

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Cash Transfer Programmes in lower and middle-income countries, understanding pathways to nutritional change – A realist review protocol
AUTHORS	Floate, Hilary; Marks, Geoffrey; Durham, Jo

VERSION 1 - REVIEW

REVIEWER	Bridget Fenn Independent consultant
REVIEW RETURNED	13-Dec-2018

GENERAL COMMENTS	<p>This study sets out to review the available evidence of CTPs on nutrition status in children U5. Using at a broad range of literature the authors intend to develop a tentative theory, that will be further tested, to understand the mechanisms underlying how CTPs work. This is a timely review protocol considering the increasing interest in CTPs and the mixed evidence on nutrition status of U5s being produced.</p> <p>Abstract Introduction The purpose of this review is “to understand how, why, for whom and in what circumstances CTPs can consistently and positively influence child nutritional status”. This, as the authors say, is the first stage of a research project to provide tentative theories that will be empirically tested. I suggest that the purpose be changed to reflect this as it will be a combination of the research that will provide a fuller understanding. Especially, and as the authors state, that the available evidence on pathways is limited.</p> <p>Methods and Analyses Describe in full all acronyms in the abstract i.e. RAMSES and CMO</p> <p>It would be good if the authors explicitly laid out the 5 steps here. They mention the final step but it would help if we knew exactly what the other steps were to make it easier to follow the methods.</p> <p>Background In general, the background could be clearer and more systematic at addressing the research question. At the moment it does not give confidence that CTPs are fully understood.</p>
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The type of CTPs intended for review could be clearer from the start. This also needs to be justified better, for example, why they excluded short-term one-off CTPs.

As an introduction to CTPs the authors present a one-sided view, with emphasis on social safety nets and large-scale CTPs, with heavy reliance of research from the Ethiopian PSNP. It would be good to give a more rounded background on the different types of CTPs and contexts (development and humanitarian), and nutritional effects, especially as the literature in this area is growing. For example, there is relatively recent evidence from another REFANI study (Somalia), the Mam-Out study (Burkina Faso), and other studies in DRC and Niger.

As well, a fuller description all CTPs would help as this is incomplete. The definition included here of CTPs only includes cash. Vouchers also fall under the 'cash' heading. Are the authors intending to look at voucher programmes as well since these also bring their own issues?

Ln 119. The reference needs to changing to ref number 4 as the reference stated (1) does not go into such detail

Ln 125-6: The authors state that conditional cash transfers are 'more commonly used in more advance economies' and give examples from high-income countries. There are many CCT programmes in LMIC settings, the setting of this paper, and examples (Mexico, Nicaragua, Bangladesh, Cambodia) from these settings would be more appropriate here. There have been a number of systematic reviews done on CCTs in LMICs and it would be good to briefly summarise and reference them here, e.g. Bright et al. 2017, Lagarde et al 2007.

Ln 148: Ref 8 – a better reference would be the REFANI literature review rather than the study protocol (which was developed from the literature review): Fenn B. (2015) Research on Food Assistance for Nutritional Impact (REFANI): Literature Review. REFANI.

Ln 151-157: This part is difficult to follow. The paper by Leroy is referenced here along with the UNICEF conceptual framework. However, the Leroy paper sets out a framework showing potential mechanisms that might affect nutrition status. This goes further than what the authors say about how CTPs work, by increasing economic ability to buy more (diverse) foods. It would be good to have a brief description, &/or examples, of some of the underlying mechanisms of how CTPs might have an impact on nutritional status. They might be better here to acknowledge some of the gaps in the knowledge, including costs (referencing other literature that has addressed these).

