

Does it Measure Up?

Common Food Security Metrics and their Potential for Local NGO Learning

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SUMMARY:

Calls for greater accountability and effectiveness resound throughout the international development sector, propelling a greater emphasis on monitoring and evaluation (M&E) than ever before. A shift towards demonstrating the *impact* of development initiatives has led to two broad trends in M&E: (1) the rise of randomized control trials (RCTs) as the “gold standard” for impact evaluation, and (2) the donor-driven push for local development institutions to quantitatively measure their impact under the framework of results-based M&E. While the first trend has received significant attention from academics, policy-makers and the like, the second trend has been relatively ignored. This inattention is troubling because of the material implications M&E can have and the innate tensions that exist between donors and recipients at different levels of the aid chain. International donors’ seek universal, globally comparable indicators to permit progress comparisons across contexts. However, there is a growing backlash to these top-down, results-based M&E methods, which many practitioners see as inappropriate for the complex problems and settings that development projects take place in. This is coupled with an emerging appreciation that effective, sustainable progress requires local ownership, which includes the definition of indicators and what constitutes success. So the question becomes, is the trend towards uniform indicators and measurement methods encouraging or discouraging the local learning necessary for generating sustainable local solutions? Applying this lens to the concept of food security, this paper examines the most common food security metrics, and whether these tools are appropriate for fostering learning and progress at the local NGO level. A case study based on the development one of these food security measurement tools, the Coping Strategies Index (CSI), with a local South African NGO shows that these common measures were not designed for the local NGO context, and therefore do not provide decision-useful information that could contribute to organizational learning. Thus, M&E approaches should be broadened to take into account local learning needs, knowledge, and capabilities in order to lead to more sustainable outcomes.

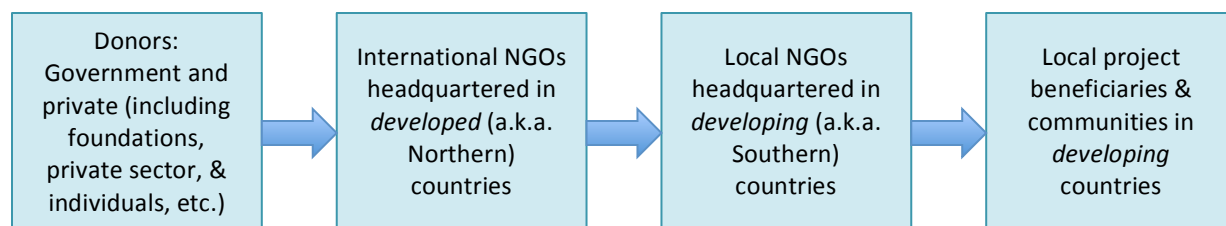
Key words: Monitoring & evaluation (M&E), accountability, results, learning, local NGOs, food security, Coping Strategies Index (CSI)

INTRODUCTION

More effort and resources are being devoted to the field of monitoring and evaluation (M&E) in the international development sector than ever before. This renaissance is primarily due to growing demands from international donors who want to demonstrate the impact and effectiveness of their interventions and justify their spending (Eyben, 2013; Holma & Kontinen, 2011; Mueller-Hirth, 2012; Woodhill, 2005). In particular, two trends emerge out of this intense focus on impacts: (1) the rise of randomized control trials (RCTs) as the “gold standard” for impact evaluation, which aim to identify the causal impact of a policy or program (White, 2010), and (2) the wide-spread adoption of the results-based M&E approach (Binnendijk, 2001; UNDP, 2009) as a means of ensuring development effectiveness at all levels. While policy-makers, academics, and development practitioners have paid significant attention to the former trend, the latter has received relatively little despite it having an arguably greater influence on day-to-day activities development activities. Thus, this second trend is the overarching focus of discussion.

Since the early 2000s, there have been massive strides in development outcomes and millions being lifted out of extreme poverty. However, this means that the remaining work will be harder, as simpler problems are solved. Thus, development requires new, innovative approaches and frameworks to tackle the increasingly complex problems of poverty. To achieve this, there are increasing calls for incorporating local, indigenous knowledge and worldviews (Ebrahim, 2003b, 2005; Holma & Kontinen, 2011; Kilby, 2006a; Lennie & Tacchi, 2014; Levine & Griñó, 2015; Ofir, 2013; Woodhill, 2005). Even at the upper echelons of the aid chain there is a growing appreciation for the importance of learning and incorporating local contexts and stakeholders into the development process, especially when it comes to M&E. Local ownership of development would identify new solutions and ensure more sustainable outcomes. But this raises the question of whether the current results-based M&E paradigm is appropriate for fostering the necessary local learning that can lead to these essential innovations.

Figure 1. Simple Aid Chain



Source: Adapted from Bornstein, 2003

Local non-governmental organizations (NGOs)¹, in particular, hold a critical position in the aid chain. The number of development NGOs, in general, has swelled in recent years, and they are now an integral part of service delivery and project implementation (Bendell, 2006; Bornstein, 2003a; Edwards & Hulme, 1996; Odiwuor, 2013). Figure 1 illustrates a simplified aid chain, showing how money, resources, and policies flow primarily down from international donors through to local NGOs and ultimately local beneficiaries (Bornstein & Wallace 2006). Due to their proximity to and direct relationships with target communities, local NGOs have a unique understanding of their context and the information needs related to challenges like food

¹ Development NGOs, at the local and international level, constitute a large and heterogeneous group of organizations, and this paper refers to them in a very general sense. There are certainly exceptions to the way that

insecurity. Moreover, these organizations are frequently run or staffed by local community members. Given that they are not likely to leave when the project funding is over they have a strong incentive to create sustainable change. Thus, the obstacles to learning at the local NGO level are important for the development community as a whole to address.

To explore this question, this paper begins with a brief overview of results-based M&E in relation to the emerging appreciation around the role M&E plays in promoting progress through learning, especially at the local level. I will apply this lens to the most common measures of food (in)security, one of the primary global development efforts, evaluating whether these tools would be appropriate to foster learning and progress at the local NGO level. I will then illustrate these analyses with a case study based on my own fieldwork developing one of these food insecurity measurement tools, the Coping Strategies Index (CSI), with a local South African NGO.

The main argument of this paper is that current results-based M&E tools, exemplified by the common food (in)security measures discussed, are inappropriate for achieving desirable progress based on local learning outcomes because they may overemphasize asymmetric power relations between donors and recipients, oversimplify local contexts, and overshadow local informational needs by focusing on a few narrow indicators. Informing an effective balance between a focus on results, accountability and learning, especially at the local NGO level, will help lead to more sustainable and meaningful development. It is therefore important for both funders and NGOs to consider how M&E tools and requirements influence local learning potential.

RESULTS-BASED M&E: The Dominant Paradigm

Results-based M&E is the approach to M&E that stems from results-based management, a type of performance management strategy with roots in the private sector. Alternatively called “Managing for Results” (USAID/PPL, 2015) or more specifically “Managing for Development Results (MfDR)” (UNDP, 2009) by different groups, results-based management arose in the 1990s in response to neoliberal criticisms that governments were inefficient and ineffective at service delivery. In contrast, the private sector was a shining example of efficiency, leading many public sector agencies to adopt their strategies and practices, including strategic planning, performance monitoring, and employing more frequent and rigorous evaluations (Binnendijk, 2001; Wallace, 1997). This approach is known as New Public Management (Alexander, Brudney, & Yang, 2010; Brinkerhoff, 2008; Eyben, 2013). One example of this is the passage of the 1993 Government Performance and Results Act (GPRA) in the United States which aimed to improve the performance of public agencies by requiring strategic plans that detailed the agency’s goals, results indicators, and measurement plan (Cuellar, 2011).

Today, results-based management and its prescribed M&E style are the dominant paradigm in development. Several international high-level forums that focused on aid effectiveness have further confirmed this, such as the 2005 Paris Declaration on Aid Effectiveness, the 2008 Accra Agenda for Action, and the 2011 Busan Partnership for Effective Development Co-operation; all of which declare a *focus on results* as one of the common principles necessary to achieving desired development goals (Fourth High Level Forum on Aid Effectiveness, 2011; OECD/DAC, 2016). Furthermore, the United Nations Millennium Development Goals (MDGs) and their recent successors, the Sustainable Development Goals (SDGs), are the embodiment of this emphasis on results and the widespread adoption of results-

based management as standard best practice in development (Armytage, 2011; Lennie & Tacchi, 2014; White, 2010).

