Annual Report 2010

Umeå International School of Public Health

Epidemiology and Global Health

Printed by Print & Media, Umeå, Sweden 2011
Cover photo:Lars Weinehall

Preamble

This report ends Epidemiology and Global Health's 24st operation year. It summarizes continued strong achievements in research and research training as well as in public health education. The report presents how the research profile gradually has developed, not least as illustrated by the record high number of scientific publications.

During 2010 Epidemiology and Global Health was selected as one of Umeå University's strong research environments and it is no exaggeration to Global Health at Umeå University now is a world-leading research network in the its field.

One of today's challenges to the research environments like ours is to actively compete for international research grants. But as we all know, is not only exciting research ideas and high academic skills that is needed, to successfully compete in an international arena. It also requires skills that can actively assume responsibility and provide guidance of research management, budgeting and financial monitoring that is living up to a high international standard. Therefore, we in 2010 recruited a coordinating Research Manager to complement the research groups. Upgraded in this way, the unit during 2010 produced four major research applications to the EU.

In 2010, 6 Ph.D. student successfully defended their theses, the while xx new ones were accepted for doctoral studies. In 2010 also a large number of new students commenced their Masters Education at Umeå International School of Public Health (UISPH), 43 as first-year students turning up at the beginning of term. Thanks to the excellent effort of teachers, students, counselors and administrators, it has been possible to provide a good educational program for both the new students and for the second-year student.

The students who began their master program in September 2010 were the last who did not need to pay tuition fees. Unfortunately, the decision by the Swedish Parliament on tuition fees will hit our future MPH education particularly hard, as our students largely come from non-EU countries. So the challenges we will meet during 2011 are likely to affect Umeå University's most international educational environment very negatively.

The Swedish Research School for Global Health - a partnership between Umeå University and Karolinska Institutet, has also in 2010 worked excellent and provided a series of well-appreciated post-graduate courses.

Operations such as Epidemiology and Global Health are highly dependent on good partnerships. We would like to underline the good climate of cooperation that exists within the Department of Public Health and Clinical Medicine, and most-especially with our Head of Department, Professor Ellinor Ädelroth. We would also like to stress the Importance of our wide-ranging cooperation with the Västerbotten County Council's Research, Development & Education staff, led by Professor Jack Lysholm. And last but not least, we want to thank partners within the University, Umeå Municipality as well as other partners both nationally and internationally for their valuable and creative collaboration in the past year.

This Annual Report summarizes in a concrete way our research and research training, our educational effort and the important cooperations that have characterized Epidemiology and Global Health during year 2010.

Lars Weinehall
Professor, Head of Division

Urban Janlert
Professor, Deputy Head of Division

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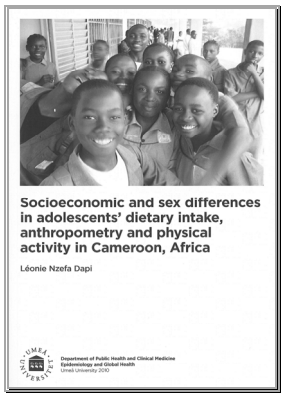
Socioeconomic and sex differences in adolescents' dietary intake, anthropometry and physical activity in Cameroon, Africa



Thesis defended: 5 February, 2010
Supervisors: Urban Janlert, Christel Larsson, Agneta Hörnell
Opponent: Professor Thorkild Tylleskär, University of Bergen, Norway

Background: People in Cameroon are experiencing a dietary transition characterized by changing from traditional food habits to increased intake of highly processed sweet and fatty food. The rapid change in food pattern combined with an increased sedentary lifestyle has resulted in a rather high prevalence of obesity, hypertension, cardiovascular diseases and type 2 diabetes. Nutritional intake is important during adolescence for growth spurt, health, cognitive development and performance in school.

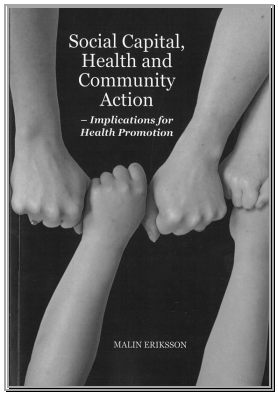
Objective: The aim of this thesis was to assess dietary intake, anthropometry and physical activity of adolescents according to sex and socioeconomic status (SES) and to investigate food perceptions of adolescents living in urban and rural areas of Cameroon.

Methods: Girls and boys, 12-16 years of age, were randomly selected from schools in urban and rural areas. Food frequency questionnaire, 24-hour dietary and physical activity recalls, anthropometric measurements, qualitative interviews and a background questionnaire were used for data collection.

