WHO-EM/NUT/254/E

Report on the

The first regional scientific conference on nutrition, disability and mental health

Amman, Jordan
12–13 October 2010

World Health Organization
Regional Office for the Eastern Mediterranean

Document WHO-EM/NUT254/E/06.11/30

CONTENTS

1. INTRODUCTION

The first regional conference in nutrition, disability and mental health was organized jointly by the World Health Organization Regional Office for the Eastern Mediterranean (WHO EMRO) and Amman Arab University in Amman, Jordan on 12–13 October 2010. The main objective of the conference was to come up with a set of recommendations to: increase the awareness of people and institutions on the important of best health and nutrition practices for promotion of optimal mental health and prevention of disabilities; bridge the service gaps that exist and initiate evidence-based safe and effective nutrition interventions; and reduce the incidence of disabilities and mental health problems. More than 100 participants from different sectors attended the conference, from Jordan University, governmental and private institutions and Royal Medical Services, Nutrition Department.

The conference was opened by Dr Saeed Al-Tell, President of Amman Arab University, who emphasized the importance of the topics to be explored and the strong need to consider disabled people a high priority group for health care and nutritional management. Dr Adnan Al-Jadri, Dean of Psychological and Educational College, Amman Arab University, reflected on the main objective of the conference. Multisectoral coordination was needed between various institutions that provide the needed care for nutrition, disabilities and mental health through translating the recommendations of the conference into concrete actions for the three sectors. Greater efforts needed to be placed on nutrition related behaviour change that could be integrated with other health and non-health programmes to meet health and nutrition objectives for this group.

Dr Haifa Madi, Director of Health Protection and Promotion, WHO EMRO stressed the role of nutrition in health protection and promotion for the people with mental health problems and disabilities in the Region. She expressed appreciation for the contribution of the academic professionals and representatives from Austria, Egypt, Jordan, Pakistan, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic and Yemen, as well as the technical input provided by WHO staff from headquarters and the Regional Office.

Dr Amal Al Nahas, Secretary-General, High Council for the Affairs of Persons with Disabilities, Jordan, introduced the vision, goals, framework and roles of the Council. The three roles of the Council were planning, leading and funding. She said that one of the main areas of work of the Council was the empowerment of institutions and foundations to better serve disabled people, in addition to supporting rehabilitation programmes at the community level.

Dr Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean, drew attention to the need to define health and disease among all people and especially among disabled people. Health and nutrition care for this group started from the community, not from the clinic, and there was a strong need for developing national and regional policies that guaranteed that services were provided at community level. Dr Gezairy concluded his speech by thanking Amman Arab University for joining hands with WHO in this important area. He thanked the participants and assured them of WHO’s support in the process of developing national action plans and policies to ensure optimum health care services for disabled people.

Dr Nayef Al-Fayez, Minister of Health, Jordan welcomed the participants and delivered the inaugural message. In his message, Dr Al-Fayez thanked WHO for taking the initiative to hold a regional meeting to address the challenges and priority areas in the management of people with disabilities and special care needs. He emphasized the need to develop comprehensive food guidelines and nutrition policies that guard the nutritional and health status of this group. He drew attention to the relationship between diet and mental health and disabilities, stressing that health care providers should be partners in providing the highest level of health care to disabled people. He concluded his speech by emphasizing the importance of scientific research in the area of nutrition and mental health and disabilities to further highlight the priority areas.

The conference programme and list of participants are attached as Annexes 1 and 2, respectively.

