. 4

(continued)

Prisma Checklist (continued)

Section and Topic	Item #	Checklist item	Location where item is reported
METHODS			
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g., tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	-
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	p. 4
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	p. 4
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	p. 4
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g., subgroup analysis, meta-regression).	-
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	-
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	-
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	p. 4
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Figure 1, p. 5
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	-
Study characteristics	17	Cite each included study and present its characteristics.	Table 1 and 2 (pp. 6-11)
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Appendix B
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g., confidence/credible interval), ideally using structured tables or plots.	Table 2 (pp. 8-11)
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	-
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g., confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Table 2 (pp. 8-11)
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	-
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	-

(continued)

Prisma Checklist (continued)

Section and Topic	Item #	Checklist item	Location where item is reported
RESULTS			
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	-
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Table 2 (pp. 8-11)
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	p. 16
	23b	Discuss any limitations of the evidence included in the review.	p. 12, p. 16
	23c	Discuss any limitations of the review processes used.	p. 17
	23d	Discuss implications of the results for practice, policy, and future research.	pp.16-17
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Described in the thesis section 3.4.1
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Thesis section 3.4.1
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	-
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	-
Competing interests	26	Declare any competing interests of review authors.	-
Availability of data, code, and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Supplemental material

Adapted from “The PRISMA 2020 statement: an updated guideline for reporting systematic reviews”, by M. J. Page, J. E McKenzie, P. M Bossuyt, I. Boutron, T. C. Hoffmann, C. D. Mulrow, L. Shamseer, J. M. Tetzlaff, E. A. Akl, S. E Brennan, R. Chou, J. Glanville, J. M., Grimshaw, A. Hróbjartsson, M. M. Lalu, T. Li, E. W. Loder, E. Mayo-Wilson, S. McDonald, L. A. McGuinness… D. Moher, 2021, BMJ, *372*(71), Supplementary material (https://doi: 10.1136/bmj.n71). Copyright 2021 by the BMJ.

Appendix II

STROBE Statement Checklist

STROBE Statement—Checklist of Items that Should be Included in Reports of Cross-Sectional Studies

	Item No	Recommendation	Page No
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	Publication 2, p. 1
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	p. 1
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	p. 1-2
Objectives	3	State specific objectives, including any prespecified hypotheses	p. 2
Methods			
Study design	4	Present key elements of study design early in the paper	p. 2
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	p. 2
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants	p. 2
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	pp. 2-4
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	pp. 2-4
Bias	9	Describe any efforts to address potential sources of bias	Described in thesis, section 5.5
Study size	10	Explain how the study size was arrived at	p. 3
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	p. 4
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	p. 4
		(*b*) Describe any methods used to examine subgroups and interactions	
		(*c*) Explain how missing data were addressed	
		(*d*) If applicable, describe analytical methods taking account of sampling strategy	
		(*e*) Describe any sensitivity analyses	

(continued)

STROBE Statement—Checklist of Items that Should be Included in Reports of Cross-Sectional Studies (continued)

	Item No	Recommendation	Page No
Results			
Participants	13	(a) Report numbers of individuals at each stage of study—e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	Figure 1, p.3
		(b) Give reasons for non-participation at each stage	
		(c) Consider use of a flow diagram	
Descriptive data	14	(a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders	pp. 4-5
		(b) Indicate number of participants with missing data for each variable of interest	
Outcome data	15	Report numbers of outcome events or summary measures	pp. 5-6
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included	pp. 5-6
		(*b*) Report category boundaries when continuous variables were categorized	
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	
Other analyses	17	Report other analyses done—e.g., analyses of subgroups and interactions, and sensitivity analyses	
Discussion			
Key results	18	Summarise key results with reference to study objectives	p. 6
Limitations	19	Discuss limitations of the study, considering sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	pp. 6-7
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	pp. 6-7
Generalizability	21	Discuss the generalizability (external validity) of the study results	p. 7
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Not applicable

Adapted from Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Checklists, 2021 (https://www.strobe-statement.org/checklists/). In the public domain.

Appendix III

End of Study Questionnaire Addressed to Nurse

Nº ☐☐☐☐

Data de preenchimento ___/___/201_

Questionário Pós 4ª Consulta de Vigilância de Saúde Infantil dos 5 Anos de Idade ao(s) Enfermeiro(s)

Este questionário faz parte de um estudo que tem como objetivo caracterizar a Consulta de Vigilância de Saúde aos 5 anos de idade, realizada pelos enfermeiros.

O questionário contém um conjunto de questões sociodemográficas e profissionais que pretendem caracterizar os enfermeiros que participam no estudo.

O questionário é de fácil preenchimento e o tempo de resposta é de aproximadamente 5 minutos. Para a maioria das questões basta-lhe assinalar com uma cruz (X) ou círculo (O) no quadro respetivo. Outras questões envolvem respostas curtas. Pedimos-lhe que responda, tanto quanto possível, a todas as questões. Lembramos-lhe que não existem respostas corretas ou incorretas, boas ou más. Interessa-nos a sua opinião sincera. O questionário é anónimo e as suas respostas são inteiramente confidenciais.

Agradecemos antecipadamente o tempo e a atenção que irá disponibilizar para responder a este questionário.

A. Identificação Sociodemográfica e Profissional

A.1. Género

☐ Masculino

☐ Feminino

A.2. Idade

______ anos

A.3. Habilitações académicas (selecione a mais elevada)

☐	Curso de Enfermagem Geral
☐	Bacharelato em Enfermagem
☐	Licenciatura em Enfermagem
☐	Especialização em Enfermagem. Identifique qual: ________________________
☐	Mestrado. Identifique qual: ____
☐	Doutoramento. Identifique qual: ______________________________________

A.4. Tempo de exercício profissional

Na prestação de cuidados: _________anos ______meses (se inferior a 1 ano)

Na prestação de cuidados em Cuidados de Saúde Primários: _______ anos _______meses (se inferior a 1 ano).

Nesta unidade de cuidados de saúde: ____ anos ____meses (se inferior a 1 ano)

A.5. Formação em educação para o *empowerment* dos clientes (e.g., entrevista motivacional, *counselling*, intervenções centradas na pessoa e família, partilha da tomada de decisão, *coaching* de saúde, literacia em saúde, etc.)