These practices are now widespread, having been passed down the aid chain from large donor agencies and foundations to international NGOs and eventually local ones. Given this ubiquity, it is important for development funders and practitioners to critically reflect on whether results-based M&E is indeed “best practice.”

Defining Terms

The United Nations Development Program (UNDP) defines results-based management as “a management strategy or approach by which an organization ensures that its processes, products and services contribute to the achievement of clearly stated results;” that “provides a coherent framework for strategic planning and management by improving learning and accountability” (Evaluation Office UNDP, 2002, pp. 9–10).

Results-based management has been an important development for the practice of M&E because M&E activities make up the bulk of the results-based management process. The first steps consist of developing measurable objectives, identifying associated indicators, and setting specific performance targets with the aid of a strategic planning tool, like the logical framework (logframe) matrix. Following this, organizations or project teams track their progress through a performance monitoring system that regularly reports on results and also integrates evaluations, which provide additional analysis of performance against targets (Binnendijk, 2001).

The *results* in results-based management refer to outputs, outcomes, and impacts. The distinctions between them are often vague, however, so they are defined as follows based on Binnendijk’s (2001, pp. 20) definitions.

- *Outputs*- the goods and services produced through activities (e.g., an extension manual, number of people trained). Outputs are the first, and often most tangible, level of results.
- *Outcomes*- the realized effects or consequences of outputs on the intended beneficiaries. These can be short-term, such as an increase in awareness or knowledge resulting from attending training, or more medium-term, such as changes in behavior or the adoption of a technology. Outcomes can also refer to unintended and/or negative changes that can be linked to outputs, and constitute the second level of results.
- *Impact*- the long-term change that a project contributes to, encompassing both intended and unintended, positive and negative changes to the individuals and communities involved in the project, as well as to society, the economy, and/or the environment more broadly. This highest-level result is the hardest to measure and attribute to specific project(s) or interventions. Another name for impact is long-term outcome.

Monitoring and evaluation are also terms that can be difficult to pin down, meaning different things to different people. Under results-based management, *monitoring*, also called performance monitoring, is defined as the continuous and systematic process of tracking progress towards results, through data collected on the objectively verifiable performance indicators identified in the logframe or other strategic planning tool (Cracknell, 2000; Morra Imas & Rist, 2009). Additionally, monitoring is considered to be an internal project or organizational activity undertaken by the immediate managers of an intervention, with the aim of facilitating adaptive management and timely decision-making (Garbutt, 2013; World Bank, 2004).

*Evaluation*², on the other hand, is a procedure that determines the worth or significance of a project, program, or policy. Evaluations are more periodic and deliberate than monitoring processes; often carried out at the end of a project or program, as summative evaluations³, which are conducted by objective, external evaluators who employ rigorous analytical methods (Cracknell, 2000; Morra Imas & Rist, 2009). In essence, evaluations are meant to provide managers and funders with decision-useful information about current initiatives and policies, which will improve their effectiveness, efficiency, and sustainability. Overall though, both of these are clearly focused on measuring results, with particular attention paid to high-level impacts, like those outlined in the Sustainable Development Goals, such as food security. And as this emphasis on impact grows, the distinction between them blurs, which is why they are so often referred to in conjunction as M&E.

Critiques of Results-Based M&E

HOW AID REALLY WORKS: M&E FOR WHOM?



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The rhetoric of results-based M&E, expounded by many development donors, makes this approach appear to be basic, common sense management practice. Moreover, the tools and practices are neutral and objective, suited to achieving the dual goals of accountability and learning in any context. In practice, however, many argue that results-based M&E has significant limitations and fails to live up to its promises (Armytage, 2011; Bakewell & Garbutt, 2005; Bornstein, 2003a; Carman, 2009; Mueller-Hirth, 2012; Wallace, 1997).

To start, critics point out that the results-based M&E framework is a top-down initiative, and assert that it does not reflect the needs of the local development practitioners or the people they are trying to serve. As already mentioned, it developed because of pressures for donors to demonstrate their effectiveness and accountability; not in response to local concerns or calls for reform (Wallace, 1997). However, as NGOs in general become an increasingly integral part of efforts to achieve development goals, donors are demanding greater accountability from them (Edwards & Hulme, 1996; D. Lewis, 2001).

² There is a lot of debate and confusion around the topic of evaluation in development. USAID makes the distinction in their evaluation policy between *impact evaluation*, which seeks to attribute impacts to specific interventions (e.g., RCT studies), and *performance evaluation*, which still tries to assess impact, but does not try to attribute it to a specific project or program (USAID, 2011). This paper focuses on food security impact indicators, which could be used in either type of evaluation, but since the analysis of these metrics centers on their potential to contribute to local NGO learning, it is most likely that they would be used in performance evaluations under these definitions.

³ Summative evaluations are only one type of evaluation. Others include formative, process, outcome, and impact evaluation, and they can be broken down by timing, method and focus. For a more extensive description of the different types of evaluation, see Cracknell (2000), *Evaluating Development Aid*.

Local NGOs often end up adopting results-based M&E systems and tools, therefore, out of necessity, in response to direct donor demands. Results-based M&E reporting requirements flow down the aid chain along with money and resources, making adoption of M&E a contingency of funding (Bornstein 2003, Ebrahim 2003, Mueller-Hearth 2012). The likelihood of taking up these requirements is higher for NGOs who are dependent on these official sources of funding, either as direct grant recipients or indirectly through subcontracts with other organizations (Ebrahim 2003). And even when an NGO is not explicitly required to employ results-based M&E practices, they might choose to anyway because of institutional pressures to conform to the dominant paradigm and be seen as a legitimate organization (Barman & Macindoe, 2012; Carman, 2009; Mir & Bala, 2015). A study of local and international NGOs in Cambodia found that resource dependence, reliance on few sources of international donor funding, and social embeddedness, which relates to legitimacy and learning from peers, were significant predictors of an organization's use of results-based M&E tools and activities (Marshall & Suarez, 2013).

What makes this problematic for local NGOs is that it exacerbates existing power asymmetries between donors, grantees, and local communities by highlighting the strong upward accountability mechanisms donors are able to exercise to ensure that their needs are met, which often come at the expense of an organization's ability to respond to its downward accountability to its beneficiaries or internal accountability to its own staff and mission (Ebrahim, 2003a; Kilby, 2006b). Many local NGOs, based in the global South, draw parallels to this system and their colonial histories, where the South is continually called upon to account to the North, but never the other way around (Bornstein, 2003a). Moreover, at the bottom of the aid chain, local beneficiaries face the greatest marginalization. Not only is their local knowledge not valued by a system that prizes objective, quantitative indicators, but they lack the power to demand the downward accountability due to them (Ebrahim, 2003a, 2003b, 2005). This creates an M&E environment that is extractive and disempowering towards development's most vulnerable constituents.

Additionally, though donors describe results-based M&E tools as neutral and practical, critics push back that the quantitative impact indicators promoted by this system are actually couched in Western, positivist ideas of measurement and impact (Armytage, 2011; Eyben, 2013). Many of the concepts and analytical methods are unfamiliar and disjointed from local perceptions, practically ensuring that they will not produce local learning (Bakewell & Garbutt, 2005; Carnochan, Samples, Myers, & Austin, 2014; Woodhill, 2005). Furthermore, simply collecting data on these indicators requires organizations to develop specific types of capacity and expertise (Mueller-Hirth, 2012), and even then they often lack the ability to analyze and utilize the information in an effective manner. So M&E becomes a purely bureaucratic hurdle for organization that diverts time and resource away from core activities and services. Moreover, the strict linear cause-effect logic of results-based M&E stifles the flexibility and innovation necessary to truly realize results in these dynamic and challenging environments (Lennie & Tacchi, 2014)

One of the reasons for this disjuncture is that results-based M&E rests on a strong assumption that often proves false. This assumption is that, "*If funders require [organizations] to provide them with reports about performance information and funders require that they engage in program evaluation, then [organizations] will learn from this and, in turn, be able to provide more effective services in more efficient ways*" (Carman, 2009, p. 260 emphasis original). But as outlined above there are several ways this breaks down.