Results: The proportion of overweight was three times higher in girls (14%) compared to boys (4%). Stunting and underweight were more common among boys (15% and 6 %) than girls (5% and 1%). The prevalence of stunting was two times higher among the urban adolescents with low SES (12%) compared to those with high SES (5%). The rural adolescents had more muscle that the urban adolescents. The rural adolescents ate in order to live and to maintain health. Urban adolescents with low SES ate in order to maintain health, while those with high SES ate for pleasure. More than 30% of the adolescents skipped breakfast in the urban area. Urban adolescents with high SES and girls reported a more frequent consumption of in-between meals and most food groups compared to the rural adolescents, boys and those with low SES. Over 55% of the adolescents had a protein intake below 10% of the energy (E%). Twenty-six percent of the adolescents had fat intake below 25 E%, and 25% had fat intake above 35 E%. A large proportion of the adolescents had an intake of micronutrients below the estimated average recommendation. Boys and the adolescents with low SES reported a higher energy expenditure and physical activity level than girls and the adolescents with high SES, respectively. Both under- and over-reporting of energy intake were common among the adolescents.

Conclusions: The present study showed that nutrient inadequacy, stunting, underweight, as well as overweight and obesity were common among the adolescents in Cameroon. Therefore an intervention program targeting both under- and overnutrition among school adolescents is needed. Sex and socioeconomic differences also need to be considered.

Malin Eriksson



Social capital, health and community action - Implications for health promotion

Thesis defended: 12 June, 2010
Supervisors: Maria Emmelin, Lars Dahlgren, Urban Janlert
Opponent: Professor Catherine Campbell, Institute of Social Psychology, London School of Economics, London

Background; The overwhelming increase in studies about social capital and health occurring since 1995 indicates a renewed interest in the social determinants of health and a call for a more explicit use of theory in public health and epidemiology. The links between social capital and health are still not clear and the meanings of different forms of individual and collective social capital and their implications for health promotion needs further exploration. The overall aims of this thesis are to explore the relationship between social capital and health and to contribute to the theoretical framework of the role of social capital for health and health promotion.

Methods; Data from a social capital survey were used to investigate the associations between individual social capital and self-rated health for men and women and different educational groups. Survey data were also analyzed to determine the association between collective social capital and self-rated health for men and women. A qualitative case study in a small community with observed high levels of civic engagement formed the basis for exploring the role of social capital for community action. Data from the same study were utilized for a grounded theory situational analysis of the social mechanisms leading to social capital mobilization.

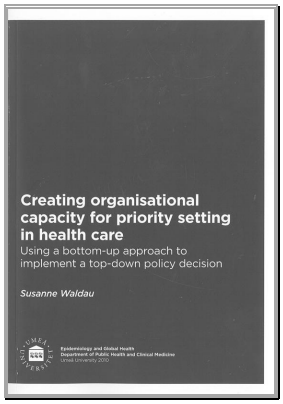
Main findings; Access to individual social capital increases the odds for good self-rated health equally for men and women and different educational groups. However, the likelihood of having access to social capital differs between groups. The results indicate a positive association between collective social capital and self-rated health for women but not for men. Results from the qualitative case study illustrate how social capital in local communities can facilitate collective actions for public good but may also increase social inequality. Mobilizing social capital in local communities requires identification of community issues that call for action, a fighting spirit from trusted local leaders, "know-how" from creative entrepreneurs, and broad legitimacy and support in the community.

Conclusions; This thesis supports the idea that individual social capital is health-enhancing and that strengthening individual social capital can be considered one important health promotion strategy. Collective social capital may have a positive effect on self-rated health for women but not for men and therefore mobilizing collective social capital might be more healthenhancing for women. Collective social capital may have indirect positive effects on health for all by facilitating the ability of communities to solve collective health problems. However, mobilizing social capital in local communities requires an awareness of the risk for increased social inequality.

Susanne Waldau

Creating organisational capacity for priority setting in health care. Using a bottom-up approach to implement a top-down policy decision

Thesis defended: 22 October, 2010
Supervisors: Lars Lindholm, Urban Janlert, Olle Svensson
Opponent: Finn Kamper Jörgensen, National Institute of Public Health, Copenhagen, Denmark



In this thesis, priority setting to the form of the Swedish parliamental decision on priority setting, 1997, is considered an innovation for implementation in health care. The features of this innovation are investigated. The practical implications of implementation are identified by investigating the user organisation, ie, Swedish health care organisations and management systems. Also, a case of a three-stage process for macro-level priority setting that engaged the entire organisation in the Västerbotten County Council (VCC) is presented. This is done against a background of preceding implementation efforts in the VCC. Four specific research efforts and papers are presented.