☐	Contexto Académico
☐	Formação contínua. Se sim indique a duração: ___ < de 4 horas ___ 4-8 horas ___ 9-12h ___ 13-48h ___>48h
☐	Autoformação
☐	Nenhuma

A.6. Formação em Obesidade Infantil

☐	Contexto Académico
☐	Formação contínua. Se sim indique a duração: ___ < de 4 horas ___ 4-8 horas ___ 9-12h ___ 13-48h ___>48h
☐	Autoformação
☐	Nenhuma

B. O seu Peso e Altura

B.1. Sem sapatos, qual é a sua altura? _____

B.2. Sem sapatos, qual é o seu peso? _____

Muito obrigada por responder a este questionário!

A sua colaboração foi muito importante.

Por favor, coloque o questionário no envelope, feche o envelope, e entregue-o ao investigador.

Appendix IV

Pre-consultation Questionnaire Addressed to Family

Nº | | | | |

Data de preenchimento ___/___/201_

Questionário Pré-Consulta de Vigilância de Saúde Infantil à(s) Família(s)

Este questionário faz parte de um estudo que tem como objetivo caracterizar a Consulta de Vigilância de Saúde aos 5 anos de idade, realizada pelos enfermeiros.

O questionário contém um conjunto de questões que procuram caracterizar o perfil sociodemográfico das famílias que participam no estudo.

O questionário é de fácil preenchimento e o tempo de resposta é de aproximadamente 5 minutos. Para a maioria das questões basta-lhe assinalar com uma cruz (X) ou círculo (O) no quadro respetivo. Outras questões envolvem respostas curtas. Pedimos-lhe que responda, tanto quanto possível, a todas as questões com sinceridade. Lembramos-lhe que não existem respostas corretas ou incorretas, boas ou más. O questionário é anónimo e as suas respostas são inteiramente confidenciais.

Agradecemos antecipadamente o tempo e a atenção que irá disponibilizar para responder a este questionário.

A. Caracterização sociodemográfica do agregado familiar

A.1. Identifique quem está a preencher este questionário

☐	Mãe biológica da criança
☐	Pai biológico da criança
☐	Companheiro/a da mãe da criança
☐	Companheira/o do pai da criança
☐	Avó
☐	Outra pessoa. Por favor, indique quem: ____________________________________

A.2. Idade dos pais biológicos da criança que hoje tem a consulta

Idade da mãe: _____ anos

Idade do pai: _____ anos

A.3. País onde nasceram os pais

A mãe da criança nasceu em ____________________ (indique o país)

O pai da criança nasceu em _____________________ (indique o país)

A.4. Escolaridade dos pais

	Mãe	**Pai**	**Companheiro/a da Mãe que não o Pai**	**Companheiro/a do Pai que não a Mãe**
Não sabe ler nem escrever	☐	☐	☐	☐
Sabe ler e escrever sem diploma ou sem 1.º Ciclo completo	☐	☐	☐	☐
Completou 1. º Ciclo Ensino Básico (atual 4º ano/antiga instrução primária/4ª classe)	☐	☐	☐	☐
Completou 2. º Ciclo Ensino Básico (atual 6º ano/antigo ciclo preparatório)	☐	☐	☐	☐
Completou 3. º Ciclo Ensino Básico (atual 9º ano/antigo 5º ano do liceu)	☐	☐	☐	☐

(continua)

Vire a página, por favor.

A.4. Escolaridade dos pais (cont.)

	Mãe	**Pai**	**Companheiro/a da Mãe que não o Pai**	**Companheiro/a do Pai que não a Mãe**
Completou Ensino Secundário ou Técnico (atual 12º ano, antigo 7º ano do liceu)	☐	☐	☐	☐
Ensino Pós-secundário Não superior (ex. Curso profissional)	☐	☐	☐	☐
Completou Ensino Superior (Bacharelato ou Licenciatura)	☐	☐	☐	☐
Completou Mestrado	☐	☐	☐	☐
Completou Doutoramento	☐	☐	☐	☐
Não sabe/não responde	☐	☐	☐	☐

A.5. Situação profissional dos pais

	Mãe	**Pai**	**Companheiro/a da Mãe que não o Pai**	**Companheiro/a do Pai que não a Mãe**
Ativo(a), empregado(a) a tempo inteiro	☐	☐	☐	☐
Ativo(a), empregado(a) a tempo parcial	☐	☐	☐	☐
Ativo(a), desempregado(a)	☐	☐	☐	☐
Estudante a tempo inteiro	☐	☐	☐	☐
Trabalhador-estudante	☐	☐	☐	☐
Doméstico(a)	☐	☐	☐	☐
Licença parental	☐	☐	☐	☐
Reformado(a)	☐	☐	☐	☐
Outra, por favor especifique	____________	____________	____________	____________

Vire a página, por favor.

A.6. Profissão dos pais

Profissão da mãe: ____

Profissão do pai: ____

Profissão do companheiro/a da mãe: ________________________________

Profissão do companheiro/a do pai: _________________________________

A.7. Caracterização da criança que tem hoje a consulta

	Data de nascimento	Sexo	País de nascimento
Criança que tem consulta de vigilância	___ / ___ /______	Fem. ☐ Masc. ☐	_____________

A.8. Indique com quem vive a criança (que tem hoje a consulta) atualmente

Não	**Sim**		**Número**	**Idade**
☐	☐	Mãe		
☐	☐	Pai		
☐	☐	Companheiro(a) da mãe que não o Pai		|___|___|
☐	☐	Companheira(o) do Pai que não a Mãe		|___|___|
☐	☐	Irmão/ Meios-irmãos	|___|___|	|___|___| |___|___| |___|___| |___|___|
☐	☐	Avós maternos/paternos	|___|___|	
☐	☐	Outros Familiares	|___|___|	
☐	☐	Outros não-familiares	|___|___|	
☐	☐	Instituição		

Vire a página, por favor.

A. 9. Indique quem do agregado veio hoje à consulta

☐	Mãe da criança
☐	Pai da criança
☐	Companheiro/a da Mãe que não o Pai
☐	Companheira/o do Pai que não a Mãe
☐	Avô
☐	Avó
☐	Outros adultos. Por favor, indique quais: _____________
☐	Crianças. Quantas? ________ Idades _______

A.10. A criança que veio hoje à consulta frequenta um estabelecimento de educação (jardim de infância ou infantário ou pré-escolar)?

