## **Supplementary Materials**

Figure S1. Number of caregiver resource constructs measured in each article

- Table S1. PubMed search strategy
- Table S2. Scoping review inclusion and exclusion criteria
- Table S3. Description of caregiver resource measures included in this review
- Table S4. Caregiver Resource measures and findings in complementary feeding and responsive feeding articles

References for supplementary materials



Figure S1. Number of caregiver resource constructs measured in each article (N=163)

| Search          | Search terms   |
|-----------------|--|
| domain          |  |
| #1 Participants | infant*[tiab] OR infancy[tiab] OR child*[tiab] OR baby[tiab] OR babies[tiab] OR babys[tiab] OR toddler*[tiab] OR "first 1000 days"[tiab] OR "first 1,000 days"[tiab]   |
|                 | OR "child"[MeSH Terms]   |
| #2 Caregiver    | ((mother*[tiab] OR maternal[tiab] OR caregiver*[tiab]) AND (capabilit*[tiab] OR capacit*[tiab])) OR "gender norm attitudes"[tiab] OR "gender equality"[tiab] OR  |
| resources       | "gender inequality" [tiab] OR "gender role" [tiab] OR "gender roles" [tiab] OR "gender norm" [tiab] OR "gender norms" [tiab] OR "gender relations" [tiab] OR "women's  |
|                 | status"[tiab] OR "woman's status"[tiab] OR "status of women"[tiab] OR "egalitarian beliefs"[tiab] OR stress*[tiab] NOT "oxidative stress"[tiab] OR "mental   |
|                 | health"[tiab] OR "depressive symptoms"[tiab] OR depression[tiab] OR anxiety[tiab] OR anxious[tiab] OR "mood disorder"[tiab] OR "mood disorders"[tiab] OR   |
|                 | "cope"[tiab] OR "coping"[tiab] OR trauma*[tiab] OR "psychological health"[tiab] OR "psychological wellbeing"[tiab] OR "psychological wellbeing"[tiab] OR   |
|                 | "psychological well-being"[tiab] OR "maternal distress"[tiab] OR helplessness[tiab] OR passivity[tiab] OR "depression"[MeSH Terms] OR "depressive  |
|                 | disorder" [MeSH Terms] OR "anxiety" [MeSH Terms] OR "perceived health" [tiab] OR "self-reported health" [tiab] OR "self reported health" [tiab] OR "self-reported hea |
|                 | ((perceived [uab] OK sell-reported [uab]) OK sell reported [uab]) AND physical nearin [uab]) OK welloeing [uab] OK welloeing [u |
|                 | or quality of the [hab] Or infinite particle violence [110/Abstract] OR "gender based violence" [Title/Abstract] OP "gender based violence" [Title/Abstract] OP "gender based violence" [Title/Abstract] OP  |
|                 | "sexual abuse"[Title/Abstract] OR "physical abuse"[Title/Abstract] OR "nsychological abuse"[Title/Abstract] OR "emotional abuse"[Title/Abstract] OR "emotional   |
|                 | violence"[Title/Abstract] OR "harassment"[Title/Abstract] OR "humanitarian"[Title/Abstract] OR "displace*" [Title/Abstract] OR "emergence*"[Title/Abstract] OR   |
|                 | "war"[Title/Abstract] OR "wars"[Title/Abstract] OR "kidnan*"[Title/Abstract] OR "armed conflict"[Title/Abstract] OR "emergencies"[MeSH Terms] OR "armed  |
|                 | conflicts"[MeSH Terms] OR "violence"[MeSH Terms] OR "self-efficacy"[tiab] OR "self efficacy"[tiab] OR "capable"[tiab] OR "parenting efficacy"[tiab] OR "self-  |
|                 | worth"[tiab] OR "self worth"[tiab] OR "self-confidence"[tiab] OR "self confidence"[tiab] OR "confident"[tiab] OR "self esteem"[tiab] OR "self-esteem"[tiab] OR   |
|                 | "self efficacy" [MeSH Terms] OR "self concept" [MeSH Terms] OR "social support" [tiab] OR "social networks" [tiab] OR "social network" [tiab] OR "social networks" [tiab]  |
|                 | capital"[tiab] OR loneliness[tiab] OR supportiveness[tiab] OR "emotional support"[tiab] OR "practical support"[tiab] OR "material support"[tiab] OR "informational   |
|                 | support"[tiab] OR "instrumental support"[tiab] OR "appraisal support"[tiab] OR "family support"[tiab] OR "social support"[MeSH Terms] OR "time use"[tiab] OR   |
|                 | "time to"[tiab] OR "time availability"[tiab] OR "time burden"[tiab] OR "time trade-off"[tiab] OR "time trade off"[tiab] OR "workload"[tiab] OR "workload"[tiab] OR "time burden"[tiab] OR "time trade-off"[tiab] OR "time trade-of |
|                 | OR "work hours"[tiab] OR "women's work*"[tiab] OR "woman's work*"[tiab] OR "men's work*"[tiab] OR "man's work*"[tiab] OR "maternal work*"[tiab] OR   |
|                 | "mother's work*"[tiab] OR "mothers' work*"[tiab] OR "mothers work*"[tiab] OR "father's work*"[tiab] OR "fathers' work*"[tiab] OR "fathers' work*"[tiab] OR   |
|                 | "parent's work*"[tiab] OR "parents' work*"[tiab] OR "parents work*"[tiab] OR "parental work*"[tiab] OR "parents' work*"[ti |
|                 | "caregivers' work*"[tiab] OR "caregivers work*"[tiab] OR "women's time"[tiab] OR "woman's time"[tiab] OR "mother's time"[tiab] OR "mothers time"[tiab] OR "mother's time"[t |
|                 | mothers time [tiab] OK maternal time [tiab] OK fathers time [tiab] OK fathers time [tiab] OK fathers time [tiab] OK fathers time?[tiab] OK fathers time?[tiab] OK fathers time?[tiab]  |
| #2 Child        | unie [uab] OK parents work [uab] OK caregiver's unie [uab] OK caregive |
| feeding and     | OR intake*[tiab] OR "feeding frequency"[tiab] OR "responsive child feeding"[tiab] OR "responsive feeding"[tiab] OR "responsive parenting"[tiab] OR "active   |
| nutrition       | feeding"[tiab] OR "hunger cue*"[tiab] OR "satiety cue*"[tiab] OR stunt*[tiab] OR wasted[tiab] OR wasting[tiab] OR underweight[tiab] OR undernutrition[tiab] OR   |
| nuuruon         | undernourished[tiab] OR malnutrition[tiab] OR malnourished[tiab] OR "micronutrient deficiency"[tiab] OR "micronutrient deficiencies"[tiab] OR anemi*[tiab] OR  |
|                 | "nutritional status" [tiab] OR "diet" [MeSH Terms] OR "food" [MeSH Terms] OR "growth disorders" [MeSH Terms] OR "malnutrition" [MeSH Terms] OR   |
|                 | "micronutrients"[MeSH Terms] OR "deficiency"[MeSH Subheading] OR "infant nutritional physiological phenomena"[MeSH Terms]  |
| #4 Context      | low-income countr*[tiab] OR low income countr*[tiab] OR lower-middle-income countr*[tiab] OR lower middle income countr*[tiab] OR low- and middle-income   |
|                 | countr*[tiab] OR low and middle-income countr*[tiab] OR low and middle income countr*[tiab] OR developing countr*[tiab] OR afghan*[tiab] OR albania*[tiab] OR  |
|                 | algeria*[tiab] OR angola*[tiab] OR armenia*[tiab] OR Azerbaijan*[tiab] OR bangladesh[tiab] OR belarus*[tiab] OR belize*[tiab] OR benin*[tiab] OR Bhutan*[tiab]   |
|                 | OR Bolivia*[tiab] OR bosnia*[tiab] OR "Bosnia and Herzegovina"[tiab] OR Bulgaria*[tiab] OR "Burkina Faso"[tiab] OR Burundi*[tiab] OR "Cabo Verde*"[tiab] OR  |
|                 | "Cape verde*"[tiab] OR Cambodia*[tiab] OR Cameroon*[tiab] OR "Central African Republic"[tiab] OR chad*[tiab] OR china*[tiab] OR colombia*[tiab] OR   |
|                 | comoros[tiab] OK comoros[tiab] OK comoro[tiab] OK congo[tiab] OK "costa rica"[tiab] OK "Cote d'Ivoire"[tiab] OK "Ivory Coast"[tiab] OK cuba*[tiab] OR  |
|                 | Diputer interviewed and the properties of the pr |
|                 | uvana[tiah] OR haiti[tiah] OR hondura*[tiah] OR india*[tiah] OR Indonesia*[tiah] OR iran*[tiah] OR Iran*[tiah] OR Iran*[tiah] OR Iamaica*[tiah] OR Iordan*[tiah] OR  |
|                 | Kazakhstan*[tiab] OR Kenva*[tiab] OR Kiribati*[tiab] OR korea*[tiab] OR korea*[tiab] OR kirghizia[tiab] OR k |

## Table S1: PubMed search strategy

|                | OR "Lao PDR"[tiab] OR laos[tiab] OR Latvia*[tiab] OR lesotho[tiab] OR Liberia*[tiab] OR Lithuania*[tiab] OR madagascar[tiab] OR Malawi*[tiab] OR   |
|----------------|--|
|                | maldiv*[tiab] OR mali[tiab] OR "Marshall Islands"[tiab] OR Mauritania*[tiab] OR Micronesia*[tiab] OR moldova*[tiab] OR Mongolia*[tiab] OR morocc*[tiab] OR   |
|                | mozambique[tiab] OR myanmar[tiab] OR Namibia*[tiab] OR nepal[tiab] OR nicaragua[tiab] OR niger*[tiab] OR Nigeria*[tiab] OR "North Macedonia"[tiab] OR  |
|                | macedonia*[tiab] OR Pakistan*[tiab] OR "Papua New Guinea"[tiab] OR paraguay[tiab] OR peru*[tiab] OR philippines[tiab] OR philippines[ti |
|                | OR phillipines[tiab] OR principe[tiab] OR Romania*[tiab] OR russia*[tiab] OR Rwanda*[tiab] OR ruanda[tiab] OR samoa*[tiab] OR "Sao Tome"[tiab] OR  |
|                | Senegal*[tiab] OR "Sierra Leone"[tiab] OR "Solomon Islands"[tiab] OR somalia[tiab] OR "Sri Lanka"[tiab] OR "St. Vincent and the Grenadines"[tiab] OR   |
|                | sudan*[tiab] OR suriname*[tiab] OR Syria*[tiab] OR "Syrian Arab Republic"[tiab] OR tajikistan[tiab] OR tadzhikistan[tiab] OR tadzhik |
|                | Tanzania*[tiab] OR Thai*[tiab] OR togo[tiab] OR tonga[tiab] OR turk*[tiab] OR Uganda*[tiab] OR ukrain*[tiab] OR uzbek[tiab] OR uzbekistan[tiab] OR   |
|                | vanuatu[tiab] OR Vietnam*[tiab] OR "West Bank"[tiab] OR yemen[tiab] OR Zambia*[tiab] OR Zimbabwe[tiab] OR "developing countries"[MeSH Terms]   |
| #5 Publication | [Filters: from 1999-2021]  |
| date           |  |
| Full search    | #1 AND #2 AND #3 AND #4 AND #5   |

| In | clusion criteria   | Exclusion criteria |                                  |  |  |  |  |
|----|--|--------------------|----------------------------------|--|--|--|--|
| •  | Publication date: January 1999 or later  | •                  | Article not available in English |  |  |  |  |
| •  | Conducted in low- or lower-middle-income country (per 1999 World Bank classification)            | •                  | Participants are not home-       |  |  |  |  |
|    | and five upper-middle-income countries relevant for a global nutrition-programming context       |                    | based caregivers (e.g., health   |  |  |  |  |
| •  | Mentions, discusses, or reports complementary feeding at ages 6-23 months or child               |                    | clinic or hospital staff or      |  |  |  |  |
|    | nutritional status from 6 months to 2 years  |                    | daycare)                         |  |  |  |  |
| •  | Uses quantitative methods to measure at least one caregiver resource: equitable gender           | •                  | Participants are hospitalized    |  |  |  |  |
|    | attitudes, healthy stress levels, mental health, perceived physical health, safety and security, |                    | populations, except those being  |  |  |  |  |
|    | self-efficacy, social support, time sufficiency  |                    | treated for severe acute         |  |  |  |  |
|    |  |                    | malnutrition                     |  |  |  |  |
|    |  |                    |                                  |  |  |  |  |

## Table S3. Description of caregiver resource measures included in this review

Note: Dots note that authors reported adapting an existing measure or conducting cognitive interviews, pretesting, or psychometric assessments related to validity and reliability. Dots do not reflect the quality or the results of the adaptation, pretesting or assessment.

| Measure Countries where Measure description  |      |         |          |      |      |
|--|------|---------|----------|------|------|
| measure use  |      | ews     |          |      |      |
|  | on   | ervi    | <u>م</u> |      | ţ    |
|  | tati | Inte    | stin     | lity | bili |
|  | dap  | 0<br>2. | rete     | alid | elia |
|  | V    | 0       | Ρ        | >    | R    |
| Self-efficacy (n=13)   |      | 1       |          | 1    |      |
| Maternal Self-<br>Bangladesh (1) Maternal self-efficacy for feeding family cooked foods, avoiding store-bought snacks, 4   |      | •       |          |      | •    |
| Complementary  |      |         |          |      |      |
| Feeding (1)  |      |         |          |      |      |
| Maternal Self- <b>Brazil</b> (3); <b>Iran</b> (4) Mothers perceived beliefs regarding their performance of specific caregiving tasks. 10   | •    |         | •        | •    | •    |
| Efficacy Scale (2)   |      |         |          |      |      |
| Mothering Self-Zimbabwe (6,7)Women's belief in their competence as a mother. Adapted from the Parenting Self-Agency10  | •    | •       | •        |      | •    |
| Efficacy (5) Measure (8) and the Parenting Sense of Competence Scale (9).  |      | _       |          |      |      |
| Parenting Self- Jamaica (10) Perceived self-efficacy and satisfaction derived from parenting. 10   |      |         | •        |      |      |
| Esteenn (10)   |      |         |          |      |      |
| Perceived Kenya (12) Perceived behavioral control (ability to perform a behavior) by including items related to 6  | •    |         | •        |      |      |
| Behavioral perceived self-efficacy and controllability.  |      |         |          |      |      |
| Control (PBC)  |      |         |          |      |      |
|  |      | _       |          |      |      |
| Efficacy (13) Asked women whether they felt capable of giving key food groups (meat, fish of poultry, 3) dark graen leafy vegetables, and carrot, squash or sweet poteto) to their child daily |      |         |          |      |      |
| Self-Efficacy (14) Iran (14) Self-efficacy was a subscale of a larger instrument on Social Cognitive Theory related to 5   |      | •       | •        |      | +    |
| complementary feeding practices.   |      |         |          |      |      |
| Self-Efficacy (15) Lao PDR (15) Mother's self-efficacy to access health services and borrow money when needed. 2   |      |         |          |      |      |
|  |      | _       |          |      |      |
| Self-Efficacy (16)Iran (16)Self-efficacy regarding complementary feeding of their infants13  | •    |         |          |      |      |
| Salf Efficiency in Theiland (17) Eius domains of infant care tasks including shild development interaction general (7)   |      |         |          |      | +    |
| Infant Care Scale healthcare safety and diet   |      | •       |          |      |      |
| (SICS) (17)  |      |         |          |      |      |
| Social power (18) Mali (18) Operationalized self-efficacy as felt control (i.e. in charge and action-oriented) and 20  |      |         |          |      | 1    |
| passivity/helplessness (i.e. lower perceived self-efficacy).   |      |         |          |      |      |
| Perceived Physical Health (n=6)  |      |         | -        | 1    |      |
| Euro-Qol (EQ Pakistan (20) Five health dimensions including mobility, usual activities, pain/discomfort, self-care, and 5  |      | 1       |          |      | 1    |
| anxiety/depression.  |      | 1       |          |      |      |

| Measure                | Countries where  | Measure description  |     |      |      |     |     |      |
|------------------------|--|--|-----|------|------|-----|-----|------|
|                        | measure use  | •  |     |      | SA   |     |     |      |
|                        |  |  |     |      | iev  |     |     |      |
|                        |  |  |     | ion  | erv  | 50  |     | ty   |
|                        |  |  |     | tati | Inte | tin | ity | ilic |
|                        |  |  | ms  | ap   | Э    | ete | lid | lial |
|                        |  |  | Ite | ΡQ   | Co   | Pre | Va  | Re   |
| RAND 36-item           | Zimbabwe (67)  | Quality of life with eight health concepts: physical functioning, role limitations caused by   | 11  | •    | •    | •   |     | •    |
| Health Survey          |  | physical health problems, role limitations caused by emotional problems, social functioning  | 11  | •    | •    | •   |     | •    |
| (21)                   |  | emotional well-being, energy/fatigue, pain, and general health perceptions.  |     |      |      |     |     |      |
| PedsOL Family          | Ghana (23.24)  | Physical health across six self-reported functioning subscales (physical, emotional, social,   | 36  |      | •    | •   | •   | •    |
| Impact Module          |  | cognitive, worry and communication) and two-family functioning subscales (daily activities,  |     |      |      |     |     |      |
| (22)                   |  | family relationships).   |     |      |      |     |     |      |
| WHO Quality of         | Pakistan (26)  | Participants' physical health, psychological health, social relationships, and environment in  | 100 |      |      |     |     |      |
| Life (WHOQoL)          |  | relation to their goals, expectations, standards, and concerns in the context of culture and   |     |      |      |     |     |      |
| (25)                   |  | value systems.   |     |      |      |     |     |      |
| Mental Health (n=      | =83)   |  |     |      |      |     |     |      |
| Aga Khan               | Pakistan (28)  | Maternal somatic and psychological depressive symptoms.  | 25  |      |      |     | •   |      |
| University             |  |  |     |      |      |     |     |      |
| Anxiety and            |  |  |     |      |      |     |     |      |
| Depression Scale       |  |  |     |      |      |     |     |      |
| (27)                   | D  |  |     |      |      |     |     |      |
| Beck Depression        | <b>Brazil</b> (30)   | Levels of maternal depression  | 63  |      |      |     | •   | •    |
| Inventory (29)         | Mala   |  | 21  |      |      |     |     |      |
| Beck Depression        | Malaysia (32)  | Reflections on emotional state over the past two weeks, including 21 symptoms of   | 21  |      |      |     | •   | •    |
| Edition (BDLII)        |  | depression.  |     |      |      |     |     |      |
| (31)                   |  |  |     |      |      |     |     |      |
| Center for             | Antiqua (34)   | Maternal mental health as it relates to the ability to be emotionally available for her child  | 20  | •    | •    | •   | •   |      |
| Epidemiological        | Bangladesh (35–37):  | including six  | 20  | •    | •    | -   | •   | •    |
| Studies-               | Brazil (3,38);   | aspects of depression (depressed mood, guilt/worthlessness, helplessness/hopelessness,   |     |      |      |     |     |      |
| Depression (CES-       | Ethiopia (39);   | lethargy/fatigue, loss of appetite, and sleep disturbance).  |     |      |      |     |     |      |
| D) (33)                | Ghana (40,41); India   |  |     |      |      |     |     |      |
|                        | (42); Jamaica  |  |     |      |      |     |     |      |
|                        | (10,34); St. Lucia's   |  |     |      |      |     |     |      |
|                        | (34); <b>Tanzania</b> (43)   |  |     |      |      |     |     |      |
| Everyday Feeling       | Vietnam (45)   | Psychological well-being over the past four weeks in terms of symptoms of anxiety and  | 20  |      |      |     | •   | •    |
| Questionnaire          |  | depression.  |     |      |      |     |     |      |
| (EFQ) (44)             | $\mathbf{D}_{\text{and}} = \mathbf{I}_{\text{and}} \cdot (47, 40)$     |  | 10  |      |      |     |     |      |
| Euinburgn<br>Bostnatal | <b>Dangladesn</b> $(4/,48)$ ;<br><b>Chine</b> $(40)$ ; <b>Ethionic</b> | Symptoms of depressed mood including, lack of enjoyment, blaming oneself, anxiousness (including pania) worm, being overwhelmed, differents, cleaning, address, they start for the start of solutions and the start of solutions are start of solutions and the start of solutions and the start of solutions are start of solutions and the start of solutions are start of solutions and the start of solutions are start of solutions and the start of solutions are start of solutions and the start of solutions are start of solutions | 10  | •    |      | •   | •   | •    |
| Postilatal             | (50): Cambia $(51)$ :  | (including paine), worry, being overwhenned, difficulty steeping, sadness, thoughts of self-   |     |      |      |     |     |      |
| (FPDS) (46)            | (50), Gambia $(51)$ ,<br>India $(52, 53)$ .                            | 11/111.  |     |      |      |     |     |      |
| (11 03) (40)           | Pakistan $(22, 33)$ ,  |  |     |      |      |     |     |      |
|                        | South Africa (54–  |  |     |      |      |     |     |      |
|                        | 57): <b>Tanzania</b> (58):   |  |     |      |      |     |     |      |
|                        | <b>Zimbabwe</b> (6,7)  |  |     |      |      |     |     |      |

| Measure   | Countries where  | Measure description  |       |            |                 |            |          |             |
|---|--|--|-------|------------|-----------------|------------|----------|-------------|
|   | measure use  |  | Items | Adaptation | Cog. Interviews | Pretesting | Validity | Reliability |
| General Health<br>Questionnaire<br>(GHQ-12) (59)                            | <b>Brazil</b> (60,61); South Africa (62)   | Maternal mental health across three classifications: common mental disorders, severe mental disorders, and depression. Designed to be used by general practitioners and non-psychiatrists.   | 12    | •          |                 | •          | •        |             |
| Hamilton<br>Depression<br>Rating Scale (63)                                 | <b>Pakistan</b> (20,64,65)   | Symptoms of depression experienced over the previous week.   | 17    |            |                 |            |          |             |
| Hospital Anxiety<br>and Depression<br>Scale (66)                            | Pakistan (67)  | Depression and anxiety in the setting of a hospital or medical outpatient clinic   | 21    |            |                 |            |          |             |
| Hopkins<br>Symptom<br>Checklist (HSCL)<br>(68)                              | Ethiopia (69);<br>Rwanda (70); South<br>Africa (71);<br>Tanzania (72)                                  | Maternal distress in terms of symptoms of depression, anxiety, and somatic distress.   | 58    | •          |                 |            | •        | •           |
| Life Satisfaction<br>Interview (73)   | <b>Chad</b> (73)   | Caregiver-reported satisfaction with life as a proxy for mental health and lack of stress.   | NR    |            |                 |            |          |             |
| Life Satisfaction<br>Scale (74)   | <b>India</b> (74)  | Mothers' happiness and satisfaction with married life as a proxy measure for the mother's stress and mental health.  | NR    |            |                 | •          |          |             |
| PedsQL Family<br>Impact Module<br>(22)                                      | Ghana (24)   | Impact of pediatric conditions on multiple dimensions of caregiver quality of life, including physical, emotional, social, and cognitive functioning, worry, communication, family daily activities and family relationships   | 36    | •          | •               |            |          |             |
| Patient Health<br>Questionnaire<br>(PHQ-9) (75)                             | Botswana (76);<br>Ethiopia (77); Kenya<br>(78); Nepal (79);<br>Peru (80); Sudan<br>(81); Tanzania (82) | Screening, diagnosis, and measurement of the severity of depressive symptoms, and where validated, screen for depression.  | 9     | •          |                 | •          | •        | •           |
| Pictogram<br>Suffering Scale<br>(83)  | Cameroon (83)  | Maternal psychosocial distress and suffering as depicted by a picture of person carrying rock on shoulder of increasing size   | NR    |            |                 |            |          |             |
| Pitt Inventory<br>(84)  | South Africa (85)  | Current clinical experience of depressive illness and special anxieties of childbearing women including sleep, irritability, hypochondriasis, appetite, depression, cognition, libido, retardation, guilt, anxiety, depresonalization, and dependency.                   | 24    |            |                 |            | •        | •           |
| Psychological<br>Satisfaction Scale<br>(86)                                 | <b>Uganda</b> (86)   | Maternal psychological wellbeing via self-rating of level of satisfaction for life overall, food, housing, income, health, work, perceived safety, freedom from physical violence, education, dignity, ability to help others, and freedom to express spiritual beliefs. | 16    | •          |                 |            | •        | •           |
| Schedule for<br>Clinical<br>Assessment in<br>Neuropsychiatry<br>(SCAN) (87) | Pakistan (88)  | Identification and classification of mental disorders.   | NR    |            |                 |            | •        | •           |

| Measure  | Countries where   | Measure description   |           |            |                 |            |          |             |
|--|---|---|-----------|------------|-----------------|------------|----------|-------------|
|  | measure use   |   | Items     | Adaptation | Cog. Interviews | Pretesting | Validity | Reliability |
| Structured<br>Clinical Interview<br>for the DSM-IV<br>Axis I Disorders<br>(SCID-I) (89,90) | India (91); Nigeria<br>(92); Pakistan (65);<br>Vietnam (93)   | Screening women for depression using criteria for a DSM-IV major depressive episode.  | NR        | •          |                 |            | •        | •           |
| Self-Report<br>Questionnaire<br>(SRQ-20) (94)  | Bangladesh (95–98);<br>Brazil (97,99);<br>Burkina Faso (100);<br>Ethiopia (96,98,101–<br>105); Ghana (100);<br>India<br>(101,102,104,106);<br>Malawi (100,107–<br>109); Nigeria (110);<br>Pakistan (26,88,111);<br>Peru<br>(26,101,102,104,112);<br>South Africa (113);<br>Vietnam<br>(96,98,101,102,104) | Self-reported measure to detect non-specific psychological distress with subscales pertaining to depression/anxiety, somatic symptoms, reduced vital energy, and depressive thoughts.                   | 20        | •          |                 | •          | •        | •           |
| Zung Self-Rating<br>Depression Scale<br>(ZSDS) (114)                                       | <b>China</b> (115)  | Depressive symptoms and depression screening.   | 20        |            |                 |            | •        |             |
| Healthy Stress Lev   | vels (n=9)  |   |           |            |                 |            |          |             |
| Caregiver<br>Feeding Stress<br>(95)  | Bangladesh (95)   | Caregivers rate their feelings regarding their child's feeding difficulties and recall the amount of time spent feeding.  | NR        |            |                 |            |          | •           |
| Distress Scale<br>(116)  | Vanuatu (116)   | Symptoms of anxiety, depression, nervousness, and stress over the previous week. Meaning of score not stated. Adapted from the Kessler-10 Distress Scale and the CES-D Scale.                           | 15        |            |                 |            |          |             |
| Maternal Stress<br>Questionnaire<br>(117)  | <b>Iran</b> (117)   | Maternal stress related to feeling anger, worry, anxiety, quality of sleep, feeling control over<br>one's life, eating on the run, being easily irritated, losing one's temper, feeling<br>overwhelmed. | 7         |            |                 |            |          |             |
| Parenting Stress<br>Index Short Form<br>(118)  | South Africa (62)   | Areas of stress in the parent-child relationship over the past 12 months: child characteristics, parent characteristics, and stress stemming from situational or demographic conditions.                | 36        |            |                 |            | •        | •           |
| PedsQL Family<br>Impact Module<br>(22)   | Ghana (24)  | Subscale used to assess parent's self-reported worry  | NR        | •          | •               |            | •        | •           |
| Perceived Stress<br>Scale (119)  | Burkina Faso (100);<br>Ghana (100);   | Perceptions of stressful feelings and thoughts during the last month  | 10-<br>14 |            |                 |            | ٠        |             |

| Measure   | Countries where  | Measure description  |       |            |                 |            |          |             |
|---|--|--|-------|------------|-----------------|------------|----------|-------------|
|   | measure use  |  | Items | Adaptation | Cog. Interviews | Pretesting | Validity | Reliability |
|   | <b>Malawi</b> (100);<br><b>Mexico</b> (120)  |  |       |            |                 |            |          |             |
| Self-Report<br>Questionnaire<br>(SRQ-20) (94)                   | Burkina Faso (121)   | Non-specific psychological distress; subscales include anxiety/depression, somatic symptoms, reduced vital energy and depressive thoughts.   | 20    |            |                 |            |          |             |
| Stressors<br>Questionnaire<br>(10)                              | Jamaica (10)   | Issues commonly faced by low-income mothers including economic stress, partner stress, domestic violence, and community violence.  | 9     |            |                 |            | •        | •           |
| Equitable Gender  | Attitudes (n=15)   |  |       |            |                 |            |          |             |
| DHS<br>Questionnaire,<br>Women's<br>Empowerment<br>Module (122) | Ghana (123); Lao<br>PDR (15); Malawi<br>(124); Myanmar<br>(125); Nigeria (126);<br>Uganda (127); 28<br>countries globally <sup>1</sup><br>(128); 5 countries in<br>sub-Saharan<br>Africa <sup>2</sup> (129); 10<br>countries in sub- | Assessment of attitudes about reasons that justify wife-beating (i.e. burning food, arguing with partner, going out without telling partner, neglecting the children, and refusing sexual intercourse) | 5     | •          |                 | •          | •        |             |
|   | Saharan Africa <sup>°</sup>  |  |       |            |                 |            |          |             |
| MICS<br>Questionnaire<br>(131)                                  | Lao PDR (132)  | Agreement with specific reasons that justify wife-beating.   | 5     |            |                 | •          |          |             |
| National Family<br>Health Survey-2<br>(133)                     | <b>India</b> (134)   | Reasons given that justify a husband beating his wife.   | 6     |            |                 | •          |          |             |
| National Family<br>Health Survey-3<br>(135)                     | India (136)  | Caregiver's justification of domestic violence.  | 5     |            |                 | •          |          |             |
| Gender Norm<br>Attitudes Scale<br>(137)                         | Zimbabwe (6,7)   | Two dimensions related to gender norms: (1) concern with promoting equity for women and girls, and (2) belief in the maintenance of men's rights and privileges.                                       | 6     | •          | •               | •          |          | •           |

<sup>&</sup>lt;sup>1</sup> Bangladesh, Burkina Faso, Benin, Bolivia, Cambodia, Cameroon, Colombia, Dominican Republic, Egypt, Ethiopia, Ghana, Haiti, Jordan, Kenya, Lesotho, Madagascar, Mali, Malawi, Mozambique, Nigeria, Namibia, Nepal, Rwanda, Senegal, Tanzania, Uganda, Zambia, Zimbabwe.

