

IATUR 2007 CONFERENCE

October 18, Washington, DC

THE ANALYSIS OF TIME-SPACE INTERACTION AS A SUBJECTIVE MEASURE OF TIME-USE: A CASE STUDY IN ANKARA, TURKEY

Feyzan Erkip, Ph. D.

Department of Interior Architecture and Environmental Design

Bilkent University
Faculty of Art, Design and Architecture,
06800, Bilkent, Ankara, Turkey

Fax: +(90) 312 266 4136

e-mail: feyzan@bilkent.edu.tr

Guliz Mugan, Ph.D. student

Department of Interior Architecture and Environmental Design

Bilkent University
Faculty of Art, Design and Architecture,
06800, Bilkent, Ankara, Turkey

Fax: +(90) 312 266 4136

e-mail: mguliz@bilkent.edu.tr

The Analysis of Time-Space Interaction as a Subjective Measure of Time-use: A Case Study in Ankara, Turkey

Feyzan Erkip, Ph.D. and Guliz Mugan, Ph.D. student

Bilkent University, Faculty of Art, Design and Architecture, 06800 Ankara Turkey

The first time-use survey of Turkey was completed recently by the Turkish Statistical Institute (TURKSTAT), which covered 5070 households within a 13-month period. The survey was based on the “Guidelines on Harmonised European Time-Use Surveys” and directly applied EUROSTAT questionnaires and time diaries. A series of problems was faced during the process of data gathering. These problems were discussed in detail in a previous study (see, Erkip, 2006). The first results of the national time-use survey were published very recently. (These results can be seen on <http://www.tuik.gov.tr>)

Although time-use surveys have long been applied in many countries, Turkey is amongst the countries that realized this potential quite late and only a few researches utilizing time-use data were done until recently which were mainly case studies in rural areas in the field of economics (see Erdil, Eruygur and Kasnakoglu, 2006; Kasnakoglu and Dayioglu, 2002; Kasnakoglu, Dayioglu and Erdil, 1996 for the details of these researches).

Our study stemmed from a need to understand the nature of time and space interaction, which has mostly overlooked in time-use surveys. Space is one of the important qualitative determinants of time-use. We believe that time-use activities obtained through diaries could better be evaluated in their relationship with spaces. Currently, location of activity is recorded as a generic variable such as home, work, school, etc. in most time-use surveys (UN, 2005) and even this component was missing in the Turkish application. We also believe that it requires a more qualitative analysis to be able to cover subjective interpretations of people about activities and the spaces in which they take place. This case study employed a mixed methodology with the same household survey of TURKSTAT in addition to activity listing as an alternative to time-diary method. Besides, in-depth interviews were done to explore time-use in its interaction with spaces. How did specific spaces influence the use of time in terms of duration and quality was the major concern of the interviews. Besides, more subjective aspects of time use such as satisfaction, expectations,

feelings etc. were investigated in this context. (For a detailed discussion on the methodological issues and the rationale for this case study see, Mugan and Erkip, 2007). As Haraldsen (1999) states, in small communities qualitative methods have been used within time-use surveys. He adds that quantitative time-use approach needs to be enriched with more traditional methods in developing countries.

According to the findings of the researches, the use of qualitative and quantitative methods together has the potential to provide more enriched information while trying to explain, the collected data, especially, in terms of subjective concepts such as life-satisfaction and well-being of individuals the psychological and behavioral reasons behind different time-use habits (Alsaker, Jakobsen, Magnus, Bendixen, Kroksmark and Nordell, 2006; Erlandsson and Eklund, 2006; Michelson, 2005; Skevington, Sartorius, Amir and the WHOQOL-Group, 2004; Zemke, 2004). Another important reason that necessitates enhancing quantitative time-use surveys with qualitative methods is to grasp the reasons behind the differences between time-use habits of different gender, income and education groups. Hence, it might be possible to see not only the differences between time-use of women/men and illiterate/literate, but it might also be possible to explain the reasons and forms of those differences (see Budlender and Mpetsheni, 1999; Haraldsen, 2000; Michelson, 2005 for the details of this argument). Analyzing the differences between population groups in terms of the time-use patterns is one of the major aims of this study. Including space use as one of the influences in addition to income, education and gender is expected to contribute the research on time-use.