2. PRESENTATIONS AND SCIENTIFIC PAPERS

2.1 WHO strategies on nutrition: early interventions and programmes

Dr Ayoub Al-Jawaldeh, WHO EMRO

The main causes of malnutrition are inadequate dietary intake and infection. The goals of public health and nutrition programmes are mental, physical and social goals. Nutrition situation analysis at the global level shows that more than one third of child deaths are attributable to under-nutrition. Noncommunicable diseases are the leading cause of death in many countries of the Region. Malnutrition causes 30% of deaths among children under 5 years in the Region. The major nutrition problems in the Region are food insecurity, protein-energy malnutrition, micronutrient deficiencies, infections and infectious morbidity, overweight and obesity and chronic diseases of imbalance and overabundance. There is a relationship between nutrition and disability and mental health. WHO strategies and programmes and evidence-based interventions include promotion of breastfeeding and, complementary feeding and micronutrient supplementation and fortification. In addition, WHO has developed a regional nutrition strategy, global infant and young child nutrition strategy, global strategy for noncommunicable disease, regional framework on implementing the global strategy on diet, physical activity and health, and a regional strategy on cancer control. All these efforts are directed at combating malnutrition and nutrition-related morbidity.

2.2 Effect of protein-energy malnutrition and iron deficiency on cognition

Dr Ahmed Al-Faqih, University of Jordan

Protein-energy malnutrition is classified into two main types: kwashiorkor and marasmus. Deficiencies of iron, copper and zinc and protein-energy malnutrition can cause nutritional anaemia. Haemoglobin is used as indicator for anaemia; serum ferritin is usually used as an indicator for iron deficiency. Iron deficiency is the most prevalent single nutrient deficiency worldwide; anaemia affects 1.6 billion individuals. Children at preschool age have the highest prevalence of anaemia, about 47.4%. Pregnant women are a high risk group for

iron deficiency. Iron deficiency occurs during early neonatal and postnatal periods of life and its effects are irreversible. In developing countries, the double burden of low socioeconomic status and the risk of iron deficiency anaemia deepen the gap in cognition and socioeconomic development.

2.3 Nutrition and schizophrenia

Dr Abdel Manaf Al-Jadery, University of Jordan

The prevalence of schizophrenia is estimated to be one per cent, affecting men and women equally. All age, social, cultural, religious, racial and education groups are at risk. The presenter talked about the manifestation of the disorder and different phases. He also described the risk factors which are genetic and perinatal, an interaction between genes and environmental factors. Nutrition plays a big role in brain development and function; multiple nutrient deficiencies are responsible for changes in brain function. Macronutrients (carbohydrates, protein and fats) are essential in maintaining healthy brain function. Special attention should be given to minerals such as magnesium, manganese, copper, zinc and selenium in brain function. Overall, several amino acids, folic acid and vitamin B12 are often relatively deficient in patients diagnosed with schizophrenia. An association between schizophrenia and celiac disease was demonstrated through research studies.

2.4 Production of gluten-free bread for autistic patients

Dr Tahra Elobeid, Qatar University (presented by Dr Abdel Hamid Kerkadi, Qatar University)

Dietary modifications are an important treatment option for autism. Two-thirds of individuals with autism have shown some improvement on a gluten-free and casein-free diet. The objective of the study was to produce gluten free bread for autistic patients using sorghum. Sorghum is grown is developing countries; Sudan alone produces 4122 tonnes/year. There are special processing techniques that affect the iron availability in sorghum. The study focused on two sorghum varieties from Daber and Tabat. Results of the study showed that bread produced from whole Tabat flour using natural starter gave better results in the sensory evaluation for taste, colour, aroma and bread volume. Dabar flour did not give good results during baking.

2.5 Obesity, diabetes, cardiovascular diseases and cancer related to disabilities

Hayder Al-Domi, University of Jordan

Obesity is a global pandemic. Overweight rates are increasing among children and adolescents. Obesity rates are increased among people with disabilities. Another chronic disease is diabetes; in 2000 around 151 million people globally were diabetic, while in 2010 this figure increased to 221 million. Cardiovascular disease is another serious disease which is increasing globally, including in people with disabilities. Cancer ranks just below cardiovascular disease as a cause of death. Cancer could further increase by 50% to reach 15 million new cases in 2020. The presenter recommended establishing national and regional study groups; establishing primary and secondary health promotion programmes; adopting

healthier lifestyles including diet, eating practices and physical activity; and establishing long-term care units which can reduce the risk for individuals with disabilities.