Sim ☐ Não ☐

B. Experiência de contacto com a unidade de saúde e o enfermeiro da consulta de vigilância de saúde infantil[6]

B.1. Há quanto tempo esta unidade de saúde tem sido o lugar onde leva a criança (que tem hoje a consulta) para fazer a vigilância de saúde?

☐	Primeira vez
☐	< 6 meses
☐	> 6 meses mas < 1 ano
☐	>1 ano mas < 2 anos
☐	> 2 anos mas < 4 anos
☐	> 4 anos

Vire a página, por favor.

---

[6] Traduzido e adaptado de “Parent's Perception of Primary Care measure”, por M. Seid, J. W. Varni, L. O. Bermudez, M. Zivkovic, M. D. Far, M. Nelson, e P. S., Kurtin, 2001, Pediatrics, 108(2), 264-70 (https://doi: 10.1542/peds.108.2.264). Adaptado com permissão.

B.2. Há quanto tempo esta pessoa é a enfermeira(o) da criança que hoje tem a consulta?

☐	Primeira vez
☐	< 6 meses
☐	> 6 meses mas < 1 ano
☐	>1 ano mas < 2 anos
☐	> 2 anos mas < 4 anos
☐	> 4 anos

Muito obrigada por responder a este questionário!

A sua colaboração foi muito importante.

Por favor, coloque o questionário no envelope, feche-o, e entregue-o ao investigador.

Appendix V

Post-consultation Questionnaire Addressed to Family

Nº | | | | |

Data de preenchimento ___/___/201_

Questionário Pós-Consulta de Vigilância de Saúde Infantil à(s) Família(s)

Este questionário faz parte de um estudo que tem como objetivo caracterizar a Consulta de Vigilância de Saúde aos 5 anos de idade, realizada pelos enfermeiros.

O questionário contém um conjunto de questões para que a família partilhe a sua opinião acerca da consulta, contribuindo para a melhoria futura da consulta.

O questionário é de fácil preenchimento e o tempo de resposta é de aproximadamente 25 minutos. Para a maioria das questões basta-lhe assinalar com uma cruz (X) ou círculo (O) no quadro respetivo. Outras questões envolvem respostas curtas. Pedimos-lhe que responda, tanto quanto possível, a todas as questões. Lembramos-lhe que não existem respostas corretas ou incorretas, boas ou más. Interessa-nos a sua opinião sincera. O questionário é anónimo e as suas respostas são inteiramente confidenciais.

Agradecemos antecipadamente o tempo e a atenção que irá disponibilizar para responder a este questionário.

A. Comunicação Enfermeira/o – Família[7]

Avalie a atuação da enfermeira e da sua família durante a visita ao centro de saúde. Para cada afirmação anote com um círculo a opção que melhor corresponde à sua resposta.

	Discordo totalmente	**Discordo parcialmente**	**Concordo parcialmente**	**Concordo totalmente**	**Não sei/ não respondo**
Acerca da atuação da enfermeira:					
A.1. A enfermeira tomou em consideração os sentimentos da nossa família	1	2	3	4	☐
A.2. A enfermeira ajudou a nossa família a participar na conversa	1	2	3	4	☐
A.3. A enfermeira deu à nossa família a oportunidade de fazer perguntas	1	2	3	4	☐
A.4. A enfermeira incentivou a nossa família a falar	1	2	3	4	☐
A.5. A enfermeira usou uma linguagem compreensível	1	2	3	4	☐
A.6. A enfermeira foi educada e simpática	1	2	3	4	☐
A.7. A enfermeira ajudou a nossa família a sentir-se descontraída	1	2	3	4	☐
A.8. A enfermeira demonstrou estar a escutar a nossa família	1	2	3	4	☐
A.9. A enfermeira demonstrou empatia pela nossa família	1	2	3	4	☐
A.10. A enfermeira demonstrou preocupação pela nossa família	1	2	3	4	☐

Vire a página, por favor.

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[7] Traduzido e adaptado de “Empowering Speech Practice Scale”, por T. Kettunen, L. Liimatainen, J. Villberg e U. Perko, 2006, Patient Education and Counseling, 64(1-3), 159-166 (https://doi: 10.1016/j.pec.2005.12.012). Adaptado com permissão.

	Discordo totalmente	**Discordo parcialmente**	**Concordo parcialmente**	**Concordo totalmente**	**Não sei/ não respondo**
Acerca da atuação da enfermeira:					
A.11. A enfermeira demonstrou aceitar a nossa família	1	2	3	4	☐
A.12. A enfermeira deu à nossa família a oportunidade de falar sobre sentimentos	1	2	3	4	☐
A.13. A enfermeira deu à nossa família a informação necessária	1	2	3	4	☐
A.14. A enfermeira assegurou que a nossa família compreendeu os assuntos abordados	1	2	3	4	☐
A.15. A enfermeira incentivou a nossa família a fazer perguntas	1	2	3	4	☐
A.16. A enfermeira mostrou compreender as questões apresentadas pela nossa família	1	2	3	4	☐
A.17. A enfermeira analisou em pormenor a situação de vida da nossa família	1	2	3	4	☐
A.18. A enfermeira perguntou as opiniões e as perspetivas da nossa família	1	2	3	4	☐
A.19. A enfermeira fez perguntas, cujas respostas permitiram à nossa família falar sobre outros aspectos da nossa saúde	1	2	3	4	☐

(continua)

Vire a página, por favor.

	Discordo totalmente	Discordo parcialmente	Concordo parcialmente	Concordo totalmente	Não sei/ não respondo
Acerca da atuação da enfermeira:					
A.20. A enfermeira fez perguntas que ajudaram a nossa família a avaliar comportamentos relacionados com a nossa saúde	1	2	3	4	☐
A.21. A enfermeira demonstrou respeito pelas opiniões da nossa família	1	2	3	4	☐
A.22. A enfermeira apoiou o estilo de vida saudável praticado pela nossa família	1	2	3	4	☐
A.23. A enfermeira incentivou a nossa família a planear um estilo de vida saudável	1	2	3	4	☐
A.24. A enfermeira ajudou a nossa família a tomar decisões para melhorar a nossa saúde	1	2	3	4	☐
A.25. A enfermeira apresentou alternativas para a melhoria da saúde da nossa família	1	2	3	4	☐
Acerca da atuação da família:	1	2	3	4	☐
A.26. Nós falámos sobre os aspetos essenciais relacionados com a nossa saúde	1	2	3	4	☐
A.27. Nós descrevemos o estilo de vida ou aspetos relacionados com a manutenção do mesmo	1	2	3	4	☐

(continua)

Vire a página, por favor.