Ln 157-161. The authors say "there is limited research that explains how, in what circumstances and over what timeframe, various CTP implementation structures, services and practices influence child nutritional status. The purpose of this review is to understand how, why, for whom, in what circumstances, in what respect and over what duration, CTPs can consistently and positively influence child nutritional status". This seems counter-intuitive as if they say there is limited research then how will they understand the questions they seek? Is the review set out to

	<p>answer these questions or to provide a tentative framework of mechanisms, from evidence, that will be further tested?</p> <p>Have the authors considered also looking at proximal indicators (e.g. immediate and underlying) toward nutrition status as outcomes, as there is more available research on these? I see this is addressed in the Analysis and Synthesis section. This needs then to come out clearer in the sections above.</p> <p>Ln 169-171 – the authors could provide references here to the available evidence (see point above).</p> <p>Methods Realist review methodology</p> <p>Ln 184-187: The authors write “Publication standards have been issued by the RAMESES (Realist and Meta-Narrative Evidence Synthesis: Evolving Standards) project, and realist reviews are utilised with greater frequency in complex intervention evaluations, particularly those related to human behavior change outcomes, such as CTPs”. The references here should relate to behavior change, and as it is written, in relation to CTPs. They do not. Ref 18 only mentions behavior-change once so it is unclear why this reference is used here.</p> <p>Ln 215-218 & Ln 224-227: Repeated sentences.</p> <p>Protocol and review methods Ln 231: Include refs 25 and 26 here also?</p> <p>Ln 233-234: It would be good to reference or list these relevant protocols selected.</p> <p>Ln 238-240: The authors mention analytic techniques to ensure rigour and validity. Examples would be good here (e.g. MMAT mentioned later on). Also it is better to reference original sources rather than studies that reference these original sources i.e. reference 27. Further down a difference reference is used anyway [ref 25] in Ln 462.</p> <p>Ln 248: The word ‘interventions’ is confusing here. Do the authors mean ‘programmes’?</p> <p>Review objectives Objective 2: What is the justification for restricting the search to include CTPs from “large-scale, multi-stakeholder interventions, driven by external donors”? This could come out in the introduction.</p> <p>Step 1 Ln 275-276: The authors talk about the underlying assumptions of nutrition-sensitive CTPs and the impacts on child nutrition through pathways that increase access and diversity. In Fig 1 ‘food’ is one of the four domains, which is quite broad. Have the authors considered framing their question around sustainable food systems?</p> <p>Inclusion and exclusion criteria It would be good to include in the introduction clearer information on the choice of CTPs so we can understand better why CTPs</p>
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	<p>from high-income countries are included and small-scale humanitarian CTPs are excluded.</p> <p>Article screening Ln 352 & Ln 362 – how many individual reviewers?</p> <p>Ln 357: Velonis (2016) needs to be referenced (ref 39)</p> <p>Ln 368: This is referenced as 39. Is this correct?</p> <p>Analysis Step 3: Refining programme theories</p> <p>It is confusing as to whether the literature search and data extraction and quality appraisal sections would not be better placed under the Article Screening in Step 2. This is even mentioned in Ln 459 and 480.</p> <p>Ln 452: Define MRT here.</p> <p>Ln 474: Is this reference [14] correct?</p> <p>Data extraction Will the data extraction form be piloted?</p> <p>Discussion A lot of what is in this section would be better in the introduction as it provides a good justification for this review e.g. ref 44 would be much better if mentioned earlier.</p> <p>Ln 522-524: New concepts seem to be broached in the discussion which could be addressed earlier on.</p> <p>Ln 528-530: As mentioned above this is part 1 of the research strategy and in itself will offer part of the understanding of “how and why CTPs produce nutrition outcomes” – I think “will provide strong explanatory evidence” is perhaps overambitious.</p> <p>Ln 541: Define and reference meta-ethnography</p> <p>References The references need to be consistent e.g. in some places the authors have written Lancet, (London, England) and others not. The part in brackets anyway is unnecessary.</p> <p>Check that all references are relevant and are the best match to the text.</p>
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REVIEWER	Ebenezer Owusu-Addo Monash University, Australia Kwame Nkrumah University of Science & Technology, Ghana
REVIEW RETURNED	20-Dec-2018

GENERAL COMMENTS	I am in strong support of a realist approach to the review as CTPs mechanisms of change in general have not been made explicit in the literature (see Owusu-Addo et al. 2018a, Evaluation of cash transfer programs in sub-Saharan Africa: a methodological review. Evaluation and Program Planning, 68:47-56). However, the paper
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in its current form will benefit from some modifications/clarifications prior to publication. I offer some suggestions below.

