The class divide in urban Indian youths' lives; their time-use and adaptive functioning

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CHAPTER 1

GENERAL INTRODUCTION

Studies on Time-Use

Historically, the study of time was used in the field of labour economics in the Soviet Union of 1920's for measuring worker productivity or "human capital." It eventually gained in popularity as an indicator of social and developmental progress in children and adolescents as well (Fiorini & Keane, 2014). Comparative studies of youth time-use augment our understanding of how cultural contexts shape the substance and rate of child development.

In 1999 Larson and Verma published a review titled "How children and adolescents spend time across the world: Work, play, and developmental opportunities." In this review they present two important developmental principles: interiorization and time as a developmental resource. Both are closely linked. The various contexts in which children spend time are referred to by Larson and Verma as "experiential niches" characterized by specific rules, scripts and goals that determine the type of activities and the quality of the activities that children get involved in and that determine their emotional, motivational, and learning experiences. They further contend that the amount of time spent on an activity or being engaged with a particular experiential niche tells us with what intensity and for how long children are exposed to or engaged with particular experiences. Hence, it provides an index of immersion in and incorporation or interiorization of the experiences. If the time and activity are self-chosen the children practice their self-direction and may develop autonomy, whereas important other activities that are chosen and steered by others, mainly adults, may provide opportunities for learning skills and knowledge that are important for schooling, career opportunities and other aspects of social participation in the community of which the child is a member.

Most studies that were reviewed by Larson and Verma gave input to these two principles. They demonstrated that children from different countries differ in the time they spend on particular activities like doing homework, playing, doing chores, working or watching television and that correspondingly these children differed in school relevant learning and such developmental characteristics as autonomy. Apart from the link between time spent on activities and children's development or later roles in life,

Larson and Verma (1999) showed that differences in time-use of children are closely linked to time-use of parents, to subsistence strategies they use, to the values and norms that guide their lives and the socialization goals they hold. Later studies mainly led to more evidence in support of the Larson and Verma review or presented more detailed information with respect to such issues as gender related socialization and developmental chances of boys and girls (cf. Lloyd, Grant, & Ritchie, 2008). Another favorite topic in comparative time-use studies concerns the role of school selectivity, the importance attached to school education and exams, and the related differences in youths' time-use in different countries (Newman, et al. 2007). Studies in this domain are conducted in the expectation that they augment or specify our knowledge of how cultural contexts within or between particular regions shape the substance and rate of youth's development or adaptive functioning.

The present study shares this same expectation and focuses on youth in India, specifically Pune, an urban conglomerate in West India, near Mumbai. The study is comparative in that it seeks to clarify differences in the lives of rich and poor Indian youth and highlights the related differences in terms of schooling opportunities and subsistence methods (Newman et al., 2007) and how these are reflected and shaped in differences in time-use.

There has been only one Indian pilot national time-use study, the Indian Time-Use Survey of 1999 conducted by the Central Statistical Organization of India with a sample of 1,066 rural and 488 urban towns from six Indian states. The objective was to inform national policy and similar future studies (Hirway, 2010). Maharashtra was not included in this study. Hirway (2010) pointed out the extensive sociodemographic and cultural diversity of India making designing a time-use study not only a formidable feat in this scenario, but also different from methodologies used in more developed countries. She particularly emphasized the uselessness of diaries in a country with a high illiteracy rate, and the impracticality of using observation data for a national study. The only recourse available was using previous day recall and interviews. With our interest in youth education and development in mind, a major drawback of the Indian Time-Use Survey was that it did not gather direct child or adolescent reports. It rather extrapolated information on youth, based on adult (usually parent) reports. Other smaller scale Indian time-use studies with children and adolescents have been conducted but only in part, in that they single out time-use categories and address them (Makel, Wai, Putallaz, & Malone, 2015; Rustagi, 2009; Saraswathi & Sridharan, 1991; Saraswathi & Dutta, 1988; Verma, Sharma & Larson, 2002). As a consequence these studies only provide part of the picture of how Indian youth spend time. Moreover, only

