

*Études longitudinales et défis démographiques  
du 21<sup>e</sup> siècle*



*Longitudinal Studies and Demographic Challenges  
of the 21st Century*

**RÉSUMÉS**  
**ABSTRACTS**

**FÉDÉRATION CANADIENNE DE DÉMOGRAPHIE**  
**FEDERATION OF CANADIAN DEMOGRAPHERS**

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## **Analyse biographique de la transformation des modèles matrimoniaux dans quatre capitales africaines**

Depuis une trentaine d'années, un certain nombre de changements se produisent au sein des sociétés africaines. En particulier, l'accentuation des difficultés économiques provoque un retard important de l'âge au premier mariage, la polygamie se complexifie et les unions se trouvent davantage fragilisées. De nouveaux rapports de conjugalité émergent avec la reconfiguration des rapports de genre au sein des ménages. La scolarisation des jeunes filles et les difficultés économiques ne sont pas étrangères à ces transformations. Privilégiant une approche comparative et en s'appuyant sur une série de 4 enquêtes biographiques originales conduites à Yaoundé (1996), à Antananarivo (en 1998) à Lomé (2000) et à Dakar (2001) nous examinerons les transformations profondes qui affectent le mariage en Afrique et tenterons d'expliquer les évolutions en cours à l'aide d'analyses biographiques (courbes d'Aalen et modèle de Cox).

Les analyses biographiques confirment le recul de l'âge au mariage conditionné en particulier par la dégradation de l'emploi pour les hommes. L'évolution des comportements matrimoniaux suit toutefois des parcours fort différents d'une capitale à l'autre. Les changements sont tributaires des attentes du mariage et de la place faite aux femmes qui n'obéissent pas en Afrique à un schéma unique. Par exemple à Lomé où le niveau d'activité des femmes est bien plus élevé, les changements sociaux qui sont à l'œuvre concernent plus les femmes que les hommes. Dans d'autres villes, comme Dakar, les femmes restent plus dépendantes des hommes, en raison des rôles qui leur sont prescrits en tant qu'épouses.

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## **The Effects of Physical Activity on Bone Mass Development: A 15-year Prospective Study During Adolescence and Young Adulthood**

Physical activity may be one of the most important modifiable factors for accretion of bone mass in childhood and adolescence. To distinguish the time dependant effects of physical activity from those of growth and maturation individual growth trajectories must be identified

### Purpose

To characterize patterns of individual's total body bone mineral content (TBBMC) accrual.

### Methods

Subjects were part of the Saskatchewan Bone Mineral Accrual Study (BMAS) (1991-1998, 2002-2005). In 1991 228 boys and girls were enrolled in the study (aged 8 to 15 years). By 2004 it was possible to estimate a consecutive 19-year developmental pattern. Height, physical activity, TBBMC, lean and fat mass was assessed annually by DXA (Hologic 2000). Physical activity was determined using a physical activity questionnaire. Biological age was defined as years from age of peak height velocity. Data were analyzed using random effects models.

### Results

The average lines of TBBMC with age appear to plateau around 20 years of age. During childhood the fixed coefficients that significantly predicted TBBMC were biological age (years) ( $69.1\text{g} \pm 6.7\text{g}$ ,  $p>0.05$ ), height (cm) ( $6.5\text{g} \pm 1.2\text{g}$ ,  $p>0.05$ ), lean mass (g) ( $0.031\text{g} \pm 0.001\text{g}$ ,  $p>0.05$ ), fat mass (g) ( $0.009\text{g} \pm 0.001\text{g}$ ,  $p>0.05$ ) and physical activity ( $11.2\text{g} \pm 5.2\text{g}$ ,  $p>0.05$ ). Sex however was not a significant predictor of TBBMC ( $-20.6\text{g} \pm 18.9\text{g}$ ,  $p>0.05$ ). For children of the same biological age, height, lean and fat mass, TBBMC was 56 g higher in the most active child (physical activity = 5) compared to the least active one (physical activity = 1).

### Conclusion

Longitudinal growth models show that physical activity has a significant independent effect on TBBMC accrual during the growing years.

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## **Enquêtes longitudinales et migrations internationales : Un bilan méthodologique**

Dire des migrations internationales qu'elles constituent un enjeu politique fondamental pour le siècle qui s'ouvre relève désormais du lieu commun. Le thème est désormais sur l'agenda des grands organismes internationaux et constitue une préoccupation majeure de la plupart des gouvernements. L'enjeu politique est d'autant plus grand que, pour l'heure, les politiques migratoires entreprises, en particulier dans les pays développés, conduisent souvent à des résultats médiocres, voire même à des résultats opposés à ceux qui étaient visés. Ces résultats paradoxaux soulignent la nécessité d'engager des études approfondies pour mieux saisir les processus en œuvre et ainsi mieux définir les politiques à entreprendre.

L'objet de notre communication est méthodologique. On propose une analyse critique des expériences d'enquêtes longitudinales portant sur les migrations internationales. Au-delà des données de panels qui renseignent surtout sur les processus d'intégration des immigrants, on s'intéressera aux enquêtes qui permettent une approche bipolaire de la migration internationale, c'est-à-dire des enquêtes qui tiennent compte non seulement des entrées mais aussi des sorties. Seules de telles enquêtes permettent d'étudier, de manière quantitative, les déterminants des migrations internationales, c'est-à-dire les logiques qui poussent les individus à quitter leur pays, et éventuellement à y revenir. Après avoir examiné les apports et limites des données de panels, notre analyse portera en particulier sur les enquêtes suivantes : REMUAO (Réseau d'enquête sur les migrations et l'urbanisation en Afrique de l'ouest, 1992-1993), MMP (Mexican Migration Project, 1982-2004), Enquête française sur la migration des natifs et résident des DOM (1991-1992).

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## **Understanding the dynamic determinants of Italy's very Low fertility**

The unexpected pattern of sustained low fertility in a number of industrialized societies is well documented, yet its persistence remains poorly understood. The Italian case has attracted attention not only because of its extremely low fertility, but because it so dramatically contradicts the predictions of prevailing theories. The Italian case is not fully explained by economic theories or related policy-based explanations since the substantial regional variation in fertility rates does not correlate consistently with the degree of women labor force participation or the presence of family-related services. Similarly cultural theories of secularization and individualization do not seem to apply very well to Italy, one of Europe's most family-oriented societies.

In order to explain the pattern of low fertility in Italy, we have undertaken a major multi-method investigation integrating ethnographic fieldwork with longitudinal and contextual data analysis. In the quantitative part of the investigation, we examine a nationally representative prospective survey of nearly 10,000 adults, the *Indagine Longitudinale sulle Famiglie Italiane* (ILFI or *Italian Households Panel*) for the years 1997, 1999, and 2001. We use event history techniques, focusing on the transitions to first and second birth. We include as covariates family background traits, employment, residence, and partnering histories. Second, we extend the analysis by augmenting the set of covariates with regional-level information coming from very large cross-sectional household surveys. The multilevel model incorporates the characteristics of the community context of the women in the ILFI sample. (words: 236)

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## **Validity of Self-Reports of HIV and Sexually Transmitted Infections in Rural Malawi**

Studies assessing the validity of self-reported measures of sexually transmitted infections (STIs) and HIV are needed for planning preventive and treatment services. Research on the occurrence and correlates of HIV and STIs should ideally be based on laboratory-confirmed antibody test results. In most developing countries, however, laboratory confirmation is not generally possible (especially in rural areas) and only self-reports of symptoms or perceived risk are available. The decision on whether to use these reports rests on the extent of the bias it will introduce in estimates of HIV/STI prevalence in the population under study.

This paper examines the validity of self-reports of HIV and STIs in rural Malawi, and the predictive validity of perceived risk, socioeconomic characteristics and social stigma to detect inaccurate self-reports. The data for this study come from the 2004 Malawi Diffusion and Ideational Change Project, a panel household survey that collected both behavioural and biomarker data for a sample of approximately 4000 respondents in rural Malawi. Since 1998, the Malawi Diffusion and Ideational Change Project (MDICP) has collected longitudinal data on a population-based sample of approximately 2500 adult respondents to examine the role of social networks in changing attitudes and behaviour regarding family size, family planning, and HIV/AIDS in rural Malawi. The first round of the survey (MDICP-1) was carried out in the summer of 1998, and interviewed 1541 ever-married women of childbearing age and 1065 husbands of the currently married women in three Malawi districts (Balaka in South, Mchinji in the Centre and Rumphu in the North). In the summer of 2001, the second round of the survey (MDICP-2) followed up the same respondents (if still eligible), and also interviewed all their new spouses. The third wave of the survey, carried out in the summer of 2004 with the original adult sample and an additional sample of approximately 1500 adolescents, included for the first time a testing component for treatable STIs (*Chlamydia trachomatis*, *Neisseria gonorrhoea* and *Trichomonas vaginalis* for women; *Chlamydia trachomatis* and *Neisseria gonorrhoea* for men) and HIV. A group of trained nurses were responsible for the collection of biomarkers immediately following the main survey interview, and to communicate the test results to respondents within four weeks of specimen collection. The nurses were also responsible to provide appropriate treatment for the diagnosed STIs, and counselling to the respondents infected with HIV.

To investigate the validity of self-reported HIV and STIs, actual HIV/STI antibody status was compared with self-reported likelihood of having the infection at the time of the survey. “Accurate” respondents provided responses that corresponded to their test results. “False

positive” reports were provided by respondents who self-reported to have some likelihood of infection at the time of the survey but whose antibody test resulted negative. “False negative” reports were provided by respondents who self-reported to have no likelihood of infection at the time of the survey but whose antibody test resulted positive. Among respondents with positive test results, “minimizers” reported having a low likelihood of infection. “Overreporters” reported having a high likelihood of infection at the time of the survey, but their antibody test result was negative.

Analyses were conducted using the STATA statistical software package. The Kappa measure of reliability was performed to test agreement between positive self-reported likelihood of infection with a positive result from the antibody test. Sensitivity for self-reported HIV/STI was computed as the number of respondents with positive antibody test who also self-reported to have some likelihood (low, medium, or high) to have the condition at the time of the survey divided by the total number of respondents with positive antibody test. To determine whether respondent’s socioeconomic characteristics, perceived individual and community risk of infection, and social stigma related to HIV/AIDS affected the validity of self-reports, I performed multivariate logistic regression analysis of both false-positive and false-negative reports. Finally, I evaluated the positive predictive value of self-reports for measurement of HIV/STIs prevalence in the general population. The positive predictive value was calculated as the number of respondents with positive antibody test who also self-reported to have some likelihood (low, medium, or high) to have the condition at the time of the survey divided by the total number of respondents who reported to have some likelihood (low, medium, of high) to have the condition at the time of the survey.

The misreporting of HIV and STIs in the study suggests that reliance on self-reports may introduce misclassification bias, potentially leading to false conclusions regarding the data efficacy of prevention interventions. This observation highlights the need to validate data from self-reports of HIV and STI risk.

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## **Applying Shared Frailty Models to the Study of Repeated Events: The Dynamics of Leaving and Returning to the Parental Home**

Individual trajectories have long been analysed using “traditional” event history analysis techniques that were focusing on one transition at the time. However, such statistical methods are of little help in modeling processes that involve more than one single change of state. In fact, many life course transitions can be conceptualised as parts of a more general process rather than as isolated events (for instance, obtaining a first job is one of the many steps involved in the lifelong dynamics of individuals’ employment histories). In accordance with this view, we propose to resort to shared frailty models in order to analyse the sequences of repeated events involved in the process of leaving/returning to the parental home. These models are the survival-data analog to random-effects models and make possible the estimation of overall group characteristics (frailties) accounting for intra-cluster correlations. We apply these techniques to retrospective data on nest-leaving drawn from the 2001 General Social Survey on the family in order: 1- to distinguish between the transition level and the individual level (hence allowing to consider more than one departure/return per individual), and 2- to search out for the presence of cohort-specific frailties that could virtually account for the evolution of home-leaving behaviours throughout the last decades, for we hypothesize that the propensity (frailty) to leave the parental home more than once has increased among the younger cohorts.

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## **De l'exploitation des données d'Etat civil pour l'étude de la nuptialité : Application à une commune rurale malgache**

A Madagascar, comme dans beaucoup de pays du Sud, les données démographiques sont rares. Les informations fournies par les recensements ou les enquêtes démographiques et de santé restent limitées pour l'analyse de phénomènes comme la nuptialité. Nous avons choisi de mener notre analyse des comportements matrimoniaux en exploitant les données de l'état civil dans une commune rurale des Hautes-Terres malgaches. Cette source d'information, peu utilisée dans les pays du Sud, est pourtant très riche pour l'analyse de la dynamique démographique et des interrelations entre phénomènes. Non soumise aux erreurs de déclaration d'âge ou de date, aux biais de sélection de population comme dans les enquêtes rétrospectives, elle est parfaitement appropriée à l'analyse démographique longitudinale.