<sup>&</sup>lt;sup>2</sup> Ethiopia, Kenya, Rwanda, Tanzania, and Uganda

<sup>&</sup>lt;sup>3</sup> Benin, Burkina Faso, Ethiopia, Mali, Niger, Nigeria, Rwanda, Sierra Leone, Uganda and Zimbabwe

| Measure   | Countries where  | Measure description   |       |            |                 |            |          |             |  |  |  |
|---|--|---|-------|------------|-----------------|------------|----------|-------------|--|--|--|
|   | measure use  |   | Items | Adaptation | Cog. Interviews | Pretesting | Validity | Reliability |  |  |  |
| Perception of<br>Equality Score<br>(138)                        | Zambia (74)  | Perceptions of gender equality.   | 6     |            |                 |            |          |             |  |  |  |
| Safety & Security (n=26)  |  |   |       |            |                 |            |          |             |  |  |  |
| Conflict Tactic<br>Scale (139)                                  | Bangladesh<br>(140,141); Brazil<br>(61)  | Intimate partner violence including physical and sexual violence. Experiencing physical violence includes a wife being beaten if she went out without telling her partner, neglected the children or argued with her partner. Experiencing sexual violence was identified based on a women's response to whether she had ever been physically forced to have sexual intercourse when she did not want to. | 80    | •          |                 |            |          |             |  |  |  |
| Domestic<br>Violence Module<br>of DHS<br>Questionnaire<br>(122) | <b>Bangladesh</b> (142);<br><b>Ethiopia</b> (143);<br><b>Liberia</b> (144);<br><b>Rwanda</b> (70);<br><b>Tanzania</b><br>(58,82,145); <b>28</b><br><b>countries globally</b> <sup>4</sup><br>(146); <b>5 countries</b><br><b>globally</b> <sup>5</sup> (147) | Exposure to physical and/or sexual violence and experience seeking help.  | 23    | •          |                 | •          |          |             |  |  |  |
| Domestic<br>Violence (148)                                      | South Africa (55)  | Domestic violence as assessed by whether women were slapped or had anything thrown at them $(y/n)$ ; were pushed or shoved $(y/n)$ ; were punched with a fist or another object $(y/n)$ ; or were attacked with a weapon by their partner $(y/n)$ .   | 4     | •          |                 |            |          |             |  |  |  |
| Domestic<br>Violence<br>Measure (149)                           | Pakistan (149)   | Domestic violence as measured by whether a woman has faced violence from husbands/family elders.  | 1     |            |                 | •          |          |             |  |  |  |
| Domestic<br>Violence Sub-<br>scale (10)                         | Jamaica (10)   | Domestic violence as it pertains to violence in the community, yard, and household as well as food security, insufficient income, and stressful interpersonal relationships.  | 9     |            |                 |            | •        | •           |  |  |  |
| Family Violence<br>Against Women<br>(150)                       | Bangladesh (150)   | Exposure to family violence assessed via women's self-reported exposure to physical, sexual, or emotional violence including a high level of controlling behavior. Short modified version of WHO collaborative study questionnaire based on the Conflict Tactic Scale (151,152).  | NR    | •          |                 |            |          |             |  |  |  |
| Hurt, Insult,<br>Threaten and                                   | Ethiopia (77)  | Intimate partner violence screening   | 5     |            |                 |            |          |             |  |  |  |

<sup>&</sup>lt;sup>4</sup> Azerbaijan, Bangladesh, Bolivia, Burkina Faso, Cambodia, Cameroon, Colombia, Dominican Republic, Gabon, Ghana, Haiti, Honduras, India, Kenya, Liberia, Malawi, Mali, Mozambique, Nepal, Nigeria, Peru, Republic of Moldova, Rwanda, Sao Tome and Principe, Timor-Leste, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

<sup>&</sup>lt;sup>5</sup> Egypt, Honduras, Kenya, Malawi, Rwanda.

| Measure            | Countries where                 | Measure description   | · · · ·  |      |      |      |     |          |
|--------------------|---------------------------------|---|----------|------|------|------|-----|----------|
|                    | measure use                     |   |          |      | SA   |      |     |          |
|                    |                                 |   |          |      | iev  |      |     |          |
|                    |                                 |   |          | ion  | erv  | g    |     | ty       |
|                    |                                 |   |          | tati | Inte | stin | ity | ilic     |
|                    |                                 |   | sm       | ap   |      | etee | lid | lial     |
|                    |                                 |   | Ite      | Ρq   | Co   | Pro  | Va  | Re       |
| Scream (HITS)      |                                 |   | <u> </u> |      |      |      |     |          |
| Scale (153)        |                                 |   |          |      |      |      |     |          |
| Intimate Partner   | <b>India</b> (154)              | Maternal exposure to physical violence in the two years preceding the survey.                 | NR       |      |      |      |     |          |
| Violence (154)     |                                 |   |          |      |      |      |     |          |
| National Family    | India (155)                     | Women's self-reported physical abuse by a family member more than once in the previous        | 3        |      |      | •    |     |          |
| Health Survey-2    |                                 | 12 mo, once in the previous 12 mo, since age 15 years but not in the previous 12 mo, or       |          |      |      |      |     |          |
| (133)              |                                 | never since age 15 years.   |          |      |      |      |     |          |
| National Family    | India (156,157)                 | Women's experience with emotional violence.   | 3        |      |      | •    |     |          |
| Health Survey-3    |                                 |   |          |      |      |      |     |          |
| (135)              |                                 |   | '        |      |      |      |     |          |
| National Family    | India (159,160)                 | Lifetime prevalence of three types of violence by male partners: less severe violence, severe | 17       |      |      | •    |     |          |
| Health Survey-4    |                                 | physical violence, and sexual violence.   |          |      |      |      |     |          |
| (158)              | $\mathbf{L}_{1}$                |   | 5        |      |      |      |     |          |
| Prevalence of      | <b>India</b> (161)              | Mother's experience of psychological abuse and sexual coercion.                               | 5        |      |      | •    |     | •        |
| Violence (161)     |                                 |   |          |      |      |      |     |          |
| Psychological      | Uganda (86)                     | Mothers' satisfaction across several attributes including perceived safety and freedom from   | 16       |      |      |      |     |          |
| Wellbeing Scale    | Oganua (00)                     | physical violence. Adapted from Organisation for Economic Cooperation and Development         | 10       | •    |      |      |     |          |
| (86)               |                                 | Guidelines (162)  |          |      |      |      |     |          |
| WHO's Violence     | <b>Togo</b> (164)               | Women's experience with controlling behavior, emotional violence, or physical violence        | 16       |      |      |      |     |          |
| Against Women      |                                 | from their partner over the past 12 months.   |          |      |      |      |     |          |
| Instrument         |                                 |   |          |      |      |      |     |          |
| (VAWI) (163)       |                                 |   |          |      |      |      |     |          |
| Social Support (n: | =54)                            |   |          |      |      |      |     |          |
| Social Capital     |                                 |   |          |      |      |      |     |          |
| Group              | <b>Peru</b> (112)               | Membership in groups related to work or trade, religion, community association,               | N/A      |      |      |      |     |          |
| membership         |                                 | cooperatives for saving, gender, communal kitchens, mothering, sports, irrigation, security,  |          |      |      |      |     |          |
| (112)              |                                 | or politics.  | ļ'       |      |      |      |     |          |
| Maternal Social    | <b>Mexico</b> (120)             | Maternal support based on who mothers would turn to for advice and support in certain         | N/A      |      |      |      |     |          |
| Capital and        |                                 | situations, relatives and friends with whom mothers had a close relationship, support from    |          |      |      |      |     |          |
| Grandmaternal      |                                 | social groups, and support from a grandmother.  |          |      |      |      |     |          |
| Childcare          |                                 |   |          |      |      |      |     |          |
| Support (120)      | Mozombique (165)                | Women who said that they belonged to a shursh versus women who said that they did not         | NI/A     |      |      |      |     |          |
| affiliation (165)  | Mozanibique (103)               | belong any church: affiliation with any organized religion in the previous 2 weeks            | IN/A     |      |      |      |     |          |
| Short Adapted      | Ethionia (102 167).             | Operationalized social capital as structural social capital ('connectedness') and cognitive   | 18       | •    |      |      |     | <u> </u> |
| Social Capital     | <b>India</b> (102): <b>Peru</b> | social capital ('reciprocity, sharing, trust).  | 10       |      |      |      |     |          |
| Assessment Tool    | (102); <b>Philippines</b>       |   |          |      |      |      |     |          |
| (166)              | (168); Vietnam (102)            |   |          |      |      |      |     |          |

| Measure                     | Countries where       | Measure description   |       |      |       |                            |     |      |
|-----------------------------|-----------------------|---|-------|------|-------|----------------------------|-----|------|
|                             | measure use           | -   |       |      | SV    |                            |     |      |
|                             |                       |   |       |      | iev   |                            |     |      |
|                             |                       |   |       | ion  | erv   | g                          |     | ty   |
|                             |                       |   |       | tati | Int   | stir                       | ity | bili |
|                             |                       |   | sm    | lap  |       | ete                        | lid | lial |
|                             |                       |   | Ite   | Ρq   | $C_0$ | $\mathbf{Pr}_{\mathbf{r}}$ | Va  | Re   |
| Social Capital              | Myanmar (170)         | Details not stated.   | 9     | •    |       | •                          | •   | •    |
| (169)                       |                       |   |       |      |       |                            |     |      |
| Social Capital              | Zambia (138)          | Part of a women's empowerment measure.  | 9     |      |       |                            |     |      |
| (138)                       |                       |   | NT/ A |      |       |                            |     |      |
| Social                      | Nepal (1/1)           | Participation in groups related to agriculture, water use, land/forest use, credit or   | N/A   | •    |       | •                          |     |      |
| Participation               |                       | microfinance, insurance, trade or business, civics, religion, mother's group or other   |       |      |       |                            |     |      |
| (1/1)<br>Trust in religious | Philippines (172)     | Trust in religious leaders and institutions   | 1     |      |       |                            |     |      |
| leaders and                 | 1 mappines (172)      | Trust in religious leaders and institutions.  | 1     |      |       |                            |     |      |
| institutions (172)          |                       |   |       |      |       |                            |     |      |
| Social Network              |                       |   |       |      |       |                            |     | 1    |
| Composition of              | India (173)           | Mothers' social networks within and outside their household (comprised of the six   | N/A   |      |       |                            |     |      |
| Mothers' Social             |                       | individuals a mother talks to the most), value was a composite of network size, literacy, sex,  |       |      |       |                            |     |      |
| Networks (173)              |                       | % of network members living outside of the household, % of members not related to   |       |      |       |                            |     |      |
|                             |                       | mother, and presence of mother/MIL/husband in network.  |       |      |       |                            |     |      |
| In-camp network             | Uganda (174)          | Number of households from respondent's pre-displacement farmers' group living in their  | N/A   |      |       |                            |     |      |
| size (174)                  |                       | current administrative block in the camp. Local social network has two components: long-  |       |      |       |                            |     |      |
|                             |                       | standing ties and daily contact.  |       |      |       |                            |     |      |
| Kin Network                 | Tanzania (175)        | Kin network was defined as the number of full brothers and number of sisters a mother had   | N/A   |      |       |                            |     |      |
| (175)                       |                       | living in the study area. Mother's place of birth was a proxy for kin support network.  | 37/4  |      |       |                            |     |      |
| Personal Network            | <b>Mexico</b> (176)   | Mothers asked to name 4 alters or people that they know, how close they were to each alter,   | N/A   |      |       |                            |     |      |
| (170)                       |                       | and whether they had ever discussed infant and young child feeding practices with each other. Mothers reported on each other's gay, and mumber of children level of advection and |       |      |       |                            |     |      |
|                             |                       | ability to speak an indigenous language   |       |      |       |                            |     |      |
| Social Network              | Brazil (60)           | Number of friends and relatives participant feels comfortable with and can talk to about  | N/A   |      |       |                            |     |      |
| (60)                        |                       | almost anything.  | 10/11 |      |       |                            |     |      |
| Social Network              | <b>Mexico</b> (177)   | Type of networks (within or outside the family), size of networks, frequency of interactions  | N/A   |      |       |                            |     |      |
| (177)                       | · · · · ·             | and type of support (economic, childcare, etc.)   |       |      |       |                            |     |      |
| Social Network              | South Africa (62)     | If they received a child support grant and the size of a mother's social network, calculated as   | N/A   |      |       |                            |     |      |
| (62)                        |                       | the number of close friends and relatives multiplied by the frequency of contact in the past  |       |      |       |                            |     |      |
|                             |                       | month.  |       |      |       |                            |     |      |
| Social Network              | Bangladesh (178)      | Mothers' knowledge of other mothers who had adopted optimal infant and young child  | N/A   |      |       |                            |     |      |
| (178)                       |                       | feeding practices in the community, and any personal connection to those mothers.   |       |      |       |                            |     |      |
| Social                      | Brazil (61)           | Number of friends and relatives with whom the woman could rely on in the last 12 months.  | N/A   |      |       |                            |     |      |
| Network/Support             |                       |   |       |      |       |                            |     |      |
| Network (1/9)               |                       |   |       |      |       |                            |     |      |
| A degueary of               | Tanzania (190)        | Types of help women received from their hyshends by asking if partners had participated in  | 6     |      |       |                            |     |      |
| Social Support              | <b>Tanzania</b> (160) | a sidentified in an iterative rile sort formative recearch  | 0     | •    |       |                            |     |      |
| (43)                        |                       | (181)   |       |      |       |                            |     |      |
|                             |                       | (101).  |       |      |       |                            |     |      |

| Measure  | Countries where                                       | Measure description   |           |            |                 |            |          |             |
|--|---|---|-----------|------------|-----------------|------------|----------|-------------|
|  | measure use   |   | Items     | Adaptation | Cog. Interviews | Pretesting | Validity | Reliability |
| Breastfeeding<br>Support (182)   | Vietnam (182)   | Received breastfeeding support from a health worker (e.g., nurse, doctor, or village health worker) and from a family member, relative, or friend during pregnancy or within 3 days after birth.  | 2         |            |                 |            |          |             |
| Community<br>Membership<br>(183) and<br>Community<br>Cohesion (184)                | <b>India</b> (183)                                    | Community membership (asked the head of the household if he/she is a member of any community groups) and community cohesion (used community cohesion questionnaire from (184).  | 9         |            |                 |            |          |             |
| Duke UNC<br>Functional Social<br>Support Scale<br>(185)                            | Nicaragua (186);<br>Tanzania (72,187);<br>Uganda (86) | Three types of social support: confidant (having someone to talk with about important topics), affective (being shown love and caring) and instrumental (such as financial help during an emergency).   | 10-<br>15 | •          |                 |            | •        | •           |
| Family Support<br>Scale (188)  | Indonesia (188)                                       | Family support in terms of emotional, material, and informational support provided by families in selecting complementary feeding.  | 13        |            |                 |            | •        | •           |
| Household<br>Bargaining Power<br>Sub-scale (189)                                   | <b>Nepal</b> (189)                                    | Respondent reported being an active group member in groups related to agriculture, water<br>use, land/forest use, credit or microfinance, mutual help or insurance, trade or business,<br>civics, religion, or other women's groups.                        | 9         |            |                 |            |          |             |
| Male<br>Involvement in<br>Housework (190)  | <b>Benin</b> (190)                                    | Whether women get help from adult males in their household to prepare meals, clean, do laundry, make purchases, take care of kids. A nonfamily groups' domain included participating in an environment for creating a sense of solidarity with other women. | 2         |            |                 |            |          |             |
| Maternity Social<br>Support Scale<br>(MSSS) (191)                                  | Ethiopia (77)   | Social factors associated with postpartum depression (i.e. lack of family support, lack of partner support, conflict with partner, feeling controlled by or unloved by partner, low friend network).  | 6         |            |                 |            |          |             |
| Medical<br>Outcomes Study<br>(MOS) Social<br>Support Survey<br>(192)               | Jamaica (10)  | Tangible and emotional support.   | 4         |            |                 |            | •        | •           |
| Multi-<br>Dimensional<br>Scale for<br>Perceived Social<br>Support (MSPSS)<br>(193) | Pakistan (26,65)                                      | Perceived social support including support from family, friends, and significant other.   | 12        | •          |                 |            |          |             |
| Non-Maternal<br>Adult Female<br>Household<br>Members (194)                         | Ethiopia (194)  | Number of non-maternal adult female household members; specifically, the number of non-<br>maternal AFHMs relative to the number of under-5 children.   | N/A       |            |                 |            |          |             |

| Measure  | Countries where       | Measure description   |       |            |                 |            |          |             |
|--|-----------------------|---|-------|------------|-----------------|------------|----------|-------------|
|  | measure use           |   | Items | Adaptation | Cog. Interviews | Pretesting | Validity | Reliability |
| Oslo Social<br>Support Scale<br>(OSSS-3) (195) | Pakistan (20)         | Relationships with and support from family, friends, and neighbors.   | 3     |            |                 |            | ٠        | •           |
| Paternal<br>Involvement in<br>Childcare (196)  | <b>Vietnam</b> (196)  | Time fathers spent involved in 5 child-care activities over the previous week: feeding, supporting his wife with child feeding, playing with child, putting child to bed, and bathing child. Providing health care defined by 2 variables: caring for a sick child and bringing the child for immunizations. Paternal involvement was the amount of time fathers spent during the previous week doing household chores and caring for older children. | 9     |            |                 |            | •        | •           |
| Perceived Social<br>Support (197)              | Nigeria (197)         | The degree to which six types of family members or friends (respondent's mother, husband's mother, husband, her sisters, other women in extended family, and her friends) would support their feeding method.   | 6     | •          |                 |            |          |             |
| Perceived Social<br>Support (5)                | <b>Zimbabwe</b> (6,7) | Four functional social support domains (tangible, emotional/informational, affectionate, and positive social interaction) and a question about the number of close family and friends.<br>Adapted from Interpersonal Support Evaluation List (198) and the Medical Outcomes Study Social Support Survey (192).  | 16    | •          | •               | •          |          | •           |
| Social Support<br>(38)                         | Brazil (38)           | Combined items from the Medical Outcomes Study Social Support Survey (179) and questions to assess material, practical, relationship, and emotional support (199).  | 20    | •          |                 |            | ٠        |             |
| Social Support<br>(78)                         | <b>Kenya</b> (78)     | Social support from others (yes/no).  | 1     |            |                 |            |          |             |
| Social Support<br>(127)                        | Uganda (127)          | Marital status as an indicator of social support and media access as an indicator for informational support.  | 2     |            |                 |            |          |             |
| Social Support<br>(200)                        | <b>Brazil</b> (200)   | Three dimensions of social support, social interaction, presumed support, and received support.   | 11    |            |                 |            |          |             |
| Social Support<br>(73)                         | <b>Chad</b> (73)      | Assistance for caregivers in accomplishing daily activities in addition to the age of the father, household size, dependency ratio, help available for usual tasks, family structure, and ethnic group.   | NR    |            |                 |            |          |             |
| Social Support<br>Index (201)                  | <b>Kenya</b> (201)    | Support received or provided by the father or grandmother related to household activities, childcare, emotional support, and financial support. Based on formative research.  | 12    |            |                 |            |          |             |
| Social Support<br>Measurement<br>(106)         | <b>India</b> (106)    | Economic or emotional help or assistance from groups or leaders related to work/trade, politics, religion, credit or funerals, sports, family, friends, government/civil service, charitable organizations/NGOs in the last 12 mo.  | NR    |            |                 |            |          |             |
| Social Support<br>Resources (202)              | <b>Jamaica</b> (202)  | Availability and use of child care, partner presence in the household, financial or service contributions from household members, community residence, proximity to family members, formal sources of support.  |       |            | ٠               |            |          |             |
| Social Support<br>System Adequacy<br>(200)     | Myanmar (203)         | Not stated.   | NR    | •          |                 |            |          |             |
| Social Support<br>Scale (204)                  | South Africa (205)    | Number of close contacts, frequency of contact with friends/family, and frequency of practical support.   | 3     |            |                 |            |          |             |

| Measure                    | Countries where     | Measure description  |      |     |           |     |     |      |
|----------------------------|---------------------|--|------|-----|-----------|-----|-----|------|
|                            | measure use         | r i i i i i i i i i i i i i i i i i i i  |      |     | S         |     |     |      |
|                            |                     |  |      |     | iew       |     |     |      |
|                            |                     |  |      | on  | irvi      | 50  |     | Ŷ    |
|                            |                     |  |      | ati | nte       | tin | ty  | illi |
|                            |                     |  | su   | apt | J         | tes | idi | iab  |
|                            |                     |  | ter  | ۶þ۸ | <b>30</b> | re  | /al | Rel  |
|                            |                     |  | Γ    | ł   | •         | Ι   | -   | I    |
| Sources of                 | <b>Brazil</b> (206) | Not stated.  | NR   |     |           |     |     |      |
| Breastfeeding              |                     |  |      |     |           |     |     |      |
| Support (206)              |                     |  |      |     |           |     |     |      |
| Support from               | India (74)          | Social support obtained from the husband in helping to care for the child and in-home tasks  | NR   |     |           | •   |     |      |
| Husband (74)               |                     |  |      |     |           |     |     |      |
| Support in                 | Bangladesh (96);    | Support with household chores and perceived instrumental support identified as help with   | 11-  |     |           |     |     |      |
| Household                  | Ethiopia (96);      | accommodation, money, and food.  | 12   |     |           |     |     |      |
| Chores and                 | Vietnam (96)        |  |      |     |           |     |     |      |
| Perceived                  |                     |  |      |     |           |     |     |      |
| Instrumental               |                     |  |      |     |           |     |     |      |
| Support (96)               | M-1 (10)            |  | ND   |     |           |     |     |      |
| women's                    | Man (18)            | Perceived social networks based on material, practical, cognitive, and emotional support   | NK   |     |           |     |     |      |
| Perceived Social           |                     | including mother-in-law support, husband support, household cooperation, hatal kin   |      |     |           |     |     |      |
| Time Sufficiency (         | (m_17)              | network, and total network size. Based on formative research.  |      |     |           |     |     |      |
| Caraginar                  | (II=17)             | Maan minimum and maximum hours grant on demostic tasks, agricultural work  | NI/A |     |           |     |     |      |
| Caregiver<br>Workload (72) | Chad (75)           | head in the second seco | IN/A |     |           | •   |     |      |
| WOIKIOau (75)              | Napal (207)         | Employment status (formal informal domestic) and number of income related work hours   | 2    |     |           |     |     |      |
| Work Hours                 | Nepai (207)         | per week   | 2    |     |           | •   |     |      |
| (207)                      |                     |  |      |     |           |     |     |      |
| Leisure                    | India (74)          | Mother's workload was assessed by the amount of leisure time available per day.  | N/A  |     |           | •   |     |      |
| Time/Day (74)              |                     |  | 1011 |     |           | ÷   |     |      |
| Maternal Time              | Mali (208)          | Observation of daily amount of time spent on categories of activity: productive workload or  | N/A  |     |           |     |     |      |
| Use (208)                  |                     | maternal income-generating activities, domestic work, child-care activities, social activities,  |      |     |           |     |     |      |
| × ,                        |                     | and miscellaneous activities.  |      |     |           |     |     |      |
| Maternal Work              | Jamaica (202)       | Hours and days of work per week (income-generating activities, maternal food production,   | N/A  |     |           |     |     |      |
| Patterns (202)             | . ,                 | childcare) as well as distance and time from home to workplace. Based on formative   |      |     |           |     |     |      |
|                            |                     | research.  |      |     |           |     |     |      |
| Number of Days             | Tanzania (209)      | Time mothers spent in agricultural activities and in cultivation of various crops during the   |      | ٠   |           | ٠   |     |      |
| Spent Farming              |                     | last main agricultural season.   |      |     |           |     |     |      |
| (209)                      |                     |  |      |     |           |     |     |      |
| Perceived Time             | Zimbabwe (6,7)      | Perceptions of time stress, workload, and time available for caregiving.   | 6    |     | •         | •   |     | •    |
| Stress (5)                 |                     |  |      |     |           |     |     |      |
| Time Allocation            | Bangladesh (211);   | Time allocation module (1 of 5 domains in WEAI) includes 2 indicators: workload and  | N/A  |     |           |     |     |      |
| Module from                | Nepal               | leisure. (1) Workload estimated as sum of total time spent on domestic work, care for  |      |     |           |     |     |      |
| Women's                    | (171,189,212,213);  | children and elders, wage work or employment and subsistence activities such as farming  |      |     |           |     |     |      |
| Empowerment in             | Tanzania (43);      | and livestock and schoolwork, based on 24-hour recall of all activities undertaken the day   |      |     |           |     |     |      |
| Agriculture Index          |                     | before. (2) Subjective satisfaction with time available for leisure is assessed with a single  |      |     |           |     |     |      |
| (WEAI) (210)               |                     | item.  |      |     |           |     |     |      |
| 1                          |                     |  | 1    |     |           |     |     |      |

| Measure                   | Countries where<br>measure use                  | Measure description  | Items | Adaptation | Cog. Interviews | Pretesting | Validity | Reliability |
|---------------------------|---|--|-------|------------|-----------------|------------|----------|-------------|
|                           | Zambia (138); 5<br>countries <sup>6</sup> (214) |  |       |            |                 |            |          |             |
| Women's Time<br>Use (215) | Burkina Faso (215)                              | Self-reported estimates of average time spent on agricultural activities (planting, weeding, and harvesting) and average time spent on other activities (livestock, agriculture, hunting/gathering, and child care) and domestic activities during the 7 days prior to the survey. | N/A   |            |                 |            |          |             |

N/A: not applicable NR: not reported

<sup>&</sup>lt;sup>6</sup> Bangladesh, Nepal, Cambodia, Ghana, Mozambique

| CR term used<br>by authors   | Location of<br>included<br>paper | Measure<br>(citation)                   | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings  |  |  |  |  |
|--|----------------------------------|---|--|---|--|---|--|--|--|--|
| Self-Efficacy  |                                  |   |  |   |  |   |  |  |  |  |
| Maternal Self-<br>Efficacy for<br>Complementary<br>Feeding (MSE-<br>CF)                                      | Bangladesh (1)                   | Author-<br>developed (1)                | Cross-<br>sectional                                    | n=457 rural mothers of<br>children 6-24 months of<br>age.   | Questions translated from English to<br>Bengali. Cognitive interviewing<br>conducted with 15 mothers not in the<br>survey sample.  | "Moderated mediation." Intervention impact mediated by<br>increased MSE-CF in the case of feeding green leafy<br>vegetables in the last 24h; mothers with higher MSE-CF<br>gained the most from the intervention on this behavioral<br>outcome. Intervention did not work through increased MSE-<br>CF to effect timely introduction of egg; MSE-CF did not<br>potentiate the effect on timely introduction of egg. |  |  |  |  |
| Maternal Self-<br>Efficacy   | Iran (4)                         | Maternal Self-<br>Efficacy Scale<br>(2) | Cross-<br>sectional                                    | n=423 urban and rural<br>mothers of children <2<br>years old. Mean maternal<br>age: 27.4 +/-5 years, range<br>17-40; Mean infant age:<br>15.1 +/- 5.8 months.       | Adapted with reference to Lakshman<br>et al. 2021 (216). Based on the score,<br>maternal self-efficacy was<br>categorized into four levels: very<br>good (30–40), good (20–30), poor<br>(10–20) and very poor (<10).<br>Questionnaire translated into Farsi.<br>Pilot study to test questionnaire<br>yielded no major changes. | Converse association with increased use of pressure style.<br>Significant association with maternal feeding styles,<br>including control of home food access, pressure to eat,<br>restriction for weight control, restriction for health,<br>encouragement and modeling.  |  |  |  |  |
| Maternal/Parent<br>ing Self-<br>Efficacy   | Brazil (3)                       | Maternal Self-<br>Efficacy Scale<br>(2) | Cross-<br>sectional                                    | n=595 low-income urban<br>mothers of children 6-24<br>months of age.  | High and low categories defined as<br>above and below the median of the 10<br>summed items; scores were based on<br>the average of the items answered.   | Low maternal self-efficacy was not associated with short<br>stature, nor did it mediate or modify the relationship<br>between depressive symptoms and short stature.<br>Underweight was not associated with maternal self-efficacy.   |  |  |  |  |
| Mothering Self-<br>Efficacy  | Zimbabwe<br>(6)                  | Mothering Self-<br>Efficacy (5)         | 2x2 cluster<br>randomized<br>community-<br>based trial | n=3181 mother-infant pairs;<br>recruited at pregnancy and<br>enrolled in SHINE trial,<br>followed through 18mo in<br>rural Zimbabwe.                                | Not stated.  | No significant relationship was observed between mothering self-efficacy and child diet diversity (OR 1.07 (0.90-1.28); $p = 0.424$ ).  |  |  |  |  |
| Mothering Self-<br>Efficacy  | Zimbabwe<br>(7)                  | Mothering Self-<br>Efficacy (5)         | 2x2 cluster<br>randomized<br>community-<br>based trial | n=4025 mothers (measured<br>growth in 4,073 children);<br>recruited at pregnancy and<br>enrolled in SHINE trial,<br>followed through 18mo in<br>rural Zimbabwe.     | Not stated.  | No significant relationship was observed between mothering self-efficacy and child LAZ at 18 months (OR 0.93 (0.78, 1.09), p=0.36).   |  |  |  |  |
| Parenting Self-<br>Esteem,<br>including<br>perceived self-<br>efficacy and<br>satisfaction<br>from parenting | Jamaica<br>(10)                  | Author-<br>developed (10)               | Case control<br>study                                  | Mothers of undernourished<br>IYC (n=139 cases) and<br>adequately nourished IYC<br>(n=71 controls) 9-30mo<br>old; recruited from urban<br>government health centers. | Questionnaire was pretested with 20<br>non-study mothers on two occasions,<br>two weeks apart.   | Mothers of undernourished children had lower parenting self-esteem (p<0.01).  |  |  |  |  |

| Table S4: Caregiver Resource measures and findings in complementary feeding and responsive feeding papers (N=1 | 63) |
|--|-----|
| Presented alphabetically by measure (pre-existing followed by author-developed) then author of included paper  |     |

