

# MEASURING CHILDREN'S TIME USE

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## Why measure children's time use?

"Before we can evaluate how well children are doing and why some are doing better than others, it is important to understand what they are doing..." (Harding, 1997)

- Limited understanding of how the way children spend their time affects their wellbeing and shapes their opportunities
- Gender disparities in time use begin to form in childhood yet focus of time use data collection largely on adult population
- No standard data collection tools to measure children's time use

## Key research questions

- What are the patterns of children's time use and how do they vary by age, sex and other individual and household characteristics?
  - Time as a resource/measure of well-being
- How do different patterns of children's time use relate to outcomes in their wellbeing, including health, emotional and cognitive development, educational achievement, and gender equality?
  - Time as a correlate of childhood wellbeing

## Why measure children's time use in MICS?



29	120	365
'ears	Countries	Surveys

- UNICEF's flagship Household Survey Programme launched in mid 1990s
- Surveys carried out by governments (NSOs), in technical collaboration with UNICEF
- Has become largest source of comparable statistics on children, adolescents, women and households worldwide
  - ✓ More than 200 prevalence, attitudinal and behavioral indicators
- Major data source to track progress towards the 2030 SDGs
  - ✓ 40 SDG indicators (half of all SDG indicators that can be sourced from household surveys)



## Challenges collecting time use data on children

#### Whom to interview? Self vs. proxy reporting

Is there social desirability bias when caregivers report? (e.g. under/over reporting of stigmatized/desirable activities)



How accurate is caregivers reporting? Do they know what children are doing?

At what age can children selfreport? Accuracy + value of children's inclusion Parents underreport girls' domestic work (Levison 2000)

Social desirability bias by proxy respondent may decrease with age (Janzen 2016)



Discrepancies in time spent in paid/unpaid work, sleep and leisure

Few discrepancies in time spent learning (Rost 2020)

From age 8-10, most children can report on their own time (Eurostat 2016)

Romania found data quality issues with selfreports of children 8-9 but comparable quality to adults of children 10+

### Challenges collecting time use data on children (2)

#### Adaptation of ICATUS 2016 activities to children

- Re-classification and re-grouping of ICATUS 2016 domain activities and introduction of new activity labels to prioritize children's activities (and align with UNICEF programming)
  - Examples School attendance in person/remote, gaming separately from play, socialization in person/through digital technologies, social media as entertainment
- Introduction of contextual questions related to digital/online engagement associated with learning, socialization and civic participation

### Challenges collecting time use data on children (3)

#### Seasonality bias

- Crucial to capture school term given education's centrality to children's development and opportunities (or lack thereof)
- Ideally, time use data should be collected multiple times of the year to ensure coverage across seasons but not tenable for most survey programs
- If school year cannot be captured, may not be advisable to implement children's time use module

# Challenges integrating time use module into existing household surveys

#### Example of MICS

- Non-random selection of diary days
- Potential burdens for respondent and survey teams
- Limited use of clocks/time pieces in some remote and lower literacy areas
- Interviewer training requirements

Yielding quality data without adversely affecting overall survey quality

### Considerations for time use data collection in MICS



#### Field testing

- Child versus caregiver reporting
- Adequacy of time use categories adapted from ICATUS 2016
- Additional respondent burden in multi-topic survey
- Low literacy, rural settings
- Interviewer training



#### Overview of MICS field tests of time use module

	Malawi (2017)	Belize (2019)	Zimbabwe (2022)
Instrument	Stylized questions with 2 reference periods (7 days & 24 hrs.)	Survey-based time diary (past 24 hrs.) Adaptation of ICATUS 2016 to prioritize children's activities	Survey-based <b>time diary</b> (past 24 hrs.) <b>Further adaptation of ICATUS</b> <b>2016</b> Introduction of <b>contextual</b> <b>questions</b>
Sample design	Split purposive sample of 447 households in 2 rural districts (Nkhata Bay and Balaka)	Probability-based sample of 680 households in 2 districts (mostly rural; urban)	Split purposive sample of 250 households in urban, peri- urban and rural settings in Mutare
Respondent	Proxy reporting by <b>primary caregiver</b> of children aged 5-17	Proxy reporting by <b>primary</b> <b>caregiver</b> of children aged 5-17	Self-reporting by adolescents aged 15-17 and proxy reporting by primary caregiver of adolescents aged 15-17
Implementing partners	UNICEF Malawi & Malawi National Statistical Office	UNICEF Belize & Statistical Institute of Belize	UNICEF Zimbabwe & Zimbabwe National Statistics Agency