A Madagascar, la fécondité reste élevée mais elle tend à baisser ces dernières années. Dans la région des Hautes-Terres, le mariage est le cadre de la procréation. L'âge au mariage des femmes et des hommes reste précoce et ne marque pas de changements majeurs. La fécondité reste un facteur important pour sceller de manière durable les unions et, à ce titre, la forte fréquence des mariages civils mérite d'être approfondie. Le mariage civil rend plus difficile les séparations, qui ne peuvent être validées que par une procédure de divorce. A ce titre, on peut penser que les femmes s'engageant dans le mariage civil ont déjà ou sont sur le point de faire preuve de leur fécondité.

Nous avons créé, à partir des registres des mariages et des naissances de la commune, une base de données mettant en relation les cohortes de mariages et les naissances survenues dans ces cohortes. Le choix de l'analyse de l'état civil se trouve justifié par les premiers résultats d'une enquête menée dans la commune. Celle-ci a montré l'importance du mariage civil (57,2% des femmes sont mariées civilement) ainsi qu'une forte proportion de naissances enregistrées à l'état civil (69,6%). Dans cette communication, nous proposons une méthodologie d'exploitation de l'état civil que nous appliquons à l'étude des calendriers de la nuptialité et de la fécondité. Nous montrons aussi l'intérêt et les limites que représente l'exploitation de ces données pour la compréhension des phénomènes démographiques.

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## **L'influence des caractéristiques du premier emploi des hommes sur l'arrivée du premier enfant au Canada**

Le passage à la vie adulte se fait de plus en plus différemment d'une génération à l'autre, tant en ce qui concerne l'ordre de succession des événements qu'à ce qui a trait au calendrier de franchissement de chacune des étapes de ce processus. Une de ces étapes, l'arrivée du premier enfant, est considérée ici en lien avec les caractéristiques du premier emploi. Dans quelle mesure et comment, d'une génération à l'autre, l'accès au premier emploi en qualité de salarié ou de travailleur autonome permet-il de mieux comprendre le report de la première naissance ? Pour tenter de répondre à cette question, nous utiliserons les données canadiennes longitudinales à caractère rétrospectif issues de l'Enquête Sociale Générale sur la famille de 2001, auxquelles seront appliquées les méthodes d'analyse biographique. L'hypothèse, d'une différence dans la transition vers la condition de parent en fonction des caractéristiques du premier emploi est soumise à l'épreuve des données. On s'attend à ce que, toutes choses égales par ailleurs, les salariés à plein-temps et les travailleurs autonomes deviennent plus rapidement parents par rapport aux salariés occupant le premier emploi à temps partiel. Derrière cette hypothèse, se profile l'idée qu'un premier emploi à temps partiel est plus une contrainte de la conjoncture économique qu'un choix délibéré des individus. Afin de saisir les différences sociales, l'analyse sera stratifiée selon le sexe et le groupe de générations de naissance. L'étude s'intéresse aux biographies des hommes et des femmes nés entre 1930 et 1971.

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## **From Healthy to Unhealthy: An Investigation of the Deteriorating Health Outcomes of Immigrant Populations**

A common American conception is that immigrant populations come to the United States with a host of health concerns that put a drain on the US economy. However, studies reveal that the opposite is true. Often referred to as the “epidemiological paradox”, immigrants come to the United States with much better health outcomes than the native born population but over time, their health outcomes become more similar to native born residents the longer they reside in the U.S. This pattern appears to be more pronounced among immigrants from racial and ethnic minority groups. The goal of this paper is to better understand the mechanisms underlying the deteriorating patterns of health by expanding the analysis to the National Latino and Asian American Survey (NLAAS).

Using a stratified probability sampling design the NLAAS investigates the lifetime and 12 month prevalence of psychiatric disorder and mental health service use among a representative sample of four Latino American groups (2,554), four Asian American groups (2,095) and 215 non-Hispanic non-Asian white respondents. This multi-level analysis will address three questions; 1) How are Latino and Asian Americans similar and different in patterns of immigrant health, 2) what theoretical frameworks help explain the larger decreases in health among racial and ethnically grouped immigrants, and 3) what are the population health predictions of immigrant health over time. Analysis should demonstrate outcomes consistent with the epidemiological paradox. Findings will be linked to understanding how race and nativity intersect with policy to shape ethnic minority health trajectories.

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## **La première expérience de parent: une analyse comparative entre la France, l'Italie, la Suède et la Suisse à partir des données des enquêtes fécondité et famille des années 1990**

Dans cette communication, notre attention se portera sur la pluralité des parcours familiaux. Il s'agira d'appréhender à partir des enquêtes Fécondité et Famille de l'ONU des années 1990 et des méthodes biographiques, les caractéristiques individuelles influençant les différentes formes familiales en France, Italie, Suède et Suisse, pays représentatifs de la variété des situations familiales en Europe occidentale. Ces analyses permettront de dégager les singularités et similitudes dans la formation des familles, et de confirmer que la famille européenne occidentale ne tend pas vers un modèle familial unique, mais se caractérise par la diversité de ses formes. L'analyse de récits de vie de femmes permettra ensuite de saisir, en replaçant l'acteur au coeur des changements, le sens des différentes étapes et trajectoires familiales. Ces analyses permettront plus particulièrement de montrer que la diversité des calendriers familiaux est étroitement liée à différentes manières de s'inscrire dans l'existence, et d'en comprendre les logiques.

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## **Primary School Dropouts in India: Is the Trend Changing?**

Even after fifty-seven years of Indian independence, the goal of Universal Elementary Education has not been achieving so far. About ten million children of school going age are not attending elementary schooling even today in spite of the fact that in the year 1986 a new education policy was adopted and efforts had been made through successive five years plans to achieve the target of cent per cent literacy through compulsory and free education for the children. The present paper has tried to understand the differentials in the rate of dropouts in primary (1st to 5th standard) levels over the past fifteen to twenty years in the less developed and developed regions of India using the National Family Health Survey-98-99. A case study had also been conducted in a backward district of Maharashtra State to gather the in-depth information of dropout and associated reasons. This paper attempts to understand the shift of trend in dropouts and enrolment over time. Efforts have been made to realize the determinants of dropouts at the current level. The rate of dropping out and enrolment over the past fifteen years are calculated for developed and less developed regions as a whole and for five less developed states in particular. Results show steady but slow decline in dropout in India where the rate of change is substantially higher in the developed region, where as the rate of enrolment is strikingly improved in less developed region especially after the mid eighties. The foremost reasons behind drop out are burden of household work and cost of education. It is also evident from our case study that the medium of instruction is the greatest disconnect in the education system, besides poor transport facility and meager infrastructure in the schools of rural India. As a whole, individual factors and standard of living are playing important role than the availability of primary schools (which are mostly without infrastructure) in determining dropouts. To conclude, we can think of a couple of strategy models to arrest the dropout and infuse more spontaneous participation in primary schools. We need to popularize the fundamental utility of education; otherwise children would be failing to attend the basic education in India.

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### **Mobilité dans l'emploi et changement de modèle économique: La transition vers un micro établissement au cours de la trajectoire professionnelle au Mexique.**

Les marchés du travail au Mexique présentent une croissance de l'emploi dans les micro-unités de production caractérisées par un accès réduit aux crédits et à la technologie, par des conditions d'emploi généralement précaires et revenus limités. Cette croissance des micro établissements a été associée au changement de modèle économique et à la phase actuelle de consolidation d'un modèle d'économie ouverte: représentant des formes alternatives de revenus face à un panorama de moindre création d'emploi et de baisse du pouvoir d'achat des salaires. Dans cette communication, on étudie le passage vers un micro établissement au cours de la trajectoire professionnelle. Quelles sont les conditions et caractéristiques d'une transition vers un micro-négoce: quels secteurs, et quelles branches d'activité rendent plus probable cette transition au cours de la trajectoire?

Utilisant la *Encuesta Demográfica Retrospectiva*, (enquête biographique réalisée au Mexique en 1998) on compare trois générations aux mêmes âges, soit selon trois périodes qui correspondent à différents modèles d'accumulation de l'histoire économique mexicaine. L'analyse des tables de mobilité des trois générations démontre l'importance croissante entre générations de la transition vers un micro établissement. L'analyse des facteurs associés à cette transition est réalisée avec un modèle de régression logistique en temps discret. Plus qu'un secteur (professionnel ou d'activité) particulier, les changements de profession et de branche d'activité sont liés à la transition vers un micro négoce, ce qui souligne l'hétérogénéité et l'instabilité des formes d'emploi au sein des trajectoires (éloignées de l'idée de carrière) particulièrement pendant la période actuelle d'ouverture économique.

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## **Active Life Expectancy and Functional Health Transition Among Filipino Older People**

The study examines the functional health status of Filipino older people. Using data from the 1996 Philippine Elderly Study, results provide a baseline estimate of the Active Life Expectancy (ALE) among those 60+years and its gender differentials. Capitalizing on the first available panel data on elderly in the county, health transition patterns and its determinants as well as the ALE differentials across selected socio-economic groups are also examined. Employing two methodological approaches of calculating ALE (Sullivan Method and Multi-State Life Table Method) findings demonstrate a significant age and gender pattern in ALE with the females more likely to outlive their male counterparts although they can expect to live a greater part of that life in a state of physical disability. Controlling for initial health status however reveals the greater vulnerability of the unhealthy males. Heterogeneity in ALE across the socio-economic status groups underscore the disadvantageous position of those in the higher SES bracket particularly those who survive to advance old age. Health transition results also demonstrate a significant proportion of recovery in functional health with the females more likely to experience disability and to remain in an unhealthy state compared to the males. A complex set of socio-demographic and health risk behaviors are found to impinge on their health transition and their mortality experiences suggesting the possible areas of intervention.

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## **Linking Fitness and Holistic Medicine**

The use of complementary and alternative medicine (CAM) is increasing dramatically in Canada; recent reports indicate that 40 to 50% of Canadians now regularly use CAM (Canadian Health Network, 2003; de Bruyn, 2001). While some researchers attribute this growth primarily to the rising prevalence of chronic disease and greater public access to global health information, others point to abstract social shifts like reduced tolerance for paternalism, and growing acceptance of consumerism and individual responsibility for health (Clark, 2000). Goldstein (2000) extends the latter position by theorizing that fitness culture and CAM share crucial foundational elements such that people who embrace the ideals of fitness more readily rationalize using CAM; however, this hypothesis has never been tested with longitudinal data. I test Goldstein's hypothesis using four waves of data collected on a nationally representative sample of Canadian adults (N=9949) participating in the National Population Health Survey (NPHS). Results from growth curve analysis indicate that leisure-time physical activity is a predictor of CAM use at initial interview, but more importantly, change in physical activity over time is positively associated with change in CAM use. In an era of public health initiatives that encourage fitness and seek to reorganize health spending, these findings suggest that if higher levels of fitness can be linked to increasing CAM use, then health policies that implicitly promote a holistic paradigm while making private CAM services inaccessible to many Canadians are problematic.

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## **Changements démographiques en Afrique sahélienne: Un schéma contemporain d'une société rurale en transition**

L'Afrique Sub-Saharienne a connu depuis la deuxième guerre mondiale d'importantes évolutions démographiques. Mais ces évolutions sont complexes et parfois en contradiction avec les modèles escomptés au regard des expériences européennes ou d'autres régions en développement et les objectifs fixés par les programmes de population rarement atteints.

L'évolution des comportements de fécondité demeure une question importante dans le contexte rural en Afrique de l'Ouest.

Une étude de cas en milieu rural sénégalais permet d'illustrer les mécanismes en œuvre. Elle s'appuie sur l'analyse des données d'un système de suivi démographique mis en place dans les années 1960 qui permet de tracer les grandes tendances démographiques et de décrire de manière détaillée les évolutions récentes. Par ailleurs, l'évolution du système de production de cette société est particulièrement bien documentée. L'équilibre observé dans les années 1960 entre les activités agricoles et pastorales est rompu dans les années 1980 en raison d'une modification climatique et de la croissance démographique. Ces modifications conduisent les individus à développer une logique économique ouverte vers l'extérieur, et notamment vers le monde urbain. Cette perspective permet de mieux comprendre les évolutions récentes allant vers une très forte mobilité des jeunes vers la ville. Cette alternative à la ressource locale maintient des logiques familiales de forte fécondité. Cependant, à l'échelle du migrant, l'expérience urbaine et l'éloignement familial conduisent à une exposition différente aux risques sanitaires contemporains (IST/sida, grossesse non prévue) et s'accompagnent d'importantes modifications en terme de perceptions et de pratiques, qui ne seront pas sans conséquences sur les comportements à venir.