| CR term used<br>by authors                      | Location of<br>included<br>paper | Measure<br>(citation)                   | Study<br>Design                                    | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings  |
|---|----------------------------------|---|--|--|--|---|
| Perceived<br>Behavioral<br>Control (PBC)        | Kenya (12)                       | Perceived<br>Behavioral<br>Control (11) | Cross-<br>sectional                                | n=665 female caregivers of<br>children <2 years old<br>(n=202 mothers of children<br>6-23mo), received nutrition<br>education from SUSTAIN.  | Adapted to IYCF. Pretested on 60<br>respondents; checked for<br>comprehension, clarity, and cultural<br>appropriateness and ease of<br>administration of the scales.   | PBC had a significant effect on a number of IYCF practices,<br>such that one unit increase in PBC index increased the<br>expected number of IYCF practices by 33%. However, PBC<br>did not have a significant effect on use of IYCF practices for<br>mothers of children 6-23 mo alone.   |
| Perceived Self-<br>Efficacy                     | Burkina<br>Faso (13)             | Author-<br>developed (13)               | Cross-<br>sectional                                | n=1889 mother-infant pairs<br>6-23 months old in rural<br>villages. Average maternal<br>age 28 years old.  | Not Stated.  | Among mothers who introduced soft, semi-solid, and/or solid foods, 14.6% (CI 12.2, 17.4) felt capable giving meat, fish or egg every day to child; dark green leafy vegetables 62.9% (CI 57.9, 67.6); carrot, squash, sweet potato 11.2% (CI 9.0, 14.0).  |
| Self-Efficacy                                   | Iran (14)                        | Author-<br>developed (14)               | Quasi-<br>experimental<br>intervention             | n=170 mothers of 6-24-<br>month-old children, in an<br>urban area, mean age 30 +/-<br>5.04 years old; range 18-49<br>years. Children mean age<br>14.11 +/- 4.94.   | Review of literature and related tools. Two focus groups discussions with mothers of 6 to 24-month-old children ( $n=7$ ). Pilot test on 36 participants.  | Intervention improved self-efficacy of mothers.   |
| Self-Efficacy                                   | Lao PDR<br>(15)                  | Author-<br>developed (15)               | Cross-<br>sectional                                | n=100 mothers (17-46 years<br>of age) of children 0-4<br>years of age in a semi-urban<br>area. (n=23 0-11 months;<br>n=17 12-23 months).   | Not Stated. Sample question: "How<br>easy do you find it to access health<br>services when you need to?"; "How<br>easy do you find it to borrow money<br>when you need to?".   | Mean self-efficacy score for health services was significantly lower ( $p=0.067$ ) for mothers with stunted children than for those without stunted children. No difference between groups in mean self-efficacy score for borrowing money.   |
| Self-Efficacy                                   | Iran (16)                        | Author-<br>developed (16)               | 3-arm cluster<br>randomized<br>controlled<br>trial | n=90 urban mothers of full-<br>term singleton, exclusively<br>breastfed infants 4 mo to 4<br>mo and 29 days old. Infants<br>average age 130.08 days $\neg \pm$<br>7.48. Mean age of mothers<br>29.87 (years) $\neg \pm$ 4.68. 30<br>mothers in each arm.   | Changes made based on the opinions<br>of health education experts,<br>guidelines on complementary feeding<br>by Iranian Ministry of Health.<br>Example item: "I can prepare a food<br>suitable to the age of my infant."   | Gain-framed and loss-framed messages equally increased<br>self-efficacy in observing appropriate complementary<br>feeding. Both experimental groups were similar in terms of<br>self-efficacy score, but loss-framed messages increased<br>attitude more. Cannot conclude that effect of message<br>framing type is always directly related to higher self-<br>efficacy.  |
| Self-Efficacy in<br>Infant Care<br>Scale (SICS) | Thailand<br>(17)                 | Author-<br>developed (17)               | Cross-<br>sectional<br>sample                      | n=397 mothers 16-47 years<br>old (mean 26.8 +/- 6.3 y) of<br>infants <12 mo old who<br>attended well-baby clinics<br>for immunizations in urban<br>area. 82% self-identified as<br>primary caregiver, 60%<br>first-time mothers,<br>education level ranged from<br>primary school to graduate<br>school (mean education =<br>$10 \neg \pm 3.6$ years); 54% were<br>employed. | Individual and focus group interviews<br>with 20 mothers (pregnant, or with<br>infants 1-3, 4-6, 7-9, and 10-12<br>months old) used to develop tasks,<br>competencies, barriers, and<br>challenges for measure. Also,<br>literature, previous work on similar<br>measures, and authors' clinical<br>experience. Used Bandura's guide for<br>constructing a self-efficacy scale<br>(217). | Factor analysis with 67 items of five expected factors was<br>carried out, resulting in a five-factor solution with 42 items<br>and explained 53% of the variance. Diet was split into two<br>factors: the first factor (diet 1), consisting of six items, was<br>related to bottle- feeding and solid food, and the other factor<br>(diet 2), consisting of four items, was related to breast-<br>feeding, burping, and position during feeding. The 42-item<br>SICS was composed of five factors: developmental<br>promotion (14 items), general health care (13 items), safety<br>(5 items), diet 1 (6 items), and diet 2 (4 items). |

| CR term used<br>by authors                       | Location of<br>included<br>paper | Measure<br>(citation)                                     | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings  |  |  |  |  |  |
|--|----------------------------------|---|--|--|--|---|--|--|--|--|--|
| Social Power                                     | Mali (18)                        | Author-<br>developed (18)                                 | Cross-<br>sectional  | n=261 Fulbe mothers of<br>children <5 years of age in<br>rural Mali.   | Not Stated.  | Mothers with a higher score in passivity/helplessness were<br>more likely to have wasted or stunted children (controlling<br>for confounders). Mothers who scored better in felt control<br>were more likely to have a WHZ in the normal range.   |  |  |  |  |  |
| Perceived Physical Health                        |                                  |   |  |  |  |   |  |  |  |  |  |
| Health-Related<br>Quality of Life                | Pakistan<br>(20)                 | Euro-Qol (EQ<br>5D) (19)                                  | RCT  | n=107 mothers of children<br><= 30mo (54 intervention,<br>53 control), at outpatient<br>pediatric departments of<br>participating hospitals.   | Translated to Urdu (218)   | Scores for health-related quality of life improved significantly for the intervention group as compared to the control group.   |  |  |  |  |  |
| Perceived<br>Health Status                       | Zimbabwe<br>(6)                  | RAND 36-item<br>Health Survey<br>(21)                     | 2x2 cluster<br>RCT   | n=3181 mother-infant pairs;<br>recruited at pregnancy and<br>enrolled in SHINE trial,<br>followed through 18mo in<br>rural Zimbabwe.   | Modified survey items to make them<br>contextually relevant and dropped<br>survey items that could not be<br>modified (5).   | No significant association between perceived health status and infants fed diverse diet (OR 0.99 (0.91-1.07); $p = 0.856$ )   |  |  |  |  |  |
| Perceived<br>Physical Health                     | Zimbabwe<br>(7)                  | RAND 36-item<br>Health Survey<br>(21)                     | 2x2 cluster<br>RCT   | n=4025 mothers (measured<br>growth in 4,073 children);<br>recruited at pregnancy and<br>enrolled in SHINE trial,<br>followed through 18mo in<br>rural Zimbabwe.  | Not stated.  | Mothers who perceived themselves to be in better health<br>compared to mothers who perceived themselves to be in<br>worse health had children with better linear growth at 1 and<br>12 months of age.   |  |  |  |  |  |
| Caregiver and<br>Family Quality<br>of Life (QoL) | Ghana (23)                       | PedsQL Family<br>Impact Module<br>(22)                    | Cross-<br>sectional  | n=76 caregivers and their<br>children with cerebral palsy<br>(CP) 18mo to 12yo in eight<br>rural communities in<br>Ghana. Majority of children<br>(72%) were under 5yo and<br>had severe cerebral palsy. | Pilot tested and verbally translated<br>into three local languages.  | QoL scores were significantly lower among caregivers<br>whose children had the greatest difficulties with feeding<br>(median score 9.0) compared to those with least difficulties<br>(24.6, p=0.004) even with adjustment for potential<br>confounders (caregiver and child age, socio-economic<br>status, north/south, and CP severity). Similar QoL for<br>caregivers with a child with CP who was underweight (10.8)<br>and caregivers of not under-weight child (11.8, p=0.12). |  |  |  |  |  |
| Quality of Life<br>(QoL)                         | Ghana (24)                       | PedsQL Family<br>Impact Module<br>(22)                    | Pre/post<br>evaluation,<br>11-month<br>participatory<br>training | n=75 caregivers of children<br>with cerebral palsy 18mo to<br>12yo, at baseline (n=64<br>caregivers at endline)  | Translated to three languages Twi,<br>Gruni, and Kusaal, including forward/<br>back-translations by linguistic<br>experts. Modified following cognitive<br>field testing in the three sites. | Assessed impact of intervention on QoL and on child<br>nutrition, but did not assess relationship between QoL and<br>child nutrition. All domains of QOL (including physical<br>functioning) improved significantly baseline to endline.  |  |  |  |  |  |
| Caregivers'<br>Health-Related<br>Quality of Life | Pakistan<br>(26)                 | WHO Quality of<br>Life- Brief<br>version<br>(WHOQoL) (25) | Two-arm,<br>single-<br>blinded,<br>individual<br>RCT             | Pregnant women in third<br>trimester with increased<br>risk of postnatal depression.   | n/a [study protocol]   | n/a [study protocol]  |  |  |  |  |  |
| Mental Heal                                      | th                               |   |  |  |  |   |  |  |  |  |  |

| CR term used<br>by authors                         | Location of<br>included<br>paper | Measure<br>(citation)   | Study<br>Design                      | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings   |
|--|----------------------------------|---|--------------------------------------|---|---|--|
| Maternal<br>Depressive<br>Symptoms                 | Pakistan<br>(28)                 | Aga Khan<br>University<br>Anxiety and<br>Depression<br>Scale (27)             | Cross<br>Sectional                   | n=325 mothers (18-44 years<br>old) with children <2 years<br>old; recruited from urban<br>and rural districts.  | n/a   | Maternal depressive symptoms are related to higher risks of child underweight status.  |
| Depressive<br>Symptoms<br>(Maternal<br>Depression) | Brazil (30)                      | Beck Depression<br>Inventory (29)   | Cohort study                         | n=360 mothers with infants<br>0-12m; recruited from Sao<br>Leopoldo Hospital.   | n/a   | After adjustment for confounders, moderate and severe<br>maternal depression was significantly associated with<br>breastfeeding cessation.   |
| Maternal<br>Depression/Dep<br>ression<br>Symptoms  | Malaysia<br>(32)                 | Beck Depression<br>Inventory<br>Second Edition<br>(BDI II) (31)               | Case control study                   | n=124 mothers with<br>children 6mo to 5yo (62<br>malnourished children; 62<br>well-nourished children<br>from eight governmental<br>health clinics in Kuala<br>Langat district.       | Used Malay translated version (219) <u>.</u>  | Current maternal depression was a significant risk factor to<br>malnutrition. Mothers who experienced depression were 2.2<br>times more likely to have malnourished children (OR 2.2,<br>95% CI 1.03, 4.61), according to binary logistic regression.  |
| Depressive<br>Symptoms<br>(Maternal<br>Depression) | Bangladesh<br>(35)               | Center for<br>Epidemiologic<br>Studies<br>Depression<br>Scale (CES-D)<br>(33) | Stratified<br>cluster field<br>trial | n=463 mothers of IYC 4-<br>14mo in rural and peri-<br>urban areas; recruited from<br>Save the Children and<br>randomized into 10-month<br>parenting intervention or<br>standard care. | Conducted preliminary interviews<br>and modified several items.   | Depressive symptoms were significantly reduced among<br>women who met as a group twice monthly compared to<br>those who had mostly home or clinic visits (p=0.004). Mean<br>scores among intervention group were 13.28 (SD 14.3) vs<br>18.07 (SD 15.5) in standard care. Depressive symptoms<br>were not measured in relation to IYCF/child nutrition,<br>though nutrition indicators were collected as outcome<br>measures of the intervention.                       |
| Maternal<br>Depression                             | Jamaica<br>(10)                  | CES-D (33)  | Case control study                   | n=210 mothers of IYC 9-<br>30mo. Participants were<br>recruited from government<br>health centres in parishes<br>and urban areas.   | After piloting, the wording of the questions was adapted to be more culturally appropriate and several of the questions were omitted.   | Mothers of undernourished children reported more depressed symptoms (p<0.01).  |
| Maternal<br>Depressive<br>Symptoms                 | Bangladesh<br>(36)               | CES-D (33)  | Cohort study                         | n=221 mothers of IYC 6-<br>12mo. Participants were<br>recruited from 6-mo<br>double-blinded RCT   | Clinical cutoff of 16 was used in<br>descriptive analyses, but because the<br>cutoff has not been validated in<br>Bangladesh, CES-D was used as a<br>continuous variable to test hypotheses | No differences in infants' LAZ or WLZ at 6mo based on<br>mothers' depression status at 12 mo. At 12 mo, significant<br>depression-by-time effect on length-for-age, which<br>indicated worse growth for infants of mothers with<br>depressive symptoms. Correlation matrix showed that<br>maternal depressive symptoms were significantly related to<br>length-for-age at 12 mo ( $r = -0.13$ , $p = 0.05$ ), but not to<br>other anthropometric indexes at 6 or 12 mo |
| Maternal<br>Depression                             | Ethiopia<br>(39)                 | CES-D (33)  | Cluster RCT                          | n=1220 pregnant mothers<br>and their offspring; Women<br>were recruited starting at 2-<br>3 months gestation. Child   | n/a   | There was no difference between the intervention and<br>control children on any anthropometric indicator.  |

| CR term used<br>by authors         | Location of<br>included<br>paper              | Measure<br>(citation) | Study<br>Design   | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings   |
|------------------------------------|---|-----------------------|---|--|---|--|
|                                    |   |                       |   | data was collected 2 to 13 months.   |   |  |
| Maternal<br>Depressive<br>Symptoms | Bangladesh<br>(37)                            | CES-D (33)            | Community-<br>based<br>randomized<br>trial                | n=507 mothers of severely<br>underweight (WAZ < -3)<br>IYC 6-24mo, who had<br>recovered from an acute<br>infection at Dhaka hospital<br>of icddrb. | Adapted after piloting: two questions<br>from the CES-D scale were omitted<br>because the questions were not<br>understood and added five re-worded<br>questions were added.      | There was no significant relationship between maternal<br>depressive symptoms and the nutritional status of the<br>children  |
| Maternal<br>Depressive<br>Symptoms | India (42)                                    | CES-D (33)            | Cross-<br>sectional                                       | n=2930 mothers and their<br>IYC 6-48mo in rural India  | Adapted through the use of flexible,<br>local cut-offs and a binary indicator<br>to capture heterogeneity. Translated<br>into Hindi; back-translation and pilot<br>testing.       | Children of mothers with high MDS also had poorer dietary diversity. Children of mothers with high MDS had a higher rate of stunting and under-weight than their counterparts, with the odds ~2 times in models adjusted for child age and sex, and ~1.4 to 1.5 times in fully adjusted models. There was no significant association between maternal MDS and wasting. |
| Risk of<br>Probable<br>Depression  | Tanzania<br>(43)                              | CES-D (33)            | Cluster-<br>randomized<br>effectiveness<br>trial          | n=Women in 591 food<br>insecure households as<br>defined by the community<br>and had a child aged <1 y.  | Used a cutoff value that has been<br>validated for use among similar<br>populations in East Africa.   | At baseline, 41.2% of women were experiencing probable depression; the intervention reduced this by11.6pp (P=0.04).  |
| Maternal<br>Depression             | Brazil (38)                                   | CES-D (33)            | Cross-<br>sectional<br>study                              | n=595 mothers of children<br>6-24mo; recruited from four<br>low-income rural areas.  | Used as a dichotomous variable with<br>cut-off of 16 to indicate depressive<br>symptoms. Developed a Portuguese-<br>language version through translation<br>and back-translation. | No significant association between maternal depression and HAZ.  |
| Maternal<br>Depressive<br>Symptoms | Brazil (3)                                    | CES-D (33)            | Randomized<br>Control Trial                               | n=660 Mothers; pregnant<br>women aged >18 were<br>selected from this urban<br>region to participate in the<br>trial                                | n/a   | Maternal depression negatively modified impacts of the intervention on child development   |
| Depression<br>Status               | Ghana (40)                                    | CES-D <u>(</u> (33)   | Cross<br>Sectional  | n=384 caregivers of IYC<br><5yo seeking CWC<br>services at health center or<br>its 2 outreach posts.   | Translated and administered in Akan<br>or Dagbani language.   | In adjusted model, the risk of stunting to children of depressed mothers was statistically significant (AOR = 2.48, 95 % CI 1.29, 4.77, p= 0.0011).  |
| Maternal<br>Depressive<br>Symptoms | Ghana (41)                                    | CES-D (33)            | Cross<br>Sectional  | n=595 low-income mothers<br>with children 6-24 m were<br>recruited from an urban<br>area   | n/a   | Maternal depressive symptoms correlated with higher odds<br>of stunting amongst children but were not related to<br>children's underweight status  |
| Depressive<br>Symptoms             | St. Lucia,<br>Antigua,<br>and Jamaica<br>(34) | CES-D (33)            | Prospective<br>cohort study<br>using data<br>from cluster | n= 601 mother-child pairs;<br>Recruited at 6 week<br>postnatal clinics in Jamaica<br>(n=396) and St.Lucia  | Previously piloted and adapted for use in the Jamaican setting.   | Maternal depressive symptoms were associated with higher<br>scores on uninvolved, restrictive and forceful feeding styles<br>and lower responsive feeding.   |

| CR term used<br>by authors         | Location of<br>included<br>paper | Measure<br>(citation)  | Study<br>Design                               | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting | Caregiver Resource Specific Findings   |
|------------------------------------|----------------------------------|--|---|--|--|--|
|                                    |                                  |  | randomized<br>parenting<br>trial              | (n=103), and at 8-10 weeks<br>in Antigua (n=102).<br>Feeding data collected at<br>12mo.  |  |  |
| Parental mental<br>health          | Vietnam<br>(45)                  | Everyday<br>Feelings<br>Questionnaire<br>(EFQ)_(44)          | Cohort study                                  | n=2,000 Children and<br>caregivers, 96% of whom<br>were mothers; mix of<br>urban/ rural areas  | n/a  | Poor parental mental health is positively correlated with child underweight status.  |
| Postpartum<br>Depression<br>(PPD)  | India (52)                       | Edinburgh<br>Postnatal<br>Depression<br>Scale (EPDS)<br>(46) | Prospective<br>cohort study                   | n=287 mothers and their<br>infants in urban area   | Translated, pilot tested in Gujarati<br>language, and adapted.         | Mean feeding index score was lower in depressed than non-<br>depressed ( $6.72\neg\pm1.22$ vs $7.92\neg\pm0.6$ , p<0.001) mothers,<br>which was significantly different. Infants of depressed<br>mothers were more in risk of malnutrition compared to non-<br>depressed mothers ( $32.0\%$ vs $12.7\%$ ). Mean MUAC values<br>of the infant were significantly low in depressed mothers<br>( $13.70\neg\pm0.43$ ) than non-depressed ( $13.93\neg\pm0.38$ )   |
| Postpartum<br>Depression<br>(PPD)  | Ethiopia<br>(50)                 | EPDS_(46)  | Cohort Study                                  | n=458 Mother Child pairs;<br>Adolescent (mean age 16)<br>and adult (mean age 26)<br>mothers were recruited<br>from rural areas after giving<br>birth in hospital or clinic | n/a  | Did not examine child growth outcomes in relation to<br>mental health status   |
| Maternal<br>depressive<br>symptoms | South<br>Africa (54)             | EPDS <u>(</u> 46)  | Intervention<br>trial (cluster<br>randomized) | N=1,111 pregnant women   | Adapted; used short and ultrashort<br>versions of EPDS (220)           | Pattern of maternal depressed mood was not associated with HAZ or being stunted (HAZ <-2 SD), but was significantly associated with WAZ (F =3.9, p =0.01). Children of never depressed mothers had higher WAZ scores than children of mothers with recurrent episodes of depressed mood (p =0.01; ES =-0.07). Being malnourished significantly varied based on maternal depressed mood (F =3.1, p =0.03). Children of mothers with depression during pregnancy had a lower probability of being malnourished compared to children of mothers with depression post-partum (p =0.02; ES =-0.02). |
| Postnatal<br>Depression            | Tanzania<br>(58)                 | EPDS <u>(</u> 46)  | Cohort Study                                  | n=1128 mother child pairs;<br>pregnant women were<br>recruited from two urban<br>health clinics  | Locally translated and piloted Swahili version implemented.            | Postpartum depression is associated with impaired child<br>growth in the form of significantly lower HAZ scores at<br>24months.  |
| Maternal<br>Depression             | India (53)                       | EPDS <u>(</u> 46)  | Cohort study                                  | n= 652 mother-infant pairs;<br>Mothers recruited from a<br>rural region in third<br>trimester of pregnancy;<br>followed with infants up to<br>6-8m postpartum              | n/a  | In bivariate analysis, maternal postpartum depressive<br>symptoms predicted infant underweight and antepartum<br>depressive symptoms predicted infant stunting   |

| CR term used<br>by authors         | Location of<br>included<br>paper | Measure<br>(citation) | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings  |
|------------------------------------|----------------------------------|-----------------------|--|--|--|---|
| Maternal<br>Depression             | South<br>Africa (55)             | EPDS <u>(</u> 46)     | Prospective,<br>pragmatic<br>non-<br>randomized<br>two-group<br>cohort study | n=1,310 pregnant women<br>attending ANC at one of<br>four clinics included in the<br>study   | n/a  | Rates of depressed mood were low (12.6%), as was<br>potential clinical depression (4.4%); similar in the two<br>groups at 12 months. At 12 months and over time, mean<br>depression scores were significantly higher for comparison<br>group compared to intervention, but proportions with<br>depressed mood (EPDS > 13) were similar at 12 months<br>across groups. |
| Mental Health                      | Zimbabwe<br>(6)                  | EPDS (46)             | 2x2 cluster<br>randomized<br>community-<br>based trial                       | n=3181 mother-infant pairs;<br>Pregnant women enrolled in<br>SHINE trial and followed<br>through 18 months   | Adaptation included modifying<br>survey items to make them<br>contextually relevant or dropping<br>survey items that could not be<br>modified (5). | No significant association between maternal mental health<br>and infant being fed diverse diet observed (OR 0.85 (0.64-<br>1.19); p=0.249).   |
| Maternal<br>depression             | Gambia<br>(51)                   | EPDS <u>(</u> 46)     | Cross<br>Sectional   | n= 116 postpartum mothers<br>aged 20-25 were recruited<br>from urban and rural<br>regions  | Adapted; detail not stated.  | Significant association between maternal PPD and child nutritional status.  |
| Maternal<br>depressive<br>symptoms | Bangladesh<br>(47)               | EPDS <u>(</u> 46)     | Cross<br>Sectional   | n=300 Mother child pairs<br>were recruited from<br>attendees of a rural medical<br>college   | Piloted in neighboring rural district.   | Significant relationship between maternal depression and responsive feeding   |
| Postnatal<br>depression            | Bangladesh<br>(48)               | EPDS _(46)            | Case control<br>study  | n=280 mothers including<br>cases (children with WLZ <<br>- 3) and controls (children<br>with WLZ > - 3). All were<br>in ENID trial (Early<br>Nutrition and Immune<br>Development). | Adapted and used the Bangladesh version (221).   | Overall prevalence of maternal depressive symptoms was similar between mothers of cases and controls: $13\%$ vs $12\%$ . Maternal depressive symptoms not significantly associated with severe wasting in infants (OR 1.37 (0.32, 6.00), p= 0.67).  |
| Depressed<br>mood                  | South<br>Africa (56)             | EPDS (46)             | Cross<br>Sectional   | n= 238 Mothers aged 25-34<br>were recruited from rural<br>areas  | n/a  | Maternal depression was found to predict child stunting and inappropriate complementary feeding   |
| Mental<br>Health/Depressi<br>on    | Zimbabwe<br>(7)                  | EPDS <u>(</u> 46)     | 2x2 cluster<br>randomized<br>community-<br>based trial                       | n=4,025 mothers; Pregnant<br>women enrolled in SHINE<br>trial and followed through<br>18 months  | Adapted from Matare et al. (2015)(5).<br>Translated and validated in Shona<br>(222).   | Children of mothers with fewer depressive symptoms had significantly better linear growth outcomes (LAZ and/or stunting) at 18 months.  |
| Maternal<br>Depressed<br>Mood      | South<br>Africa (57)             | EPDS <u>(</u> 46)     | RCT  | n=958 Mother child pairs<br>(including 457 Control and<br>502 Intervention), recruited<br>as pregnant women at peri-<br>urban community level and<br>followed up 36 months         | n/a  | Children of mothers with depressed mood were more likely<br>to have low WAZ scores  |

| CR term used<br>by authors  | Location of<br>included<br>paper | Measure<br>(citation)                                 | Study<br>Design              | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting | Caregiver Resource Specific Findings  |
|---|----------------------------------|---|------------------------------|--|--|---|
| Depression  | China (49)                       | EPDS <u>(</u> 46)                                     | Cohort study                 | n=201 Mother child pairs   | Adapted; detail not stated.  | Children of depressed mothers did not meet adequate<br>energy, protein, and carbohydrate intakes  |
| Depression in<br>Mothers and<br>Severity of<br>Depression         | Pakistan<br>(20)                 | EPDS <u>(</u> 46)                                     | RCT                          | n=107 mothers with<br>children up to 30mo,<br>presenting at the outpatient<br>pediatric departments of<br>participating hospitals. 54<br>included in intervention and<br>53 in control.  | Previously translated into Urdu (218).                                 | EPDS used to screen mothers for depression to be included in intervention.  |
| Maternal<br>Mental Health   | Brazil (60)                      | General Health<br>Questionnaire<br>(GHQ-12) (59)      | Cross<br>Sectional           | n=238 Mother-infant pairs;<br>6-month-old infants and<br>their mothers recruited from<br>primary healthcare units in<br>urban hospitals  | Measure adapted and piloted in Portuguese.                             | Poor maternal mental health is positively associated with inadequate child nutritional status at 6 months.  |
| Common<br>Mental<br>Disorders<br>(CMD)/"Suspec<br>ted Depression" | Brazil (61)                      | GHQ-12 (59)   | Cross-<br>sectional<br>study | n=217 mothers and their<br>children up to 15mo; Data<br>derived from a prospective<br>cohort study that followed<br>the first year of life of<br>newborns attended at four<br>primary care facilities of<br>Rio de Janeiro from June<br>2005 to December 2009. | Used translated and adapted version<br>in Portuguese.                  | Significant associations were observed in the bivariate<br>analyses between overall physical violence and non-<br>breastfeeding; in adjusted multivariate analyses, the<br>associations remained significant. |
| Maternal<br>Depression  | South<br>Africa (62)             | GHQ-12 (59)   | RCT                          | n=1200 mother child pairs;<br>HIV positive mothers<br>(mean age 26.5y) with<br>infants 0-12m were<br>recruited from rural and<br>urban areas   | n/a  | Intervention mothers reported a larger decease in depressed<br>mood and their infants reported a larger increase in weight-<br>for-age z scores   |
| Maternal<br>Depression  | Pakistan<br>(64)                 | Hamilton<br>Depression<br>Rating Scale<br>(HDRS) (63) | Cluster-RCT                  | n=903 pregnant women,<br>married and in third<br>trimester of pregnancy. All<br>women who fulfilled the<br>criteria for a DSM-IV major<br>depressive episode were<br>recruited.  | n/a  | Infants whose mothers were still depressed at 6 months had significantly lower Z scores at both 6 months and 12 months than infants whose mothers had recovered.  |
| Depression in<br>Mothers and<br>Severity of<br>Depression         | Pakistan<br>(20)                 | HDRS (63)   | RCT                          | n=107 mothers with<br>children up to 30mo,<br>presenting at the outpatient<br>pediatric departments of<br>participating hospitals. 54  | Previously translated into Urdu (218)                                  | Results show statistically significant improvement in depression measured by HDRS in the intervention group at 3 and 6 months compared to the control group.  |

| CR term used<br>by authors                                   | Location of<br>included<br>paper | Measure<br>(citation)                                      | Study<br>Design       | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting                        | Caregiver Resource Specific Findings  |
|--|----------------------------------|--|-----------------------|---|---|---|
|  |                                  |  |                       | included in intervention and 53 in control.   |   |   |
| Depression   | Pakistan<br>(65)                 | HDRS (63)  | Cross<br>Sectional    | n=302 children <2 years,<br>and their mothers were<br>recruited to participate<br>(N=658 children)  | n/a   | None reported   |
| Maternal<br>Psychiatric<br>Illness (Anxiety<br>& depression) | Pakistan<br>(67)                 | Hospital Anxiety<br>and Depression<br>Scale (HADS)<br>(66) | Case Control<br>study | n=100 mothers and children<br>3-36mo: 50 children<br>admitted in nutritional<br>rehabilitation unit with<br>moderate and severe<br>malnutrition were selected<br>as cases while 50 children<br>with normal weight<br>admitted for other illnesses<br>were selected as controls. | n/a   | 50% of mothers of malnourished cases received high HADS<br>scores reflecting severe psychiatric illness while only 46%<br>of mothers of controls received high scores. Significant<br>relationship observed between child malnutrition and<br>maternal psychiatric illness. |
| Depression   | Rwanda<br>(70)                   | Hopkins<br>Symptom<br>Checklist<br>(HSCL) (68)             | RCT                   | n= 1498 Primary<br>Caregivers (mean age 36y)<br>of children 6-36mo<br>(n=1084 children), recruited<br>from rural/urban areas  | Adapted; detail not stated.   | Not reported  |
| Maternal<br>psychological<br>distress                        | Ethiopia<br>(69)                 | HSCL (68)  | Cross<br>Sectional    | n=1,006 Mother child pairs<br>recruited through household<br>sampling   | Developed in English and translated<br>and back-translated into Amharic and<br>Affan-Oromifa. | High levels of maternal distress were associated with child underweight   |
| Maternal<br>Depression and<br>anxiety                        | Tanzania<br>(72)                 | HSCL (68)  | RCT                   | n=699 Pregnant women<br>aged 20-29 living with HIV<br>were recruited from an<br>urban region of Tanzania  | n/a   | Maternal depression was positively associated with<br>underweight, stunting, and wasting  |
| Maternal<br>Depressive<br>Symptoms                           | South<br>Africa (71)             | HSCL (68)  | RCT                   | n=958 Mother child pairs;<br>Recruited as pregnant<br>women at peri-urban<br>community level; followed<br>up 36 months. 456 Control<br>and 502 Intervention.  | n/a   | Primary results report on effectiveness of intervention rather<br>than relationship between maternal mental health and child<br>nutrition   |
| Life<br>Satisfaction   | Chad (73)                        | Author-<br>developed (73)                                  | Cross<br>Sectional    | n=98 Caregiver Child Pairs;<br>Female caregivers were<br>interviewed in each rural<br>household and children 12-<br>71 m were evaluated   | n/a   | Dissatisfied caregivers have shorter children   |
| Satisfaction<br>with Life (Life                              | India (74)                       | Author-<br>developed (74)                                  | Cross-<br>sectional   | n=451 mothers of children<br>aged 6-59mo in slum areas  | Pretested in 25 households  | None of the maternal factors was significantly associated with children's dietary diversity.  |