2.6 The role of employees at the civil society associations for prevention of mental disability

Dr Samah Mohammed Lutfi, Suez Canal University, Egypt (Presented by Dr Ahmed Awad, University of Jordan)

Disability is considered one of the most important issues for scientists in various disciplines; medical doctors, education specialists, genetic scientists, psychologists and sociologists. It has been emphasized by researchers that providing the needed care for the disabled is considered one of the fundamentals of any civilized nation. Hence, providing the care and health services for the disabled represents the highest levels of humanity as it represents also one of the basic rights of the disabled and their families. Lately, the issue of disability has gained a special attention given the latest statistics that showed an astounding increase in the rates around the world. According to latest studies and statistics including the ones done by the United Nations; the prevalence rate of disability has reached 10% of world population, which translates into about 650 million people living with a disability. Eighty per cent of these people are living in developing countries. It is worth mentioning that the problem of disability in the third world is linked mainly to developmental issues and its constraints. Having such a high proportion of disabled people in any community is considered an obstacle toward any potential development and growth especially on the level of building human resources. From that perspective, many developing countries are exerting an extra effort to provide better services to treat and rehabilitate the disabled persons and to best utilize their capacities.

In recent years, many research studies led by doctors and sociologists investigated the effect of cultural and societal factors on different diseases and disabilities. They relied on the theory that the perception of health, disease, and disability is associated in one way or another with cultural aspects and beliefs just like to biological factors. In a sense, any disease has medical and cultural dimensions. Likewise, any form of disability is multifactorial; in which biological, economical and cultural factors intertwine. Thus, it is difficult to analyse the problem or the disability from once aspect or another, it has to be analysed while taken into consideration all factors. There are many forms of disability, including motor impairment, sensory disabilities and mental retardation; perhaps the latter type is the most difficult to study or assess, due to the special care that this group requires.

2.7 Maternal, child and adolescent mental health: interface with nutrition and disability

Dr Khalid Saeed, WHO EMRO

In 2005, nutritional, maternal, perinatal and communicable diseases contributed to 38.6% and mental disorders to 14% of the global burden of disease. Mental disorders are also the single largest contributor to the global burden of disease as a proportion of noncommunicable diseases. Among neuropsychiatric disorders, unipolar disease was the

highest in rate (10%) compared to different disorders such as schizophrenia, dementia and bipolar disorder. There is an interface between nutrition, disability and mental health. Obesity, for example, is associated with a significant increase in lifetime prevalence of mental disorders, partly mediated though physical and social disability.

There is need for joint nutritional and cognitive interventions in ensuring that children reach their optimal growth potential and for prevention of mental health problems. There is an association between maternal depression and duration of exclusive breastfeeding, as well as relative risk of children being underweight and stunted. The challenges with regard to management of persons with mental health problems include stigma, paucity of evidence to guide action, lack of political commitment and visibility, and lack of integrated service delivery. The presenter's recommendations were to: develop/update specific national mental health strategies, especially for vulnerable sections of society like mothers, children and adolescents; work jointly with the other social sectors to coordinate, plan and monitor the implementation of interventions; and build capacity in the health sector and in related social sectors for integrated service delivery.

2.8 Disabilities and rehabilitation in the Eastern Mediterranean Region

Dr Hala Sakr, WHO EMRO

The term disability is an evolving concept that is beyond physical and mental impairment and affects individuals and environments and happens at different levels of functioning. WHO's definition of disability is "the outcome or result of a complex relationship between an individual's health condition and personal factors, and of the external factors that represent the circumstance in which the individual lives". An estimated 10% of the world's population have some form of disability. In the Eastern Mediterranean Region there are about 40 million people who are living with disability. Scattered statistics show high and low estimates of disabled individuals among countries of the Region. There is an urgent need to re-establish data collection process to document the latest rates of this population in the Region to better address the magnitude of the problem and plan successful interventions. Recent developments were presented from countries such as Bahrain, Jordan, Oman, Pakistan and Syrian Arab Republic. There are challenges in the process such as limited data and research, limited documentation, limited resources and fragmented efforts. The presenter concluded by stressing the need for developing community-based health initiatives and activating the initiative for development of training and rehabilitation programmes for disabled persons.