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### **Transitions sociales et économiques du vieillissement**

Le vieillissement de la population entraînera des transitions sociales et économiques dans la société.

Nous avons décidé de commencer en déterminant l'importance du risque économique que pose le vieillissement de la population. Nous insistons sur la nécessité pour les individus d'exercer des choix dans leur intérêt personnel bien compris ainsi que celui de la famille et de la société. Nous examinons les moyens d'encourager les travailleurs âgés à prolonger leur vie active au profit de leur famille, d'eux-mêmes et de l'économie, et de les outiller en conséquence.

« Habilitier » et « encourager » sont des mots clés : nous considérons que le vieillissement de la population est un défi à relever et non une crise. Notre évaluation de l'avenir nous permet de penser que nous avons l'occasion, comme société, d'atteindre des objectifs sur les plans économique, social et de la qualité de vie en adoptant une stratégie proactive pour changer les attitudes, améliorer les conditions de travail, développer le capital humain et favoriser l'inclusion sociale et économique.

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## **Post-adolescent Adulthood? Changes in Family Formation and Adult Demographic Behavior in Post-socialist Hungary**

According to Keniston's concept of post-adolescence, during the transition to adulthood various traditional steps (finishing studies, entering the labor force, separating from the parental household, marriage, childbearing) are realized to become an adult member in the society. However, in post-socialist societies this traditional pattern has been changing rapidly. Three major schools can be distinguished with regards to the explanation of the radical transformation in family formation. The first explains it with the transformation culture, social norms and values, the strengthening of individualization and the change of values affecting gender roles. The second focuses on household economics and the deterioration of material conditions. The third approach emphasizes the social disintegration, widespread anomie and the difficulty of planning of the individual life course.

Using data from the Hungarian Social and Demographic Panel Survey from 2001 and 2004, we examine who could reach the adult status, forming a family in 2004 from those young people who were considered post-adolescent in 2001. We build a multivariate explanatory model, exploring the interdependence of different socio-economic and personal value system indicators, accounting for these three major schools of explanation.

We also look for the identification of two modern phenomena: the intended childlessness and being single in the post-socialist context. These two new patterns transform the concept of post-adolescence and might lead to radical changes in adult demographic behavior. We identify the policy implications of these changes interacting with family formation, fertility behavior, labor mobility and various other social services.

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## **L'apport de la méthode biographique dans l'analyse de l'influence du climat sur la survie des enfants au Burkina Faso.**

Indépendamment des variables classiques, les facteurs écologiques peuvent avoir une influence sur la survie des enfants dans les sociétés rurales dépendantes des cultures de subsistance. De part son impact sur la réduction des revenus et la malnutrition, la baisse de production agricole peut influencer le décès de l'enfant de moins de cinq ans.

Combinant des sources de données riches et rares à la méthode biographique, cette communication propose d'analyser **l'influence du climat sur la survie des enfants au Burkina Faso**. Les données individuelles et du ménage sont fournies par l'Enquête Migration, Insertion Urbaine et Environnement au Burkina Faso de 2000. Les précipitations sont collectées à une échelle fine (demi-degré) et pour chaque mois.

L'approche biographique permet de considérer certaines variables individuelles, de ménage et contextuelles de manière dynamique c'est-à-dire évoluant au cours du temps. Les données biographiques permettent de considérer, par exemple, les caractéristiques de l'habitat au moment de l'observation de l'enfant, et non au moment de l'enquête comme le ferait une étude utilisant des données transversales. De plus, les données de pluviométrie n'étant pas basées sur une moyenne nationale, on pourra mesurer l'exposition au risque climatique tout au long de la vie de l'enfant s'il change de région agro-climatique. Les écarts-types sont enfin ajustés par la méthode Hubert-White pour contrôler l'effet de grappe au niveau de la mère.

On s'attend à ce que la survie des enfants soit dépendante de manière différentielle selon la région hydro-climatique.

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## **Modeling Change with a Semi-parametric, Group-based Approach: Two Empirical Illustrations. A) Comparing Results from Methods Assuming Continuous and Discrete Distribution of the Latent Variable and B) In a Cohort Study of Serious Juvenile Offending, the Pittsburgh Youth Study**

### Purpose:

The purpose of the present study was to examine, through a practical application, the usefulness, strengths and limitations of three types of analysis: 1) the basic linear mixed model assuming a normal distribution of the parameters of the latent variable and of the observed variable; 2) the generalized linear model assuming a normal distribution of the parameters but allowing other kinds of distributions for the observed variable; and 3) a semiparametric mixture model assuming a discrete distribution of the parameters of the latent variable and also allowing other kinds of distributions for the observed variable.

### Method:

The sample used in this study comprised of 969 males from low-socioeconomic Montreal neighborhoods who were followed from 6 to 17 years of age. The outcome examined was physical aggression, with hyperactivity, inattention and family adversity serving as covariates. Physical aggression was measured annually, between 11 and 17 years old while the covariates were measured when the participants were six years of age. The covariates were treated as time-stable characteristics.

### Results:

Results indicated that the 3 different analytic approaches lead to different interpretations. For example, with the discrete approach, the covariates' impact was not evenly distributed across groups of individuals showing distinct patterns of development over time (see figure 1 and table 1). Interestingly, hyperactivity, family adversity and their interaction term had a statistically significant effect for those with higher levels of aggression throughout the duration of the study (groups 5 and 6) but not for those with an adolescent-limited pattern of aggression (group 4). The identification of such differential effects across groups was not possible with continuous approaches indicating only the global effect of the covariates around the average curve.

<sup>1</sup> Professor

Figure 1. Trajectories of physical aggression as estimated with a semiparametric mixture model assuming a discrete distribution of the parameters of the latent variable (PROC TAJ).

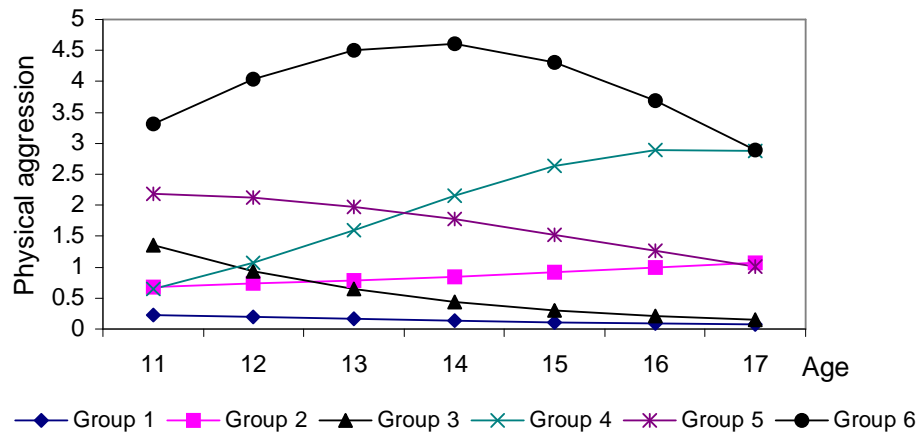


Table 1.

*Proportion of sample and parameters estimates for each group illustrated in figure 1 (N = 969)*

		Groups					
		1	2	3	4	5	6
<b>Proportion of sample (%)</b>		22.3	23.0	26.6	3.4	19.5	5.3
<b>Parameters estimates</b>							
Initial status, $\pi_{0i}$							
Intercept	$\beta^{j00}$	0.570 (1.251)	-1.217* (0.495)	4.412*** (-3.732)	-12.666** (4.841)	-1.435 (1.520)	-6.795*** (1.490)
Adv	$\beta^{j01}$	CG	1.308~ (0.755)	1.816* (0.865)	0.123 (1.593)	2.873*** (0.802)	4.851*** (1.122)
Hyp	$\beta^{j02}$	CG	0.108 (0.165)	0.214 (0.185)	-0.198 (0.363)	0.539** (0.167)	0.889*** (0.227)
Inat	$\beta^{j03}$	CG	0.267* (0.120)	0.036 (0.153)	0.601** (0.201)	0.124 (0.119)	0.064 (0.148)
Adv*hyp	$\beta^{j04}$	CG	-0.050 (0.396)	-0.281 (0.447)	0.440 (0.700)	-0.545 (0.379)	-0.927* (0.469)
Rate of change and acceleration, $\pi_1, \pi_2$							
Time	$\beta^{j10}$	-1.852* (0.884)	0.754* (0.328)	-3.732*** (0.466)	16.704* (6.638)	4.154~ (2.273)	12.117*** (2.174)
Time <sup>2</sup>	$\beta^{j20}$				-5.077* (2.261)	-1.943* (0.833)	-4.410*** (0.781)

Note. Adv = family adversity; hyp = hyperactivity; inat = inattention; CG = comparison group.

~  $p < .10$ . \*  $p < .05$ . \*\*\*  $p < .01$ . \*\*\*\*  $p < .001$ .

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## **Changing Pattern in Indian Arranged Marriage Market: A longitudinal Study**

India has recently embraced open market economy, which has major social ramifications in the context of changing lifestyle aspiration of its people. Marriage being an important indicator of social reorganization provides an effective tool to study this relationship in terms of changing preference patterns in spouse selection through arranged marriage. However dearth of reliable longitudinal records is the main impediment in capturing this relationship. This paper attempts to overcome the hurdle using classified matrimonial advertisements using the worlds highest circulated English newspaper daily -- The Times of India, over 20 years viz. 1983 to 2003 by focusing on the matrimonial pages with regular intervals of 5 years in between. The data selection is done using 10% of the representative samples using simple random method. The analysis reveals that the mean age of the girls advertised in the matrimonial columns is increasing while a definite trend towards reduction in husband-wife age difference is captured. The specification of professional degrees as market worthy qualification is going up remarkably. While specification of declared economic parameters has definitely reduced except mentioning of the work status among working girls. Declaration of physical parameters like ` have fascinations for “physical beauties” continues unabated. The welcome trend is the decline in the demand and rigidity for marriages within `same caste’. Subsequent analysis reveals significant increase in preference towards more socially upwardly mobile educated bachelors (spinsters) who can adopt themselves to the emerging socio-economic order.

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## **Suivi des trajectoires migratoires internes au Québec à l'aide du FIPA**

L'Institut de la statistique du Québec a développé, il y a quelques années, un système servant à mesurer la migration interne au Québec à partir du fichier d'inscription des personnes assurées (FIPA) de la Régie de l'assurance maladie du Québec (RAMQ). En continuité, un nouveau projet est en cours visant à exploiter ces données de manière longitudinale à partir d'un fichier chronologique constitué de l'ensemble des données recueillies annuellement depuis 1991. L'information ainsi structurée permet un éclairage nouveau sur des questions jusque là sans réponse.

Par exemple, dans le nombre de déplacements annuels que le système actuel dénombre, combien sont le fait de personnes qui se sont déplacées pour la première fois et combien sont attribuables à des «hyper mobiles» qui ont changé de région à chaque année ?

On sait qu'une forte proportion de jeunes, et aussi de moins jeunes, quittent les régions les plus éloignées, principalement en direction des grands centres urbains. Mais combien y reviennent après 1 an ? 3 ans ? 5 ans ? 10 ans ?

Parmi les retraités qui ont quitté la ville il y a quelques années pour aller s'établir dans des régions de villégiature, combien reviennent vers les lieux de services après quelques années ? Y a-t-il un âge plus fréquent pour ce type de retour ?

Une telle connaissance du phénomène migratoire, sous l'angle de trajectoires et non plus seulement de mouvements résultants, apparaît nécessaire à la mise en place d'interventions régionales mieux ciblées visant à influencer l'occupation du territoire québécois.

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## **Marital and Fertility History, and Health and Mortality in Later Life: A longitudinal Perspective from England & Wales**

The living arrangements and family support available for older people are recognised as important influences on the well-being of the older population and on needs for formal services; as such they have major implications for policy. In this context changing partnership patterns may have important implications. In this paper we use data from the Office for National Statistics Longitudinal Study (ONS LS) to reconstruct marital histories of older people in England and Wales and analyse associations between these and both health and mortality in later life. For women analyses by fertility history are also presented. The ONS LS is a record linkage study including information from census and vital registration sources for approximately 1% of the population of England and Wales. Data from four censuses (1971, 1981, 1991 and 2001) are available so for people aged 65 and over in 2001, information covering a large portion of their adult life is available. Outcome measures include mortality and reported long standing illness (available for 1991 and 2001) and self rated health (available 2001).