LEARNING-BASED M&E: An Emerging Paradigm

Recent years have seen a growing appreciation for the learning function of M&E. Some organizations have begun to rename their M&E systems ME&L, with the ‘L’ standing for learning; highlighting the connection between them. Even big donor agencies are beginning to take notice. The United States Agency for International Development (USAID), for example, is starting to advocate for the importance of learning with its new USAID Learning Lab, which is “an interactive community where members can access and contribute to a growing repository of tools and resources on integrating collaborating, learning, and adapting (CLA) throughout the USAID Program Cycle” (USAID Learning Lab, 2017).

Learning matters for development because it responds to many of the critiques people have of results-based M&E. Effective learning-based M&E systems are characterized by a human-centered approach that actively engage local communities in their own development. Drawing on participatory action research methodologies, this emerging paradigm is based on the understanding that development interventions are not one-size-fits-all, and need to be adapted to the local context (Armytage, 2011). More importantly, it recognizes local organizations and communities are ones that need to spearhead this work. Not only do they have the socio-cultural expertise needed to adapt development initiatives to their local contexts, but having local buy-in also promotes sustainable outcomes (Ebrahim, 2005; Holma & Kontinen, 2011; Lennie & Tacchi, 2014). Learning-based M&E shifts the focus of M&E away from measuring and tracking specific, pre-determined quantitative results, towards one that values the ways in which development organizations are actively trying to improve by engaging in critical reflection and incorporating lessons learned.

While there are still several key knowledge gaps and challenges to implementing this type of M&E system, the flexibility it allows and the incorporation of local knowledge and values make clear why it is gaining traction in the development community, even at the upper echelons.

However, one of these key knowledge gaps, which is potentially the deepest and most important, is how to create an environment that is more conducive to learning (Leo, 2016). This is where this paper’s discussion of food security metrics comes in. Essentially the donor rhetoric around learning and M&E is a classic case of asking for A, but rewarding B (Kerr, 1995), where donors advocate for a learning-based approach, but still work off and reward the accountability focused, results-based M&E system. Many, in fact, still claim that results-based M&E can achieve both learning and accountability (Binnendijk, 2001; UNDP, 2009; USAID, 2011). So the following sections will analyze the most common food security measurement methods, which are classic examples of quantitative, results-based M&E indicators, to see if they have potential to promote learning, specifically at the local NGO level.

COMMON FOOD SECURITY MEASUREMENT TOOLS

Food security is one of the top priorities on the international development agenda, and is widely used to inform and evaluate development policies and programs. The new Sustainable Development Goals (SDGs), for example, explicitly set a target to achieve food security for all by 2030 as part of Goal #2 (United Nations, 2017), and in the United States, Congress recently passed the Global Food Security Act of 2016 (“H.R.1567,” 2016).

It is not surprising that so much attention is given to achieving food security. Food is understood to be a basic human need, if not an innate human right, and it tugs at our moral conscience to think that there are those out there who do not have enough. Furthermore, food insecurity poses a security threat, causing societal stability, which can result in violence and revolution. The Arab Spring, for instance, was ignited by food riots that broke out because of increased bread prices (Perez, 2013). But, moreover, the concept of food security is foundational. Achieving food security is often a necessary condition for other development outcomes, like improving childhood health and development, or increasing income generation through investment (Hendriks, 2015).

Defining Food Security

Though the concept of “food security” has been around since the 1940s, the definition has evolved over the years. Prior to the 1980s, food security referred primarily to the concept of food *availability* at the national level. Influenced by a series of famines in developing countries like India and Bangladesh, the concern was whether or not countries had sufficient food supplies to feed their population. And it was this notion of food security is that spurred the Green Revolution (Hendriks, 2015). However, though food stocks went up thanks to Green Revolution technologies, hunger and malnutrition still persisted. And in 1981, Amartya Sen’s book *Poverty and Famine* led policy makers and researchers to consider *access* to food as another important concept in the definition of food security (Coates, 2015; Hendriks, 2015).

Today, the generally accepted definition of food security comes from the United Nations Food and Agriculture Organization (UN FAO). Developed in 1996 at the World Food Summit, the definition states:

“Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 2008).

This definition is further refined into four dimensions of food security: (1) availability, (2) access, (3) utilization, and (4) stability. See Table 1 for further explanation of these dimensions. Some additional aspects that do not fall directly into these four dimensions are cultural appropriateness, referring to “food preferences” in the above definition and a general implication that food security is about both food quantity and quality combined. For food security to exist, all four of these dimensions must be achieved simultaneously (FAO, 2008; IPC Global Partners, 2008).

Furthermore, the dimension of stability implies two types of food *insecurity*, *chronic food insecurity* and *transitory food insecurity*. Chronic food insecurity is persistent and occurs when people are unable to meet their dietary needs over a long period of time. Whereas, transitory food insecurity is temporary state where there is a sudden drop in one’s ability to produce, access, or utilize enough food to maintain a suitable nutritional status (FAO, 2008). However, the distinction between time periods is not clear, and in general this dimension is the hardest to measure. For example, an individual or household could potentially experience transitory food insecurity several times throughout the year, but not be classified as chronically food insecure. Moreover, under this broad distinction between transitory and chronic, a household that experienced food insecurity only once could be classified the same way as one that experiences food insecurity every other month, or even at the end of every month, depending on how the time

frame is defined. These are clearly different severities of food insecurity, but they are difficult to capture.

Table 1. The Four Dimensions of Food Security

Dimension	Quote: “ <i>Food security exists when all people...</i> ”	Description
Availability	<i>physical</i>	The physical <i>availability</i> of food, addressing the supply-side, and is determined by national/local food production levels, stocks, net trade, and food aid.
Access	<i>social and economic access to sufficient</i>	Whether or not people face economic or social barriers to obtaining food. This dimension goes beyond availability, and is affected by purchasing power, income, and infrastructure (market & transportation). Having access to quality food, in addition to sufficient quantities of food is also a part of this dimension.
Utilization	<i>safe and nutritious food that meets their dietary needs...for an active and healthy life</i>	Understood as the way the body is able to makes the most of nutrients in food. This dimension relates the most to nutrition, and follows on from access by relating to how the quality of the food influences how the body is able to use and benefit from it. However, non-food access related things could also influence utilization, such as health status.
Stability	<i>at all times</i>	This encompasses the three previous dimensions and holds that food security must be a stable state. Inadequate access to enough food of quality and/or decreases in health that impair ones ability to utilize food, even if on a periodic basis, still constitutes food insecurity.

Source: *An Introduction to the Basic Concepts of Food Security* (FAO, 2008)

In fact, there are those that would argue that these four dimensions of food security are faulty because they lack a definitive interpretation and fail to encompass understandings, such as the severity of food insecurity. Hendriks (2015) states that, “the usefulness of the concept [of food security] is constrained by the plurality of ways of understanding the causes and consequences of food insecurity, and the effects of social, economic, political and environmental interventions” (p. 609). She argues that food insecurity should be considered a continuum that goes from worry about future food access to actual experiences of hunger, rather than a binary state. Alternatively, Coates (2013) advocates for new dimensions entirely that allow the experience of food insecurity to be isolated from the potential causes and consequences⁴. In any

⁴ Dimensions defined by Coates (2013): “An individual must have access to food that is: (1) sufficient in quantity; (2) adequate in nutritional quality; (3) culturally acceptable; (4) safe; and (5) certain and stable” (p. 191).

case, these arguments highlight that there are important challenges that remain in defining a concept that is as multifaceted as food security, which is important because the way that we define it influences the way that it gets measured. For the purposes of this paper we will stick with the FAO definition and its associated dimensions.

Most Common Food Security Metrics

As the definition of food security has evolved over time, so has the means of measuring it⁵. Even with the generally accepted FAO definition, the complex nature of the concept means that there are several choices about what aspect or dimension to measure. For example, “food security metrics may focus on food availability, access, utilization, the stability of food security over time, or some combination of these” (Jones, Ngure, Pelto, & Young, 2013, p. 484), and can utilize data at a number of different levels from national to individual. Notably, due to evidence that greater developmental differences exist within a country than between countries, there is a growing need to measure food security at a more local level (Cafiero, Melgar-Quinonez, Ballard, & Kepple, 2014).