2.9 Prevalence of overweight and associated risk factors among children and adolescents with developmental disabilities in Qatar

Dr Abdel Hamid Kerkadi, Qatar University

Several studies have indicated that there is a higher incidence of overweight among children with developmental disabilities. In selected populations, researchers have reported a higher prevalence of overweight among children and adolescents with spina bifida, cerebral palsy, Prader Willi syndrome and Down syndrome. Inadequate balance of nutrients, reduced

mobility, lack of education or understanding, psychological and psychiatric conditions can all contribute to the development of overweight and obesity. Children with developmental disabilities are at more risk of nutritional problems than the general population. The objectives of the study were to assess the prevalence of overweight among children with disabilities and to determine risk factors associated with overweight. The sample size (n=203) the age range was 3–20 years. All children attended al Shafallah Center in Qatar. Anthropometric measures were taken, food habits were recorded and medicines taken were also recorded. Results of the study showed that the mean daily frequency of food consumption among all types of disabilities (mental retardation, cerebral, Down syndrome, autism) were similar overall. The study looked at the factors associated with overweight in children with developmental disabilities such as television viewing, medication intake, vegetable and fruit consumption and physical activity. Conclusions: there is high prevalence of overweight among children with developmental disabilities attending the Shafallah Center, especially among children with Down syndrome.

2.10 Nutrition consumption patterns related to the health of primary schoolchildren

Engineer Mohamed Al-Tawalbeh, Royal Medicine Services, Jordan

A nutritional survey was distributed to school students in different grades (n=300). The objective of the study was to look at eating behaviours of schoolchildren in relation to healthy eating and healthy growth. The outcomes of the study were building awareness about healthy eating styles and highlighting its impact on academic performance, and utilization of healthy eating tips in school curriculum and emphasizing their importance. The main components of the study were: health status, psychological status, smoking, nutritional knowledge, academic performance and physical activity. The results of the study showed that current nutritional knowledge among children was below average although their nutritional profile was acceptable; all children were within the healthy weight range according to age. The recommendation from this study is there should be a periodic upgrade of nutrition and healthy eating tips in the school curricula.

2.11 Nutrition status of differently disabled children and adolescents

Dr Ibrahim El-Madfa, Institute of Nutritional Sciences, Austria

The presenter explored the general aspects of nutrition in disabled persons. Among the key challenges are malnutrition, growth retardation, long duration of meal intake and low physical activity in this group. The other important aspect that needs to be noted is the influence of drugs on appetite; some psychiatric medicines lead to increased in appetite vis-a vis increase in body weight. Other medicines may lead to decreased appetite which makes it difficult for the disabled person to get his daily nutritional needs from food. It was found that 28% of females were overweight compared with 25% of males. Elevated plasma cholesterol levels were about 36% in females and 30% in males. Overall, the females had higher levels of total cholesterol, HDL, LDL. In a study conducted on disabled children living in a care centre, it was found that neither boys nor girls met their daily energy intake, and their consumption of dietary fibre was low. The intake of vitamin A, E, B1, B6 and calcium was also decreased while there was an increase in salt consumption. In summary, about a quarter

of differently disabled children were overweight, and the macronutrients intake was within the recommended range. Improvement of the nutrient density of meals in disabled children and adolescents should be targeted.