Results show that among women teenage childbearing, high parity and short birth intervals are associated with poorer health outcomes in later life. Among both women and men there are associations between marital history and later life health, among women in particular these are much attenuated when socio-economic status is taken into account. Among men the effect of recent changes in marital status, rather than longer term 'exposure' to marriage seems more strongly associated with health.

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<sup>1</sup> Grundy E and Glaser K (1997). Trends in, and transitions to, institutional residence among older people in England and Wales, 1971 to 1991. *Journal of Epidemiology and Community Health* **51**:531-540; Glaser K, Grundy E and Lynch K. (2003). Transitions to supported environments in England and Wales among elderly widowed and divorced women: The changing balance between co-residence with family and institutional care. *Journal of Women and Aging*.15: 107-126

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### **La diffusion de la contraception en zone rurale africaine. Les succès et les Échecs à Bandafassi (Sènegal) analysès grâce au site de suivi démographique.**

La fécondité est en baisse en Afrique sub-saharienne depuis plusieurs décennies mais sa diminution est lente, la contraception, qui est l'un des moteurs essentiels de la baisse, ne s'étant encore que peu diffusée, en particulier dans les campagnes. Pour mieux en comprendre les raisons, nous avons étudié de façon détaillée l'histoire de la diffusion de la contraception dans une population rurale du Sénégal, Bandafassi. Nous avons utilisé pour cela trois sources d'information : une enquête sur la contraception, les données du registre de planification familiale du dispensaire local et les informations de l'observation démographique suivie conduite depuis plus de 30 ans dans cette population. L'exploitation de ces différentes sources nous a permis de retracer la progression de la contraception année après année depuis qu'elle a débuté et d'en examiner les facteurs.

De façon étonnante, la contraception s'est diffusée extrêmement rapidement à Bandafassi, mais seulement dans quelques villages proches du dispensaire ou disposant d'un agent de santé efficace. De façon encore plus étonnante, la pratique contraceptive a chuté brutalement au début des années 2000 suite à un changement de personnel infirmier. Dans la population prise ici comme exemple, les freins et les échecs ne tiennent pas tant à une méconnaissance de la contraception de la part de la population ou à un refus de celle-ci, mais plutôt à la qualité des relations qu'entretient le personnel sanitaire avec elle et au fait que la contraception lui est plus ou moins facilement accessible.

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## **Parental Investment in Childhood and Later Adult Well-Being: Can Greater Parental Involvement Mediate the Effects of Socioeconomic Disadvantage?**

Parental involvement is important for later well-being since it conveys to children that parents are interested in their development. In socioeconomically disadvantaged homes this involvement becomes even more important. This paper asks: Can the social capital produced by greater parental involvement mediate some of the harmful effects of less financial capital? Data are from the National Child Development Study; a longitudinal study of children born in Britain in 1958. Results suggest that parental involvement does matter, but it depends on when involvement and economic hardship are measured, as well as type of involvement and parent gender. Father interest in education reduces the impact of economic hardship on education the most, especially at age 11. Both father and mother interest in school at age 16 have the largest direct impact on education. The frequency of outings with mother at age 11 also has a larger direct impact on education than outings with father, however, neither compare with the reduction in the effect of economic hardship as a result of father interest in school.

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## **Issues of Selection in Contemporary and Historical Survivorship: The Case of 20th Century Japan**

### Background and problems

Contemporary Japan has probably the lowest (cross-sectional) mortality on reliable statistical record. What is the historical background of this remarkable achievement? What issues of hidden health related heterogeneity should we expect to exist in the population of modern Japan? What prospects does this give rise to for future survivorship and population development, not only in Japan but in other industrialized and economically developed countries as well?

### Purpose and approach

This study provides an interpretation of latent selection in Japanese survivorship up thru the 20<sup>th</sup> century. Because of data limitations the emphasis is on the latter half of the 20<sup>th</sup> century. The interpretation and evaluation of current latent traits in Japanese cohort survivorship rests on fitting an extended proportional hazards model to sex-age-specific death rates of one-year cohorts born between 1950 and 2003. The model exhibits an extension to the proportional frailty model proposed by Vaupel et al. (1979)<sup>1</sup>

### Data

The available data include sex-age specific mortality tabulated by birth year, age, and year of observation from 1950 to 2003 and vital statistics in terms of crude rates and annual infant deaths as a proportion of annual live births from 1899 to 2003. Accordingly, left-truncated sex-age specific cohort tabulations on one-year basis are available from 1950. There is a gap in the available time series from 1944 to 1946 due to war activities. The available data, therefore, do not reflect the immediate survivorship impacts of the war, including the atomic bombs dropped over Hiroshima and Nagasaki in 1945. This data deficiency makes inference for the cohorts born prior to 1947 and left-truncated as of 1950 more difficult and insecure.

### Modeling

Many unobservable phenomena have profound socio-cultural impacts. *Religion* and *sexual behavior* are two such examples in point. However, the volume and detail of empirical indication

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<sup>1</sup> Vaupel J. W., K.G Manton., E. Stallard (1979). The impact of heterogeneity in individual frailty on the dynamics of mortality. *Demography*. 1979;16(3):439-454.

of the viability of the Darwinist principle of evolution by selection is overwhelming, even if strictly unobservable. Congenital frailty in terms of biological inheritance is unobserved in the data – if observable at all, less so on a mass basis. This rules out classical statistical analysis based on direct observation and estimation.

The principle of (unobservable) selection in human survivorship cannot be discarded on grounds of reason and logic. To capture central issues of selection associated with heterogeneity at the level of individuals and populations we extend the hazard model of Vaupel et al. (1979) with a multiplicative trend factor and an additive trend factor in a competing risks setup. The additive trend factor features sudden environmental shocks without selection effects while the multiplicative trend factor embodies joint ecological impacts for individual human survivorship. On birth each individual is endowed with a random frailty, which is taken to stay fixed over the entire life course. The random frailty features level of proportional change of a *latent* and basically *arbitrary* baseline hazard.

#### Choice and interpretation of baseline hazard

Selection is instigated not only by congenital biological frailty, but also by environmental impact, including human intervention. In traditional societies man has little, if any efficient control of own survivorship - in striking contrast to modern industrialized high-tech societies such as contemporary Japan. Putting natural selection (nearly) out of operation by efficient human intervention may prolong the majority of ‘bad’ lives in developed societies significantly. On the other hand, no one lives on forever. In currently industrialized countries we may well observe increasing numbers of centenarians. Yet, few persons live to extreme ages, beyond age 114, say. Thus, by established experience to this day: Human life is finite, whatever the upper biological limit. This leads us to interpret the age pattern of the baseline hazard as a proxy of the age pattern of a latent biological ‘clock’ which may well be universal in space although - for hereditary genetical reasons - hardly across multiple millennia. A natural first proxy of the age pattern of such a baseline hazard would be the age pattern of cross-sectional Japanese mortality in 2003. Pinpointing congenital frailty from level of the baseline mortality presents an interesting identification issue. A sensible working hypothesis is that the *age pattern* of the baseline mortality would have been very nearly fixed over at least the past three or four centuries.

#### Fitting the mixed hazard model to the empirical cohort mortality

The principal purpose of the extended hazard model is description of latent heterogeneity related to selection. We fit our model to the available cohort data by stochastic micro-simulation at the level of individuals with (waiting) time to death as the random element. We evaluate the associated population mortality by occurrence/exposure rates based on the simulated individual life times.

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## **Dynamique de la pratique polygamique. Le cas d'une population rurale du Mali**

La polygamie constitue l'un des piliers des institutions familiales d'Afrique de l'Ouest. Alors qu'on prédisait sa disparition dans les années soixante, elle est restée robuste et ne commence à reculer, modérément, que dans certains pays du golfe de Guinée. Dans les pays du Sahel, la proportion d'individus vivant en situation de polygamie est restée stable et élevée, concernant plus de 40 % des femmes mariées.

Les mesures transversales ne fournissent cependant qu'une image partielle de cette pratique. L'âge des hommes à la première union polygamique, la réversibilité du statut polygamique, la proportion d'individus qui y accèdent à un moment de leur vie et les modalités de l'appariement matrimonial fournissent d'autres éléments descriptifs sur cette pratique, rarement étudiés faute de données.

Cette communication les aborde à partir des biographies matrimoniales des hommes collectées chez les Bwa du Mali, par une enquête biographique réalisée en 1988-89 et actualisée tous les 5 ans (1994-5, 1999-2000, 2004). Elle met en évidence les changements qui se réalisent dans l'organisation de la pratique (mobilité, évolution du marché matrimonial alimentant la polygamie) alors que la fréquence de la polygamie, mesurée à un moment donné, a peu changé (environ 20 % de polygames parmi les hommes mariés).

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## **Regularities and Peculiarities of Birth Schedules in 19 Industrialized Countries: An Analysis of FFS Data**

Theories and empirical studies on fertility in the industrialized world focus on the main vector of change, declining average level of fertility and its determinants. Inter-individual variability plays only an instrumental role in this research by being used for identifying factors influencing the final outcome of births. However, the inter-individual diversity among women in number of children tends to increase from older to younger cohorts beginning from cohorts born in the 1930s (Shkolnikov, Andreev, Houle and Vaupel, 2004). It means that different fractions of female population are making more and more different contributions to the overall production of offspring. The present study looks at birth histories. First, we measure the amount of inter-individual diversity in respect to number of children born. Then we identify mainstream relationships between number of children, age at first birth, birth intervals and characteristics of education and partnership history with control for country and birth cohort. We identify then principal types of birth schedules. These types reflect women's division according to preferences and objective life conditions as well as turning points in the life course. Although these types correlate with educational/occupational groups they are substantially different from them (Hakim, 2003). It suggests the importance of designing specialized family policies to reach different groups of women. We use FFS data for 19 industrialized countries, including Canada, and apply different methods (cluster analysis and intensity regression).

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### **Suivre la pauvreté dans un contexte urbain africain : À la recherche d'un proxy de niveau de vie longitudinal.**

L'Unité d'Enseignement et de Recherche en Démographie (UERD) de l'Université de Ouagadougou (Burkina Faso) a mis en place en février 2002, dans la capitale Ouagadougou, un Système de surveillance démographique (SSD) qui en est à sa phase pilote (échantillon de 5000 personnes dans deux quartiers de la ville). Ce SSD s'inscrit dans le cadre plus large de l'Observatoire de population de Ouagadougou (OPO) qui se veut une plate-forme de recherche et de plaidoyer sur les questions de population, dans le but ultime d'éclairer les politiques sociales. L'un des objectifs de l'OPO est de mettre en évidence les conséquences de la pauvreté sur les comportements démographiques et sociaux des ménages et, vice-versa, de voir comment les changements démographiques et sociaux peuvent, à leur tour, influencer sur les conditions de vie des populations. Mais comment mesurer la pauvreté, dans un contexte où la collecte des informations classiques de mesure de la pauvreté (revenus et dépenses de consommation) est particulièrement difficile ? Pour contourner cette difficulté, le SSD collecte des informations sur les caractéristiques de l'habitat et les biens possédés par le ménage permettant ainsi de construire des proxys de niveau de vie. Ces informations sont mises à jour annuellement permettant ainsi de suivre les changements dans le statut économique des ménages et des individus. Recourant à une Analyse en Composantes Principales, une échelle quantitative des conditions de vie des ménages a été construite. L'objectif de cette communication est de présenter les choix méthodologiques opérés et les premiers résultats sur le proxy de l'OPO.

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## **L'évolution de l'effet du travail rémunéré sur la fécondité des femmes canadiennes, 1941-2001**

Nous nous intéressons aux effets du travail comme source de revenu et comme concurrent de la vie familiale dans l'emploi du temps sur la formation de toutes les unions qui précèdent ou suivent de peu la première naissance, en distinguant les unions libres et les mariages; nous étudions également la conversion des unions libres en mariage. On utilise les données de l'*Enquête sur la dynamique du travail et du revenu*, une enquête longitudinale prospective réalisée au moyen de panels de six ans, que l'on analyse au moyen de modèles de risque. L'EDTR est la seule source de données canadienne qui contienne à la fois des informations biographiques sur la vie familiale et reproductive et des informations longitudinales détaillées sur le travail et le revenu. Contrairement à une opinion répandue, il n'est pas nécessaire de posséder les biographies complètes d'un échantillon d'individus pour estimer correctement des modèles de risque. Cette propriété est connue des statisticiens depuis longtemps, mais n'a pas attiré l'attention de chercheurs en sciences sociales jusqu'ici. Elle nous permet d'utiliser les données de l'EDTR pour réaliser le genre d'études qui s'est fait jusqu'à maintenant à peu près exclusivement avec des données biographiques complètes et rétrospectives. Nous utilisons les données des trois premiers panels et nous retenons les individus âgés de 16 à 33 ans au début de chaque panel, de manière à couvrir les âges de 16 à 39 ans au moyen de chaque panel.