Measures of food access are the most commonly used metrics, with several tools having been developed in recent years. As such, the three most common categories of food security measurement are:

Dietary Diversity- Alternatively called the Dietary Diversity Index or Dietary Diversity Score, this method is relatively simple and is calculated based on a short questionnaire, which asks whether a household or individual has consumed any food from a set of food groups over a given period. The sum of these food groups is the score, with higher scores being more desirable, and typically correlated with greater economic access, higher caloric consumption, and a more nutritionally dense diet (Coates, 2015). Reference periods are recommended to be 24-hours for greatest recall accuracy (Swindale & Bilinsky, 2006), but they can be up to a week (i.e., 7 days) (Coates, 2015). Furthermore, the traditional household dietary diversity score (HDDS) is composed of 12 food groups⁶ and does not include food consumed away from home because there is no way for the household representative responding to the surveyor would know this accurately. At the individual level, however, dietary diversity measures would include all food consumed both at home and away. This is because the HDDS measures a household’s economic access to food, whereas the individual level measures quality of the individual’s diet (Kennedy, Ballard, & Dop, 2010). Moreover, in order to accurately represent changes in HDDS over time, Swindale and Bilinsky (2006) recommend conducting these surveys during the period of greatest shortage, and then collecting it at the same time in subsequent years to avoid the problem of seasonal variation.

Issues with dietary diversity indicators primarily relate to their inability to be used for cross-cultural comparison. This is because no universal cut-off exists in the number of food groups that would distinguish between food secure and food insecure households (Coates, 2015). FAO recommends using the mean score or a distribution of scores for analytic purposes or setting program goals and targets (Kennedy et al., 2010). For

⁵ It should be noted that while these indicators are most often referred to as food security measures, what most of them are actually measuring is food *in*security (Hendriks, 2005).

⁶ These include: Cereals; Fish and seafood; Root and tubers; Pulses/legumes/nuts; Vegetables; Milk and milk products; Fruits; Oil/fats; Meat, poultry, offal; Sugar/honey; Eggs; and Miscellaneous (Swindale & Bilinsky, 2006)

example, one study in South Africa classified households as food insecure if they fell within the bottom quartile for a given reference period (Kirkland, Kemp, Hunter, & Twine, 2013). However, this could change from context to context, even within a given country, which is why cross-cultural comparisons are a challenge.

Other concerns with dietary diversity include that neither individual nor household level measures indicate quantity of food consumed, so that true nutritional intake remains unknown. Furthermore, varying reference periods contribute to the difficulty of comparing scores, and even given the same reference period, this indicator is only a snapshot in time, which fails to take into account the seasonality of food security (Kennedy et al., 2010)

Direct Experiential Measures- Rather than using indirect indicators of food (in)security, this suite of metrics tries to measure food security as a direct experience. The first of these was the Household Food Security Survey Module (HFSSM), developed in the United States through a government-university partnership with Cornell. This module is based on the idea that the experience of food insecurity produces predictable responses related to four dimensions: (1) anxiety about food supplies; (2) perceptions about insufficient food quality or quantity of accessible foods; (3) reducing adult food intake; and (4) reducing child food intake (Jones et al., 2013). Consisting of 18 questions, each attitude or behavior response is assumed to correspond with a particular, predictable point on a severity continuum, which are quantifiable in a way that the full concept of food security is not (Coates, 2015). Subsequent measures have built off this, with the best known ones being the Household Food Insecurity Access Scale (HIFAS) a 9-question survey created by the Food and Nutrition Technical Assistance (FANTA) Project (Coates, Swindale, & Bilinsky, 2007) and the Latin American and Caribbean Food Security Scale (ELSCA), which “were designed to capture household behaviors signifying insufficient quality, quantity, acceptability, and anxiety over insecure access” (D. Maxwell, Vaitla, & Coates, 2014, p. 109).

An issue with these is that they are not valid across all contexts. FANTA did not validate the HIFAS as a whole before promoting it, and tests of internal and cross-cultural validity did not meet established criteria (Jones et al., 2013). This is mainly due to questions on the less severe end of the scale, such as those related to anxiety or worry over food, which studies from different countries showed were too subjective and varied considerably across contexts (Deitchler, Ballard, Swindale, & Coates, 2011). As a result, a reduced survey using only the last three, most severe questions was developed, known as the Household Hunger Survey (HHS), which is cross culturally valid. However, it only captures the most severe forms of food security (D. Maxwell, Coates, & Vaitla, 2013). Similarly, the ELSCA tool is not valid outside of Latin America and the Caribbean.

Due to this lack of internationally valid instruments, FAO’s Voices of the Hungry project has developed the Food Insecurity Experience Scale (FIES), which is composed of 8 yes/no response items. Extensive linguistic adaptation was undertaken in order to maintain the linguistic and cultural appropriateness of each item, and ensure that the meanings stayed faithful to their original intent (Ballard, Kepple, & Cafiero, 2013). Results from a survey of 147 countries, with each consisting of a representative sample of 1,000 adults, found that overall the data was consistent with Rasch model assumptions from item response theory once weighted according to a global reference scale (Nord,

Cafiero, & Viviani, 2016). The authors thus conclude that the FIES tool “constitute reasonably reliable measures of food insecurity and [is] adjustable to the global standard with fair confidence” (p. 1). FAO is promoting the use of the FIES in national surveys (Ballard et al., 2013), however this could still prove to be too high level and technically demanding for sub-national organizations to undertake.

Coping Strategies Index (CSI)- Daniel Maxwell and collaborators developed this tool in 1996 in collaboration with the World Food Program (WFP) and CARE Kenya (S. Maxwell, 1996). It has since been used for early warning detection in several countries, and the CSI Field Manual (D. Maxwell & Caldwell, 2008) also states that it could be “useful for monitoring long-term trends in food security” (p. 1). The basic logic of the CSI answers the following question: “What do you do when you don’t have enough food or money to buy food?” (p. 2). Building off studies that showed that people were not passive victims of circumstance, but active in managing their risks, it is logical then that they respond in certain ways to cope with these stresses related to food access insecurity (Coates, 2015). Using these strategies as indicators, which comprise the index, it follows that the more one has to cope, the less food secure they are. Scores are calculated based on the sum of frequency over a 7-day recall period, weighted by the severity of each strategy. Any score above zero is considered food insecure, so this measure is most useful for measuring the severity of food insecurity (D. Maxwell & Caldwell, 2008).

Furthermore, this measure is meant to be context-specific because it does not make sense to ask people about things that they do not do, as well as the fact that similar strategies might be viewed as more or less severe in different settings. In general, though, previous experience with the CSI shows that there are four types of consumption coping strategies that food insecure households employ: (1) changes in diet composition; (2) attempts to increase food supplies through borrowing or credit; (3) reducing the number of people to feed; and (4) rationing food or even going hungry in the most severe cases (D. Maxwell & Caldwell, 2008). Additionally, the CSI focuses on consumption coping strategies rather than resource augmentation strategies (i.e., selling off household assets), because it is difficult to distinguish between a household that does not sell off assets because they do not have any to sell or because they do not need to sell off any assets.

A “reduced” CSI (rCSI) was also developed to allow for cross-country comparisons by pooling CSI data from 15 countries to identify the most common coping strategies that appear across most cultures and represent similar levels of severity (Coates, 2015; D. Maxwell & Caldwell, 2008). The rCSI consists of five standard coping strategies⁷, although it is less useful in identifying the most vulnerable households since it does not contain the most extreme strategies.

Though studies have shown that both the CSI and rCSI correlate well with many of the other common measures listed above (D. Maxwell et al., 2013, 2014), the context-specific nature of the original does not allow cross country comparisons, and the rCSI has yet to be reliably tested for reliability, accuracy, and equivalence (Jones et al., 2013).

⁷ rCSI coping strategies (universal weights): eating less preferred foods (1.0); borrowing food/money from friends and relatives (2.0); limiting portions at meals (1.0); limiting adult intake (3.0); and reducing the number of meals per day (1.0) (D. Maxwell & Caldwell, 2008, p. 17)

Considerations and Critiques

Though the “holy grail” of food security measurement would be a single valid measure that could capture all dimensions reliably, and be comparable over space and time, none such measure has yet been developed (Ballard et al., 2013; D. Maxwell et al., 2013); although the FIES is the most promising in this regard. Rather, there is a vast array of metrics to choose from, which presents a challenge for anyone looking to measure food security, since it has been shown that not all these tools are measuring the same thing (Coates, 2013; Jones et al., 2013). Often these tools are used interchangeably or without much consideration to the dimension that is being measured (Hendriks, 2005; D. Maxwell et al., 2013), which could result in a number of issues, such as misinterpretation, failure to properly adapt chosen tools (e.g., accurate translation), and inadequate allocation of funds. Maxwell et al. (2013) conclude from their empirical study in Tigray that while many of these common metrics are well correlated, indicating that they are all capturing some aspect of food security, they are all capturing slightly different elements of food security. Moreover, there are clear and significant differences in their food security classifications, both between various metrics and even between the same metric applied by different researchers using different cut-offs.