	Discordo totalmente	Discordo parcialmente	Concordo parcialmente	Concordo totalmente	Não sei/ não respondo
Acerca da atuação da família:					
A.28. Nós pudemos responder às perguntas sem a enfermeira interromper	1	2	3	4	☐
A.29. Nós respondemos abertamente às perguntas	1	2	3	4	☐
A.30. Nós falámos das nossas preocupações	1	2	3	4	☐
A.31. Nós demos as nossas opiniões e perspetivas	1	2	3	4	☐
A.32. Nós falámos sobre a nossa situação de vida	1	2	3	4	☐
A.33. Nós falámos acerca de experiências passadas em que recebemos conselhos de saúde	1	2	3	4	☐
A.34. Nós demos a nossa opinião sobre experiências passadas em que recebemos conselhos de saúde	1	2	3	4	☐
A.35. Nós avaliámos o que fazemos para ter saúde	1	2	3	4	☐
A.36. Nós expressámos os nossos sentimentos relacionados com a saúde	1	2	3	4	☐
A.37. Nós descrevemos as nossas maneiras de manter a saúde	1	2	3	4	☐

(continua)

Vire a página, por favor.

	Discordo totalmente	**Discordo parcialmente**	**Concordo parcialmente**	**Concordo totalmente**	**Não sei/ não respondo**
Acerca da atuação da família:					
A.38. Nós participámos na elaboração de objetivos para ter saúde	1	2	3	4	☐
A.39. Nós fizemos perguntas quando não percebemos alguma coisa	1	2	3	4	☐
A.40. Nós fizemos perguntas relacionadas com a melhoria da saúde	1	2	3	4	☐
A.41. Nós fizemos as perguntas sobre assuntos que nos preocupavam	1	2	3	4	☐
A.42. Nós tomámos a palavra quando quisemos	1	2	3	4	☐
A.43. Nós expressámo-nos quando não compreendemos alguma coisa	1	2	3	4	☐
A.44. Nós dissemos quando queríamos que alguma coisa fosse dita novamente	1	2	3	4	☐

B. Alimentação e atividade física da família[8]

Para cada questão, escolha a resposta que melhor representa o seu/filho/a sua filha ou a sua família. É importante que indique o padrão típico da sua família e não o que gostaria que se passasse.

	Nunca/ Quase nunca	**Por vezes**	**Frequentemente**	**Muito frequentemente/ Sempre**
B.1. Com que frequência o seu filho/filha toma o pequeno-almoço (seja em casa ou na escola)?	1	2	3	4

Vire a página, por favor.

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[8] Traduzido e adaptado de “Family Nutrition and Physical Activity (FNPA) tool”, por Family Nutrition and Physical Activity, 2017 (http://www.myfnpa.org/resources.html). Adaptado com permissão.

	Nunca/ Quase nunca	Por vezes	Frequentemente	Muito frequentemente/ Sempre
B.2. Com que frequência o seu filho/a toma pelo menos uma refeição por dia com um ou mais membros da família?	1	2	3	4
B.3. Com que frequência o seu filho/a come enquanto vê televisão (incluindo as refeições principais ou lanches)?	1	2	3	4
B.4. Com que frequência a sua família come "fast food" isto é, comida rápida, como pizzas, hambúrgueres, etc.] ?	1	2	3	4
B.5. Com que frequência a sua família consome alimentos embalados "prontos-a comer"? [inclui refeições que se compram congeladas ou pré-cozinhadas para serem aquecidas no micro-ondas]	1	2	3	4
B.6. Com que frequência o seu filho/a sua filha come frutas e vegetais às refeições principais ou aos lanches? [não incluindo sumos]	1	2	3	4
B.7. Com que frequência o seu filho/ a sua filha bebe refrigerantes ou bebidas com açucares adicionados? [inclui colas ou "ice-tea" ou néctares ou sumos embalados com açúcar acrescentado ou bebidas zero/light ou bebidas energéticas ou bebidas isotónicas ou sumos concentrados, etc.]	1	2	3	4

(continua)

Vire a página, por favor.

	Nunca/ Quase nunca	**Por vezes**	**Frequentemente**	**Muito frequentemente/ Sempre**
B.8. Com que frequência o seu filho/sua filha bebe leite? Qual o tipo de leite?____________ Tem chocolate ou açúcar?_________________	1	2	3	4
B.9. Com que frequência a sua família controla a quantidade de guloseimas, batatas fritas, e bolachas, que o seu filho/a sua filha come?	1	2	3	4
B.10. Com que frequência a sua família usa guloseimas, gelados ou outros alimentos como recompensa pelo bom comportamento?	1	2	3	4
B.11. Com que frequência o seu/ a sua filha passa menos do que 2 horas por dia em frente a ecrãs? [inclui TV, computador, consolas de jogos, ou qualquer dispositivo móvel com ecrã]	1	2	3	4
B.12. Com que frequência a sua família controla o tempo que o seu filho/a sua filha passa em frente a ecrãs?	1	2	3	4
B.13. Com que frequência o seu filho/ a sua filha tem “tempo de ecrã” no quarto da criança?	1	2	3	4
B.14. Com que frequência a sua família oferece oportunidades para a prática de atividade física?	1	2	3	4

(continua)

Vire a página, por favor.