Introduction

There are two types of cash transfer programmes (CTPs). You therefore need to clearly indicate the type of CTPs that will be the focus of the review. CTPs for assistance in humanitarian disasters are often one-time/short duration and focus on short-term objectives (e.g. relief from a disaster), and therefore address different causal pathways/associated mechanisms of change. The second type of CTPs are regular and ongoing cash transfers focused upon poverty reduction and addressing vulnerabilities with a possible graduation from the programme. These also address different causal pathways/associated mechanisms of change. See Owusu-Addo et al. (2016) The impact of cash transfers on social determinants of health and health inequalities in Sub-Saharan Africa: a systematic review protocol. *Systematic Reviews*, 5: 114; and Owusu-Addo et al. (2018b) The impact of cash transfers on social determinants of health in sub-Saharan Africa: a systematic review. *Health Policy and Planning*, 33:675-696. Both the Kenya and Ethiopia government-led CTPs fall into the second category of CTPs.

Page 4 L139, while you talk about the underlying theory of unconditional CTPs, it is important to also indicate the general underlying/intervention theory of CPTs. Owusu-Addo et al. (2018c) <https://doi.org/10.1177/1356389018814868> might give you some ideas regarding this.

Review objectives

It is difficult to tell the difference between objectives 2 and 3 as they both focus on how CTPs achieve their nutritional outcomes. Objective 3 can be rephrased to focus on CTPs mechanisms of change: e.g Identify the mechanisms that explain how CTPs contribute to child nutrition. Objective 2 can be rephrased in such a way that it provides a plausible explanations on how and why CTPs contribute to (or not) to child nutrition. In this case, objective 1 comes first followed by the mechanisms objective then context objective (currently objective 4) and lastly the rephrased objective 2 focused upon the explanatory account.

Title says 'low-income countries' but objective 3 focuses on low- and middle-income countries. Need to be consistent.

Methods

Your description of the realist approach is fine.

Hypothesised CMOs and tentative theories

It would be helpful to make available in the protocol the list of the hypothesised CMOs as what have been provided focus largely on nutrition education either as a context or part of the implementation process. Note that with the exception of CTPs in Latin America which have nutrition education as part of the conditions, the majority of CTPs particularly those in Africa do not have nutrition education component as a formal part of the programme. It is therefore important to appropriately theorise how CTPs might work to influence nutritional outcomes beyond nutrition education at this early stage of the review. The context is currently skewed towards CTP implementation leaving out other key aspects of CTP contexts including social norms, household/family size, the size of the transfer, regularity of transfer payment etc that might be important

for triggering programme mechanisms in relation to child nutrition outcomes. Also, several mechanisms may be at play at the meso and micro levels including intersectoral collaboration, household prioritisation of needs, empowerment, motivation etc regarding how CTs might work to impact on child nutrition. See Owusu-Addo et al. 2018c <https://doi.org/10.1177/1356389018814868>

Literature search strategy

In a realist review of a complex intervention such as CTPs, you need to search beyond databases. See Owusu-Addo et al. 2016 for ideas regarding other relevant sources that can be searched. In the case of databases, the Business and Economics databases should definitely be searched including the website of the Transfer Project (a project focusing on impact evaluation of CTPs in Africa). Further, as this review seeks to understand and build theory about the effects of context in relation to CTPs' impact on child nutrition, there is the need to be more rigorous in your search for evidence to ensure that research and evaluation documents about the impacts of CTPs on nutrition in low-and middle-income countries are included, and important contexts are not overlooked. The search strategy should be based on the initial rough programme theory so as to find the data needed to test and refine their program theory/ies.

Inclusion and exclusion criteria

It is not clear why welfare programmes in high-income countries are being included in this review when the focus is on low-and middle-income countries. Also note that while CTPs in Latin America are conditional cash transfers, the majority of CTPs in Africa are unconditional CTPs. Conditionalities may trigger different sets of mechanisms in different contexts so be mindful of this.