In Paper I, priority setting is operationalised into a multi-dimensional resource allocation task. On that basis, with the help of interviews (1998) and surveys (2002 and 2005) primarily of VCC health care managers, the impact of implementation is measured by prioritisation structures, processes and decisions. Survey response rates were low. Results were used as qualitative data, internally compared, and interpreted as: a) responses reflected mainly "early adopters'" opinions; b) priority setting is an ambiguous concept; c) indicating limited overall implementation; d) reinterpretation of the prioritisation task occurred over time among respondents; and, e) this group took increasingly personal responsibility as stakeholders in priority setting.

Paper II reports a case study intervention of explicit, departmental level priority setting with the aim of improving cost-effectiveness in *in vitro* fertilization resource use and a rationing of services perceived legitimate by all stakeholders. The intervention combined priority setting and structured quality improvement techniques. Results were: a) improved operational efficiency of diagnostic procedures that allowed resources to be reallocated to treatment; and b) patients were prioritized and treatment resources were rationed based on evidence of treatment effect among subgroups. Evaluation showed that the procedure met stated criteria for legitimacy.

In Paper III, a full-format test of the macro level prioritisation process is described and evaluated by participants with the help of surveys after each completed stage. Participants report the need for improvement of elements in the overall process and of procedural specifics. However, overall there was a strong commitment to the initiative and satisfaction with the process and the resulting decisions.

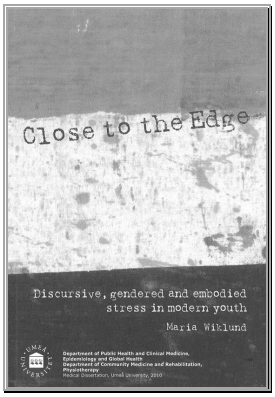
In Paper IV, procedural specifics of the prioritisation process are evaluated. They are also compared to the Program Budgeting and Marginal Analysis (PBMA) framework when used for macro level purposes. Procedures provided intended results such as vertical and horizontal priority setting and a consistent process. However, economic targets were not fully achieved in any of the stages.

Conclusions include that health care management systems are not prepared for priority setting and need profound restructuring and that the prioritisation process described in Papers III and IV was successful because: a) the process satisfied politicians' directives; b) participants were satisfied with the procedures and perceived the subsequent reallocation decisions as legitimate; and, c) methods resulted in the intended outcome. Factors suggested as the basis of success include: long-term overall preparations; broad and deep participation; a readiness for change among participants; a stage for horizontal priority setting that added to the quality, feasibility and perceived validity of the knowledge base; a strong process leadership; and politicians determined to protect the process from opportunistic disturbances.

Maria Wiklund

Close to the edge. Discursive, gendered and embodied stress in modern youth

Thesis defended 12 November, 2010
Supervisors: Ann Öhman, Eva-Britt Malmgren, Carita Bengs and Erik Bergström
Opponent: Charli Eriksson, Örebro University, Örebro



Background Adolescent subjective health and mental problems have become a public health concern not only in Sweden but worldwide. The overall aim of this thesis is to deepen and widen the understanding of young peoples' subjective health, psychosomatic and stress-related problems. A special focus is put on experienced stress among adolescent girls and young women. The study setting is one youth health centre, and three upper secondary schools in Umeå, a university town in northern Sweden. The research design combines qualitative and quantitative methods with the main focus on qualitative methods. An interdisciplinary theoretical synthesis is utilised, primarily based on bio-psycho-social, phenomenological, and social constructionist approaches.
The three qualitative papers (I-III) are based on the same sample of 40 young women who had sought help at the youth health centre because of their stress-related problems. Paper I explores the stressors experienced by the young women, whereas Paper II explores the lived experiences of stress. Paper III examines the young women's experiences of living in a violent partner relationship as young teenagers, and how this has affected their lives and health over time. Paper IV investigates perceived stress and subjective health complaints among older adolescents in upper secondary school.

Methods Data was derived from: a) a qualitative interview study with 40 adolescent girls and young women, aged between 16–25 years, who had sought help at the youth health centre for stress problems. Qualitative content analysis was used in combination with discourse-orientated analysis (Paper I); a phenomenological approach (Paper II), and narrative method (Paper III); b) a school-based survey with a sample of 16–18-year-old boys and girls (n=1027), in upper secondary school, grades 1 and 2, from different educational programs at three schools. Perceived stress, self-rated health, subjective health complaints, anxiety, and depression, were measured with a questionnaire including a set of instruments. Statistical analyses were descriptive and analytical.