	Nunca/ Quase nunca	**Por vezes**	**Frequentemente**	**Muito frequentemente/ Sempre**
B.15. Com que frequência a sua família incentiva o seu filho/ a sua filha a ser fisicamente ativo/a?	1	2	3	4
B.16. Com que frequência o seu filho/ a sua filha pratica atividade física com pelo menos um outro membro da família?	1	2	3	4
B.17. Com que frequência o seu filho/ a sua filha pratica atividade física quando ele/ela tem tempo livre?	1	2	3	4
B.18. Com que frequência o seu filho/a sua filha participa em desportos organizados ou atividades físicas com um treinador ou outro adulto responsável?	1	2	3	4
B.19. Com que frequência o seu filho/ a sua filha segue uma rotina regular na hora de ir para a cama?	1	2	3	4
B.20. Com que frequência o seu filho/ a sua filha dorme o suficiente durante a noite? Indique o número de horas que ele/ela dorme habitualmente nas 24h: ___________	1	2	3	4

C. Peso e altura dos pais da criança que hoje tem a consulta

C.1. Sem sapatos, qual é a altura do pai? _____

C.2. Sem sapatos, qual é o peso do pai? _____

C.3. Sem sapatos, qual é a altura da mãe? _____

C.4. Sem sapatos, qual é o peso da mãe? _____

Muito obrigada por responder a este questionário!
A sua colaboração foi muito importante.
Por favor, coloque o questionário no envelope, feche o envelope, e entregue-o ao investigador.

Appendix VI

Post-consultation Questionnaire Addressed to Nurse

Nº				

Data de preenchimento ___/___/201_

Questionário Pós-Consulta de Vigilância de Saúde Infantil ao(s) Enfermeiro(s)

Este questionário faz parte de um estudo que tem como objetivo caracterizar a Consulta de Vigilância de Saúde aos 5 anos de idade, realizada pelos enfermeiros.

O questionário contém um conjunto de questões acerca das interações entre o enfermeiro e a família durante a consulta.

O questionário é de fácil preenchimento e o tempo de resposta é de aproximadamente 10 minutos. Para responder às questões basta-lhe assinalar com uma cruz (X) ou círculo (O) no quadro respetivo. Pedimos-lhe que responda, tanto quanto possível, a todas as questões. Lembramos-lhe que não existem respostas corretas ou incorretas, boas ou más. Interessa-nos a sua opinião sincera. O questionário é anónimo e as suas respostas são inteiramente confidenciais.

Agradecemos antecipadamente o tempo e a atenção que irá disponibilizar para responder a este questionário.

A. Comunicação Enfermeira/o-Família[9]

Avalie a sua própria atuação e a atuação das famílias nas situações de aconselhamento para a saúde respondendo às seguintes afirmações. Para cada afirmação anote com um círculo a opção que melhor corresponde à sua resposta.

	Discordo totalmente	**Discordo parcialmente**	**Concordo parcialmente**	**Concordo totalmente**	**Não sei/ não respondo**
Acerca da atuação da enfermeira:					
A.1. Tomei em consideração os sentimentos da família	1	2	3	4	☐
A.2. Ajudei a família a participar na conversa	1	2	3	4	☐
A.3. Dei à família a oportunidade de fazer perguntas	1	2	3	4	☐
A.4. Incentivei a família a falar	1	2	3	4	☐
A.5. Usei uma linguagem compreensível	1	2	3	4	☐
A.6. Fui educada e simpática	1	2	3	4	☐
A.7. Ajudei a família a sentir-se descontraída	1	2	3	4	☐
A.8. Demonstrei estar a escutar a família	1	2	3	4	☐
A.9. Demonstrei empatia pela família	1	2	3	4	☐
A.10. Demonstrei preocupação pela família	1	2	3	4	☐
A.11. Demonstrei aceitar a família	1	2	3	4	☐
A.12. Dei à família a oportunidade de falar sobre sentimentos	1	2	3	4	☐

(continua)

Vire a página, por favor.

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[9] Traduzido e adaptado de "Empowering Speech Practice Scale", por T. Kettunen, L. Liimatainen, J. Villberg e U. Perko, 2006, Patient Education and Counseling, 64(1-3), 159-166 (https://doi: 10.1016/j.pec.2005.12.012). Adaptado com permissão.

	Discordo totalmente	Discordo parcialmente	Concordo parcialmente	Concordo totalmente	Não sei/ não respondo
Acerca da atuação da enfermeira:					
A.13. Dei à família a informação necessária	1	2	3	4	☐
A.14. Assegurei que a família compreendeu os assuntos abordados	1	2	3	4	☐
A.15. Incentivei a família a fazer perguntas	1	2	3	4	☐
A.16. Confirmei ter compreendido as questões apresentadas pela família	1	2	3	4	☐
A.17. Analisei em pormenor a situação de vida da família	1	2	3	4	☐
A.18. Perguntei as opiniões e as perspetivas da família	1	2	3	4	☐
A.19. Fiz perguntas, cujas respostas permitiram à família falar sobre a saúde de um modo abrangente	1	2	3	4	☐
A.20. Fiz perguntas que ajudaram a família a avaliar comportamentos relacionados com a sua saúde	1	2	3	4	☐
A.21. Demonstrei respeito pelas opiniões da família	1	2	3	4	☐
A.22. Apoiei o estilo de vida saudável praticado pela família	1	2	3	4	☐
A.23. Incentivei a família a planear um estilo de vida saudável	1	2	3	4	☐

(continua)

Vire a página, por favor.

	Discordo totalmente	Discordo parcialmente	Concordo parcialmente	Concordo totalmente	Não sei/ não respondo
Acerca da atuação da enfermeira:					
A.24. Ajudei a família a tomar decisões para melhorar a saúde	1	2	3	4	☐
A.25. Apresentei alternativas para a melhoria da saúde da família	1	2	3	4	☐
Acerca da atuação da família:					
A.26. A família falou sobre os aspetos essenciais relacionados com a sua saúde	1	2	3	4	☐
A.27. A família descreveu o seu estilo de vida ou aspetos relacionados com a manutenção do mesmo	1	2	3	4	☐
A.28. A família pôde responder às perguntas sem a enfermeira interromper	1	2	3	4	☐
A.29. A família respondeu abertamente às perguntas	1	2	3	4	☐
A.30. A família falou das suas preocupações	1	2	3	4	☐
A.31. A família deu as suas opiniões e perspetivas	1	2	3	4	☐
A.32. A família falou sobre a sua situação de vida	1	2	3	4	☐

(continua)

Vire a página, por favor.