Although the focus of this case study is on time-space interaction, it is expected that it would provide some clues for the national time-use survey. It is designed as a qualitative aid for the quantitative analysis of TURKSTAT to be able to modify and improve the national time-use surveys. Concerning the above-mentioned problems of design and application of this survey, our study aims to overview how the time-use survey can be enhanced with qualitative methods at the Turkish cultural context.

The Field Survey¹

In the light of above mentioned arguments, we have conducted a field survey in Ankara, the capital city of Turkey. It took three months between March-June 2007.

¹ The field survey was designed as a part of an on-going project (Erkip and Mugan, work-in progress).

Before starting, we considered that instead of a full diary, a simpler design with a certain focus might provide more reliable and useful data for our purpose. This also helped to reduce the number of household roster questions to a reasonable amount. For the data collection, predefined activity lists, which were followed up by face-to-face in-depth interviews were employed. Household and individual questionnaires that were used in our study were the same questionnaires of TURKSTAT except minor changes.

The predefined activity listing is a method in-between time-use diaries and stylized estimate questionnaires, in which respondents are expected to estimate the time-spent on predefined list of activities on the basis of ‘yesterday’. While deciding on the appropriate activities, 40 harmonized activity codes of Multinational Time Use Study (MTUS), main activity listing of 1997 Australian time-use survey, activity listing used in LAS 2004 Study by Social and Cultural Planning Office (SCP) of the Netherlands and some traditional activities in the Turkish cultural context were taken into consideration (see Appendix A for the predefined activity list).

In the field survey, the main aim was to collect qualitative data, so that quota and convenience/snowball sampling methods were used for approximately 60 individuals. The process ended up with 58 reliable cases. In order to have household and individual questionnaires that were concordant with the sample of TURKSTAT, household members aged 15 years and over were selected. The size of the sample group was determined according to the number of variables that we aimed to include. These variables are: 1) living in urban/rural regions, 2) gender, 3) working/non-working², 4) literate/illiterate³ (see Appendix B for the matrix of the sample size determined according to these variables). This also explains why some cases could not be found in selected settlement types. Some categories are nonexistent in some settlements such as educated working women in squatters.

While testing the alternative methods concerning the time-use of variety of household members from urban and rural areas of Ankara, we gave special emphasis on one of the most ignored component of time-use studies; namely data concerning space-use other than geographical location. To understand the differences in space-use of different individuals in detail in the Turkish context, urban settlements are

² We assume to assign respondents as working/non-working on the basis of their self-claim

³ Category of literate group for rural areas is defined as graduates of secondary school and over. Category of literate groups for urban areas is defined as graduates of high school and over.

classified as gated communities and traditional apartment blocks, where rural settlements as traditional village and squatters in the city. By this way, in addition to the comparison of space-use habits of individuals living in urban and rural areas, it is expected to see the different space experiences of individuals living in different types of settlements in those areas (see Appendix B and photos for the different types of urban and rural settlements). During the data gathering process, we needed to add a fifth category to the settlement types as some suburban communities reflected a different character from the apartments in the city center. We expected that Ankara case might represent Turkey in a limited, yet strong manner. If patterns of time-use vary with settlement types in Ankara, this would provide a strong case for Turkey with more variety of population and settlement types.

Within the scope of our study, the household questionnaire and individual questionnaires for each respondent were filled up by two interviewers. The researchers themselves did not take part in the data gathering processes except the field observation to prevent biases. To be able to grasp the differences between time-use patterns of weekdays and weekends, activity lists were aimed to be filled up for a weekday for one individual and for a weekend day for the other individual for the same category in each sample group.

Through face-to-face in-depth interviews, the relationship between space and time use was further investigated. The sample group for face-to-face interviews was volunteer respondents chosen from the whole group. As the data gathering procedure was quite time consuming – it took approximately 1 hour for each individual- it was hard to find people to devote additional time for the interviews, so we could approach to only 10 people more extensively. In one settlement, we conducted a focus group interview with all group in the sample. Face-to-face in-depth interviews were also supported with site observations and photographs concerning the settlements in terms of physical characteristics of the household and the neighborhood (see Appendix C for the criteria taken into consideration during observation). In this way, the geographical and physical contexts of time-use data were expected to be analyzed better.

