



ASOI 7th Annual Conference & AGM 2019

Building Bonds, Bettering Practice:

Patient advocacy and approaches to reduce obesity stigma

17-18th May 2019 | The Convention Centre, Dublin

Abstract Book



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Message from ASOI Chair

On behalf of the ASOI Committee, I welcome you to the 7th Annual Scientific Conference of the Association for the Study of Obesity on the Island of Ireland (ASOI 2019). The ASOI committee has worked hard to bring together an exciting programme, which will be of interest to both the ASOI membership and to a wide audience of non-members.

This year's conference coincides with European Obesity Day (EOD) on May 18th and is supported by a grant from the European Association for the Study of Obesity (EASO). The theme for EOD 2019 is Tackling Obesity Together. ASOI 2019 has similar themes, in the form of patient advocacy and approaches to address obesity stigma. We are delighted to be working with the new patient-led organisation, the European Coalition for People Living with Obesity (ECPO). The ECPO mission is to work collaboratively across Europe to improve the lives of people affected by the chronic disease obesity through advocacy, policy & education.

We believe weight stigma is one of the main barriers to improvement of health care and quality of life for people living with obesity. During ASOI 2019, we will hear from national and international experts, and from people living with obesity, on the impact of stigma, and how to avoid stigma in healthcare settings, in public health campaigns and in the media. For too long the emphasis has been on volitional control of body weight, ignoring the complexity of this disease and the multiple genetic, biological and environmental factors driving weight gain. We all have a role in relaying this message, to patients, our colleagues, our family and friends, the media, politicians and governmental agencies. We can work together, to help create a society that does not judge people according to their weight.

We would very much appreciate your feedback at the end of the meeting. This ensures that ASOI can continue to develop excellent scientific programmes for the future. On May 16th-20th 2020 ASOI will host the joint European Congress on Obesity and International Congress on Obesity (ECO-ICO) in Dublin and we will keep members posted as plans progress.

We hope all attendees enjoy the day and welcome you to engage fully in the event by asking questions and sharing your thoughts.

Dr Jean O'Connell
Chair, ASOI



ASOI Committee 2017-19



Dr Jean O'Connell
Chair/Joint
Education Lead



Dr Cathy Breen
Joint Secretary



Ms Karen Gaynor
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Dr John Mehegan
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Dr Grace O'Malley
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Ms Marion Hughes
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Ms Natalie Wallace
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Ms Laura
Magarahan
Committee Member



Ms Louise Tully
Administrator

Keynote Speakers

Ethical dilemmas in obesity prevention & treatment

Arya M. Sharma, MD, FRCPC

Professor, University of Alberta, Edmonton, Canada

Scientific Director, Obesity Canada



Biography

Arya M. Sharma is a Professor of Medicine at the University of Alberta. He is also the Clinical Co-Chair of the Alberta Health Services Obesity Program. Dr Sharma is founder and Scientific Director of Obesity Canada, a network of over 10,000 researchers, health professionals and other stakeholders. He is also the Past-President of the Canadian Association of Bariatric Physicians and Surgeons. His past appointments include positions as a Professor of Medicine and Canada Research Chair (Tier 1) at McMaster University (2002-2007), Professor of Medicine at the Franz-Volhard Klinik-Charite, Humboldt University Berlin (2000-2002) and the Free University of Berlin (1994-2000). His research focuses on evidence-based prevention and management of obesity and its complications. Dr Sharma is the leading voice in obesity science and medicine, has authored and co-authored more than 400 scientific articles, and has lectured widely on the etiology and management of hypertension, obesity, and related cardiovascular disorders. Dr Sharma is regularly featured as a medical expert in national and international TV and print media and maintains a widely-read blog at <http://www.drsharma.ca>

Abstract

Obesity is highly stigmatised and people living with obesity face bias and discrimination in virtually all societal settings including education, professional life, and even health care. Although obesity is now increasingly recognised as a complex chronic disease (not unlike hypertension or type 2 diabetes), both the public health and clinical approaches to obesity prevention and management embrace a rather simplistic narrative of “eat-less-move-more”, which fails to fully acknowledge that complex interaction between environmental and neurobiological mechanisms play a large role in determining body shape and size, much of which is beyond the control of the individual. Thus, there is currently no proven public health approach to reducing obesity in a population, nor does diet and exercise help sustain long-term weight loss in the vast majority of people living with obesity. Despite an abundance of weight loss attempts and a diversity of diets and weight-loss programs, sustained weight loss over years remains the exception – for most people, weight regain (relapse) is just a matter of time. This is in contrast to medical or surgical treatments of obesity, which have proven to be far superior to behavioural interventions alone in sustaining long-term weight loss. Given that obesity now affects almost one in four adults in most Western countries, health administrators face important dilemmas regarding how to best provide access to effective treatments to the millions of people living with this chronic disease. In this regard, learning from other chronic diseases like type 2 diabetes can be helpful and will be discussed.