Quality appraisal

Please clarify what you mean by the relevance and rigour criteria. The description you provide in the protocol including the proposed use of a checklist to judge the rigour and validity of articles seems to suggest that documents may be excluded before they are even analysed for relevance and rigour. In realist review, relevance relates to whether the document can contribute to theory building and/or testing while rigour relates to whether the methods used to generate the relevant data are credible and trustworthy. Also, in a realist review, any part of a document might be relevant for theory testing and refinement. Therefore, it is important to plan how data management will be done to ensure easy retrieval of documents that might need to be revisited as the review progresses. Also indicate the criteria that will be used to assess the relevance of a document for inclusion in the review.

Analysis and synthesis

This section is very weak and requires additional work to clearly outline the analytical processes and the approach to be used including how a realist 'lens' will be applied to the analysis and synthesis. Will you make use of both abductive and retroductive analytical processes? Also, how will abstraction (making sense of the pattern of findings) be carried out?

You need to consider the relationship between the programme theory and relevant formal theory. That is, which substantive theory can provide a framework for CTPs and child nutrition that would

	help you make sense of the CMO patterns – to contribute to the ‘synthesis’ stage of a realist review?
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VERSION 1 – AUTHOR RESPONSE

Reviewer Comments and Recommendations	Author Response
<p>Abstract (Fenn)</p> <p>Introduction</p> <p>The purpose of this review is “to understand how, why, for whom and in what circumstances CTPs can consistently and positively influence child nutritional status”. This, as the authors say, is the first stage of a research project to provide tentative theories that will be empirically tested. I suggest that the purpose be changed to reflect this as it will be a combination of the research that will provide a fuller understanding. Especially, and as the authors state, that the available evidence on pathways is limited.</p> <p>Methods and Analyses</p> <p>Describe in full all acronyms in the abstract i.e. RAMSES and CMO (Also an editorial comment)</p> <p>It would be good if the authors explicitly laid out the 5 steps here. They mention the final step but it would help if we knew exactly what the other steps were to make it easier to follow the methods.</p>	<p>Abstract</p> <p>The introduction in the abstract has been changed to include the change in the statement of purpose, please refer to page 2, Lines 38-42*. The methods and analysis section have been revised to include the 5 steps of the review and abbreviations have been removed, as per Lines 43-54, page 2.</p> <p>* Line numbers are in continuous format and refer to the new text in the Revised manuscript marked copy</p>
<p>Background</p> <p>Fenn:</p> <p>Background could be clearer and more systematic at addressing the research question. At the moment it does not give confidence that CTPs are fully understood.</p> <p>The type of CTPs intended for review could be clearer from the start. This also needs to be justified better, for example, why they excluded short-term one-off CTPs.</p> <p>As an introduction to CTPs the authors present a one-sided view, with emphasis on social safety nets and large-scale CTPs, with heavy reliance of research from the Ethiopian PSNP. It would be good to give a more rounded background on the different types of CTPs and contexts (development and humanitarian), and nutritional effects, especially as the literature in this area is growing. For example, there is relatively recent evidence from another REFANI study (Somalia), the Mam-Out study (Burkina Faso), and other studies in DRC and Niger.</p> <p>As well, a fuller description all CTPs would help as this is incomplete. The definition included here of CTPs only includes cash. Vouchers also fall under the ‘cash’ heading. Are the authors intending to look at voucher programmes as well since these also bring their own issues?</p>	<p>The background section has been rewritten to reflect and include comments from both reviewers, please refer to pages 4-6, Lines 97-214. The references recommended by the reviewers were very helpful and have been incorporated into the background section.</p> <p>A more complete description of CTPs is provided on pages 4 and 5, Lines 129-150. The text has been expanded to address comments from both reviewers, including various contexts and recent evidence, please refer to page 5 Lines 151-186.</p> <p>The comments on objectives, inclusion/</p>