Evaluation Procedure

We basically relied on qualitative evaluation although we applied statistical analyses whenever possible to show correlations between variables. The household and individual questionnaire forms and activity lists were evaluated by two

researchers separately to note prominent patterns of time-use in different settlements. Additionally, an external reviewer repeated the procedure independently to check the validity of this evaluation. After these three separate processes, common observations and findings were noted to derive results. (See Tashakkori and Teddlie, 2003 for the procedure for the evaluation of qualitative data.) As the major purpose was to cover as much variety as with a small sample, measuring time-use correctly was not an expected result. Nevertheless, we determined the differences between the actual time and the perceived activity time of the respondents to understand if there was a pattern in distorting the time spent for activities positively or negatively. Doing this also necessitated some assumptions to reduce the gap between actual and the perceived time use, yet after three set of evaluations we kept the differences for some cases. Estimating the time differently from the actual time was used to see if there was particular reasons or factors causing this gap. Household income, education level and settlement type were considered important in this analysis.

We believe that there are a lot of potential in using more qualitative data and face-to-face interviews to learn how people feel, where the activity took place and why in certain cases, for whom, and with whom the activity was performed. Each of these components could be analyzed to enrich the quantitative data. However, this paper only presents an example on leisure activities –measured by duration as well as variety in leisure activities- and investigates if and how it varies according to income, education and settlement.

We have a strong belief that space would be influential on time-use both in terms of the physical qualities of the space in which the activities take place and in terms of the location of and facilities provided by the settlement in which the respondents live. (Our five settlements were chosen to reflect this variety.) However, we noticed that the responses to where question did not provide sufficient clues for the first part other than a few specially mentioned spaces –mostly public. People differentiated one mall from the other by name, and it is easy to define the characteristics by observing a public space, but the rooms in their house remained undefined in most cases. We only know the appearance of the house and the appliances in and facilities nearby the house. It is interesting to note that some appliances are common to all – all households have TV, refrigerator and washing machine, although a few have internet connection, cable TV, DVD, camera recorder, and car. House ownership also varies (see Table 1 in Appendix).

Findings and Discussion

Statistical Analyses

As the sample is purposive to get the maximum variety through settlement types, it is expected to have a problem of multiple factors in the same group. Thus, we conducted statistical analyses to see if income, education and settlement type were correlated. The settlement type and individual income level ($r = 0.324$, $df = 56$, $p < 0.05$) and education and household income ($r = 0.289$ $df = 56$, $p < 0.05$) appeared slightly correlated. Education versus settlement type and education versus individual income were not correlated. Homeownership was correlated with settlement type ($r = 0.260$, $df = 56$, $p < 0.05$) yet the distribution indicates a different pattern from what could be expected. Homeownership seemed to be more common among rural and squatter settlements, which is followed by gated communities.

For analyzing the differences in patterns of leisure activities, ANOVA was applied for 5 types of settlements. The results indicated that there are significant differences in the number of leisure activities other than watching TV ($F = 6.328$ $df = 4$, $p = 0.000$), duration of leisure activities other than watching TV ($F = 3.848$, $df = 4$, $p = 0.008$), duration of watching TV ($F = 2.769$, $df = 4$, $p = 0.037$), number of leisure activities ($F = 6.178$ $df = 4$, $p = 0.000$), number of overall activities ($F = 4.796$, $df = 4$, $p < 0.002$), number of indoor leisure activities ($F = 7.437$ $df = 4$, $p < 0.000$). Time estimates, number of outdoor leisure activities and overall duration of leisure did not appear to be different along settlements. This indicates that within a comparable leisure period people do different amount of leisure activities in different settlements. Indoor leisure seems to play a larger role in these differences, so we also checked if house facilities such as balcony and garden have an influence on this pattern. Indoor leisure had a slight negative correlation with living in a dwelling with a balcony ($r = -0.312$ $df = 56$, $p < 0.05$) and also negatively correlated again slightly with living in a dwelling with a workshop outside the house ($r = -0.320$ $df = 56$, $p < 0.05$). This supports that housing facilities somehow shape leisure styles, even if not the duration.

We tested these findings also for income, education and gender to see if one or some of these factors were more dominant than the settlement type for leisure patterns. Income had no influence on any of these factors, whereas education seemed to influence the number and duration of leisure activities other than watching TV ($F = 5.728$, $df = 2$, $p = 0.006$) and ($F = 3.049$, $df = 2$, $p = 0.055$), respectively. It also affected the number of leisure activities ($F = 6.272$, $df = 2$, $p = 0.004$) and the number

of overall activities ($F = 5.200$, $df = 2$, $p = 0.009$). Gender had an influence only on time estimates ($F = 4.409$, $df = 1$, $p = 0.041$) and it seemed to be the determining factor for time estimates as women appeared to be more accurate than men.