very few social science researchers have followed strict time-use methodologies (Verma, et al., 2002), with others being more observational in nature (Saraswathi & Dutta, 1988) or focussing on restricted and highly educated cohorts (Makel et al., 2015). A common limitation through all these studies is that none of them include participants from the whole SES range; lower, middle and upper class. When studying the urban city contexts, majority studies focus on middle and upper class youth (Makel et al., 2015; Verma, et al, 2002). The time-use categories such as sleep, physical activity levels, screen time, child labour and time spent in academic activities of poor youth have been grossly understudied and under-reported. Studies that report child labour focus on out-of-school youth, completely neglecting those children that both go to school and perform labour pre- and post-school hours. Moreover, they often neglect household chores (Rustagi, 2009). In the study to be presented in this thesis we tried to overcome these shortcomings. We put the time-use of privileged Indian urban youth in perspective by comparing them to Indian urban youth from lower SES backgrounds.

As has been pointed out and will be further clarified in later chapters, there is little time-use research on poor youth in developing countries like India and the reasons are evident. Researchers have difficulty in engaging these youth in their studies most likely because poorer youth are either busy with other commitments (labour), or frequently incapable of participating in research (limited literacy). Besides these reasons, researchers cannot or are not willing to invest means to engage lower SES youth, nevertheless. This makes the current study unique.

A second important asset of the study to be presented in this thesis is that, whereas earlier studies predominantly used preselected time-use categories, the current study starts with accounts of time-use that make sense to the youth and have a link with both personal interest and personal development, as well as with developments in their specific social-historical contexts (Vedder, 1986).

Socio-Economic Status (SES) differences in Indian youth

According to Dreze and Sen (2013), India is a country of contradictions characterized by a steady national growth rate on the one hand and a high unemployment rate on the other, leading to a stark contrast between high and low socio-economic strata. Moreover, India is a society that for long has been organized as a gendered caste system (Saraswathi, 2000). India falls behind most South Asian countries on a great number of social indicators (Dreze & Sen, 2013; Indian National Family Health Survey, 2016). Another characteristic important for the current study is

that over 36% of the world's youth live in India (UNFPA, 2015). Conditions under which they are raised and develop, depend largely on their class status. Material wealth as well as social wealth offer access to opportunities that can contribute to youth well-being. Environments in which water and food scarcity, reduced access to good sanitation, education and healthcare is the norm are more likely to lead to negative or suboptimal developmental outcomes for youth (Bentley et al., 2015; UNICEF, 2015). How much time youth spend in such settings with whom, and for what purpose can be more or less detrimental to their well-being (Lam & McHale, 2015). There are even those youth raised in impoverished environments who despite their odds, have good developmental outcomes. To what extent then, do activity choices and how youth structure their day influence these developmental outcomes? Is time spent in private schools more productive than the same amount of time spent in public schools (De, Khera, Samson, & Kumar, 2011)? Do youth from poorer Indian backgrounds sleep, play, study, and use screens, more or less than those from richer backgrounds and is this beneficial or detrimental to their physical, linguistic and mental development (Lam & McHale, 2015; Larson & Verma, 1999)? Time-use studies help in answering these questions.

The chapters in the present thesis share an underlying theme of class differences and highlight the interdependence amongst Indian indicators of material circumstances including religion and caste and the hierarchy in access to resources determined therein (Meenakshi & Ray, 2002; Thorat & Neuman, 2012; Zacharias & Vakulabharanam, 2011). The goal of the thesis is to analyze the role of SES differences in the correspondence between time-use and youth's adaptive functioning in terms of language competence and mental health, i.e., the extent to which youth steer clear of externalizing and internalizing problems.

Current study

A focus on youth. The present study chose to include 10 to 15 year olds in part because these youth are able to reliably narrate details about their time-use. More importantly, the age from 10 to 15 years is a period of neurobiological significance in terms of functional brain organization and brain plasticity, affecting and being affected by time-use categories such as sleep duration (Ernst, 2016; Johnson, Riis, & Noble, 2016; Wilcock, 2002), in addition to being a period of role transition and evolving sex differences (Saraswathi & Oke, 2013). A practical argument for this inclusion is that the chance of older children being able to complete linguistic written tests, particularly amongst the public schools who struggle with literacy issues, is higher than amongst

elementary school children (De et al., 2011).