2.12 Counselling persons with special needs and their families

Dr Nazeh Hamdey, University of Jordan

Different kinds of counselling approaches can be used with people with disabilities. There is a need to have well trained and competent health professionals that provide counselling services to all people, including people with specific health needs and disabilities. Health care professionals dealing with people with disabilities must have specific characteristics such as patience and empathy in addition to professional competency. In addition to health counselling, nutrition counselling should be initiated as soon as possible to guarantee optimal physical and mental growth. In his recommendations, Dr Hamdey recommended a shift in educational strategies at the university level whereby more emphasis should be put on teaching counselling skills and strategies and allowing practical training before finishing the 4-year degree programmes.

2.13 The role of dieticians in providing nutrition services for people with developmental and special health care needs

Ms Lilas A. Tomeh, Nutrition Consulting Center, Syrian Arab Republic

Developmental disabilities are a diverse group of severe chronic conditions that result from mental and/or physical impairments. People with developmental disabilities have problems with major life activities such as language, mobility, learning, self-help and independent living. There is a lack of accurate data on the prevalence of developmental disabilities in the Region. The prevalence rate in the United States is around 4.5 million people and 10.2 million children (0–17 years) with special health needs. The employment rate among people with disability in the United States is 36% with any disability and 31% with physical disability. Although there are no firm numbers on employment rates for disabled persons in the Region, it is expected that the employment rate is lower than the figures for the United States, which puts economic strain on this population and their care-givers. The most reliable techniques and measures used in assessing the nutritional status and dietary intake in this special population are anthropometric, biochemical, clinical, dietary and environmental tools. In addition to these techniques, WHO growth charts should be used for specific ages in this population and compared with the specialized growth charts. There are many nutrition risk factors in this special group due to different aspects. Drug use and interaction, oral motor and feeding issues, and growth deficit are all nutrition risk factors. Nutrition services are an essential component of comprehensive care for children with special health care needs. Nutrition services should be provided within a system of coordinated interdisciplinary services in a manner that is preventive, family centred, community-based and culturally competent. The goals of nutrition services are to promote optimal growth and development, normalize feeding skills and behaviours and improve biochemical indices. The roles and responsibilities of dieticians dealing with such group are effective and individualized nutrition care process, nutrition counselling and technical support.

2.14 The causes of depression in children and its relationship to nutrition

Ms Susan Nabulsi, Jordan

The presentation discussed the prevalence of depression among children and adolescents in recent years. It explored the hormonal effect on depression and how it can be manipulated. The presenter categorized the types of depression into two main classifications, mental and neural, and presented the behavioural symptoms and physical symptoms for depression. It is believed that one of the leading causes of depression among children is obesity. Unhealthy dietary practices and distorted portions sizes lead to increase in body weight and elevated blood lipids. Obese children may endure considerable peer pressure due to their body size. These aspects can lead to the development of depression at early age which negatively affects other aspects of life for children and adolescents. The main recommendations were: at the school level there should be food policies that promote healthy eating among schoolchildren; parents should get involved in their children's eating choices and practices; and the role of the media in promoting unhealthy eating habits among adolescents should be recognized and addressed. All health professionals should promote the food guide pyramid for healthy eating and moderation.

2.15 Nutrition consumption pattern for vision-impaired women in Jordan

Dr Ayman Mazahreh, Al-Balqa Applied University

A study was done to look at the nutritional intake and pattern of vision-impaired women. In the study, 33 women were surveyed, mean age is 27 years, family size 6, mean weight 60kg and mean height 156cm. education level for these women is moderate and social economic status for those ladies was low-medium income. Findings were that 63% ate breakfast, 16% ate 3 meals a day, 17% ate one meal a day. Sixteen per cent had sleep disorders which may have affected their appetite. One outcome of this study was to study dietary intake in vision-impaired women, anther outcome was to empower these women to learn who to cook and prepare healthy choices.

