Getting old and time allocation among Filipino women

Delia B. Carba[1], Judith B. Borja[1], Isabelita Bas[1], Linda S. Adair[2]

[1]University of San Carlos - Office of Population Studies Foundation, Cebu City Philippines
[2]Department of Nutrition, University of North Carolina at Chapel Hill, NC

Extended Abstract

Background: Data on time use reveal significant insights not only on how people manage time but also of the life circumstances that influence its use. Family structure, labor force participation, and educational attainment are among the factors that are strongly associated with time use. Women, mothers in particular, face enormous challenges with time allocation given the competing demands of family and work. As women get older, shifts in time allocation capture not only life course changes but also health and disability conditions that come with age.

Objectives: This study describes how women allocate their time to different tasks, and the shifts in time allocation that occurs as women age. Individual and household characteristics that influence the use of time are also examined.

Data Source and Methods: This study used data on 2006 non-pregnant women aged 35-68 y from the Cebu Longitudinal Health and Nutrition Survey (CLHNS), a community-based prospective study of ever-pregnant women in Metro Cebu, Philippines. The CLHNS is an ongoing longitudinal study and to date, there are 21 survey rounds since 1983. The data collection was done in the home of the women using structured questionnaires. The amount of time usually spent daily on activities such as food preparation, housekeeping, caregiving, working at home, working away from home, leisure, and sleep was calculated based on the women's 24-hr activity diaries (reported for a typical weekday) completed in 1994, 1998, 2002 and 2005. Characteristics associated with time use were identified using tobit regression models (for censored time use data) and linear regression models. Cluster analysis was run to identify clusters of women grouped by time use patterns. Multinomial logistic regression models were run to identify characteristics associated with each cluster. All analyses were done using STATA 11 (Copyright 1984-2009).

Preliminary findings: As of the recent survey, majority of the women in our study performed food preparation and housekeeping tasks (Table 1). About a third were still involved in caregiving and doing paid work at home. Interesting findings highlight various constraints on women's time and the implications of aging on time use. For example, multivariate tobit models using 2005 data show that the number of househelp and adults in household decrease time spent on food preparation and housekeeping while presence of spouse and children < 7 had the opposite effect (Table 2). Furthermore, increasing age is associated with paid work at home. Women who have more assets and reside in more urban communities tend to work away from home (Table 3). As women age, time spent on caregiving, working away from home, and sleeping significantly decreased while leisure time progressively increased (Figure 1). Using cluster analysis, women were grouped based on their predominant time use patterns for each survey. Four distinct time use groups were identified: working at home, working away,

1

predominantly doing housework, and some housework with high leisure time. Using these groups in the 4 survey points, longitudinal time use patterns were created (Table 4) showing predominant tasks and shifts in time allocation across surveys. Women in these categories were shown to have significant differences in education, assets and urbanicity.

Summary and Discussion: In 2005 survey, only 5% of the women were more than 59 years old and more than one-third were nearing old age. Although a small percentage of our sample belongs to older ages, the Philippines like many other Asian countries are slowly experiencing population aging. Findings from this study provide valuable insights in understanding the constraints on women's time and the implications of aging on time use. Results support other studies that as women age, more time is spent on recreation[1]. Furthermore, wIth longitudinal data on time use, it would make possible comparisons in time use patterns across time with other Asian studies[2]. Some limitations of our time use data such as under or over reporting of activities and time spent on activity, recall bias for social desirability and "typical activities" may be hard to define.

Table 1. Example of how women allocate time (2005 survey)

Activities	% Performing task	Mean no. Of minutes spent on task	% Time spent on task
Caregiving	39.1	43.0	3.0
Food preparation	73.3	76.7	5.3
Housekeeping	74.7	92.9	6.4
Paid work done at home	27.4	119.2	8.3
Paid work done away from home	42.7	210.9	14.7
Leisure	98.7	345.9	24.0
Sleep	100.0	439.16	30.5

Table 2. Tobit regression coefficients of characteristics associated with household chores (2005 survey)

	Caregiving	Food Preparation	Housekeeping
Age in 2005	-3.42*	0.62	0.93
Assets	-2.22	-1.76	-1.72
Education	1.69	0.23	0.90
Urbanicity	-0.18	-0.44*	0.45
With househelp	-12.75	-33.80*	-103.15*
Spouse in household	27.49*	28.53*	14.92
Children <7	66.43*	-0.47	2.11
Adults in household	-5.84	-3.49*	1.06