Time-use methodology. The time-use study related in this thesis sequentially quantifies how youth spend every minute of their day in various contexts including at home, in school and out-of-school (Larson, 2001). Such a study records the beginning and end of activities that participants take part in, and spans 24-hours. Our study divided these hours into 144 ten-minute epochs that lasted at least one weekday and one weekend day. Such a record reflects a participants daily life experience as well as the resulting opportunities afforded for scaffolding (Brooker & Hyman, 2010; Larson & Verma, 1999). The strength of such a study comes from the detail with which activities are tracked (Ferrar, Chang, Li & Olds, 2013). Given that the activities that youth engage in are a manifestation of their competences and capabilities of adapting to conditions, the selection of activities youth engage in tells us a lot about these competences, capabilities, health and wellbeing. This is particularly clear from a phenomenon called time-displacement; the trade-off made when one activity is chosen instead of another, given the finite nature of time (Pentland, Harvey, Lawton & McColl, 2002). Time-displacement is at stake, for instance, when children who need to do homework, decide to watch television instead. Time-use categories incorporated in the present thesis included sleep, physical activity time, screen time, academic work time and child labour. Other categories of personal time; travel time and discretionary or leisure time are coded and scored but were not reported in the present thesis. Also with whom and where youth were while performing activities as well as their level of engagement are coded but not included in the present thesis.

Adaptive functioning. Adaptation outcomes chosen include physical outcomes like heights and weights of youth due to the strong relation of socio-demographic factors and time-use with nutrition and energy expenditure (Childers & Chiou, 2015; Patel, Badhoniya, Dibley, & Raynes-Greenow, 2015), but also because stunting, overweight and underweight affect quality of life, morbidity and mortality rates (Pal, Kanungo, Bal, Bhowmik, Mahapatra, & Sarkar, 2016). Written English language proficiency was chosen because knowledge of English in school-going youth instructed, at least in part, in English, reflects the susceptibility to processes of scaffolding that take place in school (Nelson, & Sheridan, 2011) as well as the accessibility to high quality educational and medical institutions that are predominantly English language institutions (Muralidharan, & Kremer, 2008). Lastly, mental health outcomes, more specifically internalizing and externalizing problem behaviour were chosen because they directly affect present and future quality of life (Mokdad et al., 2016). In combination physical, linguistic, and mental health outcomes

should give us a fair picture of Indian youths' adaptive functioning and help in understanding how SES and time-use shape developmental trajectories and determine future life chances for Indian youth.

The Structure of this Thesis

The thesis begins with a review of the educational and developmental contexts of school-going Indian youth aged 10 to 15 from Pune, an urban city in Maharashtra state, West of India. The chapter highlights Socio-Economic inequalities in Indian schools, work, and home environments drawing on the Super and Harkness (1986; 2002) model of "developmental niche." In this model the physical and social settings of youth development including both the family and school, Hindu customs of childcare in India and ethnotheories of Hindu-Indian parents including who is considered an ideal child or ideal parent, are dealt with. While dealing with these cultural constructions, particular emphasis on rich and poor contrasts is given. This chapter should function as a short introduction to the educational and developmental situation in which Indian urban youth live and grow up. It should support readers not knowledgeable of Indian urban life to appreciate the meaning and relevance of the study conducted and the findings presented in the coming chapters. In supporting readers' appreciation it should also facilitate informal, implicit comparisons with studies in settings, regions and cultures of which the readers are more knowledgeable.

Chapter 3 deals with validation of the Family affluence scale (FAS II), a popular asset-based indicator of youth Socio-Economic Status used in over 44 countries (Boudreau & Poulin 2009; Currie, Elton, Todd, & Platt, 1997; Kehoe & O'Hare, 2010; Liu et al., 2012; Molcho, Gabhainn, & Kelleher, 2007; Torsheim et al., 2015). Since we study the time-use of youth in relation to their SES, having a reliable and valid indicator of youth SES in India, is a pre-requisite. We chose an instrument that is both internationally recognized, feasible to administer and can be of great value to Indian social and health scientists.