Building a patient centered obesity network - Lessons from Canada



Dr Ximena Ramos Salas

Executive Director, Obesity Canada

Biography

Ximena Ramos Salas has a PhD in Public Health with a specialization in Health Promotion & Socio-Behavioural Sciences from the University of Alberta. She is the Executive Director of Obesity Canada, a network with a mandate to improve the lives of Canadians affected by obesity. The network engages over 40,000 health professionals, researchers, policy makers, and persons affected by obesity and is Canada's authoritative voice on evidence-based approaches for obesity prevention, treatment and policy. Since 2018, Ximena has been based in Sweden where she is also a Policy Consultant with the European Association for the Study of Obesity – the leading voice of obesity science, medicine and community in Europe and technical consultant with the World Health Organization – Regional Office for Europe. As a public health researcher, her goal is to prevent the perpetuation of weight bias and obesity stigma through public health policies and strategies. As a public health researcher, her goal is to prevent the perpetuation of weight bias and obesity stigma through public health policies and strategies. She has authored and co-authored scientific articles and lectured widely on the impact of weight bias on population health outcomes and health inequalities.

Abstract

Background: Obesity Canada is a registered charity with over 40,000 professional members and public supporters. The network's mission is to improve the lives of Canadians living with obesity through the advancement of anti-discrimination, prevention and treatment efforts. **Methods:** The Obesity Canada Public Engagement Initiative (PEI) was established in 2015 through a workshop that brought together people living with obesity, health care professionals, researchers, policy makers and collaborators. Workshop participants agreed that Canadians living with obesity need credible and evidence-based information about obesity and guidance on where to go for help and how to advocate for their health and wellbeing. In June 2015, the first Public Engagement Committee (PEC) was established to be the public voice for Canadians with obesity within Obesity Canada. **Results:** The first priority identified by the Public Engagement Committee was to create a website to translate credible obesity information to Canadians. A social media strategy was also launched in the fall of 2015, including a Weight of Living Campaign to share stories from people living with obesity, a Facebook page, a public newsletter, Google Ad words, videos and more. Throughout 2016, members of the PEC actively participated in activities to raise the voice of Canadians affected by obesity through social media, media interviews, speakers' bureau and participation in practice and policy committees around the country. In 2017, after a comprehensive feedback and information gathering process, public engagement committee finalized their first strategic plan. The primary goal of the Public Engagement Initiative is to build a vibrant

community to empower people with obesity. For the last two years, Obesity Canada has been creating and nurturing a community of persons living with obesity that can advocate for obesity. We have come a long way from having a few persons with obesity meeting in Toronto in May of 2015 to talk about what Canadians with obesity need and wish for to now having a public engagement [strategic plan](#) and an [advocacy plan of action](#). Conclusion: Obesity Canada has created a strong sense of community among obesity scientists, health professionals, policy makers trainees, persons affected by obesity, and industry leaders. This community is now activated and motivated to create change in healthcare, education, and public policies.

Feeling the ‘Weight’ of Expectation: illustrating the reflexive embodiment of obesity stigma



Dr Oli Williams

THIS Institute Postdoctoral Fellow

King's College London

Biography

Oli Williams completed his PhD in the Department of Sociology at the University of Leicester. He was subsequently awarded the NIHR CLAHRC West Dan Hill Fellowship in Health Equity which he held at the University of Bath. He later re-joined the University of Leicester in the Department of Health Sciences working in the SAPPHERE Group. He is now based at King's College London after being awarded a THIS Institute Postdoctoral Fellowship. His research focuses on health inequalities, the promotion of healthy lifestyles, obesity stigma, how places influence health, equitable intervention and co-production. He is an active promoter of health equity and social change and co-founded the art collective Act With Love (AWL) who work collaboratively with artists and designers to address social justice issues and make scientific evidence accessible and engaging for as wide an audience as possible (www.actwithlove.co.uk). In collaboration with award-winning illustrator Jade Sarson they created the evidence-based comic 'The Weight of Expectation' which illustrates how stigma associated with bodyweight and size gets under the skin and is felt in the flesh. Last year the British Science Association awarded Oli the Margaret Mead Award Lecture for Social Sciences in recognition of his work on obesity stigma.

Abstract

Dominant ideas about obesity emphasise individual moral responsibility for lifestyle modification. This undermines the influence of social inequalities and promotes weight-based stigma. As obesity and related health behaviours (e.g., diet, physical activity) follow inverse socioeconomic gradients, people of low socioeconomic status are disproportionately disadvantaged by factors associated with weight-gain and thus particularly vulnerable to obesity stigma. Existing research overwhelmingly demonstrates that obesity stigma: is an ineffective means of reducing incidence of obesity; exacerbates weight-gain and; has additional detrimental consequences. However, the processes through which these effects are realised remain largely unexamined. There is a dearth of knowledge about the subjective experience of obesity stigma as an embodied phenomenon and how socioeconomic status informs this experience. In response, here data are presented from eleven months of ethnography and semi-structured interviews with three single-sex weight-loss groups who met in a severely deprived English neighbourhood. The findings demonstrate how obesity stigma confused participant's objective and subjective experiences of their bodies. This was primarily evident when group members *felt* heavier after engaging in behaviours associated with weight-gain but

this 'weight' did not register on the scales. This phenomenon is conceptualised as the '*weight of expectation*' and interpreted as illustrative of the perpetual uncertainty and morality that characterises weight-management. Additionally, analysis shows respondents ascribed their sensate experiences of physiological responses to exercise with moral and social significance. These '*carnal cues*' provided a sense of certainty, playing an important role in attempts to negotiate obesity stigma. In collaboration with award-winning illustrator Jade Sarson these findings informed the evidence-based comic '*The Weight of Expectation*' which illustrates how stigma associated with bodyweight and size gets under the skin and is felt in the flesh. It is already being utilised in healthcare education programmes and services to challenge obesity stigma and support better care for people exposed to