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## **Un programme de recherche international- le "Generations and Gender Programme (GGP)" - une réponse aux défis démographiques du XXI ième siècle**

L'évolution sans précédent de la fécondité et de la mortalité au XX ième siècle amène nos sociétés occidentales à être formées de familles à plusieurs générations - de plus en plus trois ou quatre - pour de longues périodes de temps. Au cours du même siècle, les transformations radicales des relations hommes-femmes ont fait chanceler beaucoup de comportements démographiques traditionnels. Le GGP est le seul programme de recherche démographique international à tenir compte, tant en aval qu'en amont et dans une optique longitudinale , des relations et des échanges entre les diverses générations. La présente communication a pour but de faire connaître les nombreux avantages pour la communauté démographique canadienne à amener le Canada à une participation active à cette entreprise internationale de recherche comparative.

Si vous voulez en savoir plus sur ce programme, vous pouvez consulter le site Webb du GGp , soit [www.unece.org/ead/pau/ggp](http://www.unece.org/ead/pau/ggp)

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## **Prise en charge des enfants en bas âge en Suisse**

Notre projet de communication porte sur les modalités de garde des enfants en bas âge en Suisse. Le contexte général de la Suisse est celui d'un pays ayant un bas niveau de fécondité dans lequel les possibilités de garde d'enfant sont peu développées et dans lequel les femmes interrompent souvent leur activité professionnelle lors de la naissance de leur enfant. Le thème de la garde des enfants est devenu toutefois récemment un sujet à l'agenda politique. Dans notre contribution, nous nous demanderons quelles sont actuellement les stratégies de garde mises en place par les parents en fonction de l'avancée âge des jeunes enfants et en relation avec le parcours professionnel des mères. Les couples faisant appel aux moyens institutionnalisés de garde sont-ils aussi ceux qui font appel à des membres de leur famille, notamment les grands-parents ? Au contraire, le choix pour l'une ou pour l'autre de ces deux options correspond-il à des besoins différents ? Ou bien, est-ce le niveau du revenu du couple qui est déterminant dans le choix de la stratégie de garde ? Notre analyse s'appuiera sur l'exploitation des données du panel suisse des ménages, dont la première vague a été réalisée en 1999. Dans chaque vague, sont posées des questions détaillées sur les modalités de garde des enfants. Nous aurons pour objectif d'analyser les pratiques de garde adoptées durant les premières années de vie, en relation avec les modalités de participation des mères à la vie active.

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## **L'entourage un nouveau concept pour comprendre l'évolution des solidarités au long de la vie**

Dans le champ des approches quantitatives en Sciences sociales, l'approche biographique a conduit à reformuler les bases de l'analyse longitudinale classique en passant à des données longitudinales *individuelles* et en généralisant l'emploi des modèles de durée. Ces avancées ont été rendues possibles tant par la multiplication des enquêtes collectant des parcours individuels que par des développements d'outils statistiques.

Dorénavant un nouveau passage s'avère prometteur. Il consiste à réinsérer l'individu dans son groupe familial. Le nouveau concept d'entourage permet de mieux comprendre les stratégies sociales et d'en saisir l'évolution au cours du temps. Ainsi, l'observation comme l'analyse progressent-elles conjointement.

Dans cette communication, nous voudrions illustrer de façon concrète ces avancées conjuguées de l'observation et des méthodes, dont le lien quantitatif-qualitatif.

Le transfert d'un instrument de collecte sera discuté ici à savoir celui de l'enquête *Biographies et entourage* (INED) par l'équipe de M.Kempeneers à Montréal pour étudier les transformations des solidarités familiales au Québec depuis un siècle.

La problématique faisait appel aux entités « famille, travail et protection sociale » dans leurs liens d'articulation évoluant au fil du temps. Le concept de « solidarité » dans cette perspective, est indissociable de celui de « trajectoires » au sens où l'individu, au fil de sa vie, se trouve en présence de contextes (familial, professionnel, social et politique) en perpétuelle redéfinition, en fonction de quoi il adapte ses stratégies de soutien (ou de demande de soutien). En effet, les solidarités familiales s'inscrivent dans la durée. Introduire la dimension temporelle dans ce contexte, oblige à considérer à la fois le temps historique (évolution des univers du travail, de la famille et des politiques publiques) et le temps biographique des trajectoires (individuelles et familiales). C'est la conjonction de ces deux niveaux de temporalité qui compose et recompose sans fin les espaces sociaux où vont se déployer des solidarités « à géométrie variable » selon les différentes configurations familiales et selon les alternatives offertes par les milieux de travail et par les régimes de protection publique aux différentes époques.

Des analyses, conjointes et comparées des deux enquêtes française et canadienne seront présentées afin d'illustrer le potentiel de ce nouveau front de recherche.

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## **Projection of Obesity Rate for the Canadian Population**

### Research question

It is know common knowledge that the prevalence of obesity has been on the rise in Canada in recent years, with labels like “the obesity epidemic” and “the new tobacco” being associated with the issue. Obesity is linked with type II diabetes, cardiovascular disease, hypertension, stroke, some forms of cancers and osteoarthritis, among others, and therefore a major public health concern. If Canadians continue to gain weight over the next few years as fast as they have been adding on the pounds over the last 10 years, what will be the prevalence of obesity in Canada in 2010?

### Data and Methods

The individual patterns of BMI change is modelled using data from the National Population Health Survey, who followed a cohort of approximately 17 000 individuals starting in 1994. The results will be embedded within Statistics Canada complex micro-simulation Population Health Model, POHEM, to make projection of the prevalence of overweight and obesity in the Canadian population. These projections integrate the life course of individuals, the recent trends of increasing obesity and the Canadian population structure.

### Expected results

Preliminary results show that one third of people with a normal weight in 1994 became overweight by 2002, while almost a quarter of those who had been overweight in 1994 became obese by 2002. The simulation will project the potential impact of this continuing trend, in terms of prevalence of overweight and obesity as well as the influence on the incidence of selected chronic diseases.

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## **Projections de ménages et demande future de logements: Une analyse longitudinale des perspectives démographiques du Québec**

Une vue longitudinale du processus d'évolution des ménages privés amène un éclairage nouveau sur ce que l'on peut considérer être la demande future de logements. À partir du cycle de vie des ménages privés, quels impacts peut-on dégager de la succession de générations très nombreuses par d'autres nées en régime de sous-fécondité, de l'amélioration de l'espérance de vie aux grands âges et de l'ampleur des migrations externes ? En quoi la demande de logements sera-t-elle influencée par l'augmentation anticipée des taux de soutien de ménage ? Peut-on envisager une extrapolation de certaines caractéristiques comme la taille du ménage (personnes), la taille du logement (pièces) ou le mode de propriété ?

On relie ici deux univers qui ne sont pas toujours compatibles. Celui des logements relève d'une activité économique régie par un marché de l'offre et de la demande, et celui des ménages témoigne d'un mode de vie des individus. Les constats originaux dégagés ici veulent contribuer à enrichir la problématique de la planification du marché de l'habitation au Québec.

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## **Growth Modeling of Social Environmental Predictors of Adolescents' and Older Mothers' Children's Anxiety: Preliminary Findings**

### Purpose:

Multilevel growth modelling was used to identify the impact of parenting, support and sociodemographic characteristics on trajectories of anxiety symptoms for children born to adolescent and older mothers.

### Method:

The relationship between social environmental characteristics and children's anxiety was examined via analysis of the Canadian National Longitudinal Survey of Children and Youth (NLSCY) data. A sample of 3848 children born to adolescents and older mothers in the first cohort (1994-95) of the NLSCY were identified and followed in each subsequent cohort (1996-97, 1998-99, 2000-01) to determine the impact of early social and environmental experiences on children's anxiety over time (at ages 25-48, 49-72, and 73-96 months of age). Growth modeling (Raudenbush & Bryk, 1998) was used to examine individual and group trajectories of children's anxiety. Covariates from the first cycle were added to examine the differential impacts of parenting style, social support, and sociodemographic characteristics on adolescent and older mothers' children's anxiety.

### Results:

Preliminary results revealed that children of adolescent mothers had significantly higher initial levels of anxiety than children born to older mothers; however, the graphical trend suggested convergence. Several key covariates were revealed (Tables 1 and 2). For children of adolescents, children whose mothers reported having someone in their support network that they rely on for *help* predicted both lower levels of initial anxiety symptoms and reduced anxiety symptoms over time. In contrast, for children of older mothers, parenting style variables were significant predictors of lower levels of children's initial anxiety symptoms. Social support characteristics for older mothers (having someone to *trust*, someone who makes them feel *safe*, and someone with whom they feel *close*) reduced anxiety symptoms in older mothers' children over time. With the recent announcement of the availability of the next cycle of NLSCY data,, these results will be extended to include

Children up to 97 to 120 months of age. Implications of these findings for policy and practice will be discussed.

**Table 1. Estimated fixed effects of covariates on initial level and rate of change in Anxiety scores for children of adolescent mothers, NLSCY (1994-2001)**

<b>Fixed Effect</b>	<b>Coefficient</b>	<b>Standard error</b>	<b>t-ratio</b>	<b>p-value</b>
<b>For initial level <math>\pi_{0i}</math></b>				
Help	-.945	.547	1.73	.042
Safe	-1.04	.563	1.84	.033
<b>For linear change <math>\pi_{1i}</math></b>				
Single Mother	-.012	.009	1.31	.010
Mother's education	.008	.004	1.74	.042
Maternal depression	.002	.001	1.90	.030
Help	-.017	.009	1.82	.035

**Table 2. Estimated fixed effects of covariates on initial level and rate of change in Anxiety scores for children of older mothers, NLSCY (1994-2001)**

<b>Fixed Effect</b>	<b>Coefficient</b>	<b>Standard error</b>	<b>t-ratio</b>	<b>p-value</b>
<b>For initial level <math>\pi_{0i}</math></b>				
Positive parenting style	-.307	.043	7.07	.000
Consistent parenting style	-.083	.030	2.80	.003
Mother has someone to trust	-.274	.131	2.10	.018
Close	-.273	.120	2.26	.012
<b>For linear change <math>\pi_{1i}</math></b>				
Warm parenting style	-.001	.001	1.79	.037
Maternal depression	.001	.000	5.55	.000
Safe	-.003	.002	1.70	.045
Trust	-.007	.002	3.14	.001
Close	-.005	.002	2.40	.009

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## **Families and Children's Schooling in Vietnam**

The transition to a market economy in Vietnam involved a drastic turn in the country's education policy. Proud of its achievements in literacy and school enrolment under its socialist economy, Vietnam abandoned its fully subsidized education system in 1989, introduced fees for public schools and legalized private schools. In 1993, a few years only after the reforms, households had to pay more than half of the total cost of their children's education, ranking Vietnam among the Asian countries where the households' share of total educational costs was the highest. In the late 1980s and early 1990s many households could no longer afford the very high cost of education and enrolment rates declined in 1989-1992, although they increased again thereafter.

This paper examines the determinants of children's schooling during the 1990s. It focuses on the factors associated with school leaving during a period of high financial pressure on households. Using data from the Vietnam Living Standards Survey of 1992-1993 and 1997-1998, we apply the survival analysis technique to follow over five years a group of 3,000 children aged 6 to 13 in 1992-1993 in order to assess the factors associated with school leaving. We are particularly interested in examining the role of households' characteristics in permitting children to stay in school or not. The State's downloading on families of financial responsibilities for children's education can have serious consequences for Vietnam's future development and serious attention should be given to this issue. The example of education vividly illustrates the profound changes experienced by Vietnamese families since the economic reforms with respect to the relationship between the State and the households.

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## **Vieillir en santé au Canada**

Pour beaucoup de Canadiens, vivre plus longtemps ne présente d'intérêt que si ces années supplémentaires de vie sont passées en bonne santé. S'il apparaît normal qu'avec l'avancée en âge surviennent des problèmes de santé, certaines personnes vieillissent en bonne santé, augmentant leurs chances de jouir de leur retraite et de bien réussir leur vieillesse. Qui sont ces personnes âgées qui vieillissent en santé ? Quel est leur secret pour ainsi traverser les âges sans perdre leur bonne santé ? La présente étude vise à répondre à ces questions en étudiant les déterminants de la bonne santé chez les personnes âgées de 65 ans et plus.

