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Connecting healthcare with income maximisation services, and their financial, health and well-being impacts for families with young children: a systematic review protocol

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ABSTRACT

Introduction Poverty has far-reaching and detrimental effects on children's physical and mental health, across all geographies. Financial advice and income-maximisation services can provide a promising opportunity for shifting the physical and mental health burdens that commonly occur with financial hardship, yet awareness of these services is limited, and referrals are not systematically integrated into existing healthcare service platforms. We aim to map and synthesise evidence on the impact of healthcare-income maximisation models of care for families of children aged 0–5 years in high-income countries on family finances, parent/caregiver(s) or children's health and well-being.

Methods and analysis To be included in the review, studies must be families (expectant mothers or parents/caregivers) of children who are aged between 0 and 5 years, accessing a healthcare service, include a referral from healthcare to an income-maximisation service (ie, financial counselling), and examine impacts on child and family health and well-being. A comprehensive electronic search strategy will be used to identify studies written in English, published from inception to January 2021, and indexed in MEDLINE, EMBase, PsycINFO, CINAHL, Proquest, Family & Society Studies Worldwide, Cochrane Library, and Informit Online. Search strategies will include terms for: families, financial hardship and healthcare, in various combinations. Bibliographies of primary studies and review articles meeting the inclusion criteria will be searched manually to identify further eligible studies, and grey literature will also be searched. Data on objective and self-reported outcomes and study quality will be independently extracted by two review authors; any disagreements will be resolved through a third reviewer. The protocol follows the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols.

Ethics and dissemination Ethical approval is not required. The results will be disseminated widely via peer-reviewed publication and presentations at conferences related to this field.

PROSPERO registration number CRD42020195985.

Strengths and limitations of this study

- To our knowledge, this is the first systematic review to explore the impact of healthcare-income maximisation models of care on family finances, parent/caregiver(s) or children's health and well-being.
- The protocol follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols guidelines.
- A comprehensive search strategy across several health research-related databases is included in this study.
- Non-English language electronic databases will not be searched which is a limitation.
- A potential limitation of this review may be the heterogeneity in reporting and measures of outcomes.

INTRODUCTION

It is recognised that social determinants of health (conditions in which people are born, grow, live, work and age;[1]) will impact children's health and development either directly or indirectly long term.[2 3] Childhood poverty has a damaging impact on every dimension of health, well-being and development.[4] As children raised in poverty become adults, they experience a greater subsequent risk of educational failure, underemployment, lack of societal participation, risky behaviours and delinquency.[5] It is estimated that one in five children in high-income countries lives in relative income poverty.[6]

Compounding this, COVID-19 has created significant economic disruption across the globe, exacerbating and entrenching disadvantage via widespread job losses and financial stress. This has resulted in major adverse consequences on the health and well-being of

families worldwide. It was estimated that between 88 and 115 million people around the globe would be pushed into extreme poverty in 2020, and this is expected to rise to between 119 and 124 million across 2021.[7] While COVID-19 is viewed as a temporary shock to economic growth, the economic damage to families that are already experiencing financial hardship could be more long-lasting and may increase the number of families who are now experiencing poverty.

In response to socioeconomic and health inequities, researchers and policy-makers have sought to design effective interventions that reduce child poverty directly.[8] Systematic reviews have found that unconditional cash transfers and increases in household cash income have been associated with beneficial effects on children's health in low-income/middle-income and high-income countries.[9–11] The exact causal mechanisms underlying these effects are complex, however, two theoretical models attempt to provide insight into the mechanisms. According to the investment model, families invest additional economic resources into their children, addressing material deprivation and improving health and developmental opportunities.[12 13] Alternatively, the family stress model describes how increasing economic resources can reduce parental stress and, in turn, increase their emotionally responsive parenting and improve the home environment.[13] Broadly, it is understood that interventions to reduce household poverty will nurture children's health and development.

Income-maximisation advice services such as financial counsellors and welfare advice services can enable families to access financial entitlements they may not be aware of, provide assistance with childcare and housing options, and offer support and advice in crisis situations. Embedded income maximisation services within a healthcare setting provides a unique opportunity to take action due to the potential for wide-scale early screening, identification and referrals.[14] The literature on the impact of financial services, and particularly the healthcare-financial service interface, is a disparate field of published and grey literature which has yet to be reviewed systematically.[15–20] We aim to fill this evidence gap by conducting the first systematic literature review on this topic to inform better parental/caregiver(s) or children health and well-being through referral from a healthcare service (ie, provided by paediatricians, child health nurses, general practitioners, health social workers, health professionals, nurse, doctor or midwife) to an income-maximisation service (ie, financial counsellor, Citizens Advice Bureau).