	Discordo totalmente	Discordo parcialmente	Concordo parcialmente	Concordo totalmente	Não sei/ não respondo
Acerca da atuação da família:					
A.33. A família falou acerca de experiências passadas em que recebeu conselhos de saúde	1	2	3	4	☐
A.34. A família deu a sua opinião sobre experiências passadas em que recebeu conselhos de saúde	1	2	3	4	☐
A.35. A família avaliou o que faz para ter saúde	1	2	3	4	☐
A.36. A família expressou os seus sentimentos relacionados com a saúde	1	2	3	4	☐
A.37. A família descreveu as suas maneiras de manter a saúde	1	2	3	4	☐
A.38. A família participou na elaboração de objetivos para ter saúde	1	2	3	4	☐
A.39. A família fez perguntas quando não percebeu alguma coisa	1	2	3	4	☐
A.40. A família fez perguntas relacionadas com a melhoria da saúde	1	2	3	4	☐
A.41. A família fez as perguntas sobre assuntos que a preocupavam	1	2	3	4	☐
A.42. A família tomou a palavra quando quis	1	2	3	4	☐

(continua)

Vire a página, por favor.

	Discordo totalmente	Discordo parcialmente	Concordo parcialmente	Concordo totalmente	Não sei/ não respondo
Acerca da atuação da família:					
A.43. A família expressou-se quando não compreendeu alguma coisa	1	2	3	4	☐
A.44. A família disse quando quis que alguma coisa fosse dita novamente	1	2	3	4	☐

Muito obrigada por responder a este questionário!

A sua colaboração foi muito importante.

Por favor, coloque o questionário no envelope, feche o envelope, e entregue-o ao investigador.

Appendix VII

Lisbon and Tagus Valley Ethics Committee for Health’s Approval Letter

arslvt
LISBOA E VALE DO TEJO

GOVERNO DE PORTUGAL
MINISTÉRIO DA SAÚDE

Exma. Sr.ª
Dr.ª Sónia Rodrigues
srodrigues@esel.pt

C/C:

Sua Referência	**Sua Comunicação de**	**Nossa Referência**	**Data**
		982/CES/2015	20-01-2015

Assunto: Prevenção do Excesso de Peso e Obesidade Infantil: Análise da Consulta de Vigilância de Saúde Infantil Realizada pelos Enfermeiros aos 4 anos de Idade.

- Comissão de Ética para a Saúde da ARSLVT – Proc.065/CES/INV/2014

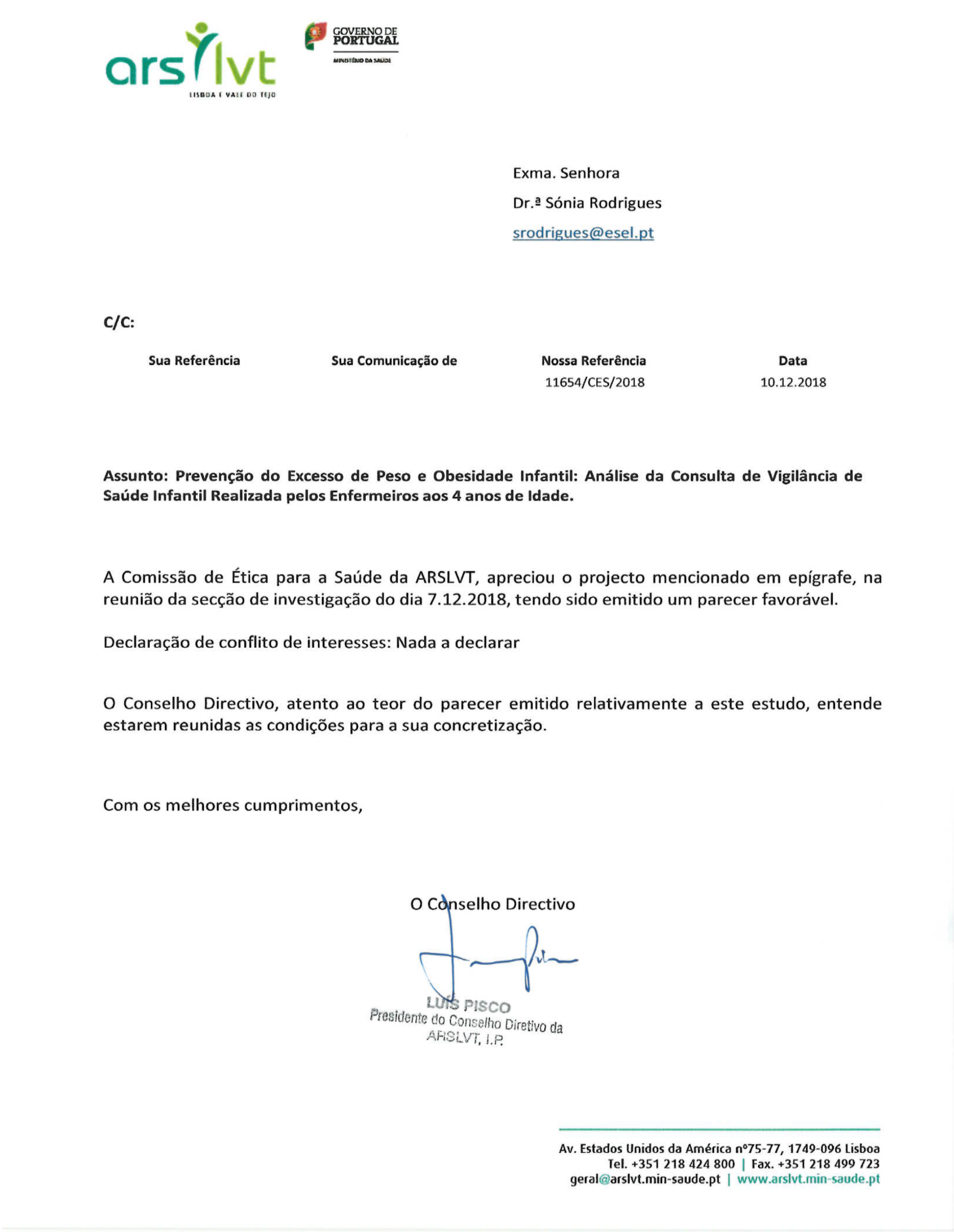
A Comissão de Ética para a Saúde da ARSLVT apreciou na sua reunião da Secção de Investigação do dia 16-01-2015, o projecto mencionado em epígrafe, tendo merecido parecer favorável.
Declaração de conflito de interesses: Nada a declarar

O Conselho Directivo, atento ao teor do parecer emitido por aquela Comissão, entende estarem reunidas as condições para a sua concretização.