<p>Owusu: There are two types of cash transfer programmes (CTPs). You therefore need to clearly indicate the type of CTPs that will be the focus of the review. CTPs for assistance in humanitarian disasters are often one-time/short duration and focus on short-term objectives (e.g. relief from a disaster), and therefore address different causal pathways/associated mechanisms of change. The second type of CTPs are regular and ongoing cash transfers focused upon poverty reduction and addressing vulnerabilities with a possible graduation from the programme. These also address different causal pathways/associated mechanisms of change. See Owusu-Addo et al. (2016) The impact of cash transfers on social determinants of health and health inequalities in Sub-Saharan Africa: a systematic review protocol. <i>Systematic Reviews</i>, 5: 114; and Owusu-Addo et al. (2018b) The impact of cash transfers on social determinants of health in sub-Saharan Africa: a systematic review. <i>Health Policy and Planning</i>, 33:675-696. Both the Kenya and Ethiopia government-led CTPs fall into the second category of CTPs.</p>	<p>exclusion criteria and scope for the review have been treated together. The text for these has been modified to clarify that the review will include 'programmes in humanitarian/relief and development settings with multiple sites' and exclude 'welfare programmes in high income countries'.</p>
<p>Fenn Ln 119 – Reference change</p>	<p>Reference changed as per reviewer recommendation</p>
<p>Fenn Ln 125-6: The authors state that conditional cash transfers are 'more commonly used in more advance economies' and give examples from high-income countries. There are many CCT programmes in LMIC settings, the setting of this paper, and examples (Mexico, Nicaragua, Bangladesh, Cambodia) from these settings would be more appropriate here. There have been a number of systematic reviews done on CCTs in LMICs and it would be good to briefly summarise and reference them here, e.g. Bright et al. 2017, Lagarde et al 2007.</p>	<p>This sentence was in error. Only LMIC are to be included in the review and the references provided (Bright and Lagarde) have been included in the background (please refer to Lines 129 and 136).</p>
<p>Fenn - Ln 148: Ref 8 –</p>	<p>The REFANI literature review is cited in Lines 101 (page 4) and Line 182 (page 5)</p>

<p>Fenn - Ln 151-157: This part is difficult to follow. The paper by Leroy is referenced here along with the UNICEF conceptual framework. However, the Leroy paper sets out a framework showing potential mechanisms that might affect nutrition status. This goes further than what the authors say about how CTPs work, by increasing economic ability to buy more (diverse) foods. It would be good to have a brief description, &/or examples, of some of the underlying mechanisms of how CTPs might have an impact on nutritional status. They might be better here to acknowledge some of the gaps in the knowledge, including costs (referencing other literature that has addressed these)</p> <p>Owusu Page 4 L139, while you talk about the underlying theory of unconditional CTPs, it is important to also indicate the general underlying/intervention theory of CPTs. Owusu-Addo et al. (2018c)https://doi.org/10.1177/1356389018814868 might give you some ideas regarding this.</p>	<p>The section has been rewritten for clarity and has identified gaps in knowledge, please refer to pages 5 and 6, Lines 162-209</p> <p>The comment by the second reviewer and reference has been addressed in various sections, particularly on page 6, Lines 194-202</p>
<p>Fenn - Ln 157-161. The authors say “there is limited research that explains how, in what circumstances and over what timeframe, various CTP implementation structures, services and practices influence child nutritional status. The purpose of this review is to understand how, why, for whom, in what circumstances, in what respect and over what duration, CTPs can consistently and positively influence child nutritional status”. This seems counter-intuitive as if they say there is limited research then how will they understand the questions they seek? Is the review set out to answer these questions or to provide a tentative framework of mechanisms, from evidence, that will be further tested?</p>	<p>This has been addressed in the revision of the background section, where more evidence has been included and this statement has been removed.</p>
<p>Fenn - Have the authors considered also looking at proximal indicators (e.g. immediate and underlying) toward nutrition status as outcomes, as there is more available research on these? I see this is addressed in the Analysis and Synthesis section. This needs then to come out clearer in the sections above.</p> <p>Ln 169-171 – the authors could provide references here to the available evidence (see point above).</p> <p>Discussion (Fenn) A lot of what is in this section would be better in the introduction as it provides a good justification for this review e.g. ref 44 would be much better if mentioned earlier.</p> <p>Ln 522-524: New concepts seem to be broached in the discussion which could be addressed earlier on.</p> <p>Ln 528-530: As mentioned above this is part 1 of the research strategy and in itself will offer part of the understanding of “how and why CTPs produce nutrition outcomes” – I think “will provide strong</p>	<p>The notion of immediate and underlying determinants of nutrition status has been expanded on further in the revised background section and to provide more consistency through the document have been included in the inclusion and exclusion criteria pages 9 and 10, Lines 377-388.</p> <p>Further references are cited to reflect available evidence identified at this point of the review.</p> <p>The background and discussion have been rewritten to address these</p>