2.16 Phenylketonuria in Jordan

Ms Rawheya Barham, Ministry of Health, Jordan

Phenylketonuria (PKU) affects about one of every 10 000 to 20 000 Caucasian or Oriental births. The incidence in African Americans is far less. These disorders are equally frequent in males and females. Globally, the prevalence rate is at 1:18 000. The incidence rate in Jordan is one in every 4500–6000 newborns. This rate is considered high compared to global rates due to the high rates of consanguineous marriages in Jordan. The proportion of children of first degree cousins enrolled in the PKU clinic at the Ministry of Health is 89%, which is significant when compared to the numbers of marriages in the Ministry of Health national records.

Previously, PKU clinics did not exist and essential services were not provided for patients with PKU. In 1994, 8 cases of PKU were identified and 13 new cases were recorded in 2009. A sudden increase in incidence rate brought total number to 147 in 2010.

As for the services provided to children with PKU, Jordan is the first country in the Mediterranean and North Africa region that provides essential services for patients diagnosed with PKU as part of the free health services at all levels of state government, private and community. The amount of 250 000 Jordanian dinars is allocated every year to procure special milk (without phenylalanine) and low protein flour for children with PKU.

2.17 The effectiveness of nutrition counselling for the development of social interaction, and improving fitness among children with disability

Dr Fuad Aljawaldeh, Amman Arab University, Jordan

The objective of the study was to explore the impact of nutrition education in developing social interaction in children with physical disabilities and improving their eating behaviour. The total number of children included in the study was (n=75); 45 children agreed to participate in the study, and only n=30 completed the study. The sample was randomly assigned into a control group (n=15) and an experimental group (n=15). Specific research tools were developed for this study: 1) social interaction index; and 2) an eating behaviour index. Results: There are significant differences between the mean scores of the experimental group in pre and post test on the social interaction level and eating behaviour, where they scored higher in the post test. Also, the experimental group scored higher on the post test when compared with the control group and the results were statistically significant. The results of the study confirms that nutrition education programmes developed for children yield successful results and holds impact on their social interaction and eating behaviour. This study recommends the need to introduce nutrition education programmes for children in general, and in particular for children with disabilities, and the need to hold seminars and educational sessions for parents and caregivers on a regular basis.

3. RECOMMENDATIONS

To ministries of health

1. Conduct surveys that look at nutritional status and its relationship to physical and mental health and the effectiveness of the services provided in this area.

2. Encourage specialized and technical bodies that provide services for people with special needs to appoint a dietician/nutritionist to provide nutrition education and counselling.

3. Establish diet/nutrition clinics in health centres that provide specialized services for children and pregnant women.

4. Promote the development of rules and food policies that regulate the handling of food and drinks in school canteens (nutrition-friendly schools) in order to create an environment conducive to healthy eating and nutritional practices in schools, colleges and universities.

5. Design special programmes for nutrition education that provide information about nutritional practices in relation to mental health and disability.

6. Formulate research teams from diverse disciplines, including medicine, psychiatry, nutrition and psychological counselling and special education to study the factors related to nutrition and its correlation with mental health.

To universities and other education institutes

7. Acknowledge the importance of nutrition and its impact on mental health and disabilities and offer specialized curriculum/programmes with concentration on nutrition at the undergraduate and postgraduate levels.

8. Form integrated teams or working groups that focus on research and development of criteria for nutritional indicators.

To all partners

9. Establish a network that includes participants and professionals interested in the topic of nutrition, disabilities and mental health and appoint Amman Arab University as the focal point for this network.

10. Promote the development and implementation of legislation concerning persons with disabilities and special health needs.

11. Involve civil society institutions, the private sector and nongovernmental associations and parent committees in schools to provide feedback on nutrition and food policies and in advocacy for traditional and healthy cuisine.

12. Involve people with special needs and disabilities in discussions concerning their needs and well-being.

To WHO

13. Develop a comprehensive nutritional guide and dietary manuals.

14. Develop curricula on public health aspects of nutrition and mental health for inclusion in courses offered by special education institutions.

15. Focus on the education programmes developed for high priority countries in the Region such as Iraq and Palestine.

16. Find a mechanism of action to provide nutritional care and mental health care for persons with disabilities and special health needs.