As a result, statistical analyses provided some valuable information on the explanatory factors for leisure patterns of different groups. The settlement characteristics seemed to have a more dominant role on leisure patterns than income level, education and gender, a finding which requires further research. Education was the second important factor which appeared more influential on leisure patterns than income and gender. Gender difference did not appear as an important factor in that respect, however its influence on time estimates invites further attention.

General Observations based on Qualitative Data

- Different time perception by different groups of people, gender difference in time estimates - negative distortion is more valid for unemployed males and positive distortion for high-income and education, not necessarily related to work condition.
- People seem to be disturbed by personal care questions more due to privacy concerns.
- Volunteer work is limited – more communal in rural and squatter areas and more organized in high-income urban groups. It is overestimated in terms of duration.
- Sport activities are limited for all groups – different perceptions for the same activity: daily and leisurely walk is reported as a sport activity.
- Gender difference in reporting feelings- Females more easily talk about their disliked activities, mainly domestic chores; male talk about obligations and routines when they dislike the activity.
- Religious rituals differ among settlements – rural and squatter settlements practice religion more, daily prayers are common but males go to mosque for praying and socializing with peer, whereas females only pray at home.
- Watching TV is the dominant leisure activity for all groups. For the low-income groups listening to radio accompanies.
- Low-income groups tend to underreport their household income, whereas higher income seems to be more confident to tell accurate estimates.
- There appears to be a positive relation between community ties and spatial characteristics, such as better maintenance and cleaning.

Implications for TUS

Qualitative and face-to-face interviews and site-observations seem to be helpful for improving the Turkish time-use surveys. Variety in the time-use patterns of different groups could be covered better with the help of such tools. TURKSTAT studies demonstrated that the average number of primary activities is low – 19- and that there is a lack of information on secondary activities (personal interviews, 2006,

2007). Activity lists and face-to-face interviews provided us the opportunity to ask activities one by one and reduced the number of missing activities. TURKSTAT also questions if 10-minute intervals are appropriate for activity recording as it misses the activities with shorter durations. However, it is not realistic to expect people fill up the time diary correctly even for 10-minute intervals. Especially in rural areas of Turkey, illiteracy rate is high. Better option might be a recall interview for such people (UN, 2005). Although interviewers control time diaries in follow-up interviews, there occur problems in recording simultaneous and secondary activities. There are also cases in which activity sequence is not logical or missing. Another important issue is the local dialects that lead to some communication problems between household members and interviewers (for example, “taking a bath” is an activity, which is called differently in various regions of Turkey). This may lead to confusion also in the coding of activities.

Although the response rate is high – above 80 % - according to the officials, this does not reflect a voluntary participation in the Turkish context. It may be an indication of fear from the state authorities in some cases and from being punished by the law, as there is a high fine -500 YTL (more than 250 euros) for refusing to participate in national surveys. TURKSTAT officials stated that this forced people to respond to time-use questions. This may be another cause of incorrect responses. Our sample provided us the opportunity to interview with volunteers only, which is not possible for a national survey. Yet, a kind of incentive should be considered to obtain more reliable results.

TURKSTAT also mentioned that another problem occurred while classifying work and leisure as people does not report some work such as gardening when they see it leisurely. Information about the feelings helped us to determine the activity as work or leisure for each individual.

Our study also indicated that some activities are perceived differently by different individuals. For instance, routine daily walk should be separately asked from jogging or other sport activities as the responses tend to distort the results. Similarly, reading a book should be separated from reading newspaper or magazine as the former is not very frequent in particularly low-income and education groups. A location column seems to be necessary although it is hard to use it as a follow-up in Turkey as geographic information is not well recorded and changes frequently. Our stated indicated that settlement type and facilities had a noticeable influence on leisure

patterns and number of activities. The data gathered through observation for each settlement need to be processed further.

However, we failed to gather information for the physical properties of private spaces as the responses like “living room” or “bedroom” did not give much clue. However, people usually named public spaces more clearly such as “Migros shopping mall” or “Kizilay district” and this information could be further used to match activities with space characteristic.