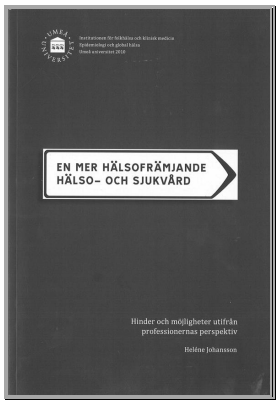
Results Paper I identified multiple stressors of modernity, gender orders and youth. Contextual factors, including social constructions and practices of gender, played an important role for the stress experienced by these young women. The results revealed that multiple and intersecting stressors and demands connected to essential life spheres, contributed not only to experiences of distress but also to feelings of constraint. Moreover, the roles of excessive taking of responsibility and failing adult support were revealed.
Paper II illuminated multidimensional lived and embodied experiences of distress. 'Living close to the edge' emerged as the common theme running through all of the interviews and captured the young women's sometimes unbearable situations. The theme contains dimensions of physical, emotional, cognitive, social, and existential distress, as well as dimensions of distrust and disempowerment.
Paper III examined two Swedish adolescent girls' experiences of living in a violent relationship as teenagers, and how this has affected their lives and health over time. The analysis revealed violation, stress, trauma, coping, and agency during adolescence and the transition into adulthood.
Paper IV showed a high level of perceived stress, and subjective health and stress complaints among boys and girls. High pressure and excessive demands from school were experienced by a majority of boys and girls. Perceived stress was correlated with subjective health and stress complaints and anxiety. There was a clear gender difference: two to three times as many girls than boys reported subjective health complaints, e.g. headaches, tiredness and sleeping difficulties, musculoskeletal pain, sadness and anxiety.

Conclusion Several issues of relevance to public health were raised throughout the thesis. According to the interview results, the young women face multiple and intersecting stressors of modernity, gender orders and being young, which correspond to their multidimensional experiences of 'living close to the edge'. Their experiences of stress are multidimensional, and include physical, emotional, cognitive, social and existential dimensions. Findings from the qualitative study were also mirrored in the findings from the larger group of adolescents in the school survey, where a high proportion of older adolescents, particularly girls, reported perceptions of stress. Moreover, perceived stress correlated to a variety of subjective health complaints and anxiety. The results can be understood and explained from a variety of perspectives. The experience of 'managing alone' indicated perceptions of inadequate social support. The overall results indicated a risk of more negative health development, particularly among adolescent girls and young women. Stressors of modernity, gender orders and youth were prominent. The continuation and normalisation of oppression and violence are also discussed as a severe gendered stressor in young women's lives. This calls for a broad contextualised and gender-sensitive approach to young people's stress and health problems. In conclusion, the age and gender gap in adolescent health needs to be further explored, and processes of distress, distrust and disempowerment have to be taken more seriously.

Helene Johansson

En mer hälsofrämjande hälso- och sjukvård. Hinder och möjligheter utifrån professionernas perspektiv

Thesis defended 3 december, 2010
Supervisors: Lars Weinehall, Maria Emmelin, Lena Lundström
Opponent: Charli Eriksson, Örebro University, Örebro



Introduction: There has been an on-going, active discussion about the need to re-orient health services to contribute more effectively to population health. This was addressed as one of the 2003 National Swedish public health policy goals, which demand health promotion and disease prevention be an integral part of the health care system and an important component of all care and treatment. Health care professionals are thus expected to play a key role in implementing the goal of "a more health-promoting health service". Their approach to, and knowledge about, health promotion will consequently greatly influence how the goal will be applied in the future.

The aim of this thesis is to describe and analyze the possibilities for re-orienting health services to more health promotion from the perspective of health professionals. The specific aims are to explore how health professionals interpret the concepts of health and health promotion, how they perceive their role in health-promoting practices, and how they view barriers and possibilities for having a health-promoting role in practice.

Methods: The thesis is based on four studies with two sets of data. Seven focus group discussions were carried out with a total of 34 informants from both hospital and primary health care settings. The informants represented major professional groups. Data were analyzed using qualitative content analysis. Perceptions generated by the qualitative study resulted in formulation of a questionnaire that was pilot-tested and used in a survey. Out of a total of 3751 health professionals who work in daytime clinical practice in the province of Västerbotten, 1810 were invited to participate. They represented counselors, dieticians, midwives, nurses, occupational therapists, physical therapists, psychologists and physicians.