* significant at p<0.05

Table 3. Tobit regression coefficients of characteristics associated with paid work (2005 survey)

	WORK AWAY	WORK HOME
Age in 2005	3.41	-5.51*
Assets	34.48*	-19.47*
Education	-23.80*	15.76*
Urbanicity	3.06*	-1.60
With househelp	-113.12	247.40*
Spouse in household	78.82	-107.26*
Children <7	-47.19	-22.16
Adults in household	-10.78	8.38

* significant at p<0.05

Figure 1. Percent time spent on specific tasks through the years (1994-2005).
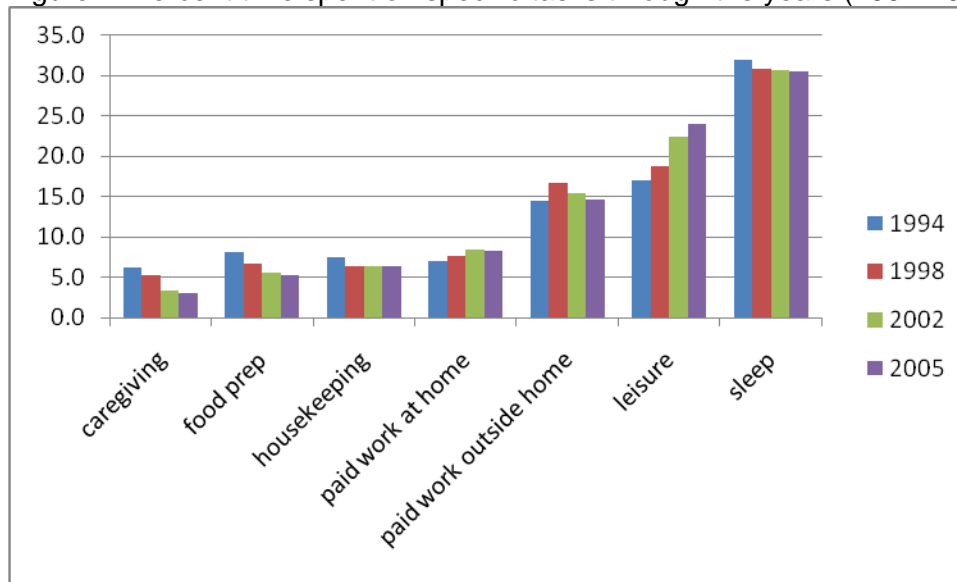
unadjusted values

Table 4. Longitudinal time use pattern categories:

timepatcat	Freq.	Percent	Cum.
1= predominantly worked away from home	335	20.65	20.65
2= predominantly housewife in transition mode w/ high leisure time	139	8.57	29.22
3= predominantly worked at home	154	9.49	38.72
4= predominantly did housework	189	11.65	50.37
5= predominantly worked at home or away from home	154	9.49	59.86
6= predominantly transition or full-time Housework	316	19.48	79.35
7= worked away or at home first 2 surveys then shifted to transition/full-time Housework	56	3.45	82.80
8= in transition housework mode then worked away or at home	69	4.25	87.05
9= in transition/fulltime housework shifted to any work in, then returned to transition/fulltime housework	77	4.75	91.80
10=no clear time use pattern across Surveys	133	8.20	100.00
Total	1,622	100.00	