Acknowledgments

The field survey was conducted with the funds provided by TUBITAK. We are grateful to our two consultants, Dr. Arzu Wasti of Sabanci University and Dr. Andries van den Broek of the Netherlands Institute for Social Research and two student interviewers, Yonca Yildirim and Esin Arsan. We also thank Dr. Omur Kizilgun for her meticulous evaluation of the activity lists and interview notes. TURKSTAT officials Ozlem Sarica and Murat Karakas have always been kind enough to respond to our questions on the Turkish national time-use survey.

References

Alsaker, S., Jakobsen, K., Magnus, E., Bendixen, H.J., Kroksmark, U. & Nordell, K. (2006). “Everyday Occupations of Occupational Therapy and Physiotherapy Students in Scandinavia.” *Journal of Occupational Science*, 13, 17-26.

Budlender, D. & Mpetsheni, Y. (1999). “Dealing with Diversity: Measuring Time Use in South Africa.”, paper presented in IATUR Conference, University of Essex, UK, October, 6-8.

Erdil, E., Eruygur, O. & Kasnakoglu, Z. (2006). “Time Use in Rural Areas: A Case Study in Turkey.” Ankara: Middle East Technical University, ERC Working Papers in Economics 06/02.

Erkip, F. (2006). “Time Use Survey in Turkey: Methodological Issues”, paper presented in IATUR Conference, Copenhagen, August 16-19, 2006.

Erkip, F. & Mugan, G. “The importance of Time-use Surveys for Social Sciences, Potential Applications and Uses in Turkey.”, the project granted by The Scientific and Technological Research Council of Turkey, work in progress.

Erlandsson L. K. & Eklund, M. (2006). “Levels of Complexity in Patterns of Daily Occupations: Relationship to Women’s Well-Being.” *Journal of Occupational Science*, 13, 27-36.

EUROSTAT (2000a). *Survey on Time Use: Activity Coding List*, Final Draft, Luxembourg: European Commission.

EUROSTAT (2000b). *Guidelines on Harmonized European Time Use Surveys*, Luxembourg: European Commission.

Haraldsen, G. (2000). "A Framework for Data Collection on Time-Use: Relating Objectives, Design and Resources.", paper presented at UN Expert Group Meeting, New York, 23-27 October.

Haraldsen, G. (1999). "The Design of Time Use Surveys in Developed and Developing Countries.", paper presented in IATUR Conference, University of Essex, UK, October 6-8.

Kasnakoglu, Z. & Dayioglu, M. (2002). "Measuring the Value of Home Production in Turkey." In T. Bulutay, (Ed.) *New Developments in National Accounts*. pp. 73-97.

Kasnakoglu, Z., Dayioglu, M. & Erdil, E. (1996). "Time Use Estimation of Value of Household Production" ERC Working papers, n.96/07.

Michelson, W. (2005). *Time Use: Expanding the Explanatory Power of the Social Sciences*. London: Paradigm Publishers.

Mugan, G. and Erkip, F. (2007) "Increasing the Effectiveness of Time-Use Survey with Qualitative Methods", paper presented in ESRA Conference, Prague, June 25-29.

Personal Interviews:

- with Özlem Sarica and Murat Karakas, March, July, December 2006, June 2007, TURKSTAT, Ankara.

Skevington, S.M., Sartorius, N., Amir, M. & WHOQOL-Group (2004). "Developing Methods for Assessing Quality of Life in Different Cultural Settings." *Social Psychiatry*, 39, 1-8.

Tashakkori, A. & Teddlie, C. (2003). "Major Issues and Controversies in the Use of Mixed Methods in the Social and Behavioral Sciences." In A. Tashakkori and C. Teddlie, (Eds.) *Handbook of Mixed Methods in Social and Behavioral Research*. (pp. 3-50) California: Sage Publications.

Tashakkori, A. & Teddlie, C. (1998). *Mixed Methodology: Combining Qualitative and Quantitative Approaches*. California: Sage Publications.

UN (2005). *Guide to Producing Statistics on Time Use: Measuring Paid and Unpaid Work*, New York: UN, Dept. of Economic and Social Affairs.

Whiteford, G. & Barns, M. (1999) "Te Ao Hurihuri: New Zealand's First Time." In W. E. Pentland, A.S. Harvey, M. P. Lawton and M. A. McColl (eds.) *Time Use Research in the Social Sciences*. (pp. 211-230) New York: Kluwer Academic.