Com os melhores cumprimentos,

O Vice - Presidente do Conselho Directivo

Luis Pisco



arslvt
LISBOA E VALE DO TEJO

GOVERNO DE PORTUGAL
MINISTÉRIO DA SAÚDE

Exma. Senhora
Dr.ª Sónia Rodrigues
srodrigues@esel.pt

C/C:

Sua Referência	Sua Comunicação de	Nossa Referência	Data
		11654/CES/2018	10.12.2018

Assunto: Prevenção do Excesso de Peso e Obesidade Infantil: Análise da Consulta de Vigilância de Saúde Infantil Realizada pelos Enfermeiros aos 4 anos de Idade.

A Comissão de Ética para a Saúde da ARSLVT, apreciou o projecto mencionado em epígrafe, na reunião da secção de investigação do dia 7.12.2018, tendo sido emitido um parecer favorável.

Declaração de conflito de interesses: Nada a declarar

O Conselho Directivo, atento ao teor do parecer emitido relativamente a este estudo, entende estarem reunidas as condições para a sua concretização.

Com os melhores cumprimentos,

O Conselho Directivo

LUÍS PISCO
Presidente do Conselho Diretivo da
ARSLVT, I.P.

Av. Estados Unidos da América nº75-77, 1749-096 Lisboa
Tel. +351 218 424 800 | Fax. +351 218 499 723
geral@arslvt.min-saude.pt | www.arslvt.min-saude.pt

Note. The research project submitted to the Ethics Review Committee for ethical review was initially proposed to be conducted in the 4-year-old well-child visit. However, due to the poor adherence of families to the 4-year-old WCV in the pre-test, in 2018 a revised amended protocol incorporating the request to change for the 5-year-old WCV was re-submitted to the Ethics Review Committee review and obtained renewed approval.

Appendix VIII

National Program for the Promotion of Healthy Eating’s Appreciation

DGS desde 1899
Direção-Geral da Saúde

Programa Nacional
para a Promoção
da Alimentação Saudável

Exmºs. Senhores,

Tendo analisado o teor da vossa proposta de colaboração projeto de investigação "Prevenção de excesso de peso e obesidade infantil - Análise da consulta de vigilância de Saúde Infantil realizada pelos Enfermeiros aos 4 anos de idade" e dado o seu valor, temos interesse em acompanhar e ser parceiros científicos do mesmo, sem custos para a Direção-Geral da Saúde.

Sublinhamos a necessidade do projeto ser replicável em outras regiões do país, envolver sempre que possível equipas multidisciplinares e ser submetido e aprovado por uma Comissão de Ética.

Lisboa, 23 de Julho de 2014

Pedro Graça
Diretor do Programa Nacional Para a Promoção da Alimentação Saudável

Appendix IX

Research Study Introduction Letter for Nurse

Lisboa,

Caro(a) colega,

A equipa de investigação, constituída por Sónia Borges Rodrigues, a realizar o Doutoramento em Enfermagem da Universidade de Lisboa - Escola Superior de Enfermagem de Lisboa, e as suas supervisoras, a Professora Doutora Sanna Salanterä (Universidade de Turku, Finlândia), e a Professora Doutora Luísa Barros (Faculdade de Psicologia, Universidade de Lisboa), em colaboração com a Direção-Geral da Saúde, estão a realizar um estudo que pretende caracterizar a Consulta de Vigilância de Saúde aos 5 anos de idade. Esta investigação insere-se numa linha de estudos que visam contribuir para a melhoria da qualidade da consulta de vigilância de saúde infantil para que futuramente crianças e famílias possam beneficiar dos melhores cuidados, e os enfermeiros possam beneficiar de instrumentos/meios que suportem a tomada de decisão e os resultados em saúde.

Neste sentido a equipa gostaria de convidá-lo(a) a participar neste estudo. O estudo foi revisto e aprovado pela Comissão de Ética para a Saúde da Administração Regional de Saúde de Lisboa e Vale do Tejo, I.P.

A participação no estudo compreende a realização de 4 Consultas de Vigilância de Saúde aos 5 anos de idade, seguida de preenchimento de um questionário para partilhar a sua visão acerca da consulta. O tempo de resposta a este questionário é de aproximadamente 10 minutos. Após as 4 consultas será solicitada a resposta a um outro questionário com questões sociodemográficas e profissionais com a duração de cerca de 5 minutos. Esta fase do estudo decorrerá na unidade de saúde onde exerce a sua profissão.

A participação neste estudo não envolve riscos superiores àqueles que experiencia no seu dia-a-dia. Se no decurso da sua participação no estudo se sentir desconfortável poderá desistir em qualquer momento. Mesmo após a participação no estudo se pretender desistir poderá fazê-lo contactando telefonicamente o investigador e fornecendo o número de participante que consta no canto superior direito do formulário de consentimento informado (em anexo).

Todos os dados recolhidos no estudo destinam-se somente para os fins desta investigação. Os dados ficarão armazenados num computador e armário devidamente protegidos e apenas a equipa de investigação terá acesso aos mesmos. Os dados serão apresentados somente em relatórios escritos e de uma forma que não permita a identificação dos participantes.

Ao participar no estudo poderá contribuir para a melhoria da qualidade da Consulta.

A sua participação é voluntária. Pode decidir não participar ou interromper o estudo em qualquer momento sem qualquer penalização ou perda de benefícios. A sua relação com o sistema de saúde e com a equipa de investigação não será afetada pela sua decisão.

Estamos totalmente disponíveis para responder a qualquer questão que possa surgir em relação a este estudo, neste momento e futuramente (por favor contacte Sónia Borges Rodrigues: 9# ### ## ##; srodrigues@esel.pt). Poderá ainda contactar a Comissão de Ética para a Saúde para o seguinte endereço de correio eletrónico: etica@arslvt.min-saude.pt

Se aceitar participar no estudo, por favor leia e assine o formulário de consentimento informado em anexo. Será contactado(a) posteriormente pelo investigador para acertar os detalhes da sua participação.