Given the complexity of the food security’s definition and the incongruence between metrics, most papers suggest employing multiple methods in order to get a more holistic picture (Coates, 2013; Jones et al., 2013; Kirkland et al., 2013; D. Maxwell & Caldwell, 2008; D. Maxwell et al., 2013, 2014; Webb et al., 2006). However, when considering the capabilities of many local NGOs, this recommendation means that they are not only challenged to decide on a single measure which would be appropriate for them, but now must devote additional time and resources to collecting several measures, which could represent undue strain. Additionally, many of these metrics were developed by academics and developed country government researchers who are trying to track national and even global trends in food security, and were not meant for use at the local level. They require a lot of resources and specific expertise to linguistically adapt to different contexts, implement in a rigorous manner, and analyze accurately. Often local NGOs and their field staff do not have these competences, and so there is huge potential for improper implementation or faulty analysis. Since measuring impact indicators in this way is also often a top-down requirement or strong recommendation, there is likely to be little understanding of the nuances of each type of food security measurement tool, increasing this probability. Moreover, these factors limit the learning potential of these indicators for local NGOs. And furthermore, because many of them are not cross-culturally valid, reporting these scores to donors does not provide any usable information at this level because numbers cannot be aggregated or compared, and so do not promote learning at this level either. Thus reporting food security measures to donors only serves to demonstrate their upward accountability, and does little to nothing for promoting local NGO learning and improvement.

In order to more explicitly demonstrate this point, the following section will briefly cover a case study, based on the author’s fieldwork with a local South African NGO, where she developed a context-specific CSI tool in response to their request for a simple way of measuring their impact. This section will draw on observational field notes, focus group recording, and interviews with NGO staff involved in implementation of the CSI tool once it was developed (Ballard et al., 2013).

CASE STUDY: Development & Implementation of the CSI in South Africa

This case study focuses on the CSI tool for measuring food insecurity; exploring both the challenges faces in development and its subsequent implementation at the local NGO level. Working essentially as an M&E consultant⁸ for SaveAct, a local South African savings group promoter, I was tasked with coming up with a simple, cost effective way to measure livelihood impacts of their programs. I chose the CSI tool because it appeared to fit these criteria and its context-specific nature made it seem like it would provide more relevant, useful information. Not only would it give SaveAct a nice overall quantitative measure that could work well in a baseline and endline/follow-up survey to monitor changes over time, but it would also provide a more granular view of particular strategies that SaveAct might find relevant, such as how often members still felt they needed to take out loans from a *mashonisa* (a.k.a., loan shark) (E. Lewis, 2015). Having this information on specific behaviors related to food insecurity would enable SaveAct to potentially target or adapt their activities to preventing people from needing to resort to these strategies, and thus improve their programs.

However, beyond SaveAct, the CSI is an interesting metric to look deeper at because some have pointed to the CSI as a nice middle ground between accountability focused, strict results-based M&E indicators and participatory M&E, such that it could serve both accountability and learning needs simultaneously (Jacobs, Barnett, & Ponsford, 2010). I think that this case study shows that, though a step towards local indicator development that would encourage greater learning, the CSI is still founded on the results-based M&E framework, and therefore does not contribute to learning at the local NGO level.

Background

South Africa is considered an upper middle-income country, but this label hides the fact that between 40 and 50 percent of the population is defined as poor (Lehohla, 2014; Machethe, 2004). This is demonstrated by its Gini coefficient, which is a measure of inequality within a country. South Africa's is among the highest in the world at 0.69 out of 1 (Lehohla, 2014).

Though significant gains have been made in poverty reduction since democratization in 1994, the rural poor continue to be marginalized and excluded from the formal economy, with the National Planning Commission (2011) stating that this was the main challenge to rural development. Furthermore, though the post-Apartheid government has tried to create a more racially representative agricultural sector, bad planning has plagued efforts at land restitution and redistribution and these programs are largely defunct (de Klerk, Fraser, & Fullerton, 2013). As a result, the rural agricultural in South Africa is 'dualistic' (May & Carter, 2009), with large, well-integrated, commercial farms on the one hand, and subsistence, smallholders on the other. Estimates put the number of subsistence households at 2.5-3.5 million, concentrated in 'black traditional areas' (de Klerk, Fraser, & Fullerton, 2013). These households are often characterized as dependent, living off government social grants and/or remittances from relatives in urban centers like Johannesburg (May & Carter, 2009). They rely on land-based livelihoods for any sort of local income generation. The high rate of HIV/AIDs only exacerbates the challenges subsistence farmers face by increasing the pressure on income due to additional healthcare and funeral costs (Delany & Storchi, 2012). Given this, increased agriculture productivity is considered essential to the improvement of smallholder livelihoods (Baiphethi & Jacobs, 2009).

⁸ This particular undertaking was funded through a USAID Research Innovation Fellowship in Agriculture (RIFA), from July - mid-September 2015. However, this was the second summer working with SaveAct.

Since 2007, the South African NGO, SaveAct, has been working in this context to promote saving and credit groups (SCGs) as a means of providing access to financial resources and services otherwise missing in rural and peri-urban areas of South Africa. Working primarily in KwaZulu-Natal and the Eastern Cape provinces, both traditional homeland areas, they have seen tremendous success using the Village Savings and Loan (VSLA) model⁹ developed by CARE. According to their most recent estimates, SaveAct has now reached over 51,000 members (SaveAct, 2017b). However, in response to many members' demand for additional services, namely agricultural enterprise training and assistance in accessing agricultural inputs, SaveAct has also created its Enterprise Focus Groups (EFGs), which consist of 10 production trainings on an agricultural topic, such as maize or broiler production (SaveAct, 2017a).

Developing the SaveAct CSI

The context-specific CSI tool, which will be referred to as the SaveAct CSI, was developed using a modified protocol based on the *Coping Strategies Index Field Methods Manual, 2nd Edition* by David Maxwell and Richard Caldwell (2008). A total of 12 focus groups were conducted over a two-month period from July to August of 2015, six in KwaZulu-Natal and six in the Eastern Cape. The majority of the areas within these provinces where focus groups took place were classified as rural, however 3 out of 6 in KwaZulu-Natal were peri-urban. Focus groups consisted of SCG members, recruited by field staff from the SaveAct network, that had belonged to an SCG for a minimum of one share-out cycle, and ranged in age from about 30 to 70. Groups ranged in size from 5 to 15 people, and not surprisingly, given that the majority of SaveAct's SCG members are women, only 3 out of the total 97 participants were men.

I worked closely with one SaveAct staff member from the start. She helped with the initial translation of all the focus group materials into isiZulu and facilitated 9 out of the 12 focus groups. Two local field officers¹⁰ also acted as facilitators when the original facilitator could not attend. Thus, there were a total of three different people who facilitated the focus groups.

Following Maxwell and Caldwell's definition of food insecurity as a time when "you don't have enough food or money to buy food," this concept was translated into two of the three local language, isiZulu and isiXhosa, which are spoken in the areas that SaveAct works. Various field staff assigned to assist me on the project undertook this activity. Unfortunately, none of the field staff that facilitated a focus group spoke Sesotho. However, they relayed to me that the group(s) could understand isiXhosa or isiZulu, and so the focus groups were conducted in one of these two languages. In some cases of focus groups in the Eastern Cape, additional field staff that had set up the meetings initially also attended and they were able to translate difficult topics when necessary.

The main change from the Field Guide method was the addition of a seasonality map. Following the initial brainstorming of consumption coping strategies (see Table 2), the group was asked to map the frequency of use of each of these coping strategies by a typical household *before* joining a savings group. Frequency was indicated using a 1- to 5-dot scale. Groups were

⁹ Savings groups act like community micro-credit unions. Groups are made up of about 10-30 self-selected individuals, who meet regularly about once a month. At each meeting, members put a minimum amount of money into the communal savings pot, by purchasing 'shares' that are a fixed price. Group members are also allowed to take out loans from this pool. The loans are repaid with 10% interest, which is much more favorable than what they would receive from local loan sharks. Saving and lending cycles normally last for about a year, and at the end all the savings plus interest is returned, and the cycle starts again (Delany & Storchi, 2012).