| CR term used<br>by authors  | Location of<br>included<br>paper | Measure<br>(citation)                           | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings  |
|---|----------------------------------|---|--|---|--|---|
| Satisfaction<br>Scale)  |                                  |   |  |   |  |   |
| Emotional,<br>social,<br>cognitive and<br>communication<br>functioning<br>(sub-scales of<br>life<br>satisfaction) | Ghana (24)                       | PedsQL Family<br>Impact Module<br>(223)         | Pre and post<br>evaluation of<br>an 11-month<br>participatory<br>training<br>programme | n=75 caregivers of children<br>with cerebral palsy aged<br>18mo to 12yo, enrolled at<br>baseline (64 caregivers at<br>endline)  | Translated to three languages (Twi,<br>Gruni, and Kusaal); forward and<br>back-translations. Modified following<br>cognitive field testing in three sites. | Emotional, social, cognitive, and communication<br>functioning were all significantly improved from baseline to<br>endline (p<0.0001).  |
| Parental<br>Depression  | Nepal (79)                       | Patient Health<br>Questionnaire<br>(PHQ-9) (75) | Cross-<br>sectional<br>study   | n=3158 mothers and<br>children; n=826 fathers and<br>children; Randomly<br>selected mothers and<br>fathers living in rural<br>regions with children<br>between 6-59m  | Adapted; detail not stated.  | Neither maternal nor paternal depression were associated with child nutritional status.   |
| Maternal<br>depressive<br>symptoms  | Peru (80)                        | PHQ-9 (75)                                      | Cross-<br>sectional<br>study (using<br>DHS 2015)                                       | n=6683 women aged 18 to<br>49 years old and their<br>children aged 6 to 59<br>months old  | Spanish translation and cultural<br>adaptation using existing version of<br>tool (INEI, 2016)  | No association between child anaemia and maternal depressive symptoms in adjusted multivariate models.  |
| Maternal<br>Depression  | Kenya (78)                       | PHQ-9 (75)                                      | Case control<br>study  | n=77 Mother child pairs<br>(Cases were 38 children 6-<br>60m admitted to urban<br>hospital with severe acute<br>malnutrition. Matched<br>controls were 38 normal-<br>weight children admitted<br>for other acute ailments.<br>Mean age of mothers: 27.7<br>years.)          | n/a  | Data and subsequent multivariable analyses revealed that<br>the odds of maternal depression were significantly higher<br>amongst malnourished cases than normal-weight controls.  |
| Maternal<br>depression  | Sudan (81)                       | PHQ-9 (75)                                      | Case control<br>study  | n=178 mothers of children<br>6-59 admitting to urban<br>hospital. Cases were<br>defined as children aged 6-<br>59 months, admitted with<br>SAM. Controls were age-<br>and sex-matched, well-<br>nourished children admitted<br>to the same hospital with<br>other ailments. | n/a  | Overall prevalence of depression was significantly higher<br>among the mothers of cases than controls (41.5% vs. 19.1%,<br>p = 0.001), with 38% displaying severe or moderately<br>severe depression in the case group compared to 17.7% in<br>the control group. Mean score of depression among mothers<br>in the case group (4.47 $\neg \pm 0.48$ ) was significantly higher<br>than those in the control group (2.46 $\pm 0.33$ ) (p = 0.001). |

| CR term used<br>by authors   | Location of<br>included<br>paper | Measure<br>(citation)                      | Study<br>Design                           | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting                   | Caregiver Resource Specific Findings   |
|--|----------------------------------|--|---|---|--|--|
| Primary Care<br>Giver (PCG)<br>Depression                              | Botswana<br>(76)                 | PHQ-9 (75)                                 | Case control<br>study                     | n= 171 children and PCGs<br>(84 malnourished children<br>(cases) and 87 normal<br>weight children matched for<br>age and gender (controls)<br>were recruited from urban<br>primary care clinics along<br>with their primary care<br>givers (mean age: 34y,<br>>95% female)) | Translated into local language<br>(Setswana); pilot tested in a smaller<br>local clinic. | Diagnoses of depression in PCGs is significantly associated<br>with child malnutrition (P=0.001)   |
| Depressive<br>symptoms   | Tanzania<br>(82)                 | PHQ-9 (75)                                 | Cross<br>sectional                        | n=1031 mothers and their<br>children 18-36 months of<br>age   | n/a  | No association between maternal depression and child nutritional status  |
| Maternal<br>Depressive<br>Symptoms                                     | Ethiopia<br>(77)                 | РНQ-9 (75)                                 | Prospective,<br>community-<br>based study | n=1560 pregnant women<br>recruited from Empowering<br>New Generations to<br>Improve Nutrition and<br>Economic opportunities<br>(ENGINE) program <sup>7</sup>  | Score of 8 or above was taken as a cut off to define depressive symptoms.                | Postnatal maternal depressive symptoms were negatively<br>associated with infant feeding practices in the linear mixed<br>effects model (P= $0.001$ ). Prenatal maternal depressive<br>symptoms were not associated with infant feeding practices<br>(P= $0.953$ ) |
| Psychosocial<br>Distress<br>(Pictogram<br>Suffering<br>Scale)          | Cameroon<br>(83)                 | Author-<br>developed (83)                  | RCT                                       | n=203 pregnant women,<br>with a mean age of 23.2;<br>n=819 lactating women,<br>with mean age 24.6, with<br>infants at 6m of age, were<br>recruited from urban and<br>rural areas  | n/a  | The intervention was associated with declines in the psychosocial suffering of pregnant (p=0.000) and lactating (p=0.000) women  |
| Maternal<br>Depression   | South<br>Africa (85)             | Pitt Inventory<br>(84)                     | Cohort study                              | n=1860 Mothers from an<br>urban area with children 6-<br>24 m were recruited to<br>participate  | n/a  | Children of depressed mothers are at a higher risk for stunting  |
| Psychological<br>Wellbeing<br>(Psychological<br>Satisfaction<br>Scale) | Uganda (86)                      | Author-<br>developed (86)                  | Cross<br>Sectional                        | n=195 Mother with children<br>0-24m were recruited from<br>rural areas  | Adapted from OECD Guidelines (162).  | A higher psychological satisfaction scale score was<br>associated with higher probability of stunting (OR [95%CI]<br>= 1.30 [1.06, 1.63])  |
| Maternal<br>Depression   | Pakistan<br>(88)                 | Schedules for<br>Clinical<br>Assessment in | Cohort study                              | n= 630 mothers with infants<br>were followed-up and   | n/a  | After adjustment for confounding, there was a positive<br>relationship between maternal depression and risk of infant<br>underweight or stunting at 6 and 12 months postpartum   |

<sup>&</sup>lt;sup>7</sup> ENGINE was a 5-year nutrition program funded by United States Agency for International Development (USAID) and implemented from September 2011 to September 2016

| CR term used<br>by authors                         | Location of<br>included<br>paper | Measure<br>(citation)   | Study<br>Design                               | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting                          | Caregiver Resource Specific Findings  |
|--|----------------------------------|---|---|---|---|---|
|  |                                  | Neuropsychiatry<br>(SCAN) (87)  |   | assessed at 2, 6, and 12m postpartum  |   |   |
| Depression   | Pakistan<br>(65)                 | Structured<br>Clinical<br>Interview for<br>DSM-IV Axis I<br>Disorders<br>(SCID-I) (89,90) | Case control<br>study                         | n=242 mothers attending<br>infant immunization clinics<br>at the 5 health centers in<br>urban and rural areas   | Translated, culturally adapted into<br>Urdu following procedure from<br>previous studies (224). | Infants with depressed mothers were found to have<br>significantly poorer growth rates (based on weight and<br>length z-scores) than infants with non-depressed mothers at<br>3- and 6-months post-partum   |
| Postnatal<br>depression                            | Nigeria (92)                     | SCID-I (89,90)  | Case Control<br>study                         | n=72 Children with<br>Malnutrition, n=72 matched<br>Children without<br>malnutrition. Data was<br>drawn from the Central<br>Community Health and<br>Development database to<br>identify cases as children<br>with malnutrition and age,<br>gender, and residence-<br>matched controls | n/a   | Major depression in the postpartum period and current<br>major depression are risk factors associated with child<br>malnutrition  |
| Maternal<br>Depression                             | India (91)                       | SCID-I (89,90)  | Cohort study                                  | n=211 mother-child pairs;<br>Mothers in this rural, low-<br>income setting were<br>assessed during late<br>pregnancy or 4-6 weeks<br>postpartum and again with<br>their children 15 months<br>later   | n/a   | Maternal CMD is significantly associated with child stunting (LAZ) at follow-up   |
| Maternal<br>Common<br>Mental<br>Disorders<br>(CMD) | Vietnam<br>(93)                  | SCID-I (89,90)  | Cluster-<br>randomized<br>controlled<br>trial | n=903 pregnant women,<br>married and in their third<br>trimester of pregnancy. All<br>women who fulfilled the<br>criteria for a DSM-IV major<br>depressive episode were<br>recruited into the trial.  | n/a   | At 6mo and 12mo, prevalence was much higher in control<br>than in intervention. Cluster-adjusted OR for major<br>depression among women in control clusters compared with<br>those in intervention clusters was highly significant and<br>remained so after adjusting for covariates. |
| Overall<br>Anxiety<br>(Psychological<br>Distress)  | Bangladesh<br>(95)               | Self-Report<br>Questionnaire<br>(SRQ-20) (94)   | Cohort study                                  | n= 1065 women in third<br>trimester of pregnancy,<br>followed up to one year<br>postnatal; rural.   | n/a   | Infant exposure to maternal CMD was not significantly<br>associated with nutritional status at six months in fully<br>adjusted multivariable analysis   |
| Maternal<br>Mental Health<br>(CMDs)                | Nigeria<br>(110)                 | SRQ-20 (94)   | Cross-<br>sectional<br>study                  | n=204 mothers of children<br><5yo with SAM, attending<br>CMAM out-patient mal-<br>nutrition clinics in Jigawa   | Translated to Hausa and back-<br>translated to English.   | Mothers with high SRQ scores (>8) had infants with lower weights on average compared to those with low SRQ scores (5.5 kg versus 6.0 kg, $p=0.003$ ).   |

| CR term used<br>by authors                           | Location of<br>included<br>paper              | Measure<br>(citation) | Study<br>Design             | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting | Caregiver Resource Specific Findings  |
|--|---|-----------------------|-----------------------------|--|--|---|
| Psychological<br>Wellbeing                           | Bangladesh,<br>Ethiopia,<br>Vietnam<br>(96)   | SRQ-20 (94)           | Cross<br>Sectional          | Mothers of children 0-5yo<br>from all urban and rural<br>households in Bangladesh<br>(n= 4400), Vietnam (n=<br>4010), Ethiopia (n= 2962)   | n/a  | High levels of maternal CMD were associated with an elevated risk of child stunting in Bangladesh and risk of child underweight in Vietnam.   |
| Risk of<br>Maternal<br>Common<br>Mental<br>Disorders | Ethiopia,<br>India, Peru,<br>Vietnam<br>(101) | SRQ-20 (94)           | Randomized<br>Control Trial | n=37 caregivers and their<br>children with moderate-to-<br>severe cerebral palsy aged<br>1-11 years in peri-urban<br>Bangladesh  | n/a  | About three-quarters of caregivers scored above the threshold of 7 points for psychological disturbance on the SRQ-20 anxiety scale (Harding et al. 1980)   |
| Maternal<br>Depression,<br>Mental Distress           | Pakistan<br>(111)                             | SRQ-20 (94)           | Cross<br>Sectional          | n=11,175 mothers with<br>children under 5 were<br>recruited to participate<br>across the three countries   | n/a  | Maternal wellbeing was not associated with child Minimum<br>Meal Frequency or Dietary Diversity   |
| Maternal<br>Common<br>Mental<br>Disorders            | Brazil (97)                                   | SRQ-20 (94)           | Case-control<br>study       | n= 172 mothers and infants<br>(82 malnourished cases, 90<br>controls) recruited from an<br>urban measles clinic  | n/a  | After controlling for potential confounding factors, maternal<br>mental distress was associated with increased risk of infant<br>undernutrition   |
| Maternal<br>Psychological<br>Distress                | Malawi<br>(107)                               | SRQ-20 (94)           | Cross<br>Sectional          | n= 2000 mothers of infants<br>age 6-18 m were randomly<br>selected from each country   | Adapted; detail not stated.  | Results suggest a significant association between high<br>maternal CMD and poor child nutritional status in Vietnam<br>and India but not Peru and Ethiopia  |
| Maternal<br>Common<br>Mental<br>Disorders<br>(CMD)   | Peru,<br>Ethiopia,<br>Vietnam,<br>India (102) | SRQ-20 (94)           | Case-control<br>study       | n= 294 mothers were<br>recruited from an urban<br>area with low rates of<br>childhood malnutrition   | n/a  | After controlling for confounders, a strong association was<br>observed between maternal CMD and child malnutrition as<br>it doubled the risk of moderate or severe malnutrition in<br>children under 5 |
| Maternal<br>Mental Health                            | Peru (112)                                    | SRQ-20 (94)           | Cohort Study                | n=899 HIV positive and<br>negative pregnant women<br>from a low-income peri-<br>urban region; women with<br>live births included with<br>their infants in analysis                           | n/a  | No association observed between maternal psychological<br>distress and continued breastfeeding  |
| Maternal<br>Common<br>Mental<br>Disorders<br>(CMD)   | Ethiopia<br>(103)                             | SRQ-20 (94)           | Cohort study                | n=7722 Mother child pairs.<br>Over the course of the<br>Young Lives Study,<br>mothers and children age 6-<br>18m were selected from 20<br>urban and rural sites across<br>the four countries | n/a  | In India and Vietnam, a significant association was observed<br>between maternal CMD and child growth from birth<br>through age 8. No significant association was found in<br>Ethiopia or Peru.         |

| CR term used<br>by authors                         | Location of<br>included<br>paper              | Measure<br>(citation) | Study<br>Design                                      | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting              | Caregiver Resource Specific Findings  |
|--|---|-----------------------|--|--|---|---|
| Maternal<br>Common<br>Mental<br>Disorders<br>(CMD) | Ethiopia,<br>India,<br>Vietnam,<br>Peru (104) | SRQ-20 (94)           | Cross<br>Sectional                                   | n=268 Mother of child 12-<br>59 mo admitted to inpatient<br>pediatric oncology ward<br>and pediatric high<br>dependency unit and their<br>mothers were recruited to<br>participate | Pilot study conducted in each country<br>to adapt the measure to local<br>contexts. | Childhood malnutrition was not found to be a predictor of<br>maternal mental distress; however, mental distress was<br>found to be associated with child stunting |
| Maternal<br>Distress/Postpa<br>rtum<br>Depression  | Pakistan<br>(26)                              | SRQ-20 (94)           | Two-arm,<br>single-<br>blinded,<br>individual<br>RCT | Pregnant women in third<br>trimester with distress<br>(screen positive on SRQ-20,<br>cut-off score of 9)   | n/a [study protocol]  | n/a [study protocol]  |
| Maternal<br>Common<br>Mental<br>Disorders          | Ethiopia<br>(105)                             | SRQ-20 (94)           | Cluster-<br>randomized<br>controlled<br>trial        | n=1302 Mothers and their<br>children (0-4y) were<br>followed from birth to 4<br>years. Maternal mental<br>health was measured at 1y.   | n/a   | Maternal depression was associated with decreased HAZ at 2 and 4 years  |
| Maternal<br>Common<br>Mental<br>Disorders<br>(CMD) | Bangladesh,<br>Vietnam,<br>Ethiopia<br>(98)   | SRQ-20 (94)           | Case-control<br>study                                | n=234 mother-child pairs in<br>rural area (78 cases, stunted<br>children; 156 controls, non-<br>stunted children); Median<br>child age: 17.2mo.                                    | n/a   | Significant relationship between maternal CMD and<br>childhood stunting as children of mothers with CMD were<br>found to be at 3x higher risk for malnutrition.   |
| Maternal<br>Depression                             | Ghana,<br>Malawi,<br>Burkina<br>Faso (100)    | SRQ-20 (94)           | Cohort Study   | n=5846 mother child pairs;<br>recruited from urban and<br>rural areas to participate in<br>the International Lipid-<br>Based Nutrient<br>Supplements Project                       | n/a   | Maternal Depression was not associated with child growth (LAZ scores)   |
| Maternal<br>psychological<br>distress              | Pakistan<br>(88)                              | SRQ-20 (94)           | Cross<br>Sectional                                   | n=125 Mother with children<br>aged 12-60m were recruited<br>from a nutritional<br>rehabilitation center and<br>day care facility in an urban<br>area                               | n/a   | Malnourished children were more than 2x as likely to have a<br>mother with a disability associated with a severe maternal<br>CMD                                  |
| Maternal<br>Common<br>Mental<br>Disorders          | Brazil (99)                                   | SRQ-20 (94)           | Cross<br>Sectional                                   | n=7242 Biological mothers<br>and their 1y old children<br>were recruited from urban<br>and rural areas   | n/a   | Not reported  |
| Maternal<br>Common<br>Mental                       | Malawi<br>(108)                               | SRQ-20 (94)           | Cross<br>Sectional                                   | n=501 Mothers and their<br>infants with a median age<br>of 9.9 m were recruited  | Translated, piloted, and administered in Chichewa.                                  | There was no association between maternal CMD and child<br>underweight; however, there was a relationship between<br>maternal CMD and child stunting              |

| CR term used<br>by authors                    | Location of<br>included<br>paper | Measure<br>(citation)                                       | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting                                       | Caregiver Resource Specific Findings  |
|---|----------------------------------|---|--|---|--|---|
| Disorders<br>(CMD)                            |                                  |   |  | from a rural district health clinic   |  |   |
| Maternal<br>psychological<br>distress         | Malawi<br>(109)                  | SRQ-20 (94)   | Cohort study   | n=244 Mother with children<br>admitted to the Nutritional<br>Rehabilitation Unit of a<br>regional hospital were<br>included                                 | Adapted; detail not stated.  | Differences in early child weight-gain were not associated<br>with maternal psychological distress  |
| Psychological<br>Distress                     | South<br>Africa (113)            | SRQ-20 (94)   | Cohort study   | n=1833 Mother-child pairs<br>of children age 5 - 21m<br>were recruited from urban<br>and rural areas  | n/a  | Childhood stunting was associated with postnatal depressive symptoms  |
| Postnatal<br>depressive<br>symptoms           | India (106)                      | SRQ-20 (94)   | Cross<br>Sectional   | n=2015 Biological mothers<br>and their 1y old children<br>were recruited from urban<br>and rural areas  | n/a  | Not reported  |
| Depression                                    | China (115)                      | Zung Self-<br>Rating<br>Depression<br>Scale (ZSDS)<br>(114) | Cross<br>Sectional   | n=2514 Mothers of children<br>under 3 years old   | n/a  | Depression amongst caregivers has a negative impact on child development  |
| Healthy Stre                                  | ess Levels                       | <u>.</u>  |  |   |  |   |
| Caregiver<br>Stress<br>(regarding<br>feeding) | Bangladesh<br>(95)               | Author-<br>developed (95)                                   | RCT  | n=37 caregivers and their<br>children with moderate-to-<br>severe cerebral palsy aged<br>1-11 years in peri-urban<br>Bangladesh                             | Not stated.  | Caregivers had decreased stress with regard to feeding post intervention (P<0.001)  |
| Distress Scale<br>(Maternal<br>Distress)      | Vanuatu<br>(116)                 | Author-<br>developed (116)                                  | Prenatal and<br>postpartum<br>questionnair<br>e and<br>assessments | n=54 Mothers and their<br>infants at 4-12 months of<br>age  | Translated to Bislama; Removed<br>redundant questions from Kessler-10<br>Distress Scale and the CES-D Scale. | No relationship between prenatal distress or diet with BMI<br>Z-scores  |
| Maternal Stress<br>Status                     | Iran (117)                       | Author-<br>developed (117)                                  | Cross-<br>sectional<br>study                                       | n=600 mother-infants pairs<br>(12-24 mo) in rural and<br>urban areas  | Not stated.  | Women with high stress tended to have greater risk of weaning compared with those without stress ( $RR = 1.67$ , 95% CI: 0.76–3.65, $p = 0.20$ ).   |
| Parenting<br>Stress                           | South<br>Africa (62)             | Parenting Stress<br>Index Short<br>Form (118)               | RCT  | n=1200 women with HIV<br>with infants 0-12mo clinic-<br>based support study (656<br>women under standard care;<br>544 women under enhanced<br>intervention) | Not stated.  | No significant influence of intervention on stress. Parental Stress Index Score <= median of 85 (12 months) was 48.5% in intervention and 44.9% in standard care. OR 0.84 (0.54,1.30, p=0.426). |

| CR term used<br>by authors  | Location of<br>included<br>paper              | Measure<br>(citation)                        | Study<br>Design   | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings  |
|---|---|--|---|--|---|---|
| Worry (sub-<br>scale of quality<br>of life)                               | Ghana (24)                                    | PedsQL Family<br>Impact Module<br>(22)       | Pre and post<br>evaluation of<br>participatory<br>training<br>programme | n=75 caregivers of children<br>with cerebral palsy aged<br>18mo to 12yo (n=64 at 11-<br>mo endline)  | Forward and back-translations by<br>linguistic experts in 3 local<br>languages. Modified after cognitive<br>field testing in 3 sites. | Worry was significantly improved from baseline to endline (p<0.0001)  |
| Maternal Self-<br>Reported Stress   | Ghana,<br>Malawi and<br>Burkina<br>Faso (100) | Perceived Stress<br>Scale (PSS)<br>(107,119) | Prospective<br>cohort   | Cohorts of mother-child<br>pairs participated in trials<br>conducted as part of the<br>International Lipid-Based<br>Nutrient Supplements<br>Project in Ghana (n=1039),<br>Malawi (n=684 and 1504)<br>and Burkina Faso (n=2619) | Not stated.   | Maternal stress was not associated with child LAZ score at 18 months.   |
| Women's<br>Overall<br>Appraisal of the<br>Stressfulness of<br>Their Lives | Mexico<br>(120)                               | PSS (119)                                    | Group<br>comparison<br>study design                                     | 90 mothers of children<br>approximately 2 years old;<br>Non-pregnant women with<br>children approximately two<br>years old in urban setting  | Not stated.   | No significant group differences were found in the mother's stress perception. Median response in the whole sample comprised being stressed "every now and then" with the median score of 22.5 suggesting moderate stress levels.             |
| Maternal Stress   | Burkina<br>Faso (121)                         | SRQ-20 (94)                                  | Cross-<br>sectional<br>survey   | n=1210 caregivers of<br>children 6-12 months old;<br>Used baseline data from a<br>longitudinal cluster<br>randomized trial of HKI's<br>Creating Homestead<br>Agriculture for Nutrition<br>and Gender Equity<br>(CHANGE)        | Not stated.   | Maternal stress was associated with a lower proportion of<br>children being introduced early to complementary foods   |
| Stressors   | Jamaica<br>(10)                               | Author-<br>developed (10)                    | Case control<br>study   | n=210 mothers of IYC aged<br>9-30mo (139<br>undernourished cases; 71<br>nourished controls),<br>recruited from government<br>health centres in urban<br>areas  | Not stated.   | Mothers of under-nourished children reported more<br>economic stress than mothers of adequately nourished<br>children(p<0.001). No difference between groups in<br>stressors relating to mother's partner and<br>domestic/community violence. |
| Equitable G   | ender Attit                                   | udes   |   |  |   |   |
| Acceptance of<br>domestic<br>violence                                     | Nigeria<br>(126)                              | DHS<br>Questionnaire<br>(225)                | Cross-sectional<br>survey<br>(Secondary<br>data analysis)               | n=7532 Mothers of children<br>born in the last five years<br>living in a variety of settings   | Pretested, adapted, and translated for Nigerian context.  | Women with acceptance of domestic violence (low autonomy)<br>were less likely to have stunted and underweight children.   |

| CR term used<br>by authors   | Location of<br>included<br>paper                                  | Measure<br>(citation)                             | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings  |
|--|---|---|--|--|--|---|
| Tolerance of<br>domestic<br>violence   | Malawi<br>(124)   | DHS<br>Questionnaire,<br>Several Surveys<br>(122) | Cross-sectional<br>survey<br>(Secondary<br>data analysis)              | n= 7348 mother-child pairs<br>Mothers of children born in<br>the last five years living in a<br>variety of settings                        | Sub-scale of maternal autonomy.<br>Original questionnaires were in English<br>and were translated into the local<br>Chichewa and Tumbuka languages then<br>back-translated into English and<br>pretested in training settings. | Unadjusted model: Mothers with high maternal autonomy were less likely to have stunted children (OR= $0.84$ , 95% CI= $0.73$ , 0.96; p= $0.011$ ). Adjusted model: Association between maternal autonomy and child stunting was moderately attenuated by the unfavorable effect of older age and favorable effect of the female sex on stunting (aOR= $0.85$ , 95% CI= $0.74$ , 0.97; p= $0.020$ ; Model 2) |
| Acceptance of<br>domestic<br>violence, as a<br>proxy for<br>women's<br>empowerment | Ghana (123)   | DHS<br>Questionnaire<br>(226)                     | Cross-sectional<br>survey<br>(Secondary<br>data analysis)              | Women aged 15 - 49 years<br>with at least one child under 5<br>years   | Pretested, adapted, and translated for<br>Ghanaian context.  | Domestic violence, as a proxy for women's empowerment, is negatively associated with child malnutrition.  |
| Domestic<br>violence   | 28<br>countries<br>globally <sup>8</sup><br>(128)                 | DHS<br>Questionnaire,<br>Several Surveys<br>(122) | Repeated cross-<br>sectional<br>survey<br>(Secondary<br>data analysis) | (Multiple years, years not<br>cited) $n = 515639$ Mothers of<br>children born in the last five<br>years living in a variety of<br>settings | Pre-testing and translation for each country context.  | Acceptability of wife beating is negatively associated with children's nutritional status.  |
| Beliefs about<br>domestic<br>violence  | Uganda<br>(127)   | DHS<br>Questionnaire<br>(227)                     | Cross-sectional<br>survey<br>(Secondary<br>data analysis)              | Mothers of children born in<br>the last five years living in a<br>variety of settings: n=1009 in<br>2006; n=888 dyads in 2011              | Pretested, adapted, and translated for Ugandan context.  | Beliefs about domestic violence were not associated with child anthropometry in either survey.  |
| Intrinsic<br>Agency  | 5 countries<br>in sub-<br>Saharan<br>Africa <sup>9</sup><br>(129) | DHS<br>Questionnaire,<br>Several Surveys<br>(122) | Cross-sectional<br>survey<br>(Secondary<br>data analysis)              | n=13780 Mothers of children<br>in 2016, born in the last five<br>years living in a variety of<br>settings                                  | Pre-testing and translation for each country context   | Intrinsic agency was positively associated with HAZ in low wealth group (0.03 [0.01, 0.05]), with anemia in middle wealth group (0.03 [0.01, 0.05]), and WHZ in high wealth group (0.05 [0.03, 0.18]).  |
| Attitude<br>towards<br>domestic<br>violence  | Lao PDR<br>(132)  | MICS<br>Questionnaire<br>(131)                    | Cross-sectional<br>survey<br>(Secondary<br>data analysis)              | n=2970 Mothers of children in<br>2006, born in the last five<br>years living in a variety of<br>settings                                   | Translated and pre-tested in four villages.  | Attitudes towards domestic violence was significantly and<br>negatively associated with height- and weight-for-age  |
| Tolerance<br>towards<br>domestic<br>violence                                       | Lao PDR<br>(132)  | DHS<br>Questionnaire<br>(228)                     | Cross-sectional<br>survey<br>(Secondary<br>data analysis)              | n=100 Mothers 17-46 years of<br>age living in semi-urban<br>setting  | 4 items to assess acceptability of<br>domestic violence in certain scenarios;<br>Categorical variable (High self-esteem,<br>low self-esteem); Answer of "Yes" for a<br>least one item used as composite score                  | Mothers without stunted children had higher self-esteem than<br>did mothers with stunted children.<br>t   |

<sup>&</sup>lt;sup>8</sup> Bangladesh, Burkina Faso, Benin, Bolivia, Cambodia, Cameroon, Colombia, Dominican Republic, Egypt, Ethiopia, Ghana, Haiti, Jordan, Kenya, Lesotho, Madagascar, Mali, Malawi, Mozambique, Nigeria, Namibia, Nepal, Rwanda, Senegal, Tanzania, Uganda, Zambia, Zimbabwe.