Zemke, R. (2004). "Time, Space and the Kaleidoscopes of Occupation.", The 2004 Eleanor Clarke Slagle Lecture, *American Journal of Occupational Theory*, 58, 608-620.

APPENDIX A
Predefined activity list

Weekend Weekday Day:
 Typical Atypical

Wake-up in the morning:
Going bed at night:

| Activities (involves activities starting from waking-up in the morning till going bed at night) | Time interval * M – Morning N – Midday E – Evening | How much time did you spend? | Do you like it? | With whom did you do this activity? | Where were you? (including the vehicle) | For whom did you that? | What else were you doing? |
|--|---|---|----------------------------------|--|--|---|--|
| 1 – Sleeping, resting, sleeplessness | | | | | | | |
| 2 – Personal hygiene | | | | | | | |
| 3 – Having breakfast | | | | | | | |
| 4 – Eating at home | | | | | | | |
| 5 – Personal care, relaxing | | | | | | | |
| 6 – Travel for personal care | | | | | | | |
| 7 – Paid work at main job | | | | | | | |
| 8 – Paid work at home | | | | | | | |
| 9 – Job search | | | | | | | |
| 10 – Unpaid voluntary work | | | | | | | |
| 11 – Travel to/from work | | | | | | | |
| 12 – School, classes, attending at educational courses, academic courses, job related training | | | | | | | |
| 13 – Homework, study, research | | | | | | | |
| 14 – Travel to/from study | | | | | | | |
| 15 – Shopping | | | | | | | |
| 16 – Shopping malls, City center | | | | | | | |
| 17 – Travel for shopping | | | | | | | |
| 18 – Housework, food and drink preparation/clean up, washing up | | | | | | | |
| 19 – Laundry and clothes care | | | | | | | |
| 20 – Home maintenance, gardening, care of pets | | | | | | | |
| 21 – Travel for domestic work | | | | | | | |
| 22 – Child care | | | | | | | |
| 23 – Care of children, teaching, helping | | | | | | | |
| 24 – Playing, reading, talking with children | | | | | | | |

| Activities (involves activities starting from waking-up in the morning till going bed at night) | Time interval * M – Morning N – Midday E – Evening | How much time did you spend? | Do you like it? | With whom did you do this activity? | Where were you? (including the vehicle) | For whom did you do that? | What else were you doing? |
|--|--|------------------------------|-----------------|-------------------------------------|---|---------------------------|---------------------------|
| 25 – Care of adults and elderly | | | | | | | |
| 26 – Travel for child, adult and elderly care | | | | | | | |
| 27 – Watching TV/video/DVD | | | | | | | |
| 28 – Listening to radio/music | | | | | | | |
| 29 – Internet use, e-mail, chatting | | | | | | | |
| 30 – other computer use | | | | | | | |
| 31 – Reading paper and magazines | | | | | | | |
| 32 – Religious activities, visiting mosque | | | | | | | |
| 33 – Cultural and community participation, doing civic duties | | | | | | | |
| 34 – Travel for cultural and community participation, civic duties | | | | | | | |
| 35 – Participating in sports | | | | | | | |
| 36 – Having guests | | | | | | | |
| 37 – Visiting friends | | | | | | | |
| 38 – Restaurants, cafes, <i>kahvehane</i> , <i>meyhane</i> , pubs, clubs | | | | | | | |
| 39 – Cinema, theatre, concerts, museums, matches and games | | | | | | | |
| 40 – Talking on the phone | | | | | | | |
| 41 – Writing/reading own correspondence | | | | | | | |
| 42 – Walking | | | | | | | |
| 43 – Zoo, theme park | | | | | | | |
| 44 – Parks, forests, beaches | | | | | | | |
| 45 – Playing games, dealing with hobbies, arts, crafts | | | | | | | |
| 46 – Having coffee, tea, smoking | | | | | | | |
| 47 – Entertaining friends | | | | | | | |
| 48 – Doing nothing, idleness | | | | | | | |
| 49 – Travel for leisure | | | | | | | |
| 50 – Spending time on other things Please indicate: | | | | | | | |