<p>explanatory evidence” is perhaps overambitious.</p> <p>Ln 541: Define and reference meta-ethnography</p>	<p>comments. The Manley reference has been included in the background section and the justification and new concepts formerly in the discussion moved to the background section, please refer to page 4, Lines 99-106. Strong explanatory evidence was modified as per page 14, Lines 603-606</p> <p>The inclusion of meta-ethnography was an author error, it has been removed from the text.</p>
<p>Methods Realist review methodology</p> <p>Fenn: Ln 184-187: The authors write “Publication standards have been issued by the RAMESES (Realist and Meta-Narrative Evidence Synthesis: Evolving Standards) project, and realist reviews are utilised with greater frequency in complex intervention evaluations, particularly those related to human behavior change outcomes, such as CTPs”. The references here should relate to behavior change, and as it is written, in relation to CTPs. They do not. Ref 18 only mentions behavior-change once so it is unclear why this reference is used here.</p> <p>Ln 215-218 & Ln 224-227: Repeated sentences</p>	<p>The sentence has been revised and references changed to address the point, please refer to page 6, Lines 222-224</p> <p>Repeated sentence removed</p>
<p>Protocol and review methods Fenn: Ln 231: Include refs 25 and 26 here also?</p> <p>Ln 233-234: It would be good to reference or list these relevant protocols selected.</p> <p>Ln 238-240: The authors mention analytic techniques to ensure rigour and validity. Examples would be good here (e.g. MMAT mentioned later on). Also it is better to reference original sources rather than studies that reference these original sources i.e. reference 27. Further down a different reference is used anyway [ref 25] in Ln 462.</p>	<p>Both references have been included, please refer to page 7, Line 266</p> <p>The protocols have been referenced, please refer to page 7, Line 269</p> <p>Added on page 7, Lines 274-276 and reference updated</p>
<p>Review Objectives</p>	