<sup>&</sup>lt;sup>9</sup> Ethiopia, Kenya, Rwanda, Tanzania, and Uganda

| CR term used<br>by authors   | Location of<br>included<br>paper                                    | Measure<br>(citation)   | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings   |
|--|---|---|--|--|---|--|
|  |   |   |  |  | for low self-esteem; answer of "No" for<br>all four items used as composite score<br>for high self-esteem.          |  |
| Attitude<br>towards<br>domestic<br>violence  | Myanmar<br>(125)  | DHS<br>Questionnaire<br>(229)                                   | Cross-sectional<br>survey<br>(Secondary<br>data analysis)                    | n=12885 Mothers of children<br>born in the last five years<br>living in a variety of settings                        | Translated and pre-tested in one urban and two rural locations.   | Odds of child anaemia were higher in children born to mothers<br>who had a tolerant attitude toward domestic violence than<br>those born to mothers who were intolerant of domestic<br>violence  |
| Socio-familial<br>empowerment,<br>(acceptability<br>of domestic<br>violence sub-<br>scale) | 10 countries<br>in sub-<br>Saharan<br>Africa <sup>10</sup><br>(130) | DHS<br>Questionnaire,<br>with Women's<br>Status Module<br>(122) | Cross-sectional<br>survey<br>(Secondary<br>data analysis)                    | n=15153 Mothers of children<br>born in the last five years<br>living in a variety of settings                        | Pre-testing and translation for each country context  | Attitudes towards domestic violence were a sub-scale in the<br>socio-familial empowerment construct. Except for Zimbabwe,<br>all statistically significant relationships between socio-familial<br>empowerment and appropriate feeding practices were negative   |
| Attitudes<br>towards<br>domestic<br>violence   | India (134)   | National Family<br>Health Survey<br>(NFHS-2) (133)              | Cross-sectional<br>survey<br>(Secondary<br>data analysis)                    | n=821 mothers of children<br>born in the last five years<br>living in a variety of settings                          | National pretest in one district;<br>questionnaires for each state were<br>bilingual, in local language and English | There was not a significantly significant difference in the<br>percentage of stunted children between women who approved<br>and did not approve of gender-based violence   |
| Justification of<br>domestic<br>violence   | India (136)   | National Family<br>Health Survey<br>(NFHS-3) (133)              | Cross-sectional<br>survey<br>(Secondary<br>data analysis)                    | n=9092 mothers of children<br>born in the last five years<br>living in a variety of settings                         | National pretest in two districts;<br>translated in 18 languages  | Children of maternal caregivers who did not justify violence<br>against them for going out without permission, neglecting her<br>children, arguing with her husband, refusing to have sex with<br>her husband and burning food had better nutritional status   |
| Gender Norm<br>Attitudes   | Zimbabwe<br>(6)   | Gender Norm<br>Attitudes Scale<br>(230)                         | Cluster-<br>randomized<br>community-<br>based trial                          | n=3181 mother-infant pairs   | Adapted; not stated.  | No significant association between gender norm attitudes and<br>infant diet diversity was observed (OR 1.03 (0.89–1.19);<br>p=0.673)   |
| Gender norm<br>attitudes   | Zimbabwe<br>(7)   | Gender Norm<br>Attitudes Scale<br>(230)                         | Cluster-<br>randomized<br>community-<br>based trial                          | n=4025 mothers and growth<br>measured in their 4,073<br>children   | Adapted; not stated   | Children of mothers with more egalitarian gender norm<br>attitudes had significantly better linear growth outcomes (LAZ<br>and/or stunting) at 18 months. Results from the trial show that<br>intervention improved adverse associations between child<br>linear growth and maternal inequitable gender norm attitudes<br>and maternal depression. |
| Perception of<br>Equality Score  | Zambia<br>(138)   | Author-<br>developed (138)                                      | Cluster-<br>randomised,<br>controlled, non-<br>blinded, impact<br>evaluation | Mothers of children born in<br>the last five years living in a<br>rural setting (baseline n=3044;<br>endline n=3536) | n/a   | No impact observed on perceived gender equality score  |
| Safety &<br>Security   |   |   |  |  |   |  |

<sup>&</sup>lt;sup>10</sup> Benin, Burkina Faso, Ethiopia, Mali, Niger, Nigeria, Rwanda, Sierra Leone, Uganda and Zimbabwe

| CR term used<br>by authors               | Location of<br>included<br>paper                | Measure<br>(citation)   | Study<br>Design   | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings   |
|--|---|---|---|---|--|--|
| Intimate partner<br>violence             | Bangladesh<br>(140)                             | Conflict Tactics<br>Scale (142)   | Longitudinal  | n=19,874 mothers of children<br><5yo (from 2007,2011 and<br>2014 waves of the survey)   | Shortened and modified.  | Proportions of only one severe form of malnutrition were<br>significantly higher among children of mothers who had<br>experienced IPV (12.66%). Significantly higher proportions of<br>SAM were observed among the children of mothers who had<br>experienced IPV (8.81%)                                  |
| Intimate partner<br>physical<br>violence | Brazil (61)                                     | Conflict Tactics<br>Scales - Form R<br>(CTS-1)<br>(139,231)                     | Cross-sectional<br>study                                  | n=217 mothers and their<br>children up to 15 mo old; Data<br>derived from a prospective<br>cohort study that followed the<br>first year of life of newborns<br>attended at four primary care<br>facilities of Rio de Janeiro<br>from June 2005 to December<br>2009. | 18-items used to ask mothers about<br>strategies used by them and their<br>partners to resolve possible<br>disagreements in the last 12 months, and<br>to indirectly identify a situation of<br>violence. Used Portuguese version of<br>CTS-1, applied on the 13th-month of the<br>child's life. | Significant associations were observed between overall<br>physical violence and non-breastfeeding. Couples mutually<br>physical abuse each other are 2,14 times more likely not to<br>offer breastmilk (CI 1,06-4,31), compared to couples who do<br>not physically abuse each other.                      |
| Intimate partner<br>violence             | Tanzania<br>(82)                                | Abbreviated IPV<br>module of the<br>Tanzania DHS<br>(232)                       | Cross-sectional   | n=1031 mothers of children<br>18-36 months of age in Town<br>of Ifakara and surrounding<br>villages   | Abbreviated 4 category exposure<br>variables (any IPV, both physical and<br>sexual IPV, only sexual IPV, and only<br>physical IPV)   | Exposure to only sexual IPV and both physical and sexual IPV was associated with stunting  |
| Intimate partner<br>violence             | Tanzania<br>(58)                                | Adapted Swahili<br>version of<br>domestic<br>violence module,<br>DHS 2010 (233) | Prospective<br>cohort study                               | n=1,128 mother-child dyads;<br>Pregnant women over the age<br>of 18 who sought antenatal<br>care at one of two health<br>clinics  | Pretested and translated   | IPV appeared to be an effect modifier and was therefore<br>included in the stratified analysis; The association between<br>PPD and HAZ was stronger among mother & child pairs where<br>mothers were exposed to IPV during pregnancy (0.50, 95%<br>CI:0.75 to 0.25) than among those without IPV exposure. |
| Intimate partner<br>violence             | Rwanda<br>(70)                                  | Adapted version<br>of domestic<br>violence module,<br>DHS Rwanda<br>(234)       | Cluster<br>randomized<br>trial                            | n=1,498 caregivers (mothers<br>and fathers) with at least one<br>child 6–36 months  | Developed and tested during pilot<br>research; forward- and back-translated.<br>Categorical exposure variable to<br>measure perpetration of intimate partner<br>violence by male caregivers (y/n) and<br>victimization of female caregivers (y/n)  | Caregivers in program communities were less likely to report<br>victimization to intimate partner violence. No differences<br>observed in father reports of intimate partner perpetration.   |
| Intimate partner<br>violence             | 28 countries<br>globally <sup>11</sup><br>(146) | Domestic<br>violence module,<br>DHS (122)                                       | Cross-sectional<br>survey<br>(Secondary<br>data analysis) | n=204,159 women Mothers<br>aged 15 - 49 years old with at<br>least one child under five   | 32 items; Self- reported maternal<br>lifetime exposure to intimate partner<br>violence was separated into four<br>categories: (i) any; (ii) physical only;<br>(iii) sexual only; and (iv) both physical<br>and sexual. Pre-testing and translation<br>for each country context                   | Maternal exposure to any intimate partner violence<br>significantly increased the odds of childhood stunting.  |

<sup>&</sup>lt;sup>11</sup> Azerbaijan, Bangladesh, Bolivia, Burkina Faso, Cambodia, Cameroon, Colombia, Dominican Republic, Gabon, Ghana, Haiti, Honduras, India, Kenya, Liberia, Malawi, Mali, Mozambique, Nepal, Nigeria, Peru, Republic of Moldova, Rwanda, Sao Tome and Principe, Timor-Leste, Uganda, United Republic of Tanzania, Zambia, Zimbabwe
| CR term used<br>by authors                              | Location of<br>included<br>paper               | Measure<br>(citation)                                    | Study<br>Design   | Sample size and<br>description of population<br>where measure<br>implemented                  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings  |
|---|--|--|---|---|---|---|
| Domestic<br>violence                                    | Tanzania<br>(145)                              | Domestic<br>violence module,<br>DHS (232)                | Cross-sectional   | Mothers of children aged 0-<br>59mo   | Five yes or no questions: whether<br>women were justifiably beaten by their<br>partners when (1) they went out without<br>telling their partner, (2) they neglected<br>their children, (3) they argued with their<br>partner, (4) they refused to have sex with<br>their partner, and (5) they burnt food.  | Child stunting rates are significantly higher for violence prone<br>households. Stunting is 5 percentage points higher in<br>households where women are beaten when they went out<br>without telling their partners.  |
| Maternal<br>experience of<br>physical and<br>sexual IPV | 5 countries<br>globally <sup>12</sup><br>(147) | Domestic<br>violence module,<br>DHS (DHS,<br>2021) (122) | Cross-sectional<br>survey<br>(Secondary<br>data analysis) | n=24,905 Ever-married<br>women 15 - 49 years with at<br>least 1 child younger than 5<br>years | Pre-testing and translation for each country context  | When IPV was considered by type, associations between IPV<br>and malnutrition and stunting in Honduras, Kenya, and Malawi<br>remained, although there was no consistent trend whereby<br>specific types of violence were more strongly associated than<br>others with the outcomes. |
| Maternal<br>exposure to<br>domestic<br>violence         | Liberia<br>(144)                               | Domestic<br>violence module,<br>DHS (122)                | Secondary data<br>analysis                                | n=2467 Women 15-49 years<br>with children 0-4 years of age                                    | Authors created three composite<br>variables: women's experience of<br>physical or emotional DV in prior year;<br>women's experience of any sexual<br>domestic violence in prior year; and<br>whether women witnessed their father<br>beating mother. Variables were analyzed<br>separately and not combined into a<br>scale. Pretested and translated.                     | Women's experience of sexual domestic violence negatively<br>and significantly associated with child anthropometric status.   |
| Intimate partner<br>violence                            | Ethiopia<br>(143)                              | Domestic<br>violence module,<br>DHS (122)                | Cross-sectional<br>survey<br>(Secondary<br>data analysis) | n=1307 Women 15 - 49 years<br>old with a child 6 - 23month o<br>age                           | Women's responses were used to create<br>fone exposure variable: exposure to any<br>physical, emotional, or sexual violence<br>vs none. Pretested and translated  | Children of mothers who had intimate partner violence had 65% lesser odds of getting a minimum acceptable diet as compared to those who were children of women who did not have an intimate partner violence (AOR: 0.35; 95% CI: 0.16, 0.77)  |
| Maternal<br>exposure to<br>physical or<br>sexual IPV    | Bangladesh<br>(142)                            | Domestic<br>violence module,<br>DHS (235)                | Cross-sectional<br>survey<br>(Secondary<br>data analysis) | n=1851 Ever-married women<br>15 - 49 years with at least 1<br>child younger than 5 years      | 8 items; Women's responses were used<br>to create a 4-level categorical variable<br>depending if they had experienced:<br>physical IPV only, sexual IPV only, bott<br>physical and sexual IPV, or neither type<br>of IPV. Also created a binary variable<br>measuring whether a mother reported<br>any form of IPV (physical, sexual, or<br>both). Pretested and translated | Maternal experiences of IPV were associated with an increased<br>risk of stunting and underweight among children but not with<br>an increased risk of wasting.  |
| Intimate partner<br>violence                            | Bangladesh<br>(141)                            | Bangladesh<br>DHS, IPV<br>questionnaire<br>module (235)  | Cross-sectional<br>survey<br>(Secondary<br>data analysis) | n=2041 Ever-married women<br>with at least one under 5 child<br>in a variety of settings      | Shortened and modified version of<br>conflict tactic scale (NIPORT et al.,<br>2007). 8 items; Three binary exposure<br>variables were developed based on  | Having any stunted children under 5 years remained significantly associated with women ever experiencing any physical (OR, 1.48; 95% CI, 1.23, 1.79), sexual (OR, 1.28;   |

<sup>&</sup>lt;sup>12</sup> Egypt, Honduras, Kenya, Malawi, Rwanda

| CR term used<br>by authors  | Location of<br>included<br>paper | Measure<br>(citation)  | Study<br>Design   | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings   |
|---|----------------------------------|--|---|--|--|--|
|   |                                  |  |   |  | lifetime experience of any physical<br>partner violence (y/n), sexual partner<br>violence (y/n) and physical and sexual<br>partner violence (y/n).   | 95% CI, 1.02, 1.61) and physical and/or sexual (OR, 1.51; 95% CI, 1.25, 1.84) violence by their partners.  |
| Intimate partner<br>violence  | South<br>Africa (55)             | Domestic<br>Violence (148)                                   | Prospective<br>cohort study<br>design                     | n=458 Mothers who recently<br>gave birth at hospital or one of<br>10 closest clinics.  | Adapted; details not stated.   | Both adolescents and adults experienced IPV at the same rate<br>with one in five women having been beaten in the past 12<br>months before learning about pregnancy. This rate increased<br>significantly once the pregnancy was recognized for both<br>adults and adolescents. (No CR specific findings) |
| Domestic<br>violence  | Pakistan<br>(149)                | Author-<br>developed (149)                                   | Cross-sectional study                                     | n=400 Mothers aged 18-49<br>with at least one child (under<br>five years)  | Pretested before use.  | Gender based violence was found to have a significant effect<br>on mothers' and children's' health.  |
| Domestic<br>Violence Index,<br>(within<br>Stressors<br>Questionnaire) | Jamaica<br>(10)                  | Author-<br>developed (10)                                    | Case control<br>study                                     | n=210 Mothers of IYC 9-<br>30mo. Participants were<br>recruited from government<br>health centres in parishes and<br>urban areas.  | Not stated   | No difference between the nourished and undernourished<br>groups in stressors relating to the mother's partner and<br>domestic and community violence.   |
| Family<br>Violence<br>Against<br>Women                                | Bangladesh (150)                 | Author-<br>developed (150)                                   | Longitudinal<br>cohort study                              | n=3164 Pregnant women<br>living in rural areas   | Adapted from Conflict Tactic Scale.<br>Short modified version of WHO<br>Collaborative Study Questionnaire<br>(151,152).  | Statistically significant association between mother's exposure<br>to any violence and lower WAZ and HAZ scores at birth, as<br>well as 24 months of age for boys and girls.   |
| Intimate partner<br>violence  | Ethiopia<br>(77)                 | Hurt, Insult,<br>Threaten and<br>Scream (HITS)<br>(153)      | Prospective,<br>community-<br>based study                 | n=1560 pregnant women;<br>Based on ENGINE birth<br>cohort study data<br>(Empowering New<br>Generations to Improve<br>Nutrition and Economic<br>opportunities), a 5-year<br>nutrition intervention program<br>funded by USAID | Not stated.  | IPV was negatively associated with infant feeding practices (P= 0.001)   |
| Intimate partner violence   | India (154)                      | Author-<br>developed (154)                                   | Cross-sectional   | n=3578 mothers with children<br>under two; February 2014 to<br>September 2015, in a census<br>after the trial intervention<br>covering all households with<br>married women 15-49 years.                                     | n/a.   | If a mother had experienced physical violence in the last 2 years, her child had higher odds of being stunted (AOR 1.83; 95% CI 1.21, 2.77)  |
| Presence of<br>domestic<br>violence                                   | India (157)                      | NFHS (NFHS-1,<br>NFHS-2, NFHS-<br>3), Women's<br>Empowerment | Cross-sectional<br>survey<br>(Secondary<br>data analysis) | Mothers of children born in<br>the last five years living in a<br>variety of settings including<br>NFHS-1, n=89,777; NFHS-2,   | National pretest and translation for each<br>survey. 1 item; Dichotomous (Beats<br>wife, does not beat wife); Score refers to<br>whether or not a husband beats a wife if<br>she is unfaithful to him and assess the | Domestic violence is statistically associated with the short-<br>term measures of children's undernourishment in 1998–99. In<br>2005–06, domestic violence is positively associated with<br>height-for-age measure.  |

| CR term used<br>by authors   | Location of<br>included<br>paper | Measure<br>(citation)   | Study<br>Design   | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings  |
|--|----------------------------------|---|---|---|--|---|
|  |                                  | Module<br>(133,135)   |   | n=89,199; NFHS-3,<br>n=121,120  | extent to which a wife is threatened by<br>physical violence as a proxy for<br>women's empowerment.                                    |   |
| Domestic<br>violence   | India (155)                      | NFHS-2,<br>Domestic<br>violence module<br>(133)               | Cross-sectional<br>survey<br>(Secondary<br>data analysis) | n=69,072 Ever-married<br>women aged 15-49   | National pretest in one district;<br>questionnaires for each state were<br>bilingual, in local language and English                    | Statistically significant association between mother's exposure<br>to violence and childhood wasting, stunting, severe<br>underweight for age, and severely low BMI for age.  |
| Emotional<br>violence  | India (156)                      | NFHS-3,<br>Domestic<br>violence module<br>(135)               | Cross-sectional<br>survey<br>(Secondary<br>data analysis) | n= 79,729 Ever-married<br>women aged 15-49  | Pretested and translated   | Mothers' experience of emotional violence was significantly associated with child's low weight for age ( $p$ <.001) and child's stunting ( $p$ <.001). Mothers who experienced emotional violence at higher risk of having underweight-U2 children (OR:1.317).  |
| Intimate partner<br>violence   | India (159)                      | NFHS-4,<br>Domestic<br>violence module<br>(158)               | Cross-sectional<br>survey<br>(Secondary<br>data analysis) | n=6443 Mothers of IYC 0-<br>12mo  | Pretested and translated   | No statistically significant associations between experiencing<br>any of the three forms of IPV and infant feeding among<br>mothers of children aged 7 to 12 months.  |
| Intimate partner violence  | India (160)                      | NFHS-4,<br>Domestic<br>violence module<br>(158)               | Cross-sectional   | n=29,558 women with<br>children <5yo  | Not stated   | Significantly higher proportion of children were stunted or<br>underweight whose mothers had been emotionally or sexually<br>abused ( $p < 0.001$ ). Children of mothers who experienced at<br>least one form of violence were more likely to suffer from<br>stunting, underweight and wasting conditions compared to<br>those whose mothers did not face any violence. |
| Prevalence of<br>domestic<br>violence  | India (161)                      | Author-<br>developed (161)                                    | Cross-sectional<br>study                                  | n=820 Women in rural and<br>tribal communities with at<br>least one child 6 - 24 months<br>old  | Formative qualitative research.<br>Translated and back-translated into local<br>language; field-tested piloted on random<br>subsample. | In bivariate analysis, mother's experience of psychological abuse and sexual coercion had significant association with child weight-for-age z score (F=5.2 p<.05). In multivariate analysis, mother's experience of psychological abuse and sexual coercion significantly increased risk of low weight-for-age ( $p$ <.05).   |
| Freedom from<br>physical<br>violence<br>(Psychological<br>wellbeing<br>subscale) | Uganda (86)                      | Author-<br>developed (86)                                     | Cross-sectional<br>survey                                 | n=195 Mothers with children<br>0-24 months in a rural setting   | Adapted from OECD Guidelines (162).  | A higher psychological satisfaction scale score was associated with higher probability of stunting (OR [95%CI] = 1.30 [1.06, 1.63]).  |
| Intimate partner violence  | Togo (164)                       | WHO's Violence<br>Against Women<br>Instrument<br>(VAWI) (163) | Non-blinded<br>parallel-cluster-<br>RCT                   | n=2031 mother-child pairs<br>(1035 intervention; 996<br>controls); Women at least 3<br>months pregnant and mothers<br>of IYC 0-23mo; mothers of<br>children 24-59mo suffering | n/a.   | Women receiving the cash transfers had lower odds of having<br>experienced physical violence in the last 12 (DD=7.9pp, ROR:<br>0.60, 95% CI: 0.36 0.99, p=0.048). No impact on controlling<br>behavior or emotional violence was observed.  |

| CR term used<br>by authors  | Location of<br>included<br>paper              | Measure<br>(citation)                                       | Study<br>Design   | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings   |
|---|---|---|---|--|---|--|
|   |   |   |   | from SAM were also eligible for the cash transfer program  |   |  |
| Social Support  |   |   |   |  |   |  |
| Social Capital  | 1   |   |   |  |   |  |
| Group<br>membership   | Peru (112)                                    | Author-<br>developed (112)                                  | Longitudinal<br>cohort (Young<br>Lives cohort)                                  | n=2015 mothers of children<br>around 1 year of age, rural and<br>urban; born in 2001and were<br>aged around 1 and 5 years old<br>in 2002 (Round 1) and 2006<br>(Round 2) respectively. | n/a   | Overall maternal group participation was not significantly<br>correlated with the child's HAZ at age 1. Correlation between<br>maternal group participation and the child's HAZ at the age of<br>1 varies significantly across maternal education. Suggestive<br>evidence of a positive association between maternal group<br>membership and child nutritional status.   |
| Maternal Social<br>Capital and<br>Grandmother<br>Childcare<br>Support | Mexico<br>(120)                               | Author-<br>developed (120)                                  | Group<br>comparison<br>study design   | 90 mothers of children<br>approximately 2 years old;<br>Non-pregnant women with<br>children approximately two<br>years old in urban setting  | All questions in the questionnaires were<br>based on literature review and long-term<br>experience of the research team within<br>Merida. | Positive association of grand-mothers providing informational support during pregnancy/infancy with one measured of child nutritional, WLZ, status at 2 years.   |
| Religious<br>affiliation  | Mozambiqu<br>e (165)                          | Author-<br>developed (165)                                  | Cross-sectional   | n=1811 Mothers with children<br>6-23 months, rural   | n/a   | Children of non-affiliated women display the highest level of chronic malnutrition, with 41.7% of them being stunted   |
| Individual<br>social capital  | Ethiopia,<br>India, Peru,<br>Vietnam<br>(102) | Short Adapted<br>Social Capital<br>Assessment Tool<br>(166) | Cross-sectional<br>analysis of<br>longitudinal<br>cohort study<br>(Young Lives) | n=7242 children from 4<br>countries (98% of total Young<br>Lives sample); Biological<br>mother of children aged 6 - 18<br>months (referred to as 1-year-<br>olds), urban and rural     | Shortened version of the Adapted Social<br>Capital Tool (A-SCAT) by Harpham et<br>al. (2002) (166).                                       | Mixed results. Cognitive social capital and support from<br>individuals consistently associated with higher z-scores. Group<br>membership showed no association. Involvement in citizenship<br>activities associated with lower z-scores in some settings. Both<br>acute (weight-for-age) and chronic (height-for-age) indicators<br>of nutritional status show similar patterns of association with<br>maternal social capital. Maternal group membership not<br>associated with either height or weight for age after adjusting.<br>Children whose mothers are involved in citizenship activities<br>had lower HAZ scores in Andhra Pradesh (B.25, 95%<br>CI.43,.07), and lower WAZ scores in Ethiopia (B.17, 95%<br>CI.33,.01), than children of mothers who are not involved.<br>More consistent patterns seen between support from<br>individuals and cognitive social capital. In all locations apart<br>from Andhra Pradesh, receiving support from one or more<br>individuals is associated with increased HAZ and in Vietnam it<br>is also associated with increased WAZ. Similarly, high levels<br>of maternal cognitive social capital are associated with<br>increased HAZ and WAZ in Vietnam and India, and increased<br>WAZ in Andhra Pradesh. No association between maternal |

| CR term used<br>by authors            | Location of<br>included<br>paper | Measure<br>(citation)                                       | Study<br>Design                             | Sample size and<br>description of population<br>where measure<br>implemented             | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings  |
|---------------------------------------|----------------------------------|---|---|--|---|---|
|                                       |                                  |   |   |  |   | cognitive social capital and child nutritional status is evident in Peru. Interactions between social capital and poverty. <sup>13</sup>  |
| Social capital<br>of mothers          | Philippines<br>(168)             | Short Adapted<br>Social Capital<br>Assessment Tool<br>(166) | Cross-sectional<br>survey, random<br>sample | n=413 Children age 6-24<br>months, rural and urban                                       | n/a   | Maternal social capital was found to be significantly associated<br>with nutritional status of children 6 to 24 months old. The<br>association indicated that as the level of maternal social capital<br>increased, the nutritional status of the child also got better, in<br>the same manner that a low level of maternal social capital was<br>significantly associated with poor nutritional status   |
| Maternal Social<br>Capital            | Ethiopia<br>(167)                | Short Adapted<br>Social Capital<br>Assessment Tool<br>(166) | Cross-sectional<br>survey                   | n=870 infants aged 6 - 12<br>months and their mother pairs,<br>rural                     | Shortened version of the Adapted Social<br>Capital Tool (ASCAT). Adapted for this<br>study population, translated into Afan,<br>Oromo; tested in the field.                                   | Having support from two or more people was associated with<br>higher DDS (OR = 1.84) and minimum dietary diversity<br>(MDD: OR = 5.20) but not with MMF, compared to those<br>without support. Having two or more group memberships was<br>associated with higher DDS (OR = 2.2) but not MDD or MMF,<br>compared to those without group membership. Findings about<br>citizenship activities were mixed for MMF and had no<br>association with DDS or MDD. Cognitive social capital<br>showed no association with DDS or MDD and lower odds of<br>MMF (OR = 0.56). Findings showed that a few components of<br>maternal structural social capital (e.g., having two or more<br>group membership or individual support from two or more<br>people) were related to increased dietary diversity in infants.<br>However, associations with meal frequency were inconsistent<br>or even lower with some social capital components |
| Social Capital                        | Myanmar<br>(170)                 | Social Capital<br>(169)                                     | Cross-sectional<br>study                    | n=1546 Biological fathers of<br>children 6-59 months, urban<br>and rural                 | Performed literature review, consulted<br>experts and academics in Myanmar to<br>check adapt to local setting. Pretesting<br>was performed on 150 participants from<br>a township in Myanmar. | Both individual and community levels of social capital of<br>fathers had an influence on child stunting, while only the<br>individual level of social capital of fathers had an influence on<br>child wasting. Relationship between individual-level social<br>capital and child stunting was varied by community-level<br>social capital. Inverse relationship of social supports from the<br>father's social networks at the individual level with child<br>wasting. The community-level social supports related<br>negatively with child stunting, there was no association<br>between cognitive social capital and child undernutrition.  |
| Social Capital<br>Score and<br>Spouse | Zambia<br>(138)                  | Author-<br>developed (138)                                  | Cluster-<br>randomized,<br>controlled, non- | Households with children 0 -<br>59.5 months of age in rural<br>areas as part of the RAIN | n/a   | see EGNA Section.   |

<sup>&</sup>lt;sup>13</sup> In India the impact of household poverty on child height-for-age is much less pronounced among those children whose mother has high levels of cognitive social capital. In Vietnam, support from individuals and household poverty group interact in the prediction of weight-for-age While support from one individual is associated with increased WAZ among all children, the association is more pronounced among children living in non-poor households. Interestingly, support from two or more individuals is associated with a slight reduction in WAZ among all children apart from those living in non-poor households.

| CR term used<br>by authors                           | Location of<br>included<br>paper | Measure<br>(citation)      | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings  |
|--|----------------------------------|----------------------------|--|---|---|---|
| Relationship<br>Score                                |                                  |                            | blinded, impact evaluation   | project. At baseline, n= 3044<br>mothers; at endline, n=3536.   |   |   |
| Social<br>Participation                              | Nepal (171)                      | Author-<br>developed (171) | Cross-sectional<br>survey  | n=1787 mothers of children<br>under 24 months; mothers had<br>an average age of 24.9 years,<br>with range from 15 - 52 years,<br>rural  | Adapted, translated and field tested. See<br>Cunningham et al. (2015) for more info<br>on the design/conducting of survey<br>(212). | No significant association between social participation score<br>and child's MMF/DD. During path analysis, social<br>participation was associated with higher exposure to IYCF<br>information, which was associated with dietary diversity.   |
| Trust in<br>religious<br>leaders and<br>institutions | Philippines<br>(172)             | Author-<br>developed (172) | Opportunistic,<br>retrospective<br>study                                   | n=1192 Caregivers of the<br>children enrolled in the MCO<br>program - Malnourished Child<br>Outreach (MCO), was a 16-<br>week site-based feeding<br>program for moderately and<br>severely wasted children<br>between the ages of 6 and 60<br>months, Urban/rural | n/a   | Caregivers' trust in religious leaders or church was negatively<br>associated with dropout, suggesting that each increased level of<br>satisfaction or trust was associated with a decreased proportion<br>of dropouts from the treatment program. Authors suggest that<br>when households experiencing extreme poverty trust local<br>religious leaders and institutions, they are more likely to<br>remain enrolled in services provided through these networks.  |
| Social Networ  | 'k                               |                            |  |   |   |   |
| Composition of<br>Mothers' Social<br>Networks        | India (173)                      | Author-<br>developed (173) | Cross-sectional<br>data combined<br>with data from<br>Young Lives<br>study | n=279 Mothers participating<br>in Young Lives with children<br>approximately 1 year of age,<br>rural and urban  | n/a   | The adjusted results showed that network size and network<br>literacy rate remained positively associated with child nutrition<br>(b¬°0.18,P¬°0.007 and b¬°0.57,P¬°0.028, respectively), and<br>that the association with network non-family (%) was still<br>weak and negative (b¬°20.01,P¬°0.049). The model with all<br>three indicators showed the same results. An increase in<br>network size of one member was associated with an increase of<br>0.21 in HAZ. Meanwhile, a 50% increase in network literacy<br>rate was associated with an increase of 0.28 in Z-score. First,<br>there was a positive interaction between network size and<br>mother's age (P¬°0.093) only children of mothers younger than<br>25 years old were unaffected by network size. There was a<br>negative interaction between HH wealth and network literacy<br>rate (P¬°0.088) only among the poorest of the poor (housing<br>quality score,0.20) was there a statistically significant<br>association with network literacy. |
| In-Camp<br>Network Size                              | Uganda<br>(174)                  | Author-<br>developed (174) | Mixed methods<br>observational <sup>14</sup>                               | n=207 Children under 5 who<br>were born at least 1 year after<br>the household was displaced,<br>IDP camps in Northern<br>Uganda  | n/a   | Local social networks affect HAZ by increasing the resources<br>available for or directed to child health and nutrition inputs.<br>Increasing local network size by one household (a 25%<br>increase in average network size) leads to between a 0.065 to<br>0.22 z-score improvement, showing a positive and significant<br>effect of network cohesion on the health and nutrition of the  |