METHODS AND ANALYSIS

Protocol and registration

This systematic review will be conducted following the recommendation of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Protocol (PRISMA-P) guidelines.[21] This review protocol is registered in the International Prospective Register of Systematic Reviews (PROSPERO) database and can be accessed at: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020195985

Aim and design

The purpose of this systematic review is to synthesise and critically evaluate the scientific evidence on the impact of healthcare-income maximisation models of care for families of children aged 0–5 years experiencing financial difficulties on family finances and parent/caregiver(s) or children's health and well-being.

Search strategy

The search strategy will be performed using the Population/Intervention/Comparison/Outcomes approach[22] to ensure a systematic search of the literature of the following research question: In families of children ages 0–5 years who are experiencing financial difficulties (P,0), do healthcare-income maximisation models of care (I) compared with usual care (C) have a positive impact on family finances, and/or parent/caregiver, and/or child health and well-being (O). Search terms will include subject headings (eg, MeSH in PubMed/MEDLINE) in addition to free-text words (with appropriate truncation) for the key concepts in relation to the population (ie, families will include expectant mothers/parents/caregivers of children who are aged between 0 and 5 years), intervention (ie, referrals from healthcare to income maximisation services) outcome of interest (ie, financial impact). The search strategy was developed with an experienced librarian and adapted to the various bibliographic databases (see final search strategy in online supplemental file 1). For general databases that do not have subject headings, free-text keyword searches will be applied. Article searches will be conducted in the following specialised and general databases from inception to January 2021: Medical Literature Analysis and Retrieval System Online (MEDLINE), Excerpta Medica database (Embase), Psychology Information (PsycINFO) and (EMCare) via OVID. Cumulative Index to Nursing and Allied Health Literature (CINAHL Complete), Proquest, and Family & Society Studies Worldwide via EBSCO, Cochrane Library via Wiley, and Informit Online via RMIT. Grey literature (including book chapters, dissertations, conference abstracts, government reports/guidelines) will also be searched. The reference sections of the included studies and cited studies will be manually searched for additional relevant studies.

Inclusion criteria

Studies will be included if they are published in English. The types of participants, studies and outcomes that were considered for inclusion are described below.

Study eligibility

Type of study/ characteristics

Experimental and quasi-experimental study designs including randomised controlled trials (RCTs), non-RCTs, before and after studies, mixed-methods evaluations and

interrupted time-series studies. In addition, analytical observational studies including prospective and retrospective cohort studies, case–control studies and analytical cross-sectional studies will be considered for inclusion. Studies must have a component of healthcare-income maximisation model of care. This includes referral pathways (ie, a form of linkage) from healthcare services (eg, provided by paediatricians, child health nurses, general practitioners, health social workers, health professionals, nurses, doctors or midwives) to an income maximisation service (eg, health referrals to financial counselling services, or colocation of health and financial counselling services). For the purposes of this review, income maximisation services may examine—but are not limited to—family's income, source of income, current debts (utility, taxation, gambling, business, debt recovery, loans or credit cards), unemployment issues, change in circumstances (disability), budgeting and expenses (accommodation, utilities, food or travel) and financial literacy/financial education. For experimental studies, the interventions will need to examine an outcome based on a referral pathway between healthcare-income maximisation services. For longitudinal studies, any follow-up length is allowed but there must be at least one outcome measure. Grey literature (eg, book chapters, dissertations, conference abstracts, government reports/guidelines)will be included.

In this review, we will consider all studies conducted in English, and conducted in high income countries, where it is possible to calculate or report on financial impact, or health and well-being, when a child is aged between 0 and 5 years old. Studies will be ineligible if there is a focus on cash transfer programmes.

Type of comparators

The studies should compare the income maximisation model to usual care. Studies comparing different type of income maximisation will be included.

Population

Families (expectant mothers or parents/caregivers) of children who are aged between 0 and 5 years who are accessing a child healthcare service. If age range is reported instead of a mean, samples with a lower limit of 1–59.99 months/4.99 years and an upper limit of <6 years will be eligible. If a mean age or age range is not reported, samples described as babies, infants, toddlers or preschoolers will be eligible. For longitudinal or experimental study designs, the age criterion will be applied to the first measurement time point of the exposure, and could examine primary school children, adolescents and adults. While the intervention studies may occur during the antenatal period, or when a child is aged between 0 and 5 years, outcomes can be measured with a lag.

Outcome of interest

Studies will have to measure at least one of the following outcomes: (1) income (change in income/earnings/debt management); (2) other financial impact (financial literacy); (3) parental/caregiver or child health and well-being, including physical, mental and spiritual health, social well-being, developmental well-being of the child, parenting skills, service use, cost and harm.

Exclusion criteria

1. Studies are conducted in low-income/ middle-income countries and/or focus on cash transfer programmes.
2. Studies do not include a measure of financial impact, or health and well-being when a child is aged between 0 and 5 years old.
3. Studies use a qualitative methodology or case series.