¹⁰ Field officers are the ones that train SCGs and assist older groups when they encounter a problem or issue

also asked about which strategies they think a typical household who has at least one member in a savings group still relies on and at what frequency. However, given the difficulty in getting people to admit that they still used any of these strategies, especially in a group setting, this prompt was later changed to be a hypothetical question: “Which of these strategies would you still rely on if you every found yourself in such a situation?” This helped a bit but responses are still likely to be censored because people did not want to admit publically that they would resort to any of these strategies. Lastly, going back to the Field Manual, each focus groups was asked to rank the severity of each coping strategy on a scale of 1 to 4, with 4 being the most sever. The recorded rankings reflect the group’s consensus. Refer to Appendix A for a detailed outline of the focus group protocol.

Table 2. Example List of Coping Strategies Developed by a Focus Group

Zulu	English
Kudle kwanele abantwana kuqala	Small children eat first
Ukuboleka imali kamakhelwane	Borrow money from neighbors
Sikha imifino ezimilelayo (imbuya & bolonja)	Gather wild food (wild spinach & sea weed)
Seqisa izinsuku singadli	Skip entire days without food/eating
Sinciphisa isikali sokudla	Reduce portion size of food
Ukudla imbewu ebekiwe	Consume stored seed
Ukukweleta ukudla	Buy food on credit
Ingane ziyodla esikoleni/komakhelwane	Send children to eat at school/neighbors
Sigcine sidle ukudla okungenamsoco	Eat less nutritious food/preferred food
Ukucela ukudla kamakhelwane	Ask neighbors for food
Sinciphisa isibalo sokudla ngosuku	Reduce meal times per day (3 to 1)

The 12 most common coping strategies from all the focus groups were then determined and their severity scores averaged to obtain the weights for the SaveAct CSI. These 12 coping strategies are listed below in Table 3, along with the groups’ specific severity rankings and the calculated “consensus ranking.”

Note that there are two coping strategies listed that have an asterisk next to them. The first one, “a. Gather wild food” has a severity ranking of 1 rather than 2 because in the focus group discussions it was often said that participants still gather wild food currently, but not because households felt food insecure. Rather, they did this simply out of preference for such foods. Additionally, only one group out of 12 ranked this above a 2, which means that if this outlier was not considered, the score would already round down to 1. That is why I chose to give this coping strategy has a severity ranking of 1 rather than 2.

The second, “k. Skip entire days without eating,” was not a very common coping strategy, but did come up 3 times. Because this is such a server coping strategy, denoting extreme food insecurity, I felt that it was important to include it in the SaveAct CSI. The fact that it came up at all means that this is a coping strategy that is utilized, but probably only in the most severe circumstances. That is perhaps why is did not come up in most of the other focus groups, because these participants were not experiencing this most extreme form of food insecurity before joining a savings group, and thus did not consider it. However, it is likely that others in their community may be facing this, and therefore is likely to be something that some future new SCG members may face. Additionally, while the average from the groups was 3.0, I decided to

rank this strategy at a 4 because of its extreme nature, and the fact that 2 out of 3 groups also ranked this as a 4.

Table 3. Coping Strategies Grouped and Ranked by Focus Group

Coping Strategy	Focus Group Ranking for Each Individual Coping Strategy													Consensus Ranking
	FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8	FG9	FG10	FG11	FG12	Ave.	
a. Gather wild food	1	1	2	2	3	2	2	1	1	1	1	1	1.5	1*
b. Eat stored seed	4	1	1	2	4	4	4	4	-	4	1	3	2.9	3
c. Eat less preferred, cheaper, or unhealthy food	4	2	4	3	1	4	3	2	3	1	-	2	2.6	3
d. Reduce portion size at meal times	2	2	3	4	2	1	1	2	-	-	3	2	2.2	2
e. Reduce number of meals per day	3	3	3	4	4	3	1	4	-	-	4	-	3.2	3
f. Let small children eat before adults	3	-	4	3	-	3	2	4	-	-	4	4	3.4	3
g. Ask a neighbor for food	2	4	2	2	3	1	1	4	1	2	2	3	2.3	2
h. Purchase food on credit	3	2	-	1	1	4	3	3	3	4	1	3	2.5	3
i. Borrow money from a loan shark	-	4	4	4	2	4	4	4	4	4	4	4	3.8	4
j. Find a daily piece job	-	1	-	4	4	4	3	3	1	4	4	-	3.1	3
k. Skip entire days without eating	4	-	-	-	1	-	4	-	-	-	-	-	3.0	4*

Given this final list of coping strategies and their consensus rankings, the final SaveAct CSI is displayed in Table 4. The recall period for this tool is 7 days, based on the recommendation of the CSI Manual (2008). This is a reduction from the original 30-day recall period, since that was deemed too long a timeframe to provide accurate data. While not all coping strategies would be utilized in any given 7-day period, the CSI is only meant to provide a snapshot in time. More frequent data collection should be used if the goal is to understand the seasonality of household food access insecurity. However, my recommendation to SaveAct was to only repeat this survey once a year at the same time in order to monitor changes from year to year, given the expected seasonality.

Appendix B shows an example of how the SaveAct CSI would be calculated. The lowest possible CSI score is 0, denoting complete food security, and the higher the score the more food insecure a household. The highest possible SaveAct CSI score is 217.

Table 4. SaveAct Coping Strategies Index (CSI) Tool

In the past 7 days, if there has been a time when you did not have enough food or money to buy food, how often has your household had to:	Frequency Score (0-7)	Severity Weight	Weighted Score = Frequency X Severity
<i>(add each behavior to the question)</i>			
a. Gather wild food?		1	
b. Eat stored seed?		3	
c. Eat less preferred, cheaper, or unhealthy food?		3	
d. Reduce portion size at meal times?		2	
e. Reduce number of meals per day?		3	
f. Let small children eat before adults?		3	
g. Ask a neighbor for food?		2	
h. Purchase food on credit?		3	
i. Borrow money from a loan shark?		4	
j. Find a daily piece job?		3	
k. Skip entire days without eating?		4	
TOTAL HOUSEHOLD SCORE	Sum down the totals for each individual strategy		

Implementation of the CSI Tool

My time in South Africa only encompassed the development of the SaveAct CSI tool. Through follow-up interviews with the Director and primary M&E officer I learned about how SaveAct has since implemented the CSI tool.

SaveAct always wanted to incorporate this tool as a module within a larger “livelihood tracker,” which would also look at areas like knowledge change and empowerment. Because of the length of this larger survey, the M&E officer in charge decided to go with the universal reduced CSI (rCSI) since it only consisted of 5 questions rather than 12. Table 5 is an example of the rCSI tool. Furthermore, they decided to pilot this tool only with the Enterprise Focus Groups (EFG) and not the Savings and Credit Groups (SCGs), since there were less of these groups and they were just starting this program so it would be easier to incorporate a new M&E tool.

While the initial survey tool was meant to be a baseline-endline, the main M&E officer also decided to collect responses after each of the 10 EFG meetings because of the variable nature of the trainings. Depending on the commodity, some curriculum take place in 10 consecutive weeks, like broilers, while others have a more seasonally determined timeline, such as maize, which has a long lag between the initial planting sessions and subsequent harvest ones.

Basically, I think the main point that we started using the tool is for the monitoring, or the M&E side of Enterprise Focus Groups, that was originally done on a base and endline survey. However, we encountered that they...yeah, some issues about timeframes

and issues with the cyclicity of the program itself. So, we transformed it in a way that we are using a smaller sample currently, and we are carrying out that tool at every meeting, at every enterprise development meeting. –M&E officer

Concerns over a small sample size also led SaveAct to collect data from three members of each EFG. This includes the group's Lead Farmer and two other EFG members. While I was initially told that these other two respondents were randomly chosen, I later learned that the either the group selects who these other two are or in a few instances "eager" farmers have volunteered. Because these surveys require additional time after the meeting, around 45 minutes per person, and what often happens is that the three respondents fill it out as together to save time. While this is understood to cause problems in terms of the reliability of people's answers, it is still a common occurrence that often leads to the food security questions being left blank.

In general filling in surveys is not something that people like to do. Quite honestly, people hate filling out these surveys. They take a long time and also some of the questions are very sensitive. Food security in particular was very intimidating. A very very intimidating set of questions. And if you interview in a group, people are not willing to share. –M&E officer

This leads to a situation in which those with less social capital in the group, mainly younger and less wealthy members, are the ones responding to this survey. Furthermore, there are lots of issues with people refusing to fill out this portion of the survey because they find it too personal.