APPENDIX B Matrix of the Sample Size

| Settlements | Type of Settlement | Gender | Literacy | Working | | Name of the respondent | Interview day | Address | Telephone |
|-------------|------------------------------|-------------|-------------|---------|---|------------------------|---------------|---------|-----------|
| Urban | Gated communities | Female | Literate | Working | 1 | | | | |
| | | | | | 2 | | | | |
| | | | Non-working | 1 | | | | | |
| | | | | 2 | | | | | |
| | | | Illiterate | Working | 1 | | | | |
| | | | | | 2 | | | | |
| | | Non-working | 1 | | | | | | |
| | | | 2 | | | | | | |
| | | Male | Literate | Working | 1 | | | | |
| | | | | | 2 | | | | |
| | | | Non-working | 1 | | | | | |
| | | | | 2 | | | | | |
| | Illiterate | | Working | 1 | | | | | |
| | | | | 2 | | | | | |
| | Non-working | 1 | | | | | | | |
| | | 2 | | | | | | | |
| | Traditional apartment blocks | Female | Literate | Working | 1 | | | | |
| | | | | | 2 | | | | |
| | | | Non-working | 1 | | | | | |
| | | | | 2 | | | | | |
| | | | Illiterate | Working | 1 | | | | |
| | | | | | 2 | | | | |
| | | Non-working | 1 | | | | | | |
| | | | 2 | | | | | | |
| Male | | Literate | Working | 1 | | | | | |
| | | | | 2 | | | | | |
| | | Non-working | 1 | | | | | | |
| | | | 2 | | | | | | |
| | Illiterate | Working | 1 | | | | | | |
| | | | 2 | | | | | | |
| Non-working | 1 | | | | | | | | |
| | 2 | | | | | | | | |

| | | | | | | | | | |
|-------------|---------------------------|-------------|-------------|-------------|---|--|--|--|--|
| Rural | Traditional rural village | Female | Literate | Work | 1 | | | | |
| | | | | 2 | | | | | |
| | | | Non-working | 1 | | | | | |
| | | | | 2 | | | | | |
| | | Illiterate | Work | 1 | | | | | |
| | | | | 2 | | | | | |
| | | | Non-working | 1 | | | | | |
| | | | | 2 | | | | | |
| | | Male | Literate | Work | 1 | | | | |
| | | | | | 2 | | | | |
| | | | | Non-working | 1 | | | | |
| | | | | | 2 | | | | |
| | Illiterate | | Work | 1 | | | | | |
| | | | | 2 | | | | | |
| | | | Non-working | 1 | | | | | |
| | | | | 2 | | | | | |
| | Squatter's house | Female | Literate | Work | 1 | | | | |
| | | | | 2 | | | | | |
| | | | Non-working | 1 | | | | | |
| | | | | 2 | | | | | |
| | | | Illiterate | Work | 1 | | | | |
| | | | | | 2 | | | | |
| | | Non-working | | 1 | | | | | |
| | | | | 2 | | | | | |
| Male | | Literate | Work | 1 | | | | | |
| | | | | 2 | | | | | |
| | | | Non-working | 1 | | | | | |
| | | 2 | | | | | | | |
| | Illiterate | Work | 1 | | | | | | |
| | | | 2 | | | | | | |
| Non-working | | 1 | | | | | | | |
| | | | 2 | | | | | | |

APPENDIX C Observation Sheet

Type of Settlement:

Detached house: Villa Squatter's house Village house

Gated community apartment block Traditional apartment block

| Physical conditions | Existing/not existing, few/many, distant/close | Well-cared/neglected | Visual document (yes/no) |
|--|---|-----------------------------|---------------------------------|
| Physical infrastructure of the settlement | | | |
| Security cameras, security guards | | | |
| Green area | | | |
| Parking lot | | | |
| Children's playground park | | | |
| Distance to main roads | | | |
| Distance to bus/minibus stops | | | |
| Shopping mall, supermarket, bazaar | | | |
| Cafe, <i>kahvehane</i> , bar, club, restaurant, cinema, mosque | | | |
| School, university, nursery | | | |
| Traffic, traffic noise | | | |
| Crowding | | | |
| Police station | | | |
| Hospital, polyclinic, pharmacy | | | |
| Pedestrian area, walking area | | | |
| Environmental maintenance | | | |
| Dustbin | | | |
| Garbage | | | |
| Hygienic conditions | | | |
| Other (please indicate) | | | |