# Select field test findings

- Child self reporting versus care-giver proxy reporting:
  - Caregivers not as able to report child's activities and duration when child away from home
  - Caregivers found it harder than children to report activities children were engaged in, even when children at home

#### ICATUS adaptations

 ICATUS activities adaptation and contextual questions were understood, but small samples did not capture low prevalence activities in testing locations

#### Low-literacy/remote settings

- Some challenges collecting time use data
- Non-numeric responses ("a bit", "not long" etc.) required time estimation after extensive probing



# Select field test findings (2)

- Quality data depends on good interviewer-respondent rapport and strong interviewing skills
- With adequate training and practice, interviewers' probing and activity coding skills significantly improve
- Training manuals need to be customized to provide country-relevant examples to aid in activity coding
- Sufficient time for training is critical

# Evidence on non-random selection of diary days from first MICS7 results

#### Distribution of interviews, by day of the week

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Sunday	2382	12.1	12.1	12.1
	2 Monday	2614	13.3	13.3	25.5
	3 Tuesday	2588	13.2	13.2	38.7
	4 Wednesday	2953	15.1	15.1	53.7
	5 Thursday	3095	15.8	15.8	69.5
	6 Friday	2671	13.6	13.6	83.1
	7 Saturday	3310	16.9	16.9	100.0
	Total	19613	100.0	100.0	

## MICS7 Children's Time Use Module

- Available as complementary topic in MICS7 & as public good
- Direct reporting for children aged 15-17
- Proxy reporting by caregiver for children aged 10-14
- Tool package includes administration guidelines, interviewer's instructions, protocols and ethical considerations for interviewing children

TIME USE																TU
TU1. Check	WB4: Respondent	's age?			AGE 15-17 AGE 18-49		1	2 ⇒ End								
TU2. Begin by (he/she) wo questions T follow-up q respondent TU3. I will po	TU2. Begin by asking the respondent what time (he/she) woke up the day before the interview and what time (he/she) went to sleep. Then ask (him/her) to list the activities (he/she) did during the day in chronological order, from the time (he/she) went to sleep. For each activity the respondent reports, choose and record in TU7 the appropriate code from the list of activity codes provided at the end of the time diary. Then, proceed to ask questions TU8-TU10: at what time did the activy start, how long did it take and at what time did it end. Depending on the activity reported by the respondent, you will be prompted to ask a follow-up question. Record the answer to the follow-up question, move on to the next row and ask the respondent about the activity (he/she) did next. After recording all activities and relevant follow-up questions, ask TU20 to check once again if there is any other activity the respondent did during the day and forgot to mention.															
activities su	activities such as relaxing or thinking.															
TU4. What ti	me did you wake	up yesterday?			HOURS AND MIN	UTES::	-									
TU5. What the	me did you go to s	sleep for the night yest	erday?		HOURS AND MIN	UTES::										
TU6. Activity order	TU7. What did you do (first/next)? Choose activity code from list on the following page	TU8. What time did this activity start?	TU9. How do this a	' long did you ctivity?	TU10. What time did this activity end?	TU11. Check TU7: Is activity code 080, 090, 110, 120, 130, 150 or 042? 1 YES, TU7=080 2 YES, TU7=090 ⇔ TU14 3 YES, TU7=110 ⇔ TU15 4 YES, TU7=120 ⇔ TU16 5 YES, TU7=130 ⇔ TU17 6 YES, TU7=150 ⇔ TU18 7 YES, TU7=042 ⇔ TU19 8 NO, OTHER CODES ☆ Go to next row and record next activity in TU7	TU12. Did you play online/ over the internet? 1 YES 2 NO	TU13. W A ALON: B WITH: (ONLI C WITH: D WITH: D WITH: E WITH: ONLIN Record al record C, Probe: A: Go to beg record ne	Vith wi E (ON FRIE) INE / ( FRIE) OTHI FRIEN NE Il menu D, E nyone ginning ext acti	hom d ILINE NDS I OFFL NDS ( ERS O NDS A tioned if TUI e else? g of ne ivity in	id you / OFF N PEF INE) NLIN NLIN ND O ! Do n !2=2 ext row 1 TU7	n play? FLINE) RSON NE E DTHERS Not	y? TU14. Did yo watch this online/over internet? ERS 1 YES 2 NO Go to beginnii of next row an record next activity in TU		TU15. Did you get the news online/over the internet? 1 YES 2 NO Go to beginning of next row and record next activity in TU7	
ORDER	ACTIVITY	START TIME	HOURS	MINUTES	END TIME		YES NO						YES	NO	YES	NO
001		4:00			:	1 2 3 4 5 6 7 8 9	1 2	A	В	С	D	E	1	2	1	2
002		:			:	1 2 3 4 5 6 7 8 9	1 2	A	В	С	D	E	1	2	1	2
003		:			:	1 2 3 4 5 6 7 8 9	1 2	A	В	С	D	E	1	2	1	2
004		:			:	1 2 3 4 5 6 7 8 9	1 2	A	В	С	D	E	1	2	1	2
005		:			:	123456789	1 2	A	В	С	D	E	1	2	1	2
006		:			:	1 2 3 4 5 6 7 8 9	1 2	A	В	С	D	E	1	2	1	2
007		:			:	123456789	1 2	A	B	C	D	E	1	2	1	2
008		-			-	123456789	1 2	A	в	C	D	E	1	2	1	2