Cette analyse exploite les données longitudinales des cinq premiers cycles de l'Enquête Nationale sur la Santé de la Population. Elle s'appuie sur les modèles à risque proportionnel afin de dégager les déterminants d'un changement dans l'état de santé des répondants entre 1994-95 et 2002-03. L'effet de plusieurs variables explicatives telles que la présence d'un conjoint ou l'activité physique est mesuré longitudinalement, de façon à mieux établir les liens qui existent entre des changements de celles-ci et l'évolution de l'état de santé des personnes âgées.

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## **Longitudinal Dynamics of Poverty and Health: Challenges and Future Prospects**

Our study examines the relationship between poverty and health in time. Following the argument that time is significant for shaping the experience of being poor or not poor and growing evidence of heterogeneity in long-term patterns of poverty, we investigate whether different kinds of poverty have distinct consequences for long-term health. Using data from the 1968-1996 annual waves of the Panel Study of Income Dynamics Data, we estimate a general growth mixture model to assess the relationship between the longitudinal courses of poverty and health. The model allows us to first estimate latent poverty classes in the data and then determine their effects on latent self-rated health. Four types of long-term poverty patterns characterized as stable nonpoor, exiting poverty, entering poverty and stable poor were evident in the data. These different kinds of poverty affected self-rated health trajectories in distinct ways, but worked in concert with age, education and race to create gaps in initial health status that were constant over time. Results are interpreted in light of their implications for policy and the ongoing challenges of mapping the dynamics of poverty and health experiences.

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### **Longitudinal Studies and Demographic Challenges. Employment Characteristics Among Social Assistance Recipients in Canada 1996 – 2001 /**

Among OECD countries – in particular, the United States, Great Britain and more recently, Canada - there has been a move from ‘passive’ to ‘active’ social assistance programs. The focus of the reforms has been a ‘work-first’ approach, which stresses the ‘shortest route to paid employment’. The underlying assumption is that success in the labour market is best achieved through participation in it, and that bad jobs can act as stepping stones to better jobs.

While there is a large research literature in the United States on the short and longer term outcomes of this approach, there is little comparable work in Canada. Our research makes use of Statistics Canada’s longitudinal Survey of Labour and Income Dynamics (SLID) to follow a cohort of adult social assistance recipients in Canada from 1996 to 2001, and to examine their changing conditions of employment. Using descriptive, bivariate and logistic regression techniques the research addresses policy concerns such as the value of promoting education, job tenure and labour market mobility.

We explore issues such as the initial wage levels and hours of work of people who received social assistance in 1996; the extent to which people were able to improve their position in the labour market after five years; the factors associated with improvements in wage levels and hours of work; whether greater formal education, job mobility or longer tenure with an employer affect wage and hour improvements; and what factors were associated with stronger attachment to the labour market.

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### **Health Status and Migration Experience in Indonesia: Life History Analysis Using IFLS Data**

This present study attempts to examine the link between migration experience and health status among adult, early old age and elderly people in Indonesia. The study uses the 1993 and 1997 IFLS (Indonesian Family Life Survey) data, a longitudinal socioeconomic and demographic survey containing histories on one's life course including migration history and current health status. Both perceived and assessed self-reported health status (i.e. general health status/GHS and activity of daily living/ADL index) are utilized in the analysis.

Results from the statistical analysis show that migration and urbanization in Indonesia are negatively associated with the health indicators. Statistically, this relationship is robust to the general health status but weak to ability status/ADL. This effect is strong among those who have frequently migrated (more than 3 or 4 times and beyond) with longer distance (i.e. inter-province or inter-country), across different environments (urban-rural or rural-urban), started to migrate earlier (before age 17) or later (after age 45), and last migration occurred very recently (last 3-6 years). The results also suggest that this negative association would be reduced by other factors, such as younger age, higher educational attainment, no smoking behaviour, and an ideal body mass index (BMI). As found elsewhere, Indonesian population who are in adult and early old age stages are more likely to have better health status than their counterparts who are elderly. In addition, being currently married, working and residing in Java-Bali region have affected on increasing the health status of population.

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## **Development of Fat Mass During Adolescence in Normal Weight and Overweight Young Adults: A 13-year Longitudinal Study**

It is well known that western countries, including Canada, are becoming progressively overweight and obese. The popular belief is that weight is a lifelong trait and that overweight children are more likely than their thin counterparts to become overweight adults.

### **PURPOSE:**

Evaluate childhood and adolescent development of total body fat (TBF), percent body fat (%BF), and body mass index (BMI) in males and females who are normal weight and overweight as young adults.

### **METHODS:**

Subjects were part of the Saskatchewan Longitudinal Pediatric Bone Mineral Accrual Study (PBMAS) (1991-1997; 2002-2005). 65 males and 83 females (aged 8-15 years at study entry; 1991) make up the present sample. Height and weight were measured bi-annually during childhood/adolescence and annually in adulthood. BMI was calculated. Age at peak height velocity (PHV) was attained for each participant and data was aligned by this common maturational point, to control for maturity differences. Total body dual energy X-ray absorptiometry (DXA) was performed annually (for TBF and %BF). In adulthood subjects were categorized as normal weight ( $BMI < 25 \text{ kg/m}^2$ ) or overweight ( $BMI > 25 \text{ kg/m}^2$ ).

### **RESULTS:**

Independent t-tests indicated that overweight adult males and females had significantly ( $p < 0.05$ ) greater BMI, TBF and %BF than their normal weight counterparts, at most biological ages (years from PHV).

### **CONCLUSION:**

As early as childhood and adolescence, young adult males and females categorized as overweight had greater fat mass than their normal weight counterparts. These results highlight the importance of promoting healthy lifestyle choices throughout childhood.

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## **L'acquisition du vocabulaire chez les jeunes enfants au Québec: le rôle de l'environnement familial et économique**

Au Canada, 65% des mères d'enfants d'âge préscolaire étaient en emploi en 2002. Quoique la présence en emploi des mères de familles biparentales soit plus importante que celle des mères de familles monoparentales, le taux d'emploi des mères seules d'enfants âgés de 3 à 5 ans, par exemple, a connu une augmentation sans précédent entre 1995 et 2002 passant ainsi de 42% à 60%. Certains travaux se sont intéressés aux effets du travail des mères sur le développement de certaines habiletés chez les enfants d'âge préscolaire ceux-ci reposant notamment sur l'hypothèse que le temps consacré par les parents aux interactions avec leurs enfants favorise le développement cognitif de ces derniers. Réalisées à partir des données de l'Enquête longitudinale nationale sur les enfants et les jeunes (ELNEJ) de Statistique Canada, les analyses de Lefebvre et Merrigan (1998) montrent que l'emploi maternel n'a pas d'incidence significative sur l'acquisition d'habiletés langagières quand on tient compte de la fréquence avec laquelle les parents font la lecture à leurs enfants alors que celles de Gagné (2003) révèlent que la participation des parents au marché du travail influence négativement les résultats qu'obtiennent les enfants lorsque la mère a des compétences parentales supérieures à la moyenne et un niveau de scolarité plus élevé. Dans un cas comme dans l'autre, la mobilité conjugale des parents n'a pas été prise en considération. Pourtant, on peut penser que les changements engendrés par la séparation des parents ou encore par l'entrée dans une nouvelle relation ont un impact sur le temps qu'ils consacrent à leurs enfants et sur le type d'interactions qu'ils ont avec eux.

À partir des données de l'Étude longitudinale des enfants du Québec (ÉLDEQ) réalisée par l'Institut de la statistique du Québec, nous nous proposons d'examiner la relation entre le travail des mères et les résultats obtenus par les enfants âgés d'environ 3 ½ ans à l'Échelle de vocabulaire en images de Peabody (EVIP). Nous tenterons plus particulièrement de voir si la mobilité conjugale des parents exerce un effet sur les capacités langagières des enfants une fois pris en compte certaines caractéristiques sociodémographiques des parents et des enfants ainsi que certaines variables concernant l'environnement familial et économique dans lequel ceux-ci grandissent.

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## **Family Policies and Fertility – Evidence from the Nordic Countries**

During the latest decade the relationship between family policies and fertility has received more research attention than before. In particular, the link between family policies and fertility development in advanced welfare-state regimes has attracted interest. The reforms of family policies and the concurrent patterns of fertility change across European welfare states does suggest that family policies can have a noticeable impact on fertility developments, but demographic investigations into the relationship have not rendered much impressive output so far.

In an attempt at improving the situation, we investigate the connection between family policies and fertility in the Nordic countries in this paper. The Nordic countries constitute a particularly interesting test case. They belong to the same welfare-state regime and also constitute a rather uniform demographic regime. Nevertheless, their family policies differ in significant aspects. This allows us to investigate the impact of family policies on fertility in a setting that reduces the number of intervening factors.

To get leverage on our topic, we apply event-history analysis to register data from the 1970s through 2000 and display fertility trends at the various parities. This approach should disclose similarities and differences in demographic trends better than other methods. We then address the question to what extent fertility developments can be attributed to family policies. Our approach reveals that family policies do indeed have an impact on fertility behavior, but also that their impact is mediated by other factors. These must be taken into account when assessing the impact of family policies on fertility.

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## **Dynamics of Immigrants' Health in Canada: Is There a Male-Female Difference?**

Previous cross-sectional studies of immigrants' health in Canada and elsewhere generally point to a strong 'healthy immigrant effect' which diminishes over time. Our recent longitudinal study based on five waves of National Population Health Surveys (NPHS) examined for the first time for all of Canada the dynamics of such change and concluded that the diminishing of the health advantage as measured in terms of self-rated health was especially true among immigrants of non-European origins. Our research question here is to examine the hypothesis that immigration has greater impacts on women compared to men, as suggested in a recent CPHI-funded study of immigrant women. The NPHS, conducted bi-annually from 1994 to 2002, has an initial sample size of 14,117 household respondents aged 18 or older, including about 2,000 immigrants. We use a discrete proportional hazards model to study the timing of changes in health or health-related behaviours by sex and the association with various socio-demographic factors. Specifically, we compare changes in health status (self-rated health, disability and chronic disease), health care utilization (hospitalization and contact with physician), and health-related behaviours (such as smoking, physical activity and changes in body mass index) by sex, duration of residence and immigration status (European and non-European compared with Canadian-born) over the 8-year period of the surveys, controlling for socio-economic factors such as age, income and education. To the extent that the immigration process has differential impact on women vis-a-vis men, policies could be tailored specifically to address the problems encountered more frequently by women.

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## **Work Continuation and Exit of Mothers with Young Children in East Asian Economies**

A 80 percent of Japanese mothers are found to become full-time housewives after the first child birth, and the percentage has not changed in the past 20 years despite the increased educational attainment of women. This experience contrasts with western nations where increased labor participation of mothers with young children was one of the most pronounced change that has taken place in the past decades. Instead, women's increased educational attainment in Japan has resulted in delay in marriage and delay in childbirth. To what extent do such behavior reflect labor market institution, and to what extent do such behavior reflect cultural values?

We will use our newly started five year panel data collected in Seoul, Korea and in Beijing, China through our "Frontier of Gender Studies Program" by Ochanomizu University using competitive fund from Ministry of Education and Science in Japan. We have the first year result and retrospective questioning for Beijing, 2621 samples of males and females age 25-54, and Seoul, 1749 samples of males and females age 25-44. The result will be compared with retrospective questioning of Japanese Fertility Survey of 1997 of Japan, 10420 of married females and non-married males and females altogether. The method to be used will be survival analysis of women's marriage, the effect of estimated wage, family type, whether extended or nuclear, education and other factors on the work hour and home production hour choice of couples following childbirth. So far we have found much similarity in wage structure as well as couple's behavior in Seoul and Japan, while highly contrasting behavior in Beijing.

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## **Impact des changements familiaux sur les parcours professionnels des hommes et des femmes**

Cette communication vise à analyser, dans une perspective longitudinale, l'impact de la diversification des configurations familiales sur la dynamique de la participation au marché du travail des hommes et des femmes au Québec et au Canada. L'originalité de notre recherche réside dans l'approfondissement de certaines dimensions clés des histoires professionnelles des individus, rendu possible grâce à la collecte auprès d'un large échantillon d'environ 25 000 répondants rejoints par l'Enquête sociale générale sur la famille en 2001, de données rétrospectives inédites sur l'enchaînement des périodes d'emploi et de non emploi qu'ils ont connu. Ces informations permettront de tenir compte dans les analyses des dimensions nouvelles de l'organisation du travail que constituent l'emploi à temps partiel et le travail autonome, et de vérifier à quels contextes familiaux particuliers elles sont associées. L'exploitation des données sera menée à partir de la méthode de l'analyse des transitions qui permettra de saisir l'influence relative que l'histoire conjugale et parentale des individus exerce sur les trajectoires d'emploi qu'ils connaissent, et de voir dans quelle mesure ces influences se sont modifiées à travers les différentes générations d'hommes et de femmes. En apportant de nouveaux résultats sur l'articulation à travers le temps des comportements professionnels et familiaux des individus, tels que sur les liens existant entre instabilité conjugale et continuité en emploi ou entre maternité et emploi à temps partiel, notre communication contribuera à alimenter le débat et la réflexion en regard de l'élaboration de politiques publiques adaptées aux nouvelles réalités de l'emploi et de la famille.