Desde já, muito obrigada pela sua estimada colaboração,

____
Sónia Borges Rodrigues

Appendix X

Research Study Introduction Letter for Family

Lisboa,

Cara família,

A equipa de investigação, constituída por Sónia Borges Rodrigues, a realizar o Doutoramento em Enfermagem da Universidade de Lisboa - Escola Superior de Enfermagem de Lisboa, e as suas supervisoras, a Professora Doutora Sanna Salanterä (Universidade de Turku, Finlândia), e a Professora Doutora Luísa Barros (Faculdade de Psicologia, Universidade de Lisboa), em colaboração com a Direção-Geral da Saúde, estão a realizar um estudo que pretende caracterizar a Consulta de Vigilância de Saúde dos 5 anos de idade realizada pelos enfermeiros. Esta investigação insere-se numa linha de estudos que visam contribuir para a melhoria da qualidade da consulta de vigilância de saúde infantil para que futuramente crianças e famílias possam beneficiar dos melhores cuidados.

Neste sentido a equipa gostaria de convidá-lo(a) a participar neste estudo. O estudo foi revisto e aprovado pela Comissão de Ética para a Saúde da Administração Regional de Saúde de Lisboa e Vale do Tejo, I.P.

O benefício da sua participação no estudo é que poderá contribuir para a melhoria da qualidade da Consulta de Vigilância de Saúde Infantil para que futuramente crianças e famílias possam beneficiar dos melhores cuidados.

A participação no estudo pressupõe o preenchimento de um questionário antes da consulta ter início. Este questionário é constituído por questões sociodemográficas e acerca da experiência de contacto com a unidade de saúde. Segue-se a consulta realizada pelo enfermeiro(a) e a resposta a um outro questionário para que a família partilhe a sua opinião acerca da consulta. O tempo de resposta aos questionários é de aproximadamente 5 minutos e 25 minutos, respetivamente. O estudo irá decorrer nesta unidade de saúde.

A participação no estudo não envolve riscos superiores àqueles que tem no seu dia-a-dia. Se no decurso da sua participação no estudo se sentir desconfortável poderá desistir em qualquer momento.

Serão adotados os procedimentos para assegurar a confidencialidade da informação que partilha connosco. Não serão apresentados dados individuais, mas sempre dados de conjunto das várias famílias. O tratamento dos dados assegura o anonimato. Não haverá qualquer possibilidade de identificação dos intervenientes.

A participação é voluntária. Pode decidir não participar ou interromper o estudo em qualquer momento sem qualquer penalização ou perda de benefícios. A sua relação com o sistema de saúde e com a equipa de investigação não será afetada pela sua decisão. Mesmo após participar no estudo se pretender desistir poderá fazê-lo contactando telefonicamente o investigador e fornecendo o número de participante que consta no canto superior direito do formulário de consentimento informado (em anexo).

Estamos totalmente disponíveis para responder a qualquer questão que possa surgir em relação a este estudo, neste momento e futuramente (por favor contacte Sónia Borges Rodrigues: 9# ### ## ##; srodrigues@esel.pt). Poderá ainda contactar a Comissão de Ética para a Saúde para o seguinte endereço de correio eletrónico: etica@arslvt.min-saude.pt

Se aceitar participar no estudo, por favor leia e assine o formulário de consentimento informado em anexo.

Desde já, muito obrigada pela sua estimada colaboração,

____

Sónia Borges Rodrigues

Appendix XI

Research Study Consent Letter for Nurse

Nº | | | |

Pelo presente documento confirma que aceita participar num estudo de investigação conduzido por Sónia Borges Rodrigues, a realizar Doutoramento em Enfermagem, e suas supervisoras, Professora Doutora Sanna Salanterä (Universidade de Turku, Finlândia), e a Professora Doutora Luísa Barros (Faculdade de Psicologia, Universidade de Lisboa), em colaboração com a Direção-Geral da Saúde, que tem como objetivo caracterizar a Consulta de Vigilância de Saúde dos 5 anos de idade, realizada pelos enfermeiros. Pretende-se com este estudo contribuir para a melhoria da qualidade da Consulta de Vigilância de Saúde Infantil.

Confirma ainda que lhe foi providenciada a carta de apresentação do estudo, em anexo, ficou esclarecido(a) em relação ao mesmo e decidiu voluntariamente participar neste estudo.

(a preencher por si)

____

Nome

____

Assinatura

____

Data

Email:_________________________________ Número de telefone:________________

(a preencher pelo investigador)

____

Nome da pessoa que obteve o consentimento

____

Assinatura

____

Data

Nota: este documento deve ser preenchido em duplicado (uma via para si e outra para o investigador)

Appendix XII

Research Study Consent Letter for Family

Nº | | | |

Pelo presente documento confirma que aceita participar num estudo de investigação conduzido por Sónia Borges Rodrigues, a realizar Doutoramento em Enfermagem, e suas supervisoras, Professora Doutora Sanna Salanterä (Universidade de Turku, Finlândia), e a Professora Doutora Luísa Barros (Faculdade de Psicologia, Universidade de Lisboa), em colaboração com a Direção-Geral da Saúde, que tem como objetivo caracterizar a Consulta de Vigilância de Saúde dos 5 anos de idade, realizada pelos enfermeiros. Pretende-se com este estudo contribuir para a melhoria da qualidade da Consulta de Vigilância de Saúde Infantil.

Confirma ainda que lhe foi providenciada a carta de apresentação do estudo, em anexo, ficou esclarecido(a) em relação ao mesmo e decidiu voluntariamente participar neste estudo. Confirma também que falou com a criança de 5 anos de idade (e outros filhos menores, se presentes durante a consulta) e ela(es) concordou(aram) em participar no estudo.

(a preencher por si)

____

Nome do representante da família e responsável legal da(s) criança(s)

____

Assinatura

____

Data

Email:_________________________________ Número de telefone:________________

(a preencher pelo investigador)

____

Nome da pessoa que obteve o consentimento

____

Assinatura

____

Data

Nota: este documento deve ser preenchido em duplicado (uma via para si e outra para o investigador)