<p>Fenn: Ln 248: The word ‘interventions’ is confusing here. Do the authors mean ‘programmes’</p> <p>Fenn: Objective 2: What is the justification for restricting the search to include CTPs from “large-scale, multi-stakeholder interventions, driven by external donors”? This could come out in the introduction.</p> <p>Owusu It is difficult to tell the difference between objectives 2 and 3 as they both focus on how CTPs achieve their nutritional outcomes. Objective 3 can be rephrased to focus on CTPs mechanisms of change: e.g Identify the mechanisms that explain how CTPs contribute to child nutrition. Objective 2 can be rephrased in such a way that it provides a plausible explanation on how and why CTPs contribute to (or not) to child nutrition. In this case, objective 1 comes first followed by the mechanisms objective then context objective (currently objective 4) and lastly the rephrased objective 2 focused upon the explanatory account.</p>	<p>The word ‘interventions’ has been replaced by ‘programmes’.</p> <p>The objectives have been changed, please see pages 7 and 8, Lines 278-291.</p>
<p>Methods</p> <p>Fenn: Step 1 Ln 275-276: The authors talk about the underlying assumptions of nutrition-sensitive CTPs and the impacts on child nutrition through pathways that increase access and diversity. In Fig 1 ‘food’ is one of the four domains, which is quite broad. Have the authors considered framing their question around sustainable food systems?</p> <p>Owusu Your description of the realist approach is fine. Hypothesised CMOs and tentative theories It would be helpful to make available in the protocol the list of the hypothesised CMOs as what have been provided focus largely on nutrition education either as a context or part of the implementation process. Note that with the exception of CTPs in Latin America which have nutrition education as part of the conditions, the majority of CTPs particularly those in Africa do not have nutrition education component as a formal part of the programme. It is therefore important to appropriately theorise how CTPs might work to influence nutritional outcomes beyond nutrition education at this early stage of the review. The context is currently skewed towards CTP implementation leaving out other key aspects of CTP contexts including social norms, household/family size, the size of the transfer, regularity of transfer payment etc that might be important for triggering programme mechanisms in relation to child nutrition outcomes. Also, several mechanisms may be at play at the meso and micro levels including intersectoral collaboration, household prioritisation of needs, empowerment, motivation etc regarding how CTs might work to impact on child nutrition. See Owusu-Addo et al. 2018c https://doi.org/10.1177/1356389018814868</p>	<p>We agree that sustainable food systems fits better with this domain and the figure has been changed accordingly, please refer to Figure 1 and page 8, Line 314</p> <p>The authors agree with this comment. The CMOs provided in the protocol are examples only. The theoretical domains we provided in Fig 1 include other contextual factors mentioned by the reviewer. The CMOs in the protocol are implementation focused, they are an example of one of the categories under the four domains we propose in Figure 1. The other aspects of CTP contexts such as empowerment, size of transfer etc have been</p>

	<p>added to the background section as per the reviewer recommendation, including the additional reference.</p>
<p>Literature search strategy</p> <p>Owusu - In a realist review of a complex intervention such as CTPs, you need to search beyond databases. See Owusu-Addo et al. 2016 for ideas regarding other relevant sources that can be searched. In the case of databases, the Business and Economics databases should definitely be searched including the website of the Transfer Project (a project focusing on impact evaluation of CTPs in Africa). Further, as this review seeks to understand and build theory about the effects of context in relation to CTPs' impact on child nutrition, there is the need to be more rigorous in your search for evidence to ensure that research and evaluation documents about the impacts of CTPs on nutrition in low-and middle-income countries are included, and important contexts are not overlooked. The search strategy should be based on the initial rough programme theory so as to find the data needed to test and refine their program theory/ies.</p>	<p>Very useful recommendations. The text has been changed to reflect these points. Please refer to page 9, Lines 343-347.</p>
<p>Inclusion and exclusion criteria</p> <p>Fenn - It would be good to include in the introduction clearer information on the choice of CTPs so we can understand better why CTPs from high-income countries are included and small-scale humanitarian CTPs are excluded.</p> <p>Owusu - It is not clear why welfare programmes in high-income countries are being included in this review when the focus is on low-and middle-income countries. Also note that while CTPs in Latin America are conditional cash transfers, the majority of CTPs in Africa are unconditional CTPs. Conditionalities may trigger different sets of mechanisms in different contexts so be mindful of this.</p>	<p>Based on reviewer comments and the revision of the background section the inclusion and exclusion criteria have been changed, please refer to pages 9 and 10, Lines 372-381</p> <p>Welfare programs in high-income countries are now excluded. The authors agree that the mechanisms in the different contexts of CCTs, UCTs and vouchers will differ, we are working this into the data extraction and analysis phase.</p>
<p>Article screening</p> <p>Fenn - Ln 352 & Ln 362 – how many individual reviewers?</p> <p>Ln 357: Velonis (2016) needs to be referenced (ref 39)</p> <p>Ln 368: This is referenced as 39. Is this correct?</p>	<p>Two reviewers, please refer to page 10, Lines 388-389</p> <p>Updated, please refer to page 10, Line 395</p> <p>Reference removed</p>