<sup>&</sup>lt;sup>14</sup> Using data from Uganda Food for Education Evaluation; and administrative data from WFP qualitative data from focus groups conducted with parents and local leaders.

| CR term used<br>by authors                      | Location of<br>included<br>paper | Measure<br>(citation)      | Study<br>Design                          | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting | Caregiver Resource Specific Findings  |
|---|----------------------------------|----------------------------|--|--|--|---|
|   |                                  |                            |  |  |  | youngest household members. Maintaining an additional pre-<br>displacement network member as part of the in-camp network<br>was associated with a .20 HAZ improvement   |
| Kin network                                     | Tanzania<br>(175)                | Author-<br>developed (175) | Series of cross-<br>sectional<br>surveys | n=132 Women were all<br>monogamous, all parous, rural  | n/a  | In a multivariate regression model controlling for baseline age<br>and child sex, children with mothers who had more kin in the<br>study area gained more weight across the 16-month study<br>period than children with fewer kin in the village (partial $p =$<br>0.02). Disaggregating the kin term and estimating three<br>additional models showed that the first model including only<br>brothers was not significant. The second model including the<br>term for sisters was significant (F = 3.49, r2= 0.16, p = 0.02),<br>and a third model investigating the effect of subadult female<br>kin showed that the female kin effect was driven almost<br>entirely by the number of sisters a mother had that were under<br>18 years of age For all ages: These data suggest that, for the<br>majority of mothers, having kin living in the study area is<br>associated with increasing numbers of children surviving to<br>age five, having greater relative weight, and having greater<br>weight gain, and suggest that this effect was modified by<br>household wealth: wealthy households benefit the least from<br>kin and poor households the most. |
| Personal<br>Network<br>(Social<br>Network Ties) | Mexico<br>(176)                  | Author-<br>developed (176) | Cross-sectional                          | n=47 mothers who had<br>participated in the IMSS<br>Nationwide Survey on the<br>Health and Nutritional Status<br>of Children under Two Years<br>of Age in Oaxaca, Mexico | n/a  | Of the respondent-level and network-level variables tested<br>here, the percentage of indigenous alters in mother's networks<br>was found to be the best predictor of the introduction of<br>complementary foods. While they saw some associations<br>between network level variables and introduction of foods, "it<br>is equally important to note that the introduction of a large<br>number of foods was not associated with the respondent-level<br>and network-level variables. For foods that are introduced<br>early, particularly fruits, vegetables, smoothies and juice, there<br>was very little variation in the age of introduction, and thus no<br>effect to explain. However, some foods, such as beans, dairy,<br>eggs and other meats, did have a wider variation in the age of<br>introduction and simply were not explained by the respondent-<br>level and network-level variables studied   |
| Social Network                                  | Brazil (60)                      | Author-<br>developed (60)  | Cross-sectional<br>study                 | n=228 infant-mother pairs in<br>urban area; Six-month-old<br>infants who used primary<br>health care units and their<br>mothers  | n/a  | Not statistically significant.  |
| Social<br>Networks                              | Mexico<br>(177)                  | Author-<br>developed (177) | Case-control                             | n=656 Urban and rural<br>mothers with children between   | n/a  | In rural area, social networks for child care showed statistically significant differences when comparing cases and controls. In  |

| CR term used<br>by authors               | Location of<br>included<br>paper | Measure<br>(citation)      | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting | Caregiver Resource Specific Findings  |
|--|----------------------------------|----------------------------|--|---|--|---|
|  |                                  |                            |  | 6 and 23 months of age. Cases<br>comprised stunted children<br>aged between 6 and 23<br>months. Controls were well-<br>nourished children.  |  | the urban area size of social networks was a statistically<br>significant variable. In rural area household allocation of<br>resources and family organization showed that child being<br>cared for exclusively by mother had a protective effect. Social<br>networks showed that having family networks to provide care<br>for the child entailed a higher risk. In urban area having a small<br>family network increased risk of stunting (OR 2.1 CI1.27-349)   |
| Social Support/<br>Network               | South<br>Africa (62)             | Author-<br>developed (62)  | Randomized<br>Controlled<br>Trial  | n=656 women with HIV under<br>standard care; 544 women<br>with HIV under enhanced<br>intervention; Urban/rural;<br>Infants 0-12m; HIV positive<br>mother  | n/a  | n/a (did not examine relationship between social support and BFboth outcomes reported but not in connection to each other, only as longitudinal outcomes in intervention and comparison).   |
| Mothers' Social<br>Networks              | Bangladesh<br>(178)              | Author-<br>developed (178) | Cross-sectional<br>surveys to asses<br>intervention<br>impact<br>(intensive vs.<br>non-intensive<br>and change at 2<br>yr follow up) | n=2001 mothers of children <2<br>yrs at endline in 2014 and<br>n=2400 at follow up in 2016;<br>rural.   | n/a  | In the path analyses for minimum dietary diversity, mothers<br>exposed to 3 components of the interventions had higher scores<br>for social networks of adopters ( $\mathbb{E} \leq 0.20, 0.44$ ), receiving<br>information ( $\mathbb{E} \leq 0.72, 1.31$ ), and sharing information<br>( $\mathbb{E} \leq 0.32, 1.10$ ). The social network of adopters and diffusion<br>of information, in turn, were positively associated with both<br>descriptive norms ( $\mathbb{E} \leq 0.03, 0.08$ ) and injunctive norms<br>( $\mathbb{E} \leq 0.06, 0.10$ ), which were associated with higher minimum<br>dietary diversity ( $\mathbb{E} \leq 0.02, 0.09$ ). The indirect effects,<br>obtained by adding the products of the regression coefficients<br>for each path, show that, for minimum dietary diversity, 34%,<br>42%, and 43% of the total effects of IPC, MM, and CM,<br>respective were explained by improved social networks,<br>diffusion of information, and social norms. The indirect effects<br>for IPC were 61% for early initiation of breastfeeding and 39%<br>for EBF; the indirect effect of MM was 78% for EBF |
| Social<br>Network/<br>Support<br>Network | Brazil (61)                      | Social Network<br>(179)    | Cross-sectional<br>study   | n=217 mothers and their<br>children up to 15 mo old; Data<br>derived from a prospective<br>cohort study that followed the<br>first year of life of newborns<br>attended at four primary care<br>facilities of Rio de Janeiro<br>from June 2005 to December<br>2009. | Not stated   | In multivariate analyses, associations between overall physical<br>violence and non-breastfeeding remained significant even after<br>adjusting for co-variates (possession of household items,<br>mother current working status, maternal age, social network,<br>and suspected depression).  |
| Social Suppor                            | t                                |                            |  |   |  |   |

| CR term used<br>by authors                              | Location of<br>included<br>paper | Measure<br>(citation)  | Study<br>Design   | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting               | Caregiver Resource Specific Findings   |
|---|----------------------------------|--|---|--|--|--|
| Adequacy of<br>Social Support                           | Tanzania<br>(43)                 | Author-<br>developed (43)                                      | Cluster-<br>randomized<br>effectiveness<br>trial  | n=Women in 591 households;<br>Households included were<br>food insecure as defined by the<br>community and had a child<br>aged<1 y access to land and<br>planning to farm in the coming<br>year.       | Adapted from the Perceived Social<br>Support Scale and a subscale of the A-<br>WEAI. | AWEAI: At baseline, women reported that their husbands had<br>helped with $2.1 \rightarrow \pm 1.8$ household chores in the past month; the<br>intervention increased this by 0.36 tasks (P=0.05). PSSS: At<br>baseline, 78.4% of women reported adequate social support;<br>the intervention increased this proportion by 13.3pp (P=0.01).  |
| Breastfeeding<br>Support                                | Vietnam<br>(182)                 | Author-<br>developed (182)                                     | Cross-sectional survey  | n=10,834 mothers of children <24 mo old, urban and rural   | n/a  | No significant relationships between BF support during perinatal period and continued BF at 12 or 24 months  |
| Community<br>Membership<br>and<br>Community<br>Cohesion | India (183)                      | Author-<br>developed and<br>Community<br>Cohesion<br>(183,184) | Cross-sectional<br>survey, using a<br>two-stage, 30<br>cluster random<br>sampling<br>design | n=922 Children over 6<br>months, rural; Patharpratima<br>block of the Sundarbans in<br>West Bengal, India,   | Community Cohesion measure available<br>at Paina et al. (2016) (184).                | Mean perceived community cohesion score, out of a possible maximum score of nine, was5.41 for children who received minimum acceptable diet and 4.57 for children who did not receive minimum acceptable diet and the difference between these two groups was statistically significant ( $p$ = 0.000). The percentage of the head of households reporting being members of at least one community group did not differ significantly ( $p$ = 0.90) between household where the children received and did not receive minimum acceptable diet.                           |
| Social support<br>scale                                 | Uganda (86)                      | Duke UNC<br>Functional<br>Social Support<br>Scale (185)        | Cross-sectional<br>survey   | n=195 Mothers with children<br>0-24 months, rural  | n/a  | Mothers with greater social support were more likely to meet<br>the four remaining complementary feeding indicators. Each<br>unit increase in social support was associated with a higher<br>odds of MMF (odds ratio [OR] [95% CI] = $1.38$ [ $1.10, 1.73$ ]),<br>the MDD (OR [95% CI] = $1.56$ [ $1.15, 2.11$ ]), and MAD (OR<br>[95% CI] = $1.55$ [ $1.10, 2.21$ ]).   |
| Social Support  | Tanzania<br>(72)                 | Duke UNC<br>Functional<br>Social Support<br>Scale (185)        | RCT   | n=1,078; n=699 included at<br>the end of the study. Pregnant<br>women with HIV, 71.4% of<br>pregnant women were betweer<br>the ages of 20 and 29 years<br>and nearly12% were 15-19<br>years old, urban | n/a  | Perceived social support was not significantly associated with<br>underweight or stunting. Although low social support was<br>positively associated with wasting (RR1.50, P<0.01) in the<br>univariate analysis, this effect was no longer significant after<br>adjusting for confounding variables (RR 1.12, P= 0.75).  |
| Social support  | Tanzania<br>(187)                | Duke UNC<br>Functional<br>Social Support<br>Scale (185)        | Randomized<br>placebo-<br>controlled trial  | n=795 HIV positive women<br>between 12 and 27 weeks of<br>gestation, urban   | Previously validated.  | Material and social support was associated with decreased<br>likelihood of BF cessation (RR 0.83; 95% CI 0.68, 1.02)<br>Emotional and affective support, however, was not related with<br>breastfeeding cessation. Instrumental and material support was<br>significant in the univariate analysis (RR 0.76; 95% CI<br>0.63, 0.91;P-value=0.004) and when adjusting for other<br>predictors using the Cox proportional hazards model was<br>consistent with the univariate although insignificant at an alpha<br>level of 0.05 (RR 0.83; 95% CI 0.68, 1.02;P-value=0.07) |

| CR term used<br>by authors   | Location of<br>included<br>paper | Measure<br>(citation)  | Study<br>Design                           | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting | Caregiver Resource Specific Findings  |
|--|----------------------------------|--|---|---|--|---|
| Social Support   | Nicaragua<br>(186)               | Duke UNC<br>Functional<br>Social Support<br>Scale (185)              | Cross-sectional<br>study                  | n=1371 Caregivers with<br>children 0-35 months of age,<br>rural   | Used adapted Spanish version (236).                                    | Children of women with the lowest social support were more<br>likely to consume highly processed snacks and/or SSB, but<br>also had marginally significant higher odds of meeting dietary<br>diversity. No other associations were found between women's<br>social support and infant and young child feeding practices in<br>the adjusted models. With regard to social support, adjusted<br>analyses children aged 6-35 months of women in the lowest<br>social support tertile had significantly higher HAZ and lower<br>odds of stunting compared with women in the highest social<br>support tertile. No significant associations found between<br>women's social support and IYCF. Women in the lowest tertile<br>of social support had infants with the highest HAZ and also the<br>lowest occurrence of stunting. |
| Family Support<br>Scale  | Indonesia<br>(188)               | Author-<br>developed (188)   | Cross-sectional                           | n=153 mothers with babies<br>aged 6-12 mo; Conducted in<br>one of the public health<br>centers with the highest<br>incidence of malnutrition in<br>Surabaya, Indonesia.   | n/a  | All independent variables (knowledge, attitudes, beliefs, income, and family support) had a significant yet a weak correlation with maternal behavior in selecting complementary feeding for family support spearman-rho test (p= $0.006$ , r= $0.222$ )  |
| Household<br>Bargaining<br>Power Sub-<br>scale (social<br>participation) | Nepal (189)                      | Author-<br>developed (189)   | Cross-sectional study                     | n=2170 mothers/fathers of<br>children 0-59mo; Interviews<br>were conducted with the<br>mother and father of the index<br>child. Our final study sample<br>for this analysis consisted of<br>households which had<br>complete information on both<br>women's and men's<br>bargaining domains (n=2170)<br>for children aged 0-59 mo | Subscale of household bargaining power                                 | Women's social participation were not associated with child<br>HAZ (P>0.94). Men's social participation, however, was<br>positively associated with HAZ (P<0.001).  |
| Male<br>Involvement in<br>Housework                                      | Benin (190)                      | Author-<br>developed (190)   | Cross-sectional survey                    | n=767 mothers of Children 6 -<br>59 mo. Mothers age range 15 -<br>49, rural   | n/a  | No significant association between male involvement in<br>housework measure and child's dietary diversity score, height<br>for age, weight for height or weight for age.  |
| Maternal Social<br>Support   | Ethiopia<br>(77)                 | Maternity Social<br>Support Scale<br>(MSSS) (191)                    | Prospective,<br>community-<br>based study | n=1560 pregnant women;<br>Based on ENGINE birth<br>cohort study data.   | n/a  | Maternal social support (P=0.002) and social participation (P< 0.001) were positively associated with infant feeding practices  |
| Social Support<br>(tangible and<br>emotional)                            | Jamaica<br>(10)                  | Medical<br>Outcomes Study<br>(MOS) Social<br>Support Survey<br>(192) | Case control<br>study                     | cases (n=139), controls<br>(n=71); IYC were aged 9-<br>30mo. Two groups,<br>undernourished and<br>adequately nourished controls,<br>were enrolled.  | Authors made modifications but not described in paper.                 | No difference between nourished and undernourished groups<br>in the availability of social support  |

| CR term used<br>by authors                           | Location of<br>included<br>paper | Measure<br>(citation)   | Study<br>Design                               | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings  |
|--|----------------------------------|---|---|--|---|---|
| Level of Social<br>Support                           | Pakistan<br>(26)                 | Multi-<br>Dimensional<br>Scale for<br>Perceived Social<br>Support (193) | Two-arm,<br>single-blinded,<br>individual RCT | Pregnant women in third<br>trimester with distress (screen<br>positive on Self-Reporting<br>Questionnaire (SRQ), cut-off<br>score of 9)  | n/a [study protocol]  | n/a [study protocol]  |
| Perceived<br>Social Support                          | Pakistan<br>(65)                 | Multi-<br>Dimensional<br>Scale for<br>Perceived Social<br>Support (193) | Cluster-RCT                                   | n=903 Pregnant women aged<br>16-45 years (married and in<br>their third trimester of<br>pregnancy). All women<br>fulfilled the criteria for a<br>DSM-IV major depressive<br>episode, rural.  | Used questionnaires that had been<br>translated and adapted in previous<br>studies.   | n/a   |
| Non-Maternal<br>Adult Female<br>Household<br>Members | Ethiopia<br>(194)                | Author-<br>developed (194)  | Cross-sectional<br>(DHS)                      | n=7100 mothers with children aged 6-59 months  | n/a   | Prevalence of child undernutrition decreases with the number<br>of non-maternal AFHMs living in the household. having an<br>additional non-maternal AFHM is associated with, on average,<br>a 0.22 unit of SD increase in height or 0.10 unit of SD increase<br>in weight, after controlling for potential confounders.   |
| Social Support<br>Scale                              | Pakistan<br>(20)                 | Oslo Social<br>Support Scale<br>(OSSS-3) (195)                          | RCT   | n=107 mothers with children<br>up to 30mo (54 in<br>intervention, 53 in control);<br>All mothers with children up<br>to 30 months old, presenting at<br>the outpatient pediatric<br>departments of the<br>participating hospitals were<br>approached and invited to<br>participate | Translated to Urdu.   | Scores for social support improved significantly for the intervention group as compared to the control group.   |
| Paternal<br>Involvement in<br>Childcare              | Vietnam<br>(196)                 | Author-<br>developed (196)  | Cross-sectional<br>study                      | n=547 random sample of 547<br>children under 3 years of age<br>from intact families and their<br>biological parents, Urban/rural   | Includes involvement in daily child-care<br>activities, involvement in health care,<br>and indirect involvement by assisting<br>with housework. | Lack of paternal involvement in providing access to preventive<br>health care for children was significantly associated with<br>underweight among children (POR = $1.75$ , p = .025),<br>controlling for child's age, household economic status,<br>mother's education. Other factors of paternal involvement were<br>not significantly associated with prevalence of underweight,<br>they all showed tendency to reduce likelihood of child's being<br>under-weight. Larger positive coefficient of association<br>between "not involved" and underweight in children was found<br>in the urban setting. Paternal involvement in child care and<br>housework was not associated with stunting. Two factors<br>representing paternal involvement in child health were<br>marginally associated with stunting; p values equal to .06 and<br>.03, respectively. Children whose fathers were not involved in<br>providing health care were about 1.7 times more likely to be |

| CR term used<br>by authors  | Location of<br>included<br>paper | Measure<br>(citation)           | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings   |
|---|----------------------------------|---------------------------------|--|---|---|--|
|   |                                  |                                 |  |   |   | stunted than children whose fathers were involved. Paternal<br>involvement in housework and daily child care was not<br>significantly associated with prevalence of stunting   |
| Perceived<br>Social Support<br>(to employ a<br>particular<br>feeding<br>method) | Nigeria<br>(197)                 | Author-<br>developed (197)      | Cross-sectional<br>survey                              | n=240 mothers and 246<br>grandmothers; women who<br>currently had a child aged 4-24<br>months. Also included were<br>grandmothers who would have<br>had a grandchild in the same<br>age range, rural town             | Pretested whole questionnaire, not<br>specific to social support.   | Grandmothers perceived significantly more support and<br>encouragement to practice hand/forced-feeding while opposite<br>case for bottle feeding. Both sets of respondents felt equally<br>encouraged to use cups and spoons and the level of support<br>perceived was highest for this method. Perceived social<br>support from older women and other people in the house to<br>forced-feed was the main factor associated with its use by<br>mothers   |
| Perceived<br>Social Support   | Zimbabwe<br>(6)                  | Perceived Social<br>Support (5) | 2x2 cluster<br>randomized<br>community-<br>based trial | n=3181 mother-infant pairs<br>followed to 12 months;<br>Pregnant women enrolled in<br>SHINE trial   | Adapted from Interpersonal Support<br>Evaluation List (198) and the Medical<br>Outcomes Study Social Support Survey<br>(192). | Social support was not significantly associated with infant diet diversity (unadjusted OR 1.23(1.08-1.42); p=0.003; adjusted OR 1.18 (1.01-1.37); p=0.039)   |
| Perceived<br>Social Support   | Zimbabwe<br>(7)                  | Perceived Social<br>Support (5) | 2x2 cluster<br>randomized<br>community-<br>based trial | n=4,025 mothers; Pregnant<br>women enrolled in SHINE<br>trial.  | Adapted from Interpersonal Support<br>Evaluation List (198) and the Medical<br>Outcomes Study Social Support Survey<br>(192). | Similar to 18-month findings, social support was associated with child linear growth at 12 months.   |
| Social support  | Brazil (38)                      | Author-<br>developed (38)       | Cross-sectional<br>study                               | n=595 mothers of children 6-<br>24m in urban area   | Adapted from Medical Outcomes Study<br>(MOS) Social Support Survey and<br>Adams' Social Network measure<br>(192,199).         | Having a source of material support was associated with higher<br>child WHZ and WAZ. Higher maternal affectionate support<br>was positively associated with child WHZ and WAZ. Negative<br>relationship between mothers' access to support when dealing<br>with a relationship problem and children's HAZ. Mothers<br>without material support had children with a 0.05 WAZ on<br>average, compared to 0.4 for those who had at least one person<br>(p 0.01). Children of mothers who reported at least one person<br>to borrow food/money had 0.3 higher average WHZ compared<br>to children of mothers with no one to borrow from. Scoring in<br>highest range of affectionate support was associated with a 0.2<br>higher average WHZ, than mothers reporting lowest levels of<br>affectionate support. Children whose mothers had higher levels<br>of social interaction on the MOS subscale (scoring 71 - 85),<br>had on average 0.3 higher WHZ; no significant relationship<br>between other MOS domains |
| Self-Reported<br>receiving social<br>support from<br>others                     | Kenya (78)                       | Author-<br>developed (78)       | Matched Case<br>Control                                | n=39 cases and 39 controls (78<br>Mother-Child Dyads); Cases<br>were malnourished children<br>ages 6-60 months admitted<br>with severe acute malnutrition<br>The controls were gender and<br>age-matched children who | 3 <sup>n</sup> /a   | The majority of the mothers of cases (71.8%) and controls (84.6%) reported that they were receiving social support from family members or friends.   |

| CR term used<br>by authors  | Location of<br>included<br>paper | Measure<br>(citation)      | Study<br>Design                                 | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting  | Caregiver Resource Specific Findings   |
|---|----------------------------------|----------------------------|---|--|---|--|
|   |                                  |                            |   | were normal weight and<br>admitted to the same hospital<br>for acute ailments. Urban   |   |  |
| Social support,<br>informational<br>support   | Uganda<br>(127)                  | Author-<br>developed (127) | Cross-sectional<br>(Secondary<br>data analysis) | n=1009 women with child 0-<br>23 months in 2006; n= 888<br>dyads in 2011. Included BF<br>and non-BF, Urban and rural.  | Conducted formative research to inform<br>the survey but not specific to social<br>support measure (237).   | n/a  |
| Social Support<br>System<br>Adequacy<br>(degree of<br>social<br>interaction,<br>perceived<br>social support,<br>received social<br>support) | Brazil (200)                     | Author-<br>developed (200) | Case control                                    | n=101 cases [malnourished<br>children WAZ below 5 <sup>th</sup><br>percentile]; 200 control [WAZ<br>above 25th percentile];<br>children aged 12 - 23 months,<br>predominantly urban  | n/a   | The only variable related to the presumed availability of<br>support (support variable) independently related to<br>malnutrition was the absence of a partner living with the<br>mother. This effect was significant among children of all levels<br>of per capita family income   |
| Social Support  | Chad (73)                        | Author-<br>developed (73)  | Cross-sectional<br>survey                       | n=98 Children 12-71 months<br>of ages, rural   | n/a   | Caregivers who received more help to accomplish their<br>domestic or productive tasks had taller children. Consultation<br>of older women was a significant predictor of child height<br>status.   |
| Social Support<br>Index   | Kenya (201)                      | Author-<br>developed (201) | Quasi-<br>experimental                          | n=554 people at baseline (258 mothers, 165 grandmothers, and 131 fathers) and n=509 at endline; mothers, fathers, and grandmothers from households with infants 6 - 9 months old, rural  | Based on previous infant feeding<br>research conducted in Kenya (238,239).  | As number of social support actions increased in the 3 study<br>groups, likelihood of a MMF in the past 24 hours increased<br>significantly. Significant association in grandmother<br>intervention area on MDD (OR, 1.19; CI, 1.01 to 1.40; P=.04).<br>No significant effects were found on MAD.  |
| Social Support<br>Measurement   | India (106)                      | Author-<br>developed (106) | Longitudinal<br>(Cohort)                        | n=1833 mothers of children<br>aged 5 - 21months old,<br>Urban/rural.   | Description of measures' development as part of the Young Lives Study (240).  | Social Support not associated with stunting; effect of pregnancy intention and postnatal depressive symptoms on early childhood stunting were not mediated by social support   |
| Social Support<br>Resources   | Jamaica<br>(202)                 | Author-<br>developed (202) | Longitudinal<br>study                           | n=109 completed study (150<br>recruited); Mothers were heads<br>of household, had engaged in<br>income-generating activity<br>during at least the first two<br>trimesters of pregnancy, had<br>another child five years of age<br>or younger, and had just given<br>birth by normal delivery to an<br>infant whose birthweight was<br>2,500 g or more. Urban/rural | Formative interviews with 15<br>postpartum women in the area, including<br>open-ended questions concerning<br>present work situation and work<br>histories, current household structure,<br>how they managed to combine income<br>generating work and childcare, childcare<br>and infant feeding practices. | There is some indication that infants whose mothers received<br>very little in cash contributions from other household members<br>fared less well than those infants whose mothers received<br>\$100J or more. Infants whose mothers shared food preparation<br>with persons less than 15 years old had a lower percent of<br>median weight-for-age than those whose mothers were assisted<br>by food preparers over 16 years of age |

| CR term used<br>by authors   | Location of<br>included<br>paper            | Measure<br>(citation)                      | Study<br>Design                          | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting              | Caregiver Resource Specific Findings  |
|--|---|--|--|---|---|---|
| Social Support   | Myanmar<br>(203)                            | Social Support<br>System<br>Adequacy (200) | Cross-sectional<br>study                 | n=320 children aged 6-59<br>months living at the IDP<br>camp; youngest child in a<br>selected household   | Adapted; details not provided.  | The bivariate analyses showed no types of social supports were significantly associated with stunting   |
| Social Support   | South<br>Africa (205)                       | Social Support<br>Scale (204)              | RCT                                      | n=1144 at baseline, post-birth<br>assessment n=1152, 18-month<br>assessment n=1039; Urban;<br>participants in the Philani<br>project with children 0-24<br>months of age  | n/a   | Social support was significantly associated with better growth  |
| Sources of<br>Social Support<br>(Maternal<br>Grandmother<br>and Partner<br>Support for<br>Breastfeeding) | Brazil (206)                                | Author-<br>developed (206)                 | Secondary data<br>analysis from a<br>RCT | n=228, 237, and 207 mothers<br>at 6, 12, and 24 months;<br>Adolescent mothers<br>participating in a RCT (that<br>involved maternal<br>grandmothers)   | n/a   | Maternal grandmother supports breastfeeding was positively<br>associated with BF at 6 and 12 months. Partner supports<br>breastfeeding at 12 months only  |
| Support from<br>Husband  | India (74)                                  | Author-<br>developed (74)                  | Cross-sectional<br>study                 | n=451 children aged 6-59mo<br>in slum settlements (of which<br>248 were 6-23mo); Data were<br>collected from 506 households<br>with at least one child under 5<br>years whose mother was alive<br>and staying with child. If more<br>than one child, last born was<br>selected for data collection.<br>Excluded were acutely ill<br>children or those with<br>congenital defects, those<br>whose mothers had migrated<br>to city in past 6 months or not<br>willing to participate. | Pretested in 25 households. All<br>interviews were conducted in local<br>languages. | Univariate analyses: As to feeding practices for children under<br>24 months, not many maternal factors demonstrated<br>association.<br>Multivariate analyses: In model 1, leisure time/day (OR 2.47;<br>95% CI 1.2, 5.07) demonstrated a significant association with<br>meal frequency. None of the maternal factors was significantly<br>associated with children's dietary diversity except for media<br>exposure and BMI, which showed a non-significant association<br>(p<0.1). <0.1). In model 2, available leisure time (OR 2.75;<br>95% CI 1.25, 6.06) and participation in budgeting (OR 1.97;<br>95% CI 1, 3.86) demonstrated significant associations with<br>children's meal frequency. Except for BMI demonstrating a<br>weak association (OR 1.7; 95% CI 0.92, 3.13), none of the<br>maternal factors was associated with dietary diversity. |
| Support in<br>Household<br>Chores and<br>Perceived<br>Instrumental<br>Support                            | Bangladesh,<br>Ethiopia,<br>Vietnam<br>(96) | Author-<br>developed (96)                  | Cross-sectional<br>study                 | Mothers and their <5 years old<br>children in Bangladesh n=<br>4,400, Vietnam n= 4,029, and<br>Ethiopian=2,746  | n/a   | n/a   |
| Women's<br>Perceived<br>Social<br>Networks   | Mali (18)                                   | Author-<br>developed (18)                  | Cross-sectional<br>survey                | n=505 caregivers ever-married<br>women, ages 15 - 49; rural<br>(total of 402 children under<br>five years of age)   | Formative qualitative research<br>conducted with women prior to survey<br>design.   | Felt control was significantly greater among women who<br>reported support from mother-in-law, but other social support<br>variables did not have significant relationship with women's<br>self-efficacy. However, consistent across all the models is the  |