The chapter on FAS II reports the reliability, concurrent and predictive validity of the scale while comparing it to socio-culturally relevant economic indicators in India such as caste status, heights, weights and body mass indexes of children, enrollment in public or private schools, and the more conventional indicators including the educational and occupational status of parents, family size and number of siblings. Doing so gives credence to FAS II as an authentic indicator of material affluence and family wealth that is culturally relevant and statistically robust. The following chapters

use this instrument to distinguish between the rich and poor and their circumstances, how they use their time and the resulting developmental outcomes.

The fourth chapter studies the relation of SES with sleep. Sleep is obviously a very important activity in youth's lives, especially during puberty, a period when neurobiological processes affect how much sleep is needed for optimal cognitive and emotional functioning (Ernst, 2016; Johnson, Riis, & Noble, 2016; Wilcock, 2002).While western studies point to environmental components such as noise, traffic, and crime rate, aside from emotional problems as reasons for youth from a lower SES sleeping less than those from higher SES (DeSantis, Roux, Moore, Baron, Mujahid, & Nieto, 2013), in India we see that especially middle and higher SES youth are faced with a substantial academic study load, and are known to "burn the midnight oil" much more than their lower SES counterparts (Deb, Strodl, & Sun, 2015). This leads us to believe that a reverse sleep trend would be witnessed in Pune. If proven, we are then faced with the question, how would the relationship of other time-use indicators such as physical activity time, screen time and academic time relate to sleep in rich versus poor children? This chapter is important because western literature is largely inconclusive on these relations. Moreover, very few studies on time-use in India address the lowest socio-economic strata (Dinakar, Galagali, Kumar, & Abhishekh, 2014). This particular chapter analyses whether youth's physical activity, screen time and academic work mediate the relationship between SES and sleep duration. We test these mediators simultaneously so that interrelations between them are controlled for in the analyses. This allows us to clarify a pivotal question to understanding youth development: can each time-use variable individually add to the explanation of the relation between youth's SES and their sleep duration?

Whilst chapter 4 was about the relations between SES and time-use categories, the fifth chapter focuses on youth's adaptive functioning and answers the basic and main question in this thesis "does it matter for youth development on what or how they spend their time?" For middle class and richer youth in India, parents value academic success, while failure brings a family disgrace and is shameful for the child. The motivation therefore is to avoid failure at all costs, but also to excel academically (Verma et al., 2002; Verma & Sharma, 2003). For poorer youth, the focus is on child labour. India is known to have the largest number of working children in the world, a number that is grossly underestimated, in any case because it excludes consideration of domestic chores as work (UNICEF, 2015). With limited access to automated machines or staff and having to face severe economic hardships, poorer children assist with babysitting, household chores, apprenticing or other activities that allow their parents to do paid

labour and reduce the families' economic burden (Larson & Verma, 1999; Rustagi, 2009). Youth may also work in family enterprises (Saraswathi & Oke, 2015). In chapter 4 we focus on three time use categories that are important or relevant to 10-15 year old urban Indian youth, namely, sleep, academic work, and labour. We analyze how these categories are related to linguistic and mental health outcomes. Because time spent in child labor, academic work and sleep may be related and hence one may displace the other, in this final analyses we include all three time-use variables simultaneously in the equation.

Our hypotheses with regard to time-use and youth development are as follows: We expect lower SES youth to spend more time on labour and sleep but less time on academic work than their higher SES counterparts. It is not known whether these time-use categories mediate SES and linguistic or mental health outcomes in the Indian context. We hypothesize higher SES youth as reporting fewer mental health problems and having better linguistic outcomes. We further hypothesize that these relationships would be mediated by time-use categories, specifically, the time youth spend in labour and academic work. We hypothesize that more child labour predicts worse language proficiency and more mental health problems and that academic time predicts better language proficiency and less mental health problems. Sleeping patterns can be strongly predictive of both linguistic scores and mental health problems. Because what counts as 'sufficient sleep' may vary largely between cultures, and Indian studies on this topic are lacking, we do not formulate any hypotheses on the relation between sleep and linguistic or mental health outcomes.

Ultimately, we end with the general discussion. Having presented the educational and developmental contexts of rich and poor Indian youth, their time-use differences and how these are related to developmental outcomes, we argue and discuss implications for policy development and implementation ending with a presentation of limitations of our study as well as suggestions for future research.

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