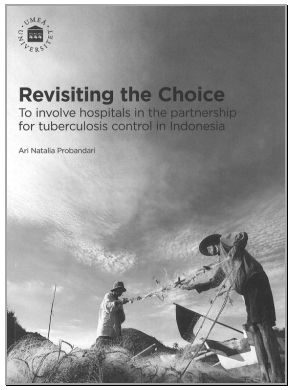
Main findings and conclusions: The vast majority of informants hold holistic ideas about health. At the same time, 40% of the health professionals considered health services to be permeated by a biomedical perspective on health. The concept of health promotion appeared to be diffuse, elusive and difficult to apply in practice. This was partly linked to a lack of agreement about the relationship between health promotion and disease prevention. Thus, policy makers have to understand the need for clarification of concepts and the implications for practice.

The thesis found strong support for a reorientation of health services in order to incorporate health promotion. The majority of the respondents believed that health services play a major role in long-term health development in the population and saw a need for health orientation as a strategy to provide more effective health care. Willingness to focus more on health promotion and disease prevention was reported significantly more often by women than men, and by primary health care personnel compared to hospital personnel. Especially noteworthy is that men and physicians, i.e., groups that often possess high positions of power, reported less positive attitudes to a more health-promoting health service, while psychologists, occupational therapists and physiotherapists most frequently reported the opposite. Therefore, awareness (analysis) of power relations must play a strategic role in the process of change. The most common barriers to health promotion roles in daily practice were reported to be heavy workloads, lack of guidelines, and unclear objectives. Management support is critical for the availability of time and other resources required for health professionals to engage in health promotion.

Ari Probandari

Revisiting the choice. To involve hospitals in the partnership for tuberculosis control in Indonesia.

Thesis defended 10 december, 2010
Supervisors: Anna-Karin Hurtig, Lars Lindholm and Adi Utarini
Opponent: Knut Lönnroth, Stop TB Department, WHO, Geneva, Switzerland



Tuberculosis (TB) is a major public health problem in many low- and middle-income countries, including Indonesia. To accelerate TB case detection, and to improve the quality of diagnosis and treatment provided by all providers, the Public-Private Mix for implementing Directly Observed Treatment Short-course (PPM DOTS) was introduced in 2000. However, previous studies on PPM DOTS have focused on private practitioners and there has been a scarcity of research on PPM DOTS in the hospital setting. This dissertation aims to capture the potential of the PPM DOTS strategy, and identify the barriers to its implementation in hospitals in Indonesia.

This dissertation is based on four separate but interrelated studies: 1. A costeffectiveness analysis, comparing incremental cost per additional number of TB cases successfully treated under three strategies of PPM DOTS in four provinces. 2. An evaluation of the access to TB services by a cross-sectional study among 62 hospitals, by estimating the proportion of TB cases receiving standardised diagnosis and treatment according to the DOTS strategy. The data were analysed using poststratification analysis. 3. The quality aspect was explored in a multiple-case study, including eight selected hospitals. The data were analysed using cross-case analysis. 4. The process of partnership was explored through a qualitative study. In-depth interviews were conducted with 33 informants, who were actors involved in PPM DOTS in hospitals in Yogyakarta province. Content analysis was applied to the qualitative data.

PPM DOTS in hospitals was shown to be a cost-effective intervention in this particular context. However, the quality of the implementation was commonly suboptimal. In addition, a substantial number of TB cases did not get standardised diagnosis and treatment as per the DOTS strategy. The process of creating partnership among hospitals and National TB Programme was shown to be complex and dynamic. Process factors, such as commitment to collaboration and interaction and trust among the actors, were shown to be important. The rapid scaling-up of PPM DOTS in hospitals at the national level in Indonesia should be revisited. Indeed, considering the importance of hospitals in TB control, the implementation should be continued and expanded. However, more attention needs to be given to process, context and governance.

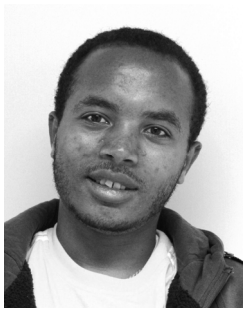
Scholarships 2010/2011

The 2010-2011 Centre Party Global Health scholarships for MPH students at UISPH

Tadesse Senay Alemu, Ethiopia

Gilbonce Betson, Tanzania

Melesse Birega, Ethiopia



Bedru Hussen Mohammed, Ethiopia

The 2010 Centre Party Global Health Research scholarships for PHD students at UISPH

Cynthia Anticona, Peru

Ana Lorena Ruano, Guatemala

Rose Laisser, Tanzania

Yalem Tsegay Assfaw, Etiopien

Tesfay Gebregzabher, Etiopien

Tej Ram Jat, India

Joseph Mumba Zulu, Zambia

Jennifer Crowe, Costa Rica