Annex 1

PROGRAMME

Tuesday, 12 October 2010

08:30–09:00	Registration
09:00–10:00	Opening remarks by Address by Dr Sa'eed El Tell, President, Amman Arab University Address by Dr Hussein A. Gezairy, Regional Director, WHO EMRO Address by H.E. Dr Nayef Al Fayez, Minister of Health, Amman, Jordan Objectives of the Conference *Dr Adnan Al-Jadri, Dean of Psychological and Educational College, Amman Arab University* Chairperson: Dr Haifa Madi, Director Health Protection and Promotion, WHO EMRO Rapporteur: Dr Soheir El Tell, Amman Arab University
10:30–10:45	WHO strategies on nutrition: early interventions and programmes *Dr Ayoub Aljawaldeh, Regional Adviser Nutrition, WHO EMRO*
10:45–11:00	Malnutrition and cognition *Dr Ahmed Al Faqeh, Professor of Nutrition, University of Jordan*
11:00–11:15	Nutrition and schizophrenia *Dr Abdel Manaf Al-Jadery, Professor of Medicine, University of Jordan*
11:15–11:30	Discussions Chairperson: Dr Nazeh Hamdey, University of Jordan Rapporteur: Ms Lilas Tomeh, Nutrition Consultation Centre for Clinical Dietitian
12:00–12:15	Obesity, diabetes and mental health *Dr Haider Al Dummy, Assistant Professor, Suez Canal University*
12:15–12:30	The role of employees at the NGOs for prevention of mental disability *Dr Samah Mohammed Lutfi, Assistant Professor, Suez Canal University*
12:30–12:45	Khat, gastrointestinal diseases and nutrition: a case control study *Dr Ibrahim Bani, Dean Faculty of Medicine, Jazan University, Saudi Arabia*
12:45–13:00	Maternal, child and adolescent mental health: challenges and strategies *Dr Khaled Saeed, Regional Adviser Mental Health and Substance Abuse, WHO EMRO*
13:00–13:15	Discussions Chairperson: Dr Nayfeh Qotami, Amman Arab University Rapporteur: Dr Raedeh Gresat, Amman Arab University
13:45–14:00	Nutrition and behavioural changes among autistic children *Dr Mohammed Kamal Abo Fotouh, Assistant Professor in Education, University of Banha, Egypt*
14:00–14:15	Diet therapy and psycho-social rehabilitation among mentally disabled people

	Mr Abas Yazide, Teacher, University of Mohammed Sedeque University
14:15–14:30	Prevalence of overweight and associated risk factor among children and adolescent with developmental disabilities in Qatar *Dr Abdel Hamid Kerkadi, Assistant Professor in Department of Health Science, Qatar University*
14:30–14:45	Nutrition consumption patterns related to the health of primary school children *Eng. Mohammed Al Tawalbeh, Nutrition Department, Royal Medical Services, Jordan*