<p>Step 3: Refining programme theories</p> <p>Fenn: It is confusing as to whether the literature search and data extraction and quality appraisal sections would not be better placed under the Article Screening in Step 2. This is even mentioned in Ln 459 and 480.</p> <p>Ln 452: Define MRT here.</p> <p>Ln 474: Is this reference [14] correct?</p> <p>Quality Appraisal and Data Extraction</p> <p>Fenn Will the data extraction form be piloted?</p> <p>Owusu Please clarify what you mean by the relevance and rigour criteria. The description you provide in the protocol including the proposed use of a checklist to judge the rigour and validity of articles seems to suggest that documents may be excluded before they are even analysed for relevance and rigour. In realist review, relevance relates to whether the document can contribute to theory building and/or testing while rigour relates to whether the methods used to generate the relevant data are credible and trustworthy. Also, in a realist review, any part of a document might be relevant for theory testing and refinement. Therefore, it is important to plan how data management will be done to ensure easy retrieval of documents that might need to be revisited as the review progresses. Also indicate the criteria that will be used to assess the relevance of a document for inclusion in the review.</p>	<p>We agree that the description of workflow was confusing. The protocol sub-headings have been revised to clarify each step and associated activities, pages 8, 9, 10, 12 and 13, Lines 294, 333, 412, 477, 551 and 577. There have been changes in the text of these sections to add clarity.</p> <p>MRT removed from text and reference has been changed to Pawson.</p> <p>The data extraction form will be piloted between the reviewers, page 13, Line 544</p> <p>Very helpful comment. The section has been revised to clarify the workflow, please refer to pages 12 and 13, Lines 496-549.</p> <p>Data management has been included.</p>
<p>Analysis and synthesis</p> <p>Owusu (only)</p> <p>This section is very weak and requires additional work to clearly outline the analytical processes and the approach to be used including how a realist 'lens' will be applied to the analysis and synthesis. Will you make use of both abductive and retroductive analytical processes? Also, how will abstraction (making sense of the pattern of findings) be carried out?</p> <p>You need to consider the relationship between the programme theory and relevant formal theory. That is, which substantive theory can provide a framework for CTPs and child nutrition that would help you make sense of the CMO patterns – to contribute to the 'synthesis' stage of a realist review?</p>	<p>The authors agree with this comment. This section has been revised to reflect the reviewer comments, please refer to pages 13 and 14, Lines 551-576. Substantive theory has been included and the reference and evaluation provided by the reviewer have been very helpful.</p>

VERSION 2 – REVIEW

REVIEWER	Ebenezer Owusu-Addo Monash University, Australia Kwame Nkrumah University of Science and Technology, Ghana
REVIEW RETURNED	16-Mar-2019

GENERAL COMMENTS	<p>The authors have satisfactorily addressed all my previous comments. The revised manuscript is much stronger now. Below are some minor comments that require the attention of the authors prior to publication.</p> <ol style="list-style-type: none"> 1. Be consistent with the use of low-and middle-income countries. In some instances, you use lower and middle-income countries as captured in the title of the paper. 2. Change the name of the author Owusu et al to "Owusu-Addo" et al throughout the document. 3. P15 L616, I would say "...implementation guidelines to help optimise the nutrition impact of the program..." as the aim of realist review/evaluation is not to enable programs 'produce consistent outcomes' everywhere.
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VERSION 2 – AUTHOR RESPONSE

Reviewer: 2 Reviewer Name: Ebenezer Owusu-Addo	Author Response
Be consistent with the use of low-and middle-income countries. In some instances, you use lower and middle-income countries as captured in the title of the paper	The text has been changed to ensure lower and middle-income countries is used throughout. All changes are highlighted in red font
Change the name of the author Owusu et al to "Owusu-Addo" et al throughout the document.	The recommended change to author name has been made, changes are highlighted in red font throughout the protocol
P15 L616, I would say "...implementation guidelines to help optimise the nutrition impact of the program..." as the aim of realist review/evaluation is not to enable programs 'produce consistent outcomes' everywhere.	The recommended change has been made in red font