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## **Migration et insertion économique en milieu urbain africain**

Depuis les années 1970, le modèle théorique à la base des travaux sur les liens entre migration et employ en Afrique suggère des hypothèses qui n'ont pu être testées faute de données longitudinales pertinentes. Avec les enquêtes rétrospectives et les techniques d'analyse longitudinale, il est maintenant possible d'examiner l'accès à l'emploi d'une façon dynamique et de comparer la performance des migrants et des non migrants. L'objectif de l'étude consiste à illustrer la pertinence des données rétrospectives pour l'étude de l'insertion économique dans trois villes africaines, soit Bamako, Dakar et Ouagadougou.

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## **Economic Self-Sufficiency in a Risky Transition to Adulthood: Evidence from a Prospective Study of Adolescent Childbearing**

The adversities faced by teenage mothers are well known. Most start out as single parents and endure long-term poverty with little access to educational opportunities or secure employment. However, the perspective of time challenges our assumptions about the inevitability of these outcomes. Why some teens eventually attain a reasonable level of economic self-sufficiency and others make little progress is often left for “further study.” The policy implications are clear, but these questions persist.

We analyze the economic self-sufficiency of very young mothers and their families with longitudinal data collected in a study that has followed a single cohort of over 200 teenage mothers since the mid-1980’s. Life History Calendars provide a month-by-month record of neighborhood, household composition, marital and fertility histories, education, employment, and sources of household income. A series of hierarchical growth curve models describe intra-individual trajectories of self-sufficiency and inter-individual differences in patterns of change. Despite the obvious advantages of explicitly modeling change over time and incorporating time-varying circumstances that influence these outcomes, growth curve models are not often used with binary outcomes such as our measure of self-sufficiency.

Our analyses identify significant gains in self-sufficiency that are associated with marriage, with cohabitation, or with single parenting. Employment has a substantial effect on self-sufficiency, but it appears that working outside the home is more clearly related to the presence of a husband or partner than to educational attainment. Qualitative interviews add to our discussion of self-sufficiency in late adolescence and early adulthood despite difficult beginnings and a high risk of economic adversity.

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## **Mental Health Consequences of Not Meeting Fertility Intentions: Life Course Dynamics**

While involuntary childlessness and unwanted pregnancies have both been associated with poor mental health outcomes among women, no studies have contrasted the mental health impact of these two extremes of not meeting intentions, or explored the potential moderating impact of education on these relationships.

Mirowsky and Ross (2003) argue that education increases the sense of control, which in turn results in better health outcomes. Both involuntary childlessness and unwanted pregnancies involve a loss of control, and as such, education could be hypothesized to be as much of a risk as a protective factor: more educated women could be distressed by a loss of control to which they are not accustomed, or they could instead reclaim control over the situation by drawing on resources not available to less educated women.

These competing hypotheses are tested with data from the National Longitudinal Survey of Youth 1979, which prospectively follows the parallel evolution of fertility intentions and reproductive histories. To ensure that the analyses reach the near end of the respondents' reproductive years, the sample is restricted to 2,720 women 40 years or older in 2002 (vital registration statistics indicate that only 1-2% of the U.S. TFR is due to women above 40). Depression is measured by the CES-D and the SF-12 MCS, and both the family history of depression and respondents' depression in early adulthood will be controlled for.

These analyses will indicate whether contemporary low fertility should be seen as a population health problem in addition to being a demographic concern.

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## **Health Over the Life Course: A Chain Graph Model of Relationships Among Socio-demographic, Societal and Behavioural Factors that Affect Health**

A rational health policy needs to shift from focussing attention on how individuals differ in their 'relative risks' to examine the multicausal nature of health/disease status. This paper aims at understanding the inter-relationships among socio-demographic, societal and behavioural influences that affect health. Using the longitudinal data from the first and the subsequent rounds of the National Population Health Survey, Canada, we identify not only how these relationships vary by different age groups, gender and social status over specific subgroups of the Canadian population like the recent and long-term immigrants versus Canadian-born, but also how they change over the life courses of individuals. Although several studies have examined the behavioural influences on health, the inter-relationships among sociodemographic, social and behavioural influences have not been clearly brought out, possibly because proper statistical techniques have not been available. In this study, we use Chain Graph Models that concentrate on meaningful connections among variables included in the analysis and help identify the changing nature of these relationships over the life course.

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## **Economic Indicators and Marriage: Exploring Their Relationships Using the Survey of Labour and Income Dynamics**

In our earlier study, we found that the effect of income on union formation and parenthood seems to differ by gender. Among men, those with higher personal income are more likely to marry or form a union and consequently, to become parents at an early age. For women, higher income seems to have the effect of delaying family formation, explained in part by the higher opportunity costs associated with parenthood. However, these findings are based on an analysis of cross-sectional data, specifically, the 2001 General Social Survey on Family History.

This paper aims at finding whether this relationship between family formation and income that differs by gender is causal. Longitudinal data from the Canadian Surveys of Labour and Income Dynamics (SLID) will be used. The focus of the analysis will be men and women aged 20-29 in 1992 (the reference year of the survey's first wave), who were followed for 6 years. Using appropriate longitudinal techniques of analysis, such as sequence analysis of interdependent processes based on the principle of conditional independence, the paper will examine the relation between change in income and change in marital and parental status, while taking into account other factors such as education and employment patterns.

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## **Nuptial Strategies for Managing the Risk of HIV Infection in Rural Malawi**

In a context where the transmission of HIV largely operates via heterosexual contact and where no cure or vaccine is available, behavioral changes are thought crucial for containing the epidemic. Most often it is abstinence, condom use and faithfulness that receive attention in this context, but these strategies sometimes lack realism (e.g. abstinence) or are beyond the control of women (e.g. condom use or faithfulness of the partner). In this contribution I investigate partner choice and divorce as two other behavioral strategies that women in rural Malawi deploy to manage their exposure to HIV. The analysis consist of two parts. In the first part, temporal changes in aggregate level indices of nuptiality characteristics are compared with trends in AIDS mortality. The second part tests the association between perceived risk of exposure to HIV and marriage practices. The longitudinal character of the Malawi Diffusion and Ideational Change Project is exploited to avoid problems of reverse causality.

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## **Is Physical Activity in Childhood Associated with Being Overweight in Adulthood?**

Recent research has focused on the relationship between a child's physical activity level and their subsequent adult body composition. The popular belief is that physical activity is a lifelong trait and that inactive children are more likely than their active counterparts to become overweight adults.

### Purpose

Identify the effects of physical activity in childhood on body composition at 40 years of age.

### Methods

Subjects were part of the Saskatchewan Growth and Development Study (1964-1973; 1998-1999). In 1964 the physical activity of 207 8 year old boys was assessed. Annually assessment took place for a further 10 years. In 1998/1999 sixty one boys were reassessed and make up the present sample. Subjects were categorized into activity groups (low active, average active, highly active) based on annual composite activity assessments. Annual height and body mass measurements were used to calculate body mass index (BMI). Individual BMI was compared against BMI for age percentiles.

### Results

A one way ANOVA test demonstrated that childhood PA groupings were not significantly related to adult BMI ( $F(2,54)=2.84$ ,  $p >0.05$ ). As children, 57 (93.4%) were classified as normal and 4 were classified as overweight (6.6%). However, as adults 22 (36.1%) were classified as normal and 39 (63.9%) were classified as overweight.

### Conclusion

The results from this study indicate that physical activity as a child does not directly relate to the body mass achieved as an adult. The question therefore is to identify when energy intake exceeds energy expenditure during the transition from childhood to adulthood.

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## **Adult Out-Migration and Intergenerational Support for the Elderly in Rural China: A Longitudinal Study**

The fast increasing out-migration of rural adults to urban areas in contemporary China has resulted in great changes in young people's occupation and their proximity from parents as well as parents' living arrangements. These changes have greatly affected extent and pattern of intergenerational support. This paper studies the impact of adult out-migration and intergenerational support in contemporary rural Chinese elderly families from a longitudinal perspective. Data used in this paper are from a longitudinal sample survey "Well-being of the elderly in Anhui province, China", conducted by Institute for Population and Development Studies of Xi'an Jiaotong University, China, in April 2001 and November 2003, respectively. The paper employs Logit regression models to analyze the intergenerational support of the elderly provided by all children, and Logit mixed regression model to investigate the intergenerational support of each child to his/her parent. While the out-migration of children has increased the living distance between children and elderly parents, it also produces positive effect of more financial support to parents, but has a negative influence on exchange of instrumental support between generations. Parents' coresidence with children has increased the exchange of financial, emotional and instrumental support between generations. Moreover, as the health and economic status of Chinese rural elderly has deteriorated, there has been an increase in intergenerational support these parents obtained from children and a decline in what they provide to their children. Social and demographic implications for the rural elderly are also discussed.

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## **Migrant Family Trajectories: An Analysis of Salvadorian and Guatemalan Immigrants in Toronto**

This paper analyzes family transformation over the period 1985 to 2001 among migrants from El Salvador and Guatemala in Toronto. Data come primarily from migration and family histories gathered in a household survey. These survey data are supplemented by immigrant arrival statistics, census tabulations, and historical accounts of the political, social and economic circumstances that were associated with departure, decisions on destination country, and settlement patterns after arrival. The conceptual framework and conclusions arise from putting together a two different family change models: a normative “life course” model, and a transformative or adaptive “resilience” model.

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## **Famille, travail et transition.**

### **Une analyse longitudinale des parcours de cohabitation en Suisse.**

A l'instar d'un grand nombre de pays occidentaux, on assiste actuellement, en Suisse, à un changement d'intensité et de calendrier de la nuptialité. Dans le même temps, on observe une diversification des formes de cohabitation familiale et/ou non familiale alternatives (Priester 1996). Ces deux phénomènes semblent en partie liés à la prolongation et la complexification des parcours de formation ainsi qu'à l'insertion de plus en plus tardive sur le marché du travail.

La pluralisation des modes de vie familiaux – et notamment la conciliation de charges familiales et professionnelles – occupe une place importante dans les débats actuels de la politique sociale suisse (Dafflon 2003). Malgré ces discussions, rares sont les études longitudinales portant sur ces diverses formes de vie, leurs étapes successives et facteurs constitutifs.

En exploitant une enquête rétrospective individuelle du panel suisse de ménages, cette communication propose d'analyser les interactions entre parcours de formation, cycles de vie professionnelle et familiale et forme de cohabitation. En spécifiant des modèles de transition multi-états et/ou à risques compétitifs, susceptibles d'explicitier les relations causales entre processus interdépendants (Blossfeld et Rohwer 2002), nous espérons contribuer à une meilleure compréhension de la dynamique des réalités familiales traditionnelles et récentes. En outre, nous porterons une attention particulière sur les disparités régionales en Suisse et sur les implications en matière de politique sociale.

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## **Modeling Trajectories of Transitions from Work to Retirement**

The paper will report results of modeling the probability distribution of alternative classes of trajectories of transition to retirement, based upon data from the longitudinal file of the Survey of Labour and Income Dynamics (SLID). The model will take into account key demographic variables, measures of aspects of socio-economic status that are pertinent to decision-making concerning retirement, indicators that reflect the onset of relevant life events such as the onset of disability, variables that reflect aspects of the SLID respondents' familial contexts, among others. Included among the variables will be ones that are sensitive to the prevailing government policy environment and initiatives, as well as to pertinent aspects of the macro-economic environment, especially demand for labour. The dependent variable of the model will take the form of an unordered polytomy, leading to probable usage of multinomial logistic regression; though the application will have to be tailored to take into account interdependence among the predictors. The paper pre-supposes the identification of who began transiting to retirement in the initial years of the six-year observation period for each SLID respondent, as well as a successful mapping and grouping into meaningful classes of the respondents' trajectories of transition during the six years – all of which are already achieved. Theory and hypotheses will be developed to provide a rationale for the adopted model, as well as part of the framework for discussing implications of the findings for questions or issues in policies and public debate about work-to-retirement transitions.