| CR term used<br>by authors  | Location of<br>included<br>paper | Measure<br>(citation)      | Study<br>Design                  | Sample size and<br>description of population<br>where measure<br>implemented   | Adaptation, translation, cross-<br>cultural equivalency, or pretesting                          | Caregiver Resource Specific Findings  |
|---|----------------------------------|----------------------------|----------------------------------|--|---|---|
|   |                                  |                            |                                  |  |   | deleterious effect on child nutrition of having a supportive<br>mother-in-law. Whereas women who perceive mothers-in-law<br>as sources of support have greater social power, the<br>informational and/or material resources controlled by the<br>mother-in-law do not appear to benefit the nutritional well-<br>being of children. Also, the likelihood of wasting among<br>children 5 years of age and younger increases as the size of<br>their mother's social network increases. |
| Time Suffici  | ency (n=17                       | )                          |                                  |  |   |   |
| Caregiver<br>Workload   | Chad (73)                        | Author-<br>developed (73)  | Cross-<br>sectional<br>survey    | n=64 rural households with<br>children 12-71 months<br>(n=136 children);<br>Interviewed heads of<br>household (on economic<br>resources) and all women in<br>household about resources<br>for care and childcare<br>variable.                      | Based on previous survey in same<br>community and literature. Pre-tested<br>with 10 households. | Caregiver workload was not significant predictor of child<br>nutritional status and therefore were not included in the<br>models, no descriptive results reported. Women involved in<br>handicrafts spent less time on domestic activities (P=0.07)<br>and had less leisure time (P<0.01), often mentioned in<br>interviews as spent in child care.   |
| Employment<br>Status (Number<br>of income-<br>related work<br>hours per week) | Nepal (207)                      | Author-<br>developed (207) | Cross-<br>sectional              | n=451 mothers of children<br>6-59 months in slum<br>settlements of Hyderabad,<br>India (n=248 IYC were 6-<br>23mo). Excluded children<br>with acute illness or<br>congenital defects, and<br>mothers who had migrated<br>to city in past 6 months. | Full survey pre-tested in pilot study<br>n=26 in one of the study sites.                        | Eighty-four (19%) mothers did not get even 2 hours leisure time per day.  |
| Leisure<br>Time/Day   | India (74)                       | Author-<br>developed (74)  | Mixed<br>methods,<br>descriptive | n=92 rural households<br>across three groups<br>representing increasing<br>levels of dairy<br>intensification  | Pretested in 25 households.   | Found increased workload, especially for medium-intensity<br>households. (Did not report results related to IYCF but said<br>women's reports in FGDs suggest that dairy intensification<br>could have an impact on women's time use and impact their<br>care giving activities and child nutrition.)  |
| Maternal Time<br>Use  | Mali (208)                       | Author-<br>developed (208) | Cross-<br>sectional<br>survey    | n=65 Bambara mothers of<br>children aged 12 -36 month,<br>excluding twins, with<br>complete data. Rural<br>(within 20 mi of town)  | Not stated.   | Women spent a mean of 5.3 hours doing domestic work, including child-care, and 2.9 hours in income-generating activities. Time spent preparing food depended on number of women in compound taking turns to cook for extended family.   |
| Maternal Work<br>Patterns   | Jamaica<br>(202)                 | Author-<br>developed (202) | Longitudinal<br>study<br>survey  | n=109 urban and semi-rural<br>mothers who were heads of<br>household, engaged in<br>income-generating activity   | Based on open-ended interviews with 15 postpartum women from health facilities in the area.     | 12 women were working at six weeks postpartum, 7<br>working at home. From 3 months, the majority reached<br>place of work in under one-half hour, but some traveled $> 1$<br>hour, and two who, at nine months postpartum, reported   |

| CR term used<br>by authors                             | Location of<br>included<br>paper      | Measure<br>(citation)                    | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings  |
|--|---------------------------------------|--|--|---|--|---|
|  |                                       |  |  | during at least first two<br>trimesters of pregnancy.   |  | traveling >2 two hours. Most women reported working very<br>long hours: at 3 months postpartum, over 80% of working<br>women reported spending 6h/d or longer on income-<br>generating activities; women with 2 occupations reported<br>working up to 16 hours per day. |
| Number of days<br>mothers spent<br>in farming          | Tanzania<br>(209)                     | Author-<br>developed (209)               | Cross-<br>sectional  | n=152 main caretakers of<br>child under 5 y and head of<br>household, in one rural<br>village   | Based on study in 1987/1988 (241) and pretested in 15 households.  | Nearly all women (>90%) reported farming as their main<br>occupation, and most women (70%) reported additional<br>income-generating activities. Women worked a median of<br>48 (range 5-208) d in fields in agricultural season of<br>2009/2010.                        |
| Perceived Time<br>Stress                               | Zimbabwe<br>(7)                       | Perceived Time<br>Stress (5)             | 2x2 cluster<br>randomized<br>community-<br>based trial                             | n=3181 mother-infant pairs<br>followed to 12 months;<br>Pregnant women enrolled in<br>SHINE trial.  | n/a  | No association was observed between perceived time stress infants fed diverse diet in unadjusted model (OR 1.03 (0.94-1.13); $p = 0.500$ )  |
| Perceived Time<br>Stress                               | Zimbabwe<br>(7)                       | Perceived Time<br>Stress (5)             | 2x2 cluster<br>randomized<br>community-<br>based trial                             | n=4,025 mothers; Pregnant<br>women enrolled in SHINE<br>trial   | n/a  | Greater prenatal time stress was associated with lower child LAZ at 18 months, but this association did not reach statistical significance $(0.04; 95\% \text{ CI: } 0.08, 0.004, p= 0.07)$ .   |
| Time Use<br>(including<br>workload and<br>leisure)     | Nepal (212)                           | WEIA Time<br>Allocation<br>Module (210)  | Cross-<br>sectional<br>survey (from<br>Suaahara;<br>secondary<br>data<br>analysis) | n=1787 rural mothers of<br>children <24 months; mean<br>age of children = 12<br>months; mean age of<br>mothers = 25 y. 32 % of<br>mothers had no formal<br>education or less than one<br>year of schooling. | 2 indicators, each scored<br>adequate/inadequate and each<br>weighted 0.10 of overall<br>empowerment score. 1. Workload<br>(productive and domestic workload<br>based on detailed 24-hr time diary,<br>summing hours in work-related tasks<br>as primary activity + 50% of time in<br>work-related tasks as secondary<br>activity; inadequate = excessive<br>workload if >10.5 hours worked in<br>past 24 hrs); 2. Satisfaction with<br>available time for leisure activities<br>(visiting, TV, radio, movies, or<br>sports: one item, 10 pt scale.<br>Inadequate = <5; Adequate = 5- 10). | Workload greater than 10.5h/d was among the 5 indicators<br>with lowest proportion of women scoring adequate (38%).<br>Satisfaction with amount of time available for leisure<br>activities (83 %) was among the highest 5 indicators.                                  |
| Women's Time<br>Use (by<br>categories of<br>activity). | 5<br>countries <sup>15</sup><br>(214) | Workload<br>indicator from<br>WEIA (210) | Cross-<br>sectional<br>survey<br>(secondary  | Primary female and male<br>household members in<br>Bangladesh (n=3503),<br>Cambodia (n=1491) Ghana<br>(n=1574), and Mozambique  | n/a (secondary data analysis)  | In countries other than Bangladesh: women's total work<br>time > than men's. In all 5 countries, women's time on<br>reproductive work > than men's; men's time on productive<br>work > women's.   |

<sup>&</sup>lt;sup>15</sup> Bangladesh, Nepal, Cambodia, Ghana, Mozambique

| CR term used<br>by authors                     | Location of<br>included<br>paper | Measure<br>(citation)                    | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings  |
|--|----------------------------------|--|--|---|--|---|
|  |                                  |  | data<br>analysis)  | (n=1707); and mothers of<br>children <5, and their<br>husbands, if available, in<br>Nepal (n=3807). Restricted<br>to agricultural households.   |  |   |
| Workload<br>Domain                             | Nepal (171)                      | Workload<br>indicator from<br>WEIA (210) | Cross-<br>sectional<br>survey (from<br>Suaahara<br>baseline<br>data)                     | n=1787 children < 24 m<br>and their mothers, in rural<br>area. Mothers average age<br>24.9 y, range 15 - 52 y.  | Used as indicator of workload.   | Mean number of hours worked per day: 11 (SD:2.98).<br>Range: 0.58-18.9 hours.   |
| Workload<br>(Time spent on<br>work activities) | Nepal (189)                      | WEIA Time<br>Allocation<br>Module (210)  | Cross-<br>sectional<br>study   | n=2170 mothers/fathers of<br>children 0-59mo;<br>households with complete<br>information on both<br>women's and men's<br>bargaining domains.  | Not stated.  | Women's workload (P<0.001) was negatively associated with HAZ. There was no association between men's workload and child HAZ.                         |
| Time<br>Allocation                             | Zambia<br>(138)                  | WEIA Time<br>Allocation<br>Module (210)  | Cluster-<br>randomized,<br>controlled,<br>non-blinded,<br>impact<br>evaluation<br>design | rural households with<br>children <5 yrs; Baseline<br>n= 3044 mothers; Endline<br>n= 3536 mothers   | Time allocation was measured only at<br>end so for this variable, compared<br>intervention and control at endline.   | Time spent on leisure I: 14h10m; C: 14h35m; agriculture<br>work I: 3h32m; C: 2h55m; domestic work I: 4h41m. C:<br>5h0m; other work I: 1h10m. C:0h59m. |
| Time Use                                       | Nepal (213)                      | WEIA Time<br>Allocation<br>Module (210)  | Cross-<br>sectional<br>survey<br>(secondary<br>data<br>analysis)                         | n=3332 rural households<br>with children < five years,<br>in three agroecological<br>zones of mountains, hills,<br>and terai, in which the<br>female respondent reports<br>working in agriculture as<br>primary or secondary<br>occupation. | 2 indicators, each scored<br>adequate/inadequate and each<br>weighted 0.10 of overall<br>empowerment score. 1. Workload<br>(productive and domestic workload<br>based on detailed 24-hr time diary,<br>summing hours in work-related tasks<br>as primary activity + 50% of time in<br>work-related tasks as secondary<br>activity; inadequate = excessive<br>workload if >10.5 hours worked in<br>past 24 hrs); 2. | Hours spent in paid & unpaid work (all households, n=3117): 11.19hrs (SD: 2.95).  |
| Women's Time<br>Use                            | Tanzania<br>(43)                 | A-WEAI (210)                             | Cluster-<br>randomized<br>effectiveness<br>trial   | n=591 food insecure<br>households (as defined by<br>the community) with child<br>aged <1yo; access to land<br>and planning to farm in the   | Not stated   | AWEAI: The intervention did not increase women's time spent on household work and child care.   |

| CR term used<br>by authors | Location of<br>included<br>paper | Measure<br>(citation)      | Study<br>Design  | Sample size and<br>description of population<br>where measure<br>implemented  | Adaptation, translation, cross-<br>cultural equivalency, or pretesting   | Caregiver Resource Specific Findings   |
|----------------------------|----------------------------------|----------------------------|--|---|--|--|
|                            |                                  |                            |  | coming year; interviewed<br>women in household  |  |  |
| Time Poverty               | Bangladesh<br>(211)              | Time poverty<br>(242)      | Cross-<br>sectional<br>survey<br>(secondary<br>data<br>analysis) | n=5124 rural households<br>with 6-23-month-old;<br>Representative sample<br>(from Bangladesh<br>Integrated Household<br>Survey) | Secondary data analysis based on<br>time poverty approach of <u>Bardasi &amp;</u><br><u>Wodon (2006) (</u> 242). | No clear evidence of a relationship between time poverty<br>and household dietary diversity or of a multiplicative effect<br>between the income and time poverty on household dietary<br>diversity.  |
| Women's Time<br>Use        | Burkina<br>Faso (215)            | Author-<br>developed (215) | Longitudinal<br>cluster-RCT<br>and process<br>evaluation         | n=1,242 women with<br>children 3-12 months old in<br>rural area   | n/a  | For women in intervention villages, an increase in time<br>spent on agriculture activities was not associated with any of<br>the child health and nutrition indicators for which a positive<br>programme impact was found in the primary analyses<br>including wasting |

## References

- 1. Zongrone A, Menon P, Pelto G, et al. The pathways from a behavior change communication intervention to infant and young child feeding in Bangladesh are mediated and potentiated by maternal self-efficacy. *J Nutr.* 2018;148(2):259–66.
- 2. Teti DM, Gelfand DM. Behavioral competence among mothers of infants in the first year: The mediational role of maternal self-efficacy. *Child Development*. 1991 Oct 1;62(5):918–29.
- 3. Surkan P, Kawachi I, Ryan L, et al. Maternal depressive symptoms, parenting self-efficacy, and child growth. *Am J Public Health*. 2008;98(1):125–32.
- 4. Salarkia N, Omidvar N, Zaeri F, et al. Mother's self-efficacy mediates the relationship between household food insecurity and maternal infant feeding styles. *Matern Child Health J*. 2016;20(3):602–12.
- 5. Matare CR, Mbuya MNN, Pelto G, et al. Assessing maternal capabilities in the SHINE trial: Highlighting a hidden link in the causal pathway to child health. *Clin Infect Dis*. 2015;61(suppl 7):S745–51.
- 6. Matare CR, Mbuya MNN, Dickin KL, Constas MA, Pelto G, Chasekwa B, et al. Maternal capabilities are associated with child caregiving behaviors among women in rural Zimbabwe. *J Nutr*. 2021;151(3):685–94.
- 7. Tome J, Mbuya M, Makasi R, et al. Maternal caregiving capabilities are associated with child linear growth in rural Zimbabwe. *Matern Child Nutr*. 2021;17(2):e13122.
- 8. Gilmore L, Cuskelly M. Factor structure of the Parenting Sense of Competence scale using a normative sample. *Child Care Health Dev.* 2009 Jan;35(1):48–55.
- 9. Dumka LE, Stoerzinger HD, Jackson KM, et al. Examination of the cross-cultural and crosslanguage equivalence of the Parenting Self-Agency Measure. *Family Relations*. 1996;45(2):216–22.
- 10. Baker-Henningham H, Powell C, Walker S, et al. Mothers of undernourished Jamaican children have poorer psychosocial functioning and this is associated with stimulation provided in the home. *Eur J Clin Nutr*. 2003;57(6):786–92.
- 11. Ajzen I. Perceived behavioral control, self-efficacy, locus of control, and the Theory of Planned Behavior. *Journal of Applied Social Psychology*. 2002;32(4):665–83.
- 12. Mutiso J, Okello J, Lagerkvist C, et al. Effect of nutrition education and psychosocial factors on child feeding practices: findings of a field experiment with biofortified foods and different women categories. *Ecol Food Nutr.* 2018;57(4):346–71.

- 13. Sarrassat S, Ganaba R, Some H, et al. Suboptimal infant and young child feeding practices in rural Boucle du Mouhoun, Burkina Faso: Findings from a cross-sectional population-based survey. *PLoS One*. 2019;14(11):e0224769.
- 14. Anjomshoa H, Mirzaee M, Iranpour A. The application of Social Cognitive Theory on mothers' feeding practices for children aged 6 to 24 months old in Iran. *International Journal of Pediatrics-Mashhad*. 2018;6(7):7983–97.
- 15. Kamiya Y, Nomura M, Ogino H, et al. Mothers' autonomy and childhood stunting: evidence from semi-urban communities in Lao PDR. *BMC Womens Health*. 2018;18(1):70.
- 16. Rafieyan-Kopaei Z, Fathian-Dastgerdi Z, Tarrahi M, et al. Effectiveness of message-framing intervention on complementary feeding related behaviors among mothers with infants aged 4-8 months: a 3-arm randomized controlled trial. *Ital J Pediatr*. 2019;45(1):158.
- 17. Prasopkittikun T, Tilokskulchai F, Sinsuksai N, et al. Self-Efficacy in Infant Care Scale: Development and psychometric testing. *Nurs Health Sci.* 2006;8(1):44–50.
- 18. Simon D, Adams A, Madhavan S. Women's social power, child nutrition and poverty in Mali. *J Biosoc Sci.* 2002;34(2):193–213.
- 19. Herdman M, Gudex C, Lloyd A, et al. Development and preliminary testing of the new fivelevel version of EQ-5D (EQ-5D-5L). *Qual Life Res*. 2011;20(10):1727–36.
- 20. Husain N, Kiran T, Shah S, et al. Efficacy of learning through play plus intervention to reduce maternal depression in women with malnourished children: A randomized controlled trial from Pakistan. *J Affect Disord*. 2021;278:78–84.
- 21. Hays RD, Sherbourne CD, Mazel RM. The RAND 36-Item Health Survey 1.0. *Health Econ.* 1993;2(3):217–27.
- 22. Varni JW, Sherman SA, Burwinkle TM, et al. The PedsQL Family Impact Module: Preliminary reliability and validity. *Health Qual Life Outcomes*. 2004;2(1):55.
- 23. Polack S, Adams M, O'banion D, et al. Children with cerebral palsy in Ghana: malnutrition, feeding challenges, and caregiver quality of life. *Dev Med Child Neurol*. 2018;60(9):914–21.
- 24. Zuurmond M, O'Banion D, Gladstone M, et al. Evaluating the impact of a community-based parent training programme for children with cerebral palsy in Ghana. *PLoS One*. 2018;13(9):e0202096.
- 25. WHO. WHOQOL-100: The 100 Questions With Response Scales. Geneva: World Health Organization; 1995.
- 26. Huma Z, Gillani A, Shafique F, et al. Evaluating the impact of a common elements-based intervention to improve maternal psychological well-being and mother-infant interaction in rural Pakistan: study protocol for a randomised controlled trial. *BMJ Open*. 2021;11(7):e047609.

- 27. Ali BS, Reza H, Khan MM, et al. Development of an indigenous screening instrument in Pakistan: the Aga Khan University Anxiety and Depression Scale. *J Pak Med Assoc*. 1998;48(9):261–5.
- 28. Saeed Q, Shah N, Inam S, et al. Maternal depressive symptoms and child nutritional status: A cross-sectional study in socially disadvantaged Pakistani community. *J Child Health Care*. 2017;21(3):331–42.
- 29. Beck AT. An Inventory for Measuring Depression. Arch Gen Psychiatry. 1961;4(6):561.
- 30. Feldens C, Vitolo M, Rauber F, et al. Risk factors for discontinuing breastfeeding in southern Brazil: a survival analysis. *Matern Child Health J*. 2012;16(6):1257–65.
- 31. Beck AT, Steer RA, Brown GK. BDI-II Manual. San Antonio, TX: The Psychological Corporation.; 1996.
- 32. Chee Din MA, Fahmi Teng NIM, Manaf ZA. Is maternal depression a risk factor for malnutrition among malay children? A case-control study in Selangor, Malaysia. *Malaysian Journal of Medicine and Health Sciences*. 2021;17:168–74.
- 33. Radloff LS. The CES-D Scale: A Self-Report Depression Scale for Research in the General Population. *Applied Psychological Measurement*. 1977;1(3):385–401.
- 34. Wright A, Tulloch-Reid M, Chang S, et al. Maternal characteristics influence infant feeding styles in Caribbean women. *Public Health Nutr*. 2021;1–12.
- 35. Aboud F, Singla D, Nahil M, et al. Effectiveness of a parenting program in Bangladesh to address early childhood health, growth and development. *Soc Sci Med*. 2013;97:250–8.
- 36. Black M, Baqui A, Zaman K, et al. Maternal depressive symptoms and infant growth in rural Bangladesh. *Am J Clin Nutr*. 2009;89(3):951S-957S.
- 37. Nahar B, Hossain I, Hamadani J, et al. Effect of a food supplementation and psychosocial stimulation trial for severely malnourished children on the level of maternal depressive symptoms in Bangladesh. *Child Care Health Dev.* 2015;41(3):483–93.
- Surkan P, Ryan L, Carvalho Vieira L, et al. Maternal social and pyschological conditions and physical growth in low-income children in Piauí, Northeast Brazil. *Soc Sci Med*. 2007;64(2):375–88.
- Mohammed H, Marquis G, Aboud F, et al. Pre-pregnancy iodized salt improved children's cognitive development in randomized trial in Ethiopia. *Matern Child Nutr*. 2020;16(3):e12943.
- 40. Wemakor A, Mensah K. Association between maternal depression and child stunting in Northern Ghana: a cross-sectional study. *BMC Public Health*. 2016;16(1):869.

- 41. Wemakor A, Iddrisu H. Maternal depression does not affect complementary feeding indicators or stunting status of young children (6-23 months) in Northern Ghana. *BMC Res Notes*. 2018;11(1):408.
- 42. Nguyen P, Friedman J, Kak M, Menon P, Alderman H. Maternal depressive symptoms are negatively associated with child growth and development: Evidence from rural India. *Matern Child Nutr*. 2018;14(4):e12621.
- 43. Santoso M, Bezner Kerr R, Kassim N, Martin H, Mtinda E, Njau P, et al. A nutritionsensitive agroecology intervention in rural Tanzania increases children's dietary diversity and household food security but does not change child anthropometry: results from a clusterrandomized trial. *J Nutr*. 2021;151(7):2010–21.
- 44. Uher R, Goodman R. The Everyday Feeling Questionnaire: The structure and validation of a measure of general psychological well-being and distress. *Social Psychiatry and Psychiatric Epidemiology*. 2010;45(3):413–23.
- 45. Trinh TA, Feeny S, Posso A. Rainfall shocks and child health: the role of parental mental health. *Climate and Development*. 2021;13(1):34-48.
- 46. Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression: Development of the 10item Edinburgh Postnatal Depression Scale. *Br J Psychiatry*. 1987;150(6):782–6.
- 47. Nasreen H, Kabir Z, Forsell Y, et al. Impact of maternal depressive symptoms and infant temperament on early infant growth and motor development: results from a population based study in Bangladesh. *J Affect Disord*. 2013;146(2):254–61.
- 48. Sharmin K, Sarwar N, Mumu S, et al. Postnatal depression and infant growth in an urban area of Bangladesh. *Midwifery*. 2019;74:57–67.
- 49. Wang H, Zhou H, Zhang Y, et al. Association of maternal depression with dietary intake, growth, and development of preterm infants: a cohort study in Beijing, China. *Front Med.* 2018;12(5):533–41.
- 50. Anato A, Baye K, Tafese Z, Stoecker B. Maternal depression is associated with child undernutrition: A cross-sectional study in Ethiopia. *Matern Child Nutr.* 2020;16(3):e12934.
- 51. Nabwera H, Moore S, Mwangome M, et al. The influence of maternal psychosocial circumstances and physical environment on the risk of severe wasting in rural Gambian infants: a mixed methods approach. *BMC Public Health*. 2018;18(1):109.
- 52. Amipara T, Baria H, Nayak S. A study on postpartum depression and its association with infant feeding practices and infant nutritional status among mothers attending the anganwadi centers of Valsad District, Gujarat, India. *Indian Journal of Community Medicine*. 2020;45(3):299–302.

- 53. Joshi M, Raut A. Maternal depression and its association with responsive feeding and nutritional status of infants: A cross-sectional study from a rural medical college in central India. *J Postgrad Med.* 2019;65(4):212–8.
- 54. Gordon S, Rotheram-Fuller E, Rezvan P, et al. Maternal depressed mood and child development over the first five years of life in South Africa. *J Affect Disord*. 2021 Nov 1;294:346–56.
- 55. Leroux X, Grose RG, Roof KA, et al. Mental health, empowerment, and violence against young women in lower-income countries: A review of reviews. *Aggression and Violent Behavior*. 2019 May;46:25–36.
- 56. Stansert Katzen L, le Roux K, Almirol E, et al. Community health worker home visiting in deeply rural South Africa: 12-month outcomes. *Glob Public Health*. 2020;1–14.
- 57. Tomlinson M, Rotheram-Borus M, Scheffler A, et al. Antenatal depressed mood and child cognitive and physical growth at 18-months in South Africa: a cluster randomised controlled trial of home visiting by community health workers. *Epidemiol Psychiatr Sci.* 2018;27(6):601–10.
- 58. Holm-Larsen C, Madsen F, Rogathi J, et al. Postpartum depression and child growth in Tanzania: a cohort study. *BJOG*. 2019;126(5):590–8.
- 59. Goldberg D, Bridges K, Duncan-Jones P, et al. Detecting anxiety and depression in general medical settings. *BMJ*. 1988;297(6653):897–9.
- 60. Hassan B, Werneck G, Hasselmann M. Maternal mental health and nutritional status of sixmonth-old infants. *Rev Saude Publica*. 2016;50:7.
- 61. Mezzavilla R de S, Barros Vianna GV de, Lindsay AC, et al. Intimate partner violence, breastfeeding, breastmilk substitutes and baby bottle use in the first year of life. *Ciência & Saúde Coletiva*. 2021;26(5):1955.
- 62. Rotheram-Borus M, Richter L, van Heerden A, et al. A cluster randomized controlled trial evaluating the efficacy of peer mentors to support South African women living with HIV and their infants. *PLoS One*. 2014;9(1):e84867.
- 63. Hamilton M. A rating scale for depression. *Journal of Neurology, Neurosurgery & Psychiatry*. 1960;23(1):56–62.
- 64. Mehnaz A, Shah N, Mala A, et al. Psychosocial determinants of nutritional neglect in a developing country. *Journal of the College of Physicians and Surgeons Pakistan*. 2014;24(5):335–9.
- 65. Rahman A, Malik A, Sikander S, et al. Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: a cluster-randomised controlled trial. *Lancet*. 2008;372(9642):902–9.

- 66. Zigmond AS, Snaith RP. The Hospital Anxiety and Depression Scale. *Acta Psychiatr Scand*. 1983;67(6):361–70.
- 67. Ejaz MS, Sarwat A, Aisha T. Maternal psychiatric morbidity and childhood malnutrition. *Pakistan Journal of Medical Sciences*. 2012;28(5):874–8.
- 68. Derogatis LR, Lipman RS, Rickels K, Uhlenhuth EH, Covi L. The Hopkins Symptom Checklist (HSCL): A self-report symptom inventory. *Behavioral science*. 1974;19(1):1-5.
- 69. Hadley C, Tessema F, Muluneh A. Household food insecurity and caregiver distress: equal threats to child nutritional status? *Am J Hum Biol*. 2012;24(2):149–57.
- 70. Betancourt T, Jensen S, Barnhart D, et al. Promoting parent-child relationships and preventing violence via home-visiting: a pre-post cluster randomised trial among Rwandan families linked to social protection programmes. *BMC Public Health*. 2020;20(1):621.
- 71. Tomlinson M, Rotheram-Borus M, le Roux I, et al. Thirty-six-month outcomes of a generalist paraprofessional perinatal home visiting intervention in South Africa on maternal health and child health and development. *Prev Sci.* 2016;17(8):937–48.
- 72. Kaaya S, Garcia M, Li N, et al. Association of maternal depression and infant nutritional status among women living with HIV in Tanzania. *Matern Child Nutr.* 2016;12(3):603–13.
- 73. Bégin F, Frongillo E, Delisle H. Caregiver behaviors and resources influence child heightfor-age in rural Chad. *J Nutr*. 1999;129(3):680–6.
- 74. Peter R, Kumar K. Mothers' caregiving resources and practices for children under 5 years in the slums of Hyderabad, India: a cross-sectional study. *WHO South East Asia J Public Health*. 2014;3(3):254–65.
- 75. Kroenke K, Spitzer RL, Williams JBW. The PHQ-9: Validity of a brief depression severity measure. *J Gen Intern Med.* 2001 Sep;16(9):606–13.
- Motlhatlhedi K, Setlhare V, Ganiyu A, et al. Association between depression in carers and malnutrition in children aged 6 months to 5 years. *Afr J Prim Health Care Fam Med*. 2017;9(1):e1–6.
- 77. Woldetensay Y, Belachew T, Ghosh S, et al. The effect of maternal depressive symptoms on infant feeding practices in rural Ethiopia: community based birth cohort study. *Int Breastfeed J*. 2021;16(1):27.
- 78. Haithar S, Kuria M, Sheikh A, et al. Maternal depression and child severe acute malnutrition: a case-control study from Kenya. *BMC Pediatr*. 2018;18(1):289.
- 79. Adhikari R, Williamson R, Sparling T, et al. Parental depression and nutrition: findings from a cross-sectional household survey in Nepal. *Public Health Nutr.* 2020;23(16):2983–93.

- 80. Alarcón-Guevara S, Peñafiel-Sam J, Chang-Cabanillas S, et al. Maternal depressive symptoms are not associated with child anaemia: A cross-sectional population study in Peru, 2015. *Child Care Health Dev.* 2020;
- 81. Mohammedahmed A, Koko A, Arabi A, Ibrahim M. Maternal depression, a hidden predictor for severe acute malnutrition in children aged 6-59 months: a case-control study at Omdurman Paediatrics Teaching Hospital, Sudan. *Sudan J Paediatr.* 2020;20(2):111–21.
- 82. Neamah H, Sudfeld C, McCoy D, et al. Intimate partner violence, depression, and child growth and development. *Pediatrics*. 2018;142(1).
- 83. Dozio E, Le Roch K, Bizouerne C. Baby friendly spaces: an intervention for pregnant and lactating women and their infants in Cameroon. *Intervention*. 2020;18(1):78–84.
- 84. Pitt B. "Atypical" depression following childbirth. Br J Psychiatry. 1968;114(516):1325–35.
- 85. Avan B, Richter L, Ramchandani P, et al. Maternal postnatal depression and children's growth and behaviour during the early years of life: exploring the interaction between physical and mental health. *Arch Dis Child*. 2010;95(9):690–5.
- 86. Ickes S, Wu M, Mandel M, et al. Associations between social support, psychological wellbeing, decision making, empowerment, infant and young child feeding, and nutritional status in Ugandan children ages 0 to 24 months. *Matern Child Nutr*. 2018;14(1).
- 87. WHO. Schedules for Clinical Assessment in Neuropsychiatry: Manual. Version 2. Geneva: World Health Organization; 1994. 331 p. (SCAN 2.1). Available from: http://apps.who.int/iris/
- 88. Rahman A, Lovel H, Bunn J, et al. Mothers' mental health and infant growth: a case-control study from Rawalpindi, Pakistan. *Child Care Health Dev.* 2004;30(1):21–7.
- 89. First MB. User's guide for the structured clinical interview for DSM-IV axis II personality disorders: SCID-II. American Psychiatric Pub; 1997.
- 90. First MB, Spitzer RL, Gibbon M, et al. The structured clinical interview for DSM-III-R personality disorders (SCID-II). Part II: Multi-site test-retest reliability study. *Journal of Personality Disorders*. 1995;9(2):92–104.
- 91. Anoop S, Saravanan B, Joseph A, et al. Maternal depression and low maternal intelligence as risk factors for malnutrition in children: a community based case-control study from South India. *Arch Dis Child*. 2004;89(4):325–9.
- 92. Adewuya A, Ola B, Aloba O, et al. Impact of postnatal depression on infants' growth in Nigeria. *J Affect Disord*. 2008;108(1–2):191–3.
- 93. Fisher J, Tran T, Nguyen T, et al. Common mental disorders among women, social circumstances and toddler growth in rural Vietnam: a population-based prospective study. *Child Care Health Dev.* 2015;41(6):843–52.