Wednesday, 13 October 2010

	Chairperson: Dr Ahmed Al Faqeeh, University of Jordan Rapporteur: Dr Ahmed Awaad, Amman Arab University
09:00–09:15	Nutrition status of differently disabled children and adolescent *Dr Ibrahim Elmadfa, President of IUNS, Vienna*
09:15–09:30	Disabilities and rehabilitation at Eastern Mediterranean Region *Dr Hala Sakr, Technical Officer, WHO EMRO*
09:30–09:45	*Dr Nazeh Hamdey, Professor in Counselling and Mental Health, University of Jordan*
9:45–10:00	The role of dieticians in providing nutrition services for people with developmental disabilities and special health care needs *Ms Lilas Tomeh, Specialist, Nutrition Consultation Centre for Clinical Dietician*
10:00–10:15	Presentation *Dr Sami Melhem* Chairperson: Dr Fathi Jarwan, Amman Arab University Rapporteur: Dr Sami Melhem, Amman Arab University
11:15–11:30	Nutrition consumption patterns for visual impairment in women in Jordan *Dr Aymen Mazahreh, Assistant Professor in Nutrition, University of Applied Balqa, Jordan*
11:30–11:45	Phenylhetonuria *Ms Rawheya Brham, Nutritionist, Ministry of Health, Amman*
11:45–12:00	Analytical study in the micronutrients and its relation with cognitive process and achievement among learning disabilities *Professor Abdel Naser Abdel Wahab, Professor of Learning Disabilities, Al Mansoora University, Egypt*
12:00–12:15	The effectiveness of counselling programme based on nutrition education for the development of social interaction, improve fitness among children with disability in mobility *Dr Mohammed Al Emmam, Associated Professor, Amman Arab University*
12:15–12:30	Mental health care for disabled people and their families *Mr Abbas Abdelbasset, Consultant in Training for Disabled People, Ministry of Social Affairs, Egypt*
12:30–14:15	Discussions

Annex 2

LIST OF SPEAKERS

Dr Saeed Al Tell
Dean
Amman Arab University for Graduate Studies
Amman
JORDAN

Dr Hayder Al-Domi
Assistant Professor of Nutrition
University of Jordan
Amman
JORDAN

Dr Ahmed Al Faqih
Professor of Nutrition
University of Jordan
Amman
JORDAN

Mr Tarek Ayed Al Farah
Ministry of Health
Amman
JORDAN

Dr Bassam Al-Hijawi
Epidemiologist
Director of Primary Health Care Administration
Amman
JORDAN

Professor Adnan Al-Jadery
Dean of Scientific Research College
Amman Arab University
Amman
JORDAN

Dr Abdel Manaf Al-Jadery
Professor of Medicine
University of Jordan
Amman
JORDAN

Dr Fuad Aljawaldeh
Associated Professor
Amman Arab University
Amman
JORDAN

Dr Mohammed Al Khulaidi
Director of Mental Health Programme
Ministry of Health
Sana'a
YEMEN

Dr Ayman Mazahreh
Associated Professor
Department of Applied Science
Al Balqa Applied University
Amman
JORDAN

Eng. Rawhia Ibrahim Barham
Nutrition Department
Ministry of Health
Amman
JORDAN

Prof. Dr Ibrahim Elmadfa
IUNS-President
Institute of Nutritional Sciences
University of Vienna
Vienna
AUSTRIA

Dr Tahra El Obeid
Head of Health Science Department
Qatar University
Doha
QATAR

Dr Maula Fazle
Director
National Institute of Rehabilitation Medicine
Ministry of Health
Islamabad
PAKISTAN

Dr Abdel Hamid Kerkadi
Associate Professor
Health Sciences Department
College of Arts and Sciences
Qatar University
Doha
QATAR

Dr Nazeh Hamdey
Professor in Counselling and Mental Health
University of Jordan
Amman
JORDAN

Eng. Hanan Masaad
Nutrition Department
Ministry of Health
Amman
JORDAN

Ms Susan Nabulsi
Specialist
Amman
JORDAN

Ms Lilas A. Tomeh
Dietician, the Nutrition Consulting Center
Lecturer
Department of nutrition and dietetics
College of Health Sciences
University of Kalamoon and Al-Baath University
Damascus
SYRIAN ARAB REPUBLIC

WHO SECRETARIAT

Dr Hussein A. Gezairy, Regional Director, WHO/EMRO
Dr Haifa Madi, Director, Health Protection and Promotion, WHO/EMRO
Dr Hashim Ali El-Zein El-Mousaad, WHO Representative Jordan
Dr Ayoub Aljawaldeh, Regional Adviser, Nutrition, WHO/EMRO
Dr Khalid Saeed, Regional Adviser, Mental Health, WHO/EMRO
Dr Hala Sakr, Technical Officer, Healthy Lifestyles, WHO/EMRO