#### Activity codes for Children's Time Use Activities

- 010 Sleeping
- 020 Eating and drinking
- 030 Taking care of personal hygiene and health care
- 040 Formal education
  - 041 School attendance (in person)
  - 042 School attendance (remote)
  - 043 Homework and studying after school hours
  - 044 Travel to / from school
- 050 Social relationships (spending time/communicating with others)
  - 051 In person, face-to-face
  - 052 Using social media and chat-based platforms
- 060 Work activities and chores
- 070 Playing (excluding gaming)
- 080 Gaming
- 090 Watching TV shows or movies as entertainment
- 100 Social media as entertainment
- 110 Following the news
- 120 Civic engagement activities
- 130 Arts, crafts, and other creative activities
- 140 Playing sports, exercising and physical activity
- 150 Reading for leisure
- 996 Other activities not captured elsewhere (Specify)

#### CORE CHILDREN'S TIME USE INDICATORS (TIME DIARY):

- Participation in daily activities
- Average time spent on activities:
  - $\circ \ \text{Among all}$
  - o Among
    - participants only

#### OTHER INDICATORS (CONTEXTUAL VARIABLES):

- Online engagement
- Playing and gaming
- School attendance

Table EQ.4.1:	Participation in daily activities (all)
	Percentage of children and adolescents age 10-17 years who, during the previous day, engaged in major
	daily activities, by type of activity they engaged in
Table EQ.4.1W	Participation in daily activities (girls)
Table EQ.4.1M	Participation in daily activities (boys)
Table EQ.4.2:	Average Time Spent on Activities (all)
	Mean number of hours spent by children and adolescents age 10-17 years on major daily activities during
	the previous day, by type of activity
Table EQ.4.2W	Average Time Spent on Activities (girls)
Table EQ.4.2M	Average Time Spent on Activities (boys)
Table EQ.4.3:	Average Time Spent on Activities by Participants (all)
	Mean number of hours spent by children and adolescents age 10-17 years on major daily activities during
	the previous day, among those who enagegd in the activities, by type of activity
Table EQ.4.3W	Average Time Spent on Activities by Participants (girls)
Table EQ.4.3M	Average Time Spent on Activities by Participants (boys)
Table EQ.4.4	Online engagement in select activities
	Percentage of children and adolescents age 10-17 years who engaged in select activities during the
	previous day, by online/offline engagement in those activities
Table EQ.4.5	Playing and gaming
	Percentage of children and adolescents age 10-17 years who engaged in play activities and game play,
	percent distribution and time spent on these activities, and among those who engaged in game play,
	percent distribution of people they played games with
Table EQ.4.6.	School attendance, in-person and remote
	Percentage of children and adolescents age 10-17 years who attended school during the previous day, by
	in-person and remote attendance, and pecent distribution of lesson-delivery modality among those who
	attended school remotely

# Summary of considerations for collecting children's time use data

Scenario 1. Integrating children's time use module into dedicated time use survey

- Inclusion age for respondents
- Self-report vs. proxy accuracy + participation
- Adaptation of ICATUS activities for relevance to children's well-being
- Timing of survey implementation to capture school term

Scenario 2. Integration into existing multipurpose household survey

- Above + assessing whether time use data can be collected without compromising data quality of main survey
  - Steps to mitigate respondent and survey team burdens
  - Sufficient training of interviewers special interviewing techniques
  - Necessity of random selection of diary days

Thank you! https://mics.unicef.org/ https://data.unicef.org/



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