- 94. Beusenberg M, Orley J, WHO. A User's Guide to the Self Reporting Questonnaire (SRQ). WHO; 1994. Available from: https://apps.who.int/iris/handle/10665/61113
- 95. Adams M, Khan N, Begum S, et al. Feeding difficulties in children with cerebral palsy: low-cost caregiver training in Dhaka, Bangladesh. *Child Care Health Dev.* 2012;38(6):878–88.
- 96. Basnet S, Frongillo E, Nguyen P, et al. Associations of maternal resources with care behaviours differ by resource and behaviour. *Matern Child Nutr*. 2020;16(3):e12977.
- 97. Cavalcante-Neto J, Paula C, Florêncio T, et al. Disability due to maternal common mental disorders (CMDs) as a risk factor for chronic childhood malnutrition: cross-sectional study. *Sao Paulo Med J.* 2016;134(3):228–33.
- Nguyen P, Saha K, Ali D, et al. Maternal mental health is associated with child undernutrition and illness in Bangladesh, Vietnam and Ethiopia. *Public Health Nutr*. 2014;17(6):1318–27.
- 99. Santos D, Santos D, Silva Rde C, Hasselmann M, Barreto M. Maternal common mental disorders and malnutrition in children: a case-control study. *Soc Psychiatry Psychiatr Epidemiol*. 2011;46(7):543–8.
- 100. Prado E, Yakes Jimenez E, Vosti S, et al. Path analyses of risk factors for linear growth faltering in four prospective cohorts of young children in Ghana, Malawi and Burkina Faso. *BMJ Glob Health.* 2019;4(1):e001155.
- 101. Bennett IM, Schott W, Krutikova S, et al. Maternal mental health, and child growth and development, in four low-income and middle-income countries. *Journal of Epidemiology and Community Health*. 2015;70(2):168–73.
- 102. De Silva M, Harpham T. Maternal social capital and child nutritional status in four developing countries. *Health Place*. 2007;13(2):341–55.
- 103. Girma S, Fikadu T, Abdisa E. Maternal common mental disorder as predictors of stunting among children aged 6-59 months in Western Ethiopia: A case-control study. *Int J Pediatr.* 2019:4716482.
- 104. Harpham T, Huttly S, De Silva M, et al. Maternal mental health and child nutritional status in four developing countries. *J Epidemiol Community Health*. 2005;59(12):1060–4.
- 105. Medhin G, Hanlon C, Dewey M, et al. The effect of maternal common mental disorders on infant undernutrition in Butajira, Ethiopia: The P-MaMiE study. *BMC Psychiatry*. 2010;10.
- 106. Upadhyay A, Srivastava S. Effect of pregnancy intention, postnatal depressive symptoms and social support on early childhood stunting: findings from India. *BMC Pregnancy Childbirth*. 2016;16:107.

- 107. Colman S, Stewart R, MacArthur C, et al. Psychological distress in mothers of children admitted to a nutritional rehabilitation unit in Malawi: A comparison with other paediatric wards. *Matern Child Nutr*. 2015;11(4):915–25.
- 108. Stewart RC, Umar E, Kauye F, et al. Maternal common mental disorder and infant growth a cross-sectional study from Malawi. *Maternal and Child Nutrition*. 2008;4(3):209–19.
- 109. Stewart R, Bunn J, Vokhiwa M, et al. A prospective study of psychological distress among mothers of children admitted to a nutritional rehabilitation unit in Malawi. *Child Care Health Dev.* 2011;37(1):55–63.
- 110. Abdullahi A, Farouk Z, Imam A. Common mental disorders in mothers of children attending out-patient malnutrition clinics in rural North-Western Nigeria: a cross-sectional study. *BMC Public Health*. 2021;21(1):185.
- 111. Brown N, Finch J, Obradović J, et al. Maternal care mediates the effects of nutrition and responsive stimulation interventions on young children's growth. *Child Care Health Dev*. 2017;43(4):577–87.
- 112. Favara M. Maternal group participation and child nutritional status in Peru. *Review of Development Economics*. 2018;22(2):459–83.
- 113. Thomas E, Kuo C, Cohen S, et al. Mental health predictors of breastfeeding initiation and continuation among HIV infected and uninfected women in a South African birth cohort study. *Prev Med.* 2017;102:100–11.
- 114. Zung WWK. A Self-Rating Depression Scale. Arch Gen Psychiatry. 1965;12(1):63.
- 115. Zhang JX, Guo SF, Li Y, et al. Factors influencing developmental delay among young children in poor rural China: a latent variable approach. *BMJ Open.* 2018;8(8).
- 116. Therrien A, Buffa G, Roome A, et al. Relationships between prenatal distress and infant body mass index in the first year of life in a lower-middle income country. *Int J Environ Res Public Health*. 2020;17(19).
- 117. Hajian-Tilaki K. Factors associated with the pattern of breastfeeding in the north of Iran. *Ann Hum Biol*. 2005;32(6):702–13.
- 118. Abidin RR. Parenting stress index third edition: Professional manual. Lutz: Psychological Assessment Resources Lutz: Inc. 1995;
- 119. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *Journal of Health and Social Behavior*. 1983;24(4):385–96.
- 120. Vázquez-Vázquez A, Fewtrell MS, Chan-García H, et al. Does maternal grandmother's support improve maternal and child nutritional health outcomes? Evidence from Merida, Yucatan, Mexico. *Philos Trans R Soc Lond B Biol Sci.* 2021;376(1827):20200035.

- 121. Bliznashka L, Arsenault J, Becquey E, Ruel M, Olney D. Using structural equation modelling to understand the contributors to anaemia among young Burkinabe children. *Matern Child Nutr.* 2020;16(1):e12881.
- 122. DHS. Demographic and Health Surveys (DHS) Program. 2021. DHS Questionnaires. Available from: https://dhsprogram.com/methodology/survey-types/dhs-questionnaires.cfm
- 123. Essilfie G, Sebu J, Annim SK. Women's empowerment and child health outcomes in Ghana. *African Development Review-Revue Africaine De Developpement*. 2020;32(2):200–15.
- 124. Chilinda Z, Wahlqvist M, Lee M, Higher maternal autonomy is associated with reduced child stunting in Malawi. *Scientific Reports*. 2021;11(1):3882.
- 125. Kang Y, Kim J. Age-specific risk factors for child anaemia in Myanmar: Analysis from the Demographic and Health Survey 2015-2016. *Matern Child Nutr.* 2019;15(4):e12870.
- 126. Agu N, Emechebe N, Yusuf K, et al. Predictors of early childhood undernutrition in Nigeria: the role of maternal autonomy. *Public Health Nutr.* 2019;22(12):2279–89.
- 127. Ickes S, Hurst T, First V. Maternal literacy, facility birth, and education are positively associated with better infant and young child feeding practices and nutritional status among Ugandan children. *J Nutr.* 2015;145(11):2578–86.
- 128. Heaton T. Are improvements in child health due to increasing status of women in developing Nations? *Biodemography Soc Biol.* 2015;61(3):252–65.
- 129. Jones R, Haardörfer R, Ramakrishnan U, et al. Women's empowerment and child nutrition: The role of intrinsic agency. *SSM Popul Health*. 2019;9:100475.
- 130. Na MZ, Jennings L, Talegawkar SA, et al. Association between women's empowerment and infant and child feeding practices in sub-Saharan Africa: an analysis of Demographic and Health Surveys. *Public Health Nutrition*. 2015;18(17):3155–65.
- 131. MICS. Lao PDR multiple indicator cluster survey 2006: final report. Vientiane: Department of Statistics, Lao PDR; 2008.
- 132. Kamiya Y. Socioeconomic determinants of nutritional status of children in Lao PDR: effects of household and community factors. *J Health Popul Nutr*. 2011;29(4):339–48.
- 133. IIPS, ORC MACRO. National Family Health Survey (NFHS-II) 1998-99. Mumbai, India. Calverton, Maryland, USA: International Institute for Population Sciences; ORC MACRO; 2000.
- 134. Shroff M, Griffiths P, Adair L, et al. Maternal autonomy is inversely related to child stunting in Andhra Pradesh, India. *Matern Child Nutr*. 2009;5(1):64–74.

- 135. IIPS, ORC MACRO. National Family Health Survey (NFHS-III), 2005-06. Mumbai, India. Calverton, Maryland, USA: International Institute for Population Sciences; ORC MACRO; 2006. Available from: https://dhsprogram.com/pubs/pdf/frind3/frind3-vol1andvol2.pdf
- 136. Sinha A, McRoy RG, Berkman B, et al. Drivers of change: Examining the effects of gender equality on child nutrition. *Children & Youth Services Review*. 2017;76:203–12.
- 137. Waszak C, Severy LJ, Kafafi L, Badawi I. Fertility Behavior and Psychological Stress: the Mediating Influence of Gender Norm Beliefs Among Egyptian Women. Psychology of Women Quarterly. 2001 Sep;25(3):197–208.
- 138. Kumar N, Nguyen PH, Harris J, Harvey D, Rawat R, Ruel MT. What it takes: evidence from a nutrition- and gender-sensitive agriculture intervention in rural Zambia. *Journal of Development Effectiveness*. 2018;10(3):341–72.
- 139. Straus MA. Measuring Intrafamily Conflict and Violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and Family*. 1979;41(1):75–88.
- 140. Chowdhury M, Khan H, Mondal M, et al. Socio-demographic risk factors for severe malnutrition in children aged under five among various birth cohorts in Bangladesh. *Journal of Biosocial Sciences*. 2020;1–16.
- 141. Ziaei S, Naved R, Ekström E. Women's exposure to intimate partner violence and child malnutrition: findings from demographic and health surveys in Bangladesh. *Matern Child Nutr*. 2014;10(3):347–59.
- 142. Rahman M, Poudel K, Yasuoka J, et al. Maternal exposure to intimate partner violence and the risk of undernutrition among children younger than 5 years in Bangladesh. *Am J Public Health*. 2012;102(7):1336–45.
- 143. Tsedal D, Yitayal M, Abebe Z, et al. Effect of intimate partner violence of women on minimum acceptable diet of children aged 6-23 months in Ethiopia: evidence from 2016 Ethiopian Demographic and Health Survey. *BMC Nutr.* 2020;6:28.
- 144. Sobkoviak R, Yount K, Halim N. Domestic violence and child nutrition in Liberia. *Soc Sci Med.* 2012;74(2):103–11.
- 145. Mukong A, Burns J. Parental bargaining and rural-urban child health differential in Tanzania. *Development Southern Africa*. 2021; 38(6):938-953.
- 146. Chai J, Fink G, Kaaya S, et al. Association between intimate partner violence and poor child growth: results from 42 demographic and health surveys. *Bull World Health Organ*. 2016;94(5):331–9.
- 147. Rico E, Fenn B, Abramsky T, et al. Associations between maternal experiences of intimate partner violence and child nutrition and mortality: Findings from Demographic and Health Surveys in Egypt, Honduras, Kenya, Malawi and Rwanda. *J Epidemiol Community Health*. 2011;65(4):360–7.

- 148. Jewkes R, Levin J, Penn-Kekana L. Risk factors for domestic violence: findings from a South African cross-sectional study. *Social Science & Medicine*. 2002;55(9):1603–17.
- 149. Batool Z, Zafar MI, Maann AA, Ali T. Socio-cultural factors affecting anemia and their effects on mother, and child health in rural areas of district Faisalabad, Punjab, Pakistan. *Pakistan Journal of Agricultural Sciences*. 2010;47(1):59–65.
- 150. Asling-Monemi K, Naved RT, Persson LA. Violence against women and the risk of fetal and early childhood growth impairment: a cohort study in rural Bangladesh. *Archives of Disease in Childhood*. 2009;94(10):775–9.
- 151. Straus MA, Douglas EM. A short form of the Revised Conflict Tactics Scales, and typologies for severity and mutuality. *Violence Vict.* 2004;19(5):507–20.
- 152. Naved RT, Azim S, Bhuiya A, et al. Physical violence by husbands: Magnitude, disclosure and help-seeking behavior of women in Bangladesh. *Social Science & Medicine*. 2006;62(12):2917–29.
- 153. Deshpande NA, Lewis-O'Connor A. Screening for intimate partner violence during pregnancy. *Rev Obstet Gynecol.* 2013;6(3–4):141–8.
- 154. Das S, Chanani S, Shah More N, et al. Determinants of stunting among children under 2 years in urban informal settlements in Mumbai, India: evidence from a household census. *J Health Popul Nutr.* 2020;39(1):10.
- 155. Ackerson L, Subramanian S. Domestic violence and chronic malnutrition among women and children in India. *Am J Epidemiology*. 2008;167(10):1188–96.
- 156. Adhikari T, Vir SC, Yadav RJ, et al. Undernutrition in children under-two years (u2) in India: An analysis of determinants. *Statistics and Applications*. 2015;13(1–2):25–36.
- 157. Imai KS, Annim SK, Kulkarni VS, et al. Women's empowerment and prevalence of stunted and underweight children in rural India. *World Development*. 2014;62:88–105.
- 158. IIPS, ICF. National Family Health Survey (NFHS-IV), 2015-16. Mumbai, India: International Institute for Population Sciences, ICF International; 2017.
- 159. Metheny N, Stephenson R. Is Intimate Partner Violence a Barrier to Breastfeeding? An Analysis of the 2015 Indian National Family Health Survey. *Journal of Family Violence*. 2020;35(1):53–64.
- 160. Mondal D, Paul P. Association between intimate partner violence and child nutrition in India: Findings from recent National Family Health Survey. *Children and Youth Services Review*. 2020;119.
- 161. Sethuraman K, Lansdown R, Sullivan K. Women's empowerment and domestic violence: the role of sociocultural determinants in maternal and child undernutrition in tribal and rural communities in South India. *Food Nutr Bull*. 2006;27(2):128–43.

- 162. OECD. OECD Guidelines on Measuring Subjective Well-being. 2013. Available from: https://www.oecd-ilibrary.org/content/publication/9789264191655-en
- 163. Garcia-Moreno C, Jansen HAFM, Ellsberg M, et al. Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. *Lancet*. 2006; 368(9543):1260–9.
- 164. Briaux J, Martin-Prevel Y, Carles S, et al. Evaluation of an unconditional cash transfer program targeting children's first-1,000–days linear growth in rural Togo: A cluster-randomized controlled trial. *PLOS Medicine*. 2020;17(11):e1003388.
- 165. Agadjanian V, Jansen N. Historical Legacies, Social Capital, and Women's Decision-Making Power: Religion and Child Nutrition in Mozambique. J Relig Health. 2018;57(4):1458–72.
- 166. Harpham T, Grant E, Thomas E. Measuring social capital within health surveys: Key issues. *Health Policy and Planning*. 2002;17(1):106-111.
- 167. Kang Y, Kim J, Seo E. Association between maternal social capital and infant complementary feeding practices in rural Ethiopia. *Matern Child Nutr.* 2018;14(1): e12484.
- 168. Domingo DGC, Barba CVC, Talavera MTM, et al. Association of maternal social capital with nutritional status of 6 to 24-month-old children living in urban and rural areas in Laguna, Philippines. *Malaysian Journal of Nutrition*. 2017;23(1):53–63.
- 169. Grootaert C, Narayan D, Jones VN, Woolcock M. Measuring Social Capital: An Integrated Questionnaire. In Washington, DC: World Bank; 2004. (World Bank Working Paper;No. 18). Available from: https://openknowledge.worldbank.org/handle/10986/15033
- 170. Win T, Tun Sein T, Ikeda W, et al. Does father's social capital matter to child undernutrition in Myanmar? *Asia Pac J Public Health*. 2020;1010539520951717.
- 171. Kulkarni S, Frongillo E, Cunningham K, et al. Women's bargaining power and child feeding in Nepal: Linkages through nutrition information. *Matern Child Nutr.* 2020;16(1):e12883.
- 172. Lau L, Dodd W, Qu H, et al. Exploring trust in religious leaders and institutions as a mechanism for improving retention in child malnutrition interventions in the Philippines: a retrospective cohort study. *BMJ Open*. 2020;10(9):e036091.
- 173. Moestue H, Huttly S, Sarella L, et al. "The bigger the better": Mothers' social networks and child nutrition in Andhra Pradesh. *Public Health Nutrition*. 2007;10(11):1274–82.
- 174. Adelman S. Keep your friends close: The effect of local social networks on child human capital outcomes. *Journal of Development Economics*. 2013;103:284–98.
- 175. Hadley C. The costs and benefits of kin: Kin networks and children's health among the Pimbwe of Tanzania. *Hum Nat.* 2004;15(4):377–95.

- 176. Wutich A, McCarty C. Social networks and infant feeding in Oaxaca, Mexico. *Matern Child Nutr*. 2008;4(2):121–35.
- 177. Reyes H, Pérez-Cuevas R, Sandoval A, et al. The family as a determinant of stunting in children living in conditions of extreme poverty: A case-control study. *BMC Public Health*. 2004;4:57.
- 178. Nguyen PH, Frongillo EA, Kim SS, et al. Information diffusion and social norms are associated with infant and young child feeding practices in Bangladesh. J Nutr. 2019;149(11):2034–45.
- 179. Chor D, Griep RH, Lopes CS, et al. Social network and social support measures from the Pró-Saúde Study: pre-tests and pilot study. *Cad Saude Publica*. 2001;17(4):887–96.
- 180. Santoso MV, Kerr RB, Hoddinott J, et al. Role of women's empowerment in child nutrition outcomes: A systematic review. *Advances in Nutrition*. 2019;10(6):1138–51.
- 181. Santoso MV. Evaluating the impact of a participatory nutrition-sensitive agriculture intervention on women's empowerment and child's diet in Singida, Tanzania. [Dissertation]. Ithaca, NY: Cornell University; 2019.
- 182. Tuan N, Nguyen P, Hajeebhoy N, et al. Gaps between breastfeeding awareness and practices in Vietnamese mothers result from inadequate support in health facilities and social norms. J Nutr. 2014;144(11):1811–7.
- 183. Barman D, Vadrevu L. How is perceived community cohesion and membership in community groups associated with children's dietary adequacy in disadvantaged communities? A case of the Indian Sundarbans. *BMC Health Services Research*. 2016;16, 73-82
- 184. Paina L, Vadrevu L, Hanifi SMMA, et al. What is the role of community capabilities for maternal health? An exploration of community capabilities as determinants to institutional deliveries in Bangladesh, India, and Uganda. *BMC Health Services Research*. 2016;16(7):621.
- 185. Broadhead W, Gehlbach S, De Gruy F, et al. The Duke-UNC Functional Social Support Questionnaire: Measurement of social support in family medicine patients. *Medical Care*. 1988;26(7):709–23.
- 186. Ziaei S, Contreras M, Zelaya Blandón E, et al. Women's autonomy and social support and their associations with infant and young child feeding and nutritional status: community-based survey in rural Nicaragua. *Public Health Nutr*. 2015;18(11):1979–90.
- 187. Petraro P, Duggan C, Msamanga G, Predictors of breastfeeding cessation among HIVinfected women in Dar es Salaam, Tanzania. *Matern Child Nutr.* 2011;7(3):273–83.

- 188. Pradanie R, Rachmawati PD, Cahyani MD. Factors Associated with mothers' behaviors in selecting complementary feeding in Surabaya, Indonesia. *Nurse Media Journal of Nursing*. 2020;10(3):306–16.
- 189. Kulkarni S, Frongillo E, Cunningham K, et al. Gendered intrahousehold bargaining power is associated with child nutritional status in Nepal. *J Nutr*. 2021;151(4):1018–24.
- 190. Alaofè H, Zhu M, Burney J, et al. Association Between women's empowerment and maternal and child nutrition in Kalalé District of Northern Benin. *Food Nutr Bull*. 2017;38(3):302–18.
- 191. Webster J, Linnane JWJ, Dibley LM, et al. Measuring social support in pregnancy: Can it be simple and meaningful? *Birth*. 2000;27(2):97–101.
- 192. Sherbourne CD, Stewart AL. The MOS Social Support Survey. *Social Science & Medicine*. 1991 Jan;32(6):705–14.
- 193. Zimet G, Dahlem N, Zimet S, Farley G. The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*. 1988;52(1):30–41.
- 194. Usman MA, Kornher L, Sakketa TG. Do non-maternal adult female household members influence child nutrition? Empirical evidence from Ethiopia. *Maternal and Child Nutrition* 2021;17(S1): e13123.
- 195. Kocalevent RD, Berg L, Beutel ME, et al. Social support in the general population: standardization of the Oslo social support scale (OSSS-3). *BMC Psychology*. 2018;6(1):31.
- 196. Tran B. Relationship between paternal involvement and child malnutrition in a rural area of Vietnam. *Food Nutr Bull.* 2008;29(1):59–66.
- 197. Titiloye M, Brieger W. Infant weaning methods: an intergenerational view from Igbo-Ora Nigeria. *Int Q Community Health Educ*. 2008 2009;29(4):323–34.
- 198. Cohen S, Mermelstein R, Kamarck T, et al. Measuring the functional components of social support. In: Social support: theory, research, and applications. Sarason, I.G. & Sarason, B.R. The Hague, Netherlands: Martinus Niijhoff; 1985.
- 199. Adams AM, Madhavan S, Simon D. Women's social networks and child survival in Mali. *Social Science & Medicine*. 2002;54(2):165–78.
- 200. de BL Carvalhaes M, D'Aquino Benício M, Barros A. Social support and infant malnutrition: a case-control study in an urban area of Southeastern Brazil. *Br J Nutr*. 2005;94(3):383–9.
- 201. Mukuria A, Martin S, Egondi T, et al. Role of social support in improving infant feeding practices in Western Kenya: A quasi-experimental study. *Glob Health Sci Pract*. 2016;4(1):55–72.

- 202. Leslie J, Powell D, Jackson J, et al. The relationship between maternal work patterns and infant feeding practices in Jamaican female headed households. *Ecology of Food and Nutrition*. 2001;40(3):215–52.
- 203. Hein A, Hong S, Puckpinyo A, et al. Dietary diversity, social support and stunting among children aged 6-59 months in an internally displaced persons camp in Kayin State, Myanmar. *Clin Nutr Res.* 2019;8(4):307–17.
- 204. Barrera M, Sandler IN, Ramsay TB. Preliminary development of a scale of social support: Studies on college students. *American Journal of Community Psychology*. 1981;9:435–47.
- 205. Leroux I, Rotheram-Borus M, Stein J, et al. The impact of paraprofessional home visitors on infants' growth and health at 18 months. *Vulnerable Child Youth Stud.* 2014;9(4):291–304.
- 206. Muelbert M, Giugliani E. Factors associated with the maintenance of breastfeeding for 6, 12, and 24 months in adolescent mothers. *BMC Public Health*. 2018;18(1):675.
- 207. Nakahara S, Poudel KC, Lopchan M, et al. Availability of childcare support and nutritional status of children of non-working and working mothers in Urban Nepal. *American Journal of Human Biology*. 2006;18(2):169–81.
- 208. Pierre-Louis J, Sanjur D, Nesheim M, et al. Maternal income-generating activities, child care, and child nutrition in Mali. *Food Nutr Bull*. 2007;28(1):67–75.
- 209. Nordang S, Shoo T, Holmboe-Ottesen G, et al. Women's work in farming, child feeding practices and nutritional status among under-five children in rural Rukwa, Tanzania. *Br J Nutr*. 2015;114(10):1594–603.
- 210. Alkire S, Meinzen-Dick R, Peterman A, et al. The Women's Empowerment in Agriculture Index. Oxford: Oxford Poverty & Human Development Initiative; 2013. Available from: http://www.ophi.org.uk/wp-content/uploads/ophi-wp-58.pdf?cda6c1
- 211. Seymour G, Masuda YJ, Williams J, et al. Household and child nutrition outcomes among the time and income poor in rural Bangladesh. *Global Food Security-Agriculture Policy Economics and Environment*. 2019;20:82–92.
- 212. Cunningham K, Ploubidis GB, Menon P, et al. Women's empowerment in agriculture and child nutritional status in rural Nepal. *Public Health Nutrition*. 2015;18(17):3134–45.
- 213. Malapit HJL, Kadiyala S, Quisumbing AR, et al. Women's empowerment mitigates the negative effects of low production diversity on maternal and child nutrition in Nepal. *Journal of Development Studies*. 2015;51(8):1097–123.
- 214. Komatsu H, Malapit HJL, Theis S. Does women's time in domestic work and agriculture affect women's and children's dietary diversity? Evidence from Bangladesh, Nepal, Cambodia, Ghana, and Mozambique. *Food Policy*. 2018;79:256–70.

- 215. van den Bold M, Bliznashka L, Ramani G, et al. Nutrition-sensitive agriculture programme impacts on time use and associations with nutrition outcomes. *Matern Child Nutr.* 2021;17(2):e13104.
- 216. Lakshman RR, Landsbaugh JR, Schiff A, et al. Development of a questionnaire to assess maternal attitudes towards infant growth and milk feeding practices. *International Journal of Behavioral Nutrition and Physical Activity*. 2011;8(1):35.
- 217. Bandura A. Health promotion from the perspective of social cognitive theory. *Psychology & Health*. 1998;13(4):623–49.
- 218. Husain N, Zulqernain F, Carter LA, et al. Treatment of maternal depression in urban slums of Karachi, Pakistan: A randomized controlled trial (RCT) of an integrated maternal psychological and early child development intervention. *Asian Journal of Psychiatry*. 2017;29:63–70.
- 219. Mahmud WMRW, Awang A, Herman I, et al. Analysis of the psychometric properties of the malay version of Beck Depression Inventory II (BDI-II) among postpartum women in Kedah, North West of Peninsular Malaysia. *Malays J Med Sci.* 2004;11(2):19–25.
- 220. Rochat TJ, Tomlinson M, Newell ML, et al. Detection of antenatal depression in rural HIVaffected populations with short and ultrashort versions of the Edinburgh Postnatal Depression Scale (EPDS). *Archives of Women's Mental Health*. 2013;16(5):401–10.
- 221. Gausia K, Fisher C, Algin S, et al. Validation of the Bangla version of the Edinburgh Postnatal Depression Scale for a Bangladeshi sample. *Journal of Reproductive and Infant Psychology*. 2007;25(4):308–15.
- 222. Chibanda D, Mangezi W, Tshimanga M, et al. Validation of the Edinburgh Postnatal Depression Scale among women in a high HIV prevalence area in urban Zimbabwe. *Arch Womens Ment Health*. 2010;13(3):201–6.
- 223. Raina P. The health and well-being of caregivers of children with cerebral palsy. *Pediatrics*. 2005;115(6):e626–36.
- 224. Rahman A, Iqbal Z, Waheed W, et al. Translation and cultural adaptation of health questionnaires. *J Pak Med Assoc*. 2003;53(4):142–7.
- 225. National Population Commission, ICF International. Nigeria Demographic and Health Survey 2013. Abuja, Nigeria: NPC/Nigeria and ICF International; 2014. Available from: http://dhsprogram.com/pubs/pdf/FR293/FR293.pdf
- 226. Ghana Statistical Service (GSS), Ghana Health Service (GHS), ICF International. Ghana Demographic and Health Survey 2014. Rockville, Maryland, USA: GSS, GHS, and ICF International; 2015. Available from: https://dhsprogram.com/pubs/pdf/fr307/fr307.pdf
- 227. Uganda Bureau of Statistics (UBOS), Macro International Inc, ICF International Inc. Uganda DHS Questionnaire. Rockville, Maryland, USA: ICF.

- 228. Kishor S, Subaiya L. Understanding women's empowerment: a comparative analysis of Demographic and Health Surveys (DHS) data. Calverton, Maryland, USA: Macro International; 2008. (DHS Comparative Reports No. 20). Available from: http://dhsprogram.com/pubs/pdf/CR20/CR20.pdf
- 229. MHoS, ICF. Myanmar Demographic and Health Survey 2015-16. Nay Pyi Taw, Myanmar: Ministry of Health and Sports - MoHS/Myanmar and ICF; 2017. Available from: http://dhsprogram.com/pubs/pdf/FR324/FR324.pdf
- 230. Nanda G. Compendium of Gender Scales. Washington, DC: FHI 360/C-Change; 2011.
- 231. Hasselmann MH, Reichenheim ME. Cross-cultural adaptation of the Portuguese version of the Conflict Tactics Scales Form R (CTS-1) used to assess marital violence: semantic and measurement equivalence. *Cad Saúde Pública*. 2003;19(4).
- 232. MoHCDGEC, MoH, NBS, OCGS, ICF. Tanzania Demographic and Health Survey and Malaria Indicator Survey 2015-2016. Dar es Salaam, Tanzania: Ministry of Health Community Development, Gender, Elderly and Children (MoHCDGEC), Ministry of Health, National Bureau of Statistics (NBS), Office of Chief Government Statistician (OCGS), and ICF; 2016. Available from: http://dhsprogram.com/pubs/pdf/FR321/FR321.pdf
- 233. National Bureau of Statistics, ICF Macro. Tanzania Demographic and Health Survey 2010. Dar es Salaam, Tanzania: NBS/Tanzania and ICF Macro; 2011. Available from: http://dhsprogram.com/pubs/pdf/FR243/FR243.pdf
- 234. NISR, MOH, ICF. Rwanda Demographic and Health Survey 2019-20. Kigali, Rwanda and Rockville, Maryland, USA: National Institute of Statistics of Rwanda (NISR), Ministry of Health (MOH), ICF; 2021. Available from: https://www.dhsprogram.com/pubs/pdf/FR370/FR370.pdf
- 235. NIPORT, Mitra and Associates, Macro International. Bangladesh Demographic and Health Survey 2007 (BDHS 2007). Dhaka, Bangladesh and Calverton, MD: National Institute of Population Research and Training (NIPORT), Mitra and Associates, & Macro International; 2007.
- 236. Alvarado BE, Zunzunegui MV, Delisle H. Validation of food security and social support scales in an Afro-Colombian community: Application on a prevalence study of nutritional status in children aged 6 to 18 months. *Cad Saude Publica*. 2005;21(3):724–36.
- 237. Ickes SB, Heymsfield GA, Wright TW, et al. "Generally the young mom suffers much:" Socio-cultural influences of maternal capabilities and nutrition care in Uganda. Maternal & Child Nutrition. 2017;13(3):e12365.
- 238. Mukuria A. Exclusive breastfeeding and the role of social support and social networks in a low-income urban community in Nairobi, Kenya [Dissertation]. Baltimore, MD: Johns Hopkins University, Bloomberg School of Public Health; 1999.
- 239. USAID Infant & Young Child Nutrition Project. Engaging Grandmothers and Men in Infant and Young Child Feeding and Maternal Nutrition: Report of a Formative Assessment in Eastern and Western Kenya. Washington, DC: USAID; 2011.
- 240. Galab S, Reddy MG, Antony P, et al. Young Lives Preliminary Country Report: Andhra Pradesh, India. 2003.
- 241. Wandel M, Holmboe-Ottesen G. Maternal work, child feeding, and nutrition in rural Tanzania. *Food Nutr Bull*. 1992 Mar 1;14(1):1–6.
- 242. Bardasi E, Wodon Q. Measuring Time Poverty and Analyzing its Determinants: Concepts and Application to Guinea. In: Gender, Time Use, and Poverty in sub-Saharan Africa. 2006. p. 75–95. (World Bank Working Paper). Available from: https://mpra.ub.unimuenchen.de/11082/