Table 5. Example of the Reduced Household CSI Score

In the past 7 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to:	Raw Score	Universal Severity Weight	Weighted Score = Frequency X weight
Relative Frequency Score			
a. Rely on less preferred and less expensive foods?	5	1	5
b. Borrow food, or rely on help from a friend or relative?	2	2	4
c. Limit portion size at mealtimes?	7	1	7
d. Restrict consumption by adults in order for small children to eat?	2	3	6
e. Reduce number of meals eaten in a day?	5	1	5
TOTAL HOUSEHOLD SCORE—Reduced CSI	Sum down the totals for each individual strategy		28

Critiques of the CSI tool: Does it promote learning?

The SaveAct CSI-

Though SaveAct did not end up utilizing it, it is worth noting that there were several issues with the development of the SaveAct CSI tool. For one, not all the focus groups were conducted in the primary language of the participants. While there did seem to be some understanding of the concept of food insecurity, it is unclear how well it was communicated across languages. This could create issues with the internal validity of the tool. Similarly, because three different facilitators were used there could be significant difference in the way that

they interpreted the purpose of the focus group and translated the concepts. For example, the translation of food security to a focus group by one of the Field Officers, who filled in for the primary facilitator, goes as follows:

When we speak about food security we are talking about uhh... we are talking about, about food... we're talking about food security in relation to people. We look at whether people do have food that is enough, and whether it is actually food. Because it could happen that you have lots of food but it's only one type, but we should change that. Remember they say you should eat different types of foods. That is what we're looking for. We're looking at do we have enough food, and is it really the proper food we should be eating... That is food security.

It is clear that this not the same definition that Maxwell and Caldwell (2008) use in the CSI manual, which is “not having enough food or money to buy food” and is focused on the access dimension. The Field Officer’s definition seems to relate more to the concept of dietary diversity. In essence, changes in the way that concepts are communicated across language and culture can significantly influence the final tool in ways that make the data less reliable, creating difficulties for interpretation and ultimately identifying actionable lessons learned. That is why FAO spent so much time and money on the linguistic adaptation of the FIES for each country (Ballard et al., 2013).

Furthermore, the focus groups themselves were not randomly sampled. This could cause issues with both the final list of coping strategies identified and the severity weights, biasing the subsequent CSI scores. And the focus group process in general does not enable the collection of individual variation in severity rankings, meaning that the group ranking could be biased by those in the group with strong opinions or might not accurately reflect the perspective of those less willing or able to share their opinion.

The rCSI-

To date, SaveAct has been collecting data with the rCSI for a little over a year, but it is unclear if they have found a way to properly analyze it in a way that makes sense for them. Even if they had a clear strategy, their data is of poor quality, plagued by frequently missing data points and obvious selection bias due to the non-random sampling strategy. There could also be issues with the timing of data collection. Since some groups have data collected over 10 consecutive weeks, while others fill out these surveys more sporadically throughout an entire year, it makes it hard to compare any trends in scores across different commodity groups. Furthermore, previous literature has cautioned that too frequent data collection on indicators such as food security could lead to respondent learning, which is where people become so familiar with the survey that they begin to give false answers, either in an effort to please the service provider or to get additional services (Ballard et al., 2013; D. Maxwell & Caldwell, 2008). And moreover, frequent data collection of this nature could lead to survey fatigue. This could be another factor in why there are so much missing data, since we were told that people find the length a nuisance.

All of these issues present real problems for using the rCSI as a learning tool.

Overall critiques-

Though some see the CSI and rCSI as a happy medium between results-based M&E’s demand for accountability and the need to produce local learning, it is clear from SaveAct’s experience that this measure of food insecurity is still founded on results-based M&E principles

and many of the overarching critiques discussed previously still apply. For one, SaveAct did not adopt the rCSI tool because of an internal need to measure food insecurity. When discussing my fieldwork prior to coming to South Africa, the Director and M&E officer clearly expressed that the impetus for having a quantitative impact measurement tool was primarily to satisfy donor demands for more rigorous impact measurement, and only secondly for organizational learning.

We have very very specific donor requirements, and they want to know the impact of our program. So this [tool] is meant to satisfy these donor requirements. That is number one.
–M&E officer

Thus, while they also expressed a desire to learn about their program's effectiveness, the M&E tools they ended up adopting were not well suited for this purpose.

The beauty of this tool is that it is short and can be comparable across contexts and projects, but this is also its greatest weakness. In many ways it is too general and not applicable. We end up asking questions that are not relevant, and too broad for us to make use of. To get the right information we would need to break things out, but I actually would like to make things shorter so they are quicker and easier to collect. – M&E officer

The result is that the rCSI becomes a tool that can only be used to impress donors and satisfy accountability demands. Perhaps this would not have been the case with the SaveAct CSI, but questions of how to implement and analyze the data in a meaningful way would have persisted.

It must also be pointed out, however, that the choice of which impact to measure and the best tool to use was not prescribed to SaveAct. Rather they chose to measure food security based on my recommendation and the fact that CARE developed the tool I suggested.

I think this tool is also something that CARE International had worked with and developed, which for us seemed to be a good point of departure, cuz quite a lot of our work has been informed by CARE's work. They seem to have been one of the stronger NGOs in developing models in this field. –Director

This reference to CARE is evidence of institutional pressure local NGOs face to conform to the dominant results-based M&E paradigm, in order to remain relevant, even when they are not obligated to comply due to direct donor requirements. Other studies looking at South African NGOs have found similar pressures (Bornstein, 2003b; Mueller-Hirth, 2012).

Another critique of results-based M&E is that it forces local organizations to adopt tools and practices that are based on decidedly Western concepts of impact and success, that are not relevant at the local level. Food security for example, is a complex concept that does not exist in many cultures. Several of the focus groups used to develop the SaveAct CSI had never heard of the term before, and the facilitators expressed concern that there was not a straightforward way to interpret it into their local language. Moreover, even the literature on food security measurement points out that there is often a lack of understanding on what different food security measure are actually capturing (Jones et al., 2013; Leroy, Ruel, Frongillo, Harris, & Ballard, 2015; D. Maxwell et al., 2013), which makes it more difficult for local NGOs to choose the best tool.

Misunderstandings about what a tool is actually measuring create additional barriers to organizational learning based on the data generated. For instance, when asked how SaveAct, as an organization operationalizes the definition of food security, the Director's response was,

Well I hope that your index [referring to the SaveAct CSI and rCSI] actually covers the definition. That's my expectation.

However, while the CSI and rCSI are typically well correlated with other measures of food security, it does not encompass the entire definition of food security by any means. It only refers to the access dimension of the UN definition and even then, it captures different aspects of access than other common food access indicators like the FIES, HFIAS, HDDS, or HHS (D. Maxwell et al., 2013, 2014).

Overall, it was evident from interviewing the Director and primary M&E officer that a lot of staff time and other resources are devoted to measuring their impact driven by both donor demands and organizational learning needs. However, SaveAct clearly lacks the organizational capacity to implement its chosen impact measure in a rigorous way, which would require even more time, money, and specialized expertise. Therefore, one could argue that the effort they do expend is wasted from a learning-focused perspective. Moreover, many of the tools SaveAct has implemented, which are widely promoted by international donors and NGOs, do not provide relevant information for the contexts in which they work because they were developed by international researchers and organizations that were looking for universally valid indicators. There is a clear trade off between universality and local relevance, and the results-based M&E indicators, like the food security ones reviewed here, prioritize the goals of these large, international interests over those of local organizations.

CONCLUSION AND RECOMMENDATIONS

Measuring food security is a top priority for many international agencies, donors, academics and policy-makers. And while it is something that these large, resource and capacity rich organizations should continue to pursue, measuring food security using the common results-based M&E style indicators discussed in this paper is counterproductive to the goal of encouraging local NGO learning, as the SaveAct case study clearly showed.

In summary, the critiques of the common food security impact measures are as follows:

- Food security is not a locally relevant concept, which is exacerbated by the fact that the generally accepted definition is so multifaceted and complex that it is difficult to operationalize, even for the most talented researchers, let alone local NGO staff.
- Different measures also capture different aspects, which makes it difficult to understand what is actually being measured and which one would be the best to use.
- Local NGOs often lack the capacity and resources to implement these tools in the appropriate way, let alone adopt multiple measures like many studies and articles suggest (Coates, 2015; Kirkland et al., 2013; D. Maxwell et al., 2013).
- Most food security measures are not cross-culturally valid, which ensures that donor reporting on these metrics only serves upward accountability purposes.
- The attempt to create universally applicable indicator measures, however, means that a lot of the local detail that is the most useful to organizations operating at this level is lost.