Study selection and data extraction

Bibliographic records will be extracted from the databases interfaces and imported into Reference Manager Software (Covidence, Melbourne, Australia) for deduplication. In levels 1 and 2, titles and then abstracts of potentially relevant articles retrieved from the database and web searches and citations of relevant studies will be screened by independent reviewers using Covidence software (a secure, internet-based software). In level 3, full text copies of articles will be obtained for those meeting initial eligibility screening. Any discrepancies will be resolved through discussion with a third reviewer. The same independent reviewers who examine titles and abstracts will examine all full text articles. Using the format of the validated standard data extraction form, we will extract the following information: descriptive study characteristics (eg, author, publication year, study design, country, sample size, age, sex), exposure, outcome, results and confounders. Where multiple models are reported (eg, bivariate and adjusted models), results will be extracted from the most fully adjusted model. Findings will be determined to be statistically significant if $p<0.05$ is reported. Reviewers will not be blinded to the authors or journals when extracting data. A flow chart showing the studies included and excluded at each stage of the study selection process will be provided.

Risk of bias (quality) assessment among included studies

Using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) framework,[23] we will systematically examine the quality of primary research contributing to each outcome, reflecting the level of confidence in the estimated effects. Briefly, five assessment criteria (risk of bias, inconsistency, indirectness, imprecision, other) will be used to rate quality of evidence as 'high', 'moderate', 'low' or 'very low'. Quality of evidence ratings will start at 'high' for RCTs and 'low' for all other experimental and observational studies. The quality of evidence could be downgraded for any study design due to limitations associated with the five assessment criteria. Risk of bias assessment for individual intervention studies will be completed following the Cochrane Handbook. GRADE does not have an official tool for assessing risk of bias in observational studies, which is one

component of the quality of evidence, but does recommend the types of characteristics to examine.[24] These will be used to assess the risk of bias of the studies included in our review. Study quality will not influence eligibility for inclusion. For non-randomised studies, we will use the Risk Of Bias In Non-randomised Studies of Interventions assessment tool developed by Cochrane.[25]

Addressing missing data

In case of missing data, significant empirical data such as screened, randomised, intention-to-treat, as-treated and per-protocol population will be closely analysed. In cases where details are missing on study design, population, intervention or outcomes, the authors of included studies will be contacted by email. After the first contact attempt, if no response is received, the study authors will be contacted two more times approximately 3–4 weeks apart. We will critically appraise the concerns related to the missing data and imputation methods, for example, last observation carried forward. The attrition rates, for example, drop-outs, lost to follow-up and withdrawals, will be investigated.

Data synthesis

For outcomes of interest, a meta-analysis will be performed (if applicable) with the data that are sufficiently homogeneous in terms of statistical, clinical and methodological characteristics. If studies are deemed not appropriate for meta-analysis, qualitative synthesis structured around the outcomes will be conducted and the results will be presented narratively. The outcomes will be presented as the mean differences (MDs)/standardised mean differences (SMDs) with 95% CIs unless otherwise stated for continuous variables. For dichotomous data, the effect estimate is risk ratios with 95% CI. Limitations of each study (ie, quality assessment) will be described.

Patient and public involvement

Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

ETHICS AND DISSEMINATION

Ethical approval is not required for this systematic review. The results will be disseminated widely via peer-reviewed publication and presentations at conferences related to this field. A link to the published review will also be circulated via social media to disseminate the findings among academics and non-academics.

DISCUSSION

Financial security is fundamental for optimal child health and development, and family income is at the heart of this.[4] Many high-income countries use social supports to increase family income and protect from poverty, including the provision of cash transfers, income support payments and community services. Income maximisation advice services are an emerging area of interest as a possible method of supporting families in poverty, and healthcare service integration may provide a unique opportunity to take action in situations of financial crisis.

Understanding how income maximisation advice services may help families during crisis may be one avenue to assist families to access useful community resources and promote a comprehensive approach to poverty and deprivation, and consequently affect the health and wellbeing of families. Our review may, therefore, have valuable implications for stakeholders including children, families, healthcare professionals, financial counsellors, health policy managers and researchers working in public health to provide a routine clinical assessment of financial hardship and refer to local services within the community.

A key strength of this review protocol is the use of multiple gold standard guidelines; the PRISMA-P, GRADE and Cochrane frameworks. By incorporating different elements from each guideline, a solid framework and structure was created by which the research question could be answered. Additional strengths are the inclusion of a university librarian with experience conducting systematic reviews who assisted with peer-reviewing the search strategy, the application of a data extraction template, and a flexible approach to data acquisition and synthesis. A limitation of this review may be the heterogeneity in reporting and measures of outcomes. Non-English language electronic databases will not be searched which is another limitation.

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