. oneway corage2005 timepatcat, tab nolab

```
              |    Summary of mom corrected age 2005
   timepatcat |        Mean    Std. Dev.        Freq.
--------------+------------------------------------
            1 |    48.362568    5.2918478          335
            2 |    49.561723    6.0527139          139
            3 |    49.573279    6.0212331          154
            4 |    48.371979    6.1328657          189
            5 |    48.951663    5.9772481          154
            6 |    49.287888    6.4648231          316
            7 |    49.489726    6.0060446           56
            8 |    48.819059    6.4861138           69
            9 |    48.172461    6.9510363           77
           10 |    48.234545    5.2984366          133
--------------+------------------------------------
        Total |    48.856394    5.9984317         1622

                   Analysis of Variance
      Source              SS          df       MS             F      Prob > F
------------------------------------------------------------------------------
Between groups      444.579609        9    49.3977344        1.38      0.1937
 Within groups      57880.9185     1612    35.906277
------------------------------------------------------------------------------
     Total          58325.4981     1621    35.9811833

Bartlett's test for equal variances:  chi2(9) =  21.8066  Prob>chi2 = 0.010


. oneway assets timepatcat, tab nolab

              |    Summary of assets score: sum of
              |              possessions
   timepatcat |        Mean    Std. Dev.        Freq.
--------------+------------------------------------
            1 |    5.7104478    2.0096425          335
            2 |    5.4388489    1.8380642          139
            3 |     5.474026    1.7682681          154
            4 |     4.962963    1.9634164          189
            5 |    5.2987013    1.7937068          154
            6 |    5.2373418    1.9898148          316
            7 |    5.4464286    1.6505607           56
            8 |            5    1.3503812           69
            9 |    5.1428571    2.2225772           77
           10 |    5.3007519    1.9923527          133
--------------+------------------------------------
        Total |    5.3464858    1.9276352         1622

                   Analysis of Variance
      Source              SS          df       MS             F      Prob > F
------------------------------------------------------------------------------
Between groups      92.2975866        9    10.2552874        2.79      0.0030
 Within groups      5930.97738     1612    3.67926637
------------------------------------------------------------------------------
     Total          6023.27497     1621    3.71577728

Bartlett's test for equal variances:  chi2(9) =  25.9410  Prob>chi2 = 0.002
```

```
. oneway education timepatcat, tab nolab

                 |      Summary of highest level of
                 |     education attained by mother
    timepatcat   |      Mean    Std. Dev.       Freq.
    -------------+--------------------------------------
             1   |   8.4119403   4.3012156         335
             2   |   7.5107914   3.9788697         139
             3   |   6.9805195   3.6808474         154
             4   |   6.6507937    3.388774         189
             5   |   7.3506494   3.2044342         154
             6   |   7.2278481    3.703964         316
             7   |   7.7857143   3.8551703          56
             8   |   6.8405797   3.1089207          69
             9   |   7.5844156   4.0825387          77
            10   |   6.6466165   2.9979677         133
    -------------+--------------------------------------
         Total   |   7.3896424   3.7677604        1622


                        Analysis of Variance
      Source              SS          df      MS            F      Prob > F
    -----------------------------------------------------------------------
    Between groups      595.538905     9   66.1709895      4.76     0.0000
     Within groups      22416.2071   1612  13.9058357
    -----------------------------------------------------------------------
        Total           23011.746    1621  14.1960185

Bartlett's test for equal variances:  chi2(9) =  42.1469  Prob>chi2 = 0.000

. oneway urbin timepatcat, tab nolab

                 |       Summary of urbanicity index
    timepatcat   |      Mean    Std. Dev.       Freq.
    -------------+--------------------------------------
             1   |   41.322388   12.800307         335
             2   |   42.647482   11.958178         139
             3   |   39.162338   14.952854         154
             4   |   38.354497   14.354784         189
             5   |   42.506494   13.271054         154
             6   |    40.39557   13.509027         316
             7   |   41.392857   14.367487          56
             8   |   42.246377   12.180512          69
             9   |   38.571429   13.741436          77
            10   |   39.210526   14.340054         133
    -------------+--------------------------------------
         Total   |   40.554871   13.562536        1622


                        Analysis of Variance
      Source              SS          df      MS            F      Prob > F
    -----------------------------------------------------------------------
    Between groups      3394.33913     9   377.148792      2.06     0.0298
     Within groups      294776.277   1612  182.863696
    -----------------------------------------------------------------------
        Total           298170.617   1621  183.942391
```

Bartlett's test for equal variances: chi2(9) = 13.3580 Prob>chi2 = 0.147

References:

1. McKinnon, Allison L. (1992). Time use for self care, productivity, and leisure among elderly Canadians. *CJOT*, 59 (2), 102-110.

2. Chapter 1. How do People in the Asia/Pacific Region Spend their Time? Society at a Glance Asia/Pacific 2011 © OECD 2011, 11-24.

Anne H. Gauthier (University of Calgary), Timothy Smeeding (Syracuse University) (2001). Historical trends in the patterns of time use of older adults. www.oecd.org/dataoecd/21/5/2430978.pdf., pp 1-31. Accessed on 17 September 2012