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### **Trajectoires conjugales de cohabitation en Argentine entre 1995 et 2003. Pluralité des acteurs ou pluralité des destinations?**

En Argentine, les unions consensuelles et les naissances hors mariage se sont répandues depuis quelques années, notamment dans la classe moyenne où elles étaient rares. Ce changement s'est produit pendant une période de difficultés économiques où la classe moyenne s'est appauvrie. On ne sait donc pas si, dans l'Argentine d'aujourd'hui, la cohabitation est une forme de mariage à rabais (Oppenheimer, Kalmijn et Lim, 1997) dont la diffusion serait due aux aléas qu'a traversés le pays ou, au contraire, la conséquence de l'accroissement de l'autonomie des individus que la « seconde transition démographique » associe à sa diffusion dans les pays développés (Lesthaegue, 1995). Nous étudions cette question en analysant l'évolution, entre 1995 et 2003, des relations entre emploi, revenu, formation des unions, naissances et conversion des unions consensuelles en mariage à partir du sous-échantillon des femmes de moins de 40 ans de la *Encuesta Permanente de Hogares*, une enquête par panels menée par l'Indec, l'agence de statistique officielle argentine, et au moyen de modèles de risque. Dans le premier cas, le risque de former une union consensuelle variera en raison inverse de la situation économique individuelle alors que le risque de convertir une union consensuelle en mariage variera en raison directe de celle-ci, peu importe la situation économique du pays. Dans le second cas, le risque de former une union consensuelle augmentera avec le temps, peu importe la situation économique des individus ou du pays, alors que le risque de transformer une union consensuelle en mariage diminuera avec le temps.

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## **Diminished Capacity to Parent: Does Divorce Change Parenting Behaviour?**

Coined in the 1980s by researchers investigating the effects of parental divorce on child outcomes, 'diminished capacity to parent' refers to the reduced ability and motivation to parent as divorcing couples negotiate the crisis period of marital dissolution. Despite the popularity of the term, few studies have attempted to systematically track changes in parenting behaviour before, during and after the process of marital dissolution. Using four waves of data from the Canadian National Longitudinal Study of Children and Youth (NLSCY), the current study involves prospectively tracking a nationally representative sample of Canadian children ages four and five who live with two biological parents at initial interview in 1994 (N=1231), and comparing changes in parenting behaviour among divorced and continuously married households. Results, obtained through growth curve analysis, suggest that, controlling for pre-divorce parenting behaviour, parents who divorce report engaging in fewer positive interactions with their children, but are neither less effective nor more punitive subsequent to the divorce event compared to parents whose marriage remain intact during the follow up period.

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## **Conceptualisation d'un événement de santé et sa prise en compte dans une analyse biographique**

L'un des enjeux majeurs auxquels fait face le monde développé est de comprendre et de promouvoir les facteurs qui protègent la santé des personnes. Il devient de plus en plus évident que la santé et le bien-être résultent largement de l'expérience accumulée au cours de la vie. Pour appréhender ces défis, de nouvelles approches par des études longitudinales tant prospectives que rétrospectives permettent d'expliquer l'état de santé d'un individu par sa trajectoire de vie. Certains événements socio-familiaux vécus péniblement comme le divorce, le décès d'un proche, des souffrances, des violences subies, le chômage de longue durée, ... sont autant des facteurs explicatifs d'un état de santé dégradé.

L'objet de cette communication vise à répondre aux questions suivantes : dans quelle mesure le parcours de vie familial et professionnel d'un individu peut contribuer à expliquer l'état de santé de celui-ci ? dans quelle mesure les caractéristiques de son parcours résidentiel interviennent-elles aussi ? et en fin de compte dans quelle mesure le parcours de santé lui-même n'influence-t-il pas les caractéristiques de la carrière professionnelle, familiale et migratoire de cet individu ?

Dans la perspective d'obtenir des résultats concrets sur l'état de santé au cours des diverses phases de la vie, cette communication vise à présenter une réflexion méthodologique autour de la mise en place d'un recueil biographique en Belgique qui outre le relevé des événements factuels et datés des trois trajectoires classiques des 55-74 ans, à savoir le parcours familial, le parcours résidentiel et le parcours professionnel, s'est aussi attaché à recueillir le parcours de santé biographique d'Ego depuis sa naissance. Le recueil de cette trajectoire de santé est innovant dans l'histoire des enquêtes biographiques et nous souhaitons en exprimer ici par le biais de tests de validation sur le terrain et d'une enquête pilote les premiers résultats avec son lot de difficultés méthodologiques, conceptuelles et techniques liées à l'approche longitudinale d'une part, et, dans cette catégorie de parcours d'autre part.

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## **Modeling the Joint Development of Depression and Anxiety Among Canadian Children Aged 2 to 11**

### Purpose:

The purpose of the present study was to model the development of anxiety and depression among Canadian children aged 2 to 11 and to jointly estimate these disorders using a general nonlinear mixtures of curves program (MOC; Boulerice, 2004).

### Method:

Participants were 10641 predominately white children drawn from the National Longitudinal Survey of Children and Youth. Information about the participants was collected by interviewing mothers in their home by a trained research assistant who asked them to rate, among other things, their child's depressive and anxious behaviors on a 3-point Likert scale (often/very true; sometimes/somewhat true; never/not true). Sample questions: "How often would you say that \_\_\_\_ seems unhappy, sad or depressed?"; "... is too fearful or anxious?"

### Results:

Three distinct trajectories were identified for depression: 1 constant group representing 18.61% of the children; 1 linear group representing 53.17% of the children; and 1 quadratic group representing 28.22% of the children (see Figure 1), while four distinct trajectories were identified for anxiety: 1 constant group representing 11.56% of the children; 2 linear groups representing 16.39% and 37.91% of the children; and 1 quadratic group representing 34.14% of the children (see Figure 2). Results from the joint trajectory estimates indicated that 6% of children followed a higher trajectory for both depression and anxiety and that strikingly, higher depression was never related to low levels of anxiety, a result similar to what has been reported with regard to adult depression (Barlow, et al., in press).

Figure 1. Trajectories of depression.

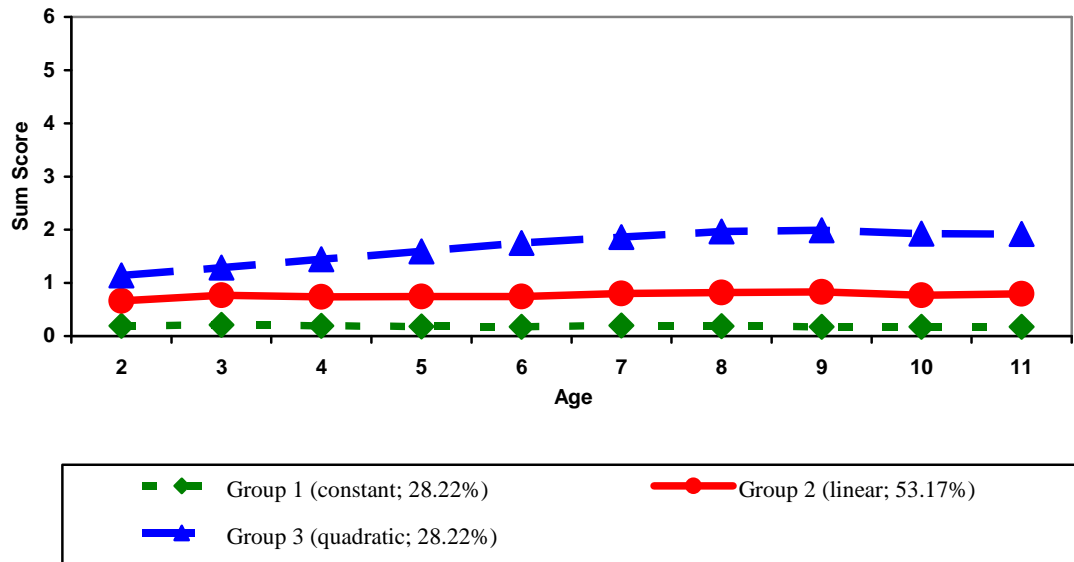
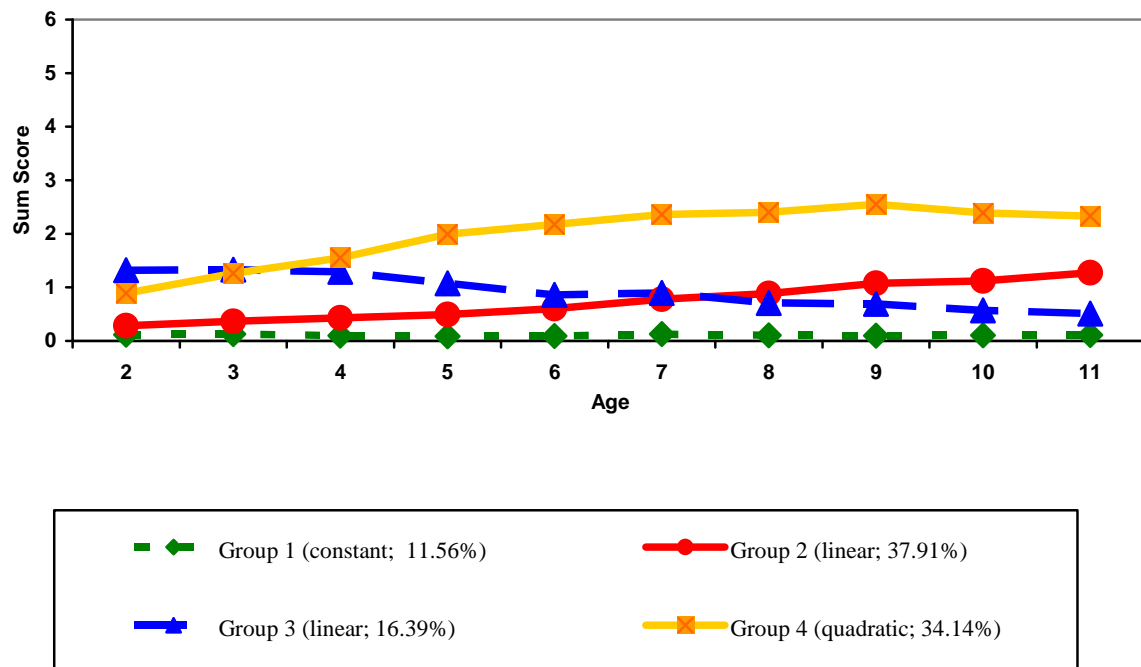


Figure 2. Trajectories of anxiety.



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## **Longitudinal Studies Based on Linkage of Routinely Collected Administrative Data: Overview and Examples Based on Linked Vital Statistics Birth and Death Records**

Longitudinal studies based on prospectively collected survey data are severely limited by the rarity of such studies, their limited sample size, the high costs of data collection, and long delays between the initiation of such a survey and the accumulation of sufficient data for analysis. However, the resulting datasets tend to be extremely rich in content. By contrast, longitudinal studies based on linkage of routinely collected administrative data are potentially much more numerous, of far greater sample size, relatively inexpensive, and the follow-up data may be available quickly. However, the resulting datasets tend to be much less rich in content. Nevertheless, by combining the information from multiple datasets, record-linkage-based approaches can enrich their content considerably. We describe the steps in building and validating the Canadian linked birth and infant death database, and its planned extension to include person-oriented hospital morbidity data, as well as the feasibility of linking it to a sub-sample to census socioeconomic data. Examples of the policy-relevance of the work to date are shown. Methodological challenges and statistical techniques are described.

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## **Changes in Hospitalisation Among Older Adults Living in British Columbia: Rural-Urban Differences, 1990-2000**

### Background

Through the 1990s, governments across Canada shifted health care funding allocation and organisational foci toward a community-based population health model. One of the major concerns of reform based on this model is ensuring equitable access to health services, including by factors such as rural-urban residence, income, gender and ethnicity. Yet, its effectiveness in achieving this objective remains unknown. To address this issue, this study examines rural-urban differences in trends in the utilization of hospital care in British Columbia during a decade of health system reform.

### Materials and Methods

Our analyses draw on hospital utilization data from Medical Services Plan files maintained by the BC Ministry of Health and accessible through the British Columbia Linked Health Data (BCLHD) resource. BCLHD data represent fiscal years 1990-1991 through 1999-2000. Rural-urban residence is measured using Enumeration Area codes. Annual trends in age-sex adjusted rates are analysed using joinpoint regression. As well, longitudinal multivariate analyses assessing the effects of rural-urban residence, age and gender on hospitalizations are conducted using generalised estimating equations (GEE).

### Results and Discussion

Our findings reveal that health care reforms planned through the 1990s and formally implemented in 1997 were accompanied by declines in hospitalization rates overall and in both rural and urban areas. Rural areas had higher hospitalization rates than urban areas; however the gap between them decreased over time. Hospitalization is significantly influenced by time (year-to-year) as well as residence factors. The findings are discussed with reference to health reform objectives.

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