Given, these issues, I would not recommend that any of these food security metrics be used by local NGOs who are seeking to learn about their impacts.

There is a growing appreciation that locally tailored solutions to many of the most pressing development challenges are needed in order to drive progress forward in a sustainable manner. However, to see real change we need to confront the barriers that still exist when it comes to encouraging local learning. The dominant, results-based M&E paradigm is ill-suited to promoting local NGO learning because it does not value local perspectives and over emphasizes upward donor accountability. So rather than continue to promote the adoption of results-based M&E impact indicators, such as those for food security, donors should develop systems that enable local organizations to develop their own indicators that encourage downward accountability and local ownership of development outcomes. For example, one study in Uganda compared the use of a locally developed school scorecard to a standard one and found that the participator scorecard provided not only a greater depth of detail, but also improved student and teacher attendance, as well as helped raise student test scores in schools that used this scorecard (Zeitlin, Bategeka, Guloba, Kasirye, & Mugisha, 2011).

Bell and Aggleton (2012) suggest that the prioritization of quantitative methods as the *only* rigorous, valid ways to produce actionable evidence be discontinued in favor of greater use of qualitative, ethnographic methods. “Because of their emphasis on developing locally grounded explanations, ethnographic methods in particular offer a potentially richer way of assessing the relationships between intent, action and change in social development” (p. 796).

Though integrating more participatory methods into common M&E practice presents its own challenges and capacity building requirements, it is evident that the dominant quantitative, results-based paradigm is not producing the necessary learning outcomes at the local level. Qualitative methods offer more flexibility to incorporate local perspectives and can also encourage local ownership of M&E. Thus, in order to facilitate a greater degree of local learning, I too recommend that results-based M&E indicators be replaced with ones that do not impede local learning potential.

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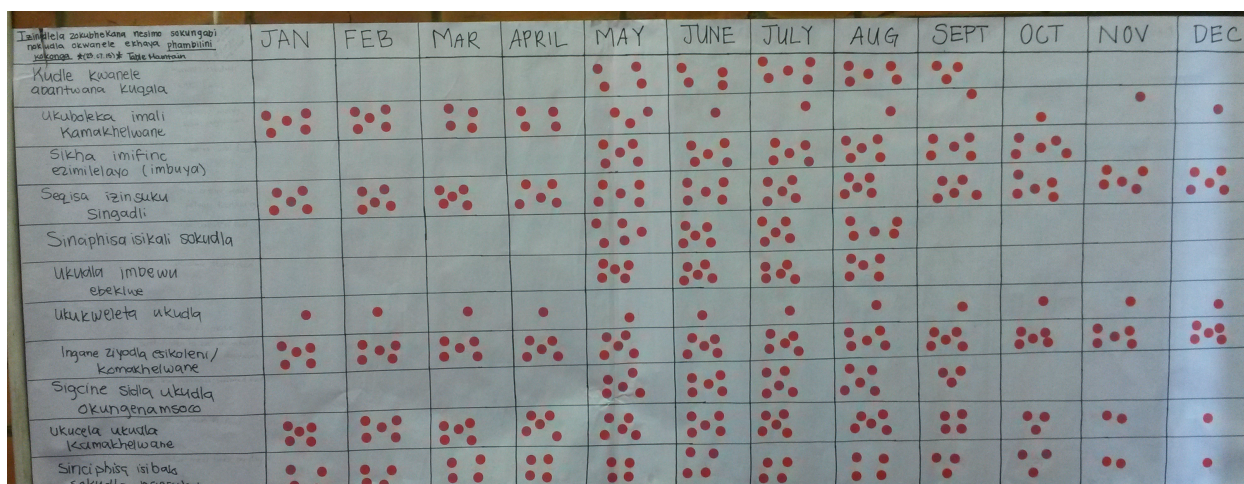
APPENDIX A

Focus Group Outline/Structure

Personnel: PI (Elyssa Lewis), a South African co-facilitator (SaveAct Staff member)

- Introduction
 - Review of what the study goals and objectives are
 - Introduction of PI and co-facilitator
 - Consent process (remind participants that they can refrain from answering questions/participating in the discussion or activities and/or decide to withdraw themselves from the study at any time without repercussions)
 - Give brief outline of focus group structure/topics
- Discussion of topic/concept of food *security* and food *insecurity*
- List of coping strategies
 - Discuss/define what a coping strategy is
 - Recall baseline-before SCG membership
 - What coping strategies did your and/or a typical household in this community generally utilize when faced with food insecurity (prior to joining a SCG)?
 - Will come up with a list of 7-15 of the most common coping strategies used before joining and SCG
 - Will have a list of general coping strategies commonly found from other coping strategies impact assessments that can be referenced to guide the discussion.
- Seasonality Mapping
 - Matrix of coping strategies and months (See below)

	MONTHS											
Coping Strategies	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Coping strategy #1												
Coping strategy #2												



- Discuss the average monthly frequency of each coping strategy *before* joining an SCG-from the list developed
 - Done by drawing red dots, numbering from 1 to 5, in the space corresponding to each month and coping strategy. (1 dot) once a month; (2 dots) twice a month; (3 dots) three times a month; (4 dots) four times a month; (5 dots) five or more times a month
- Present coping strategies-at least a year after SCG membership
 - What coping strategies are common for SCG members now?
 - Will be based upon previous list developed to see if some coping strategies are no longer used and whether or not there are any new ones.
 - There was reluctance to discuss current coping strategies, however, so this became a hypothetical “What *would* you do now, if faced with a situation where you did not have enough food or money to buy food?”
 - Those coping strategies people said they would still used were marked with a green asterisk
 - A couple groups did give a frequency for these, which were indicated with green dots, using the same 1-5 scale from before
- Severity ranking
 - All the coping strategies discussed were written out on cards
 - These cards were then ranked from 1 to 4 by the group, using a chart (see below)

1 Least Severe	2 Moderate	3 More Severe	4 Most Severe

1	2	3	4
Okunzima Kancane	Okunzima	Okunzima kakhudlwana	Okunzima kakhulu
Ukufunga amatoho emphakathini	Ukugaga amathini/izinsimbi/ Nohayela sikudayise	Ukuboleka ukudla esitolo	Ukuboleka imali komashonisa
Ukukha imfino emasimini		Uknehlisa izinga lezinto esizithengayo zokudla sibheka okusendalini	
Ukudla Ukunana Kumakhelewane			

- Once this is complete, facilitators and participants will discuss any trends that emerge and what their understanding of the causes may be

APPENDIX B

Example of the SaveAct CSI:

In the past 7 days, if there has been a time when you did not have enough food or money to buy food, how often has your household had to:	Frequency Score (0-7)	Severity Weight	Weighted Score = Frequency X Severity
(add each behavior to the question)			
a. Gather wild food?	4	1	4
b. Eat stored seed?	0	3	0
c. Eat less preferred, cheaper, or unhealthy food?	7	3	21
d. Reduce portion size at meal times?	5	2	10
e. Reduce number of meals per day?	2	3	6
f. Let small children eat before?	7	3	21
g. Ask a neighbor for food?	1	2	2
h. Purchase food on credit?	1	3	3
i. Borrow money from a loan shark?	0	4	0
j. Find a daily piece job?	7	3	21
k. Skip entire days without eating?	0	4	0
TOTAL HOUSEHOLD SCORE	Sum down the totals for each individual strategy		88

Scoring details:

- Question (a) “In the past 7 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to gather wild food?”
- The answer for this example household was that they had done this 4 out of the previous 7 days.
- The severity weighting for this particular behavior is 1.
- So the weighted total recorded for the answer to Question (a) is $4 \times 1 = 4$.
- For Question (b) the frequency was 0 days out of the previous seven and the severity weighting is 3, so the weighted total is $0 \times 3 = 0$.
- This procedure is repeated for each question: multiply the frequency score by the severity weighting and record the number in the final box of the row. Then the individual scores in the boxes are summed to the bottom of the form.
- The lowest possible CSI score is 0, denoting complete food security. The higher the score the more food *insecure* a household is. The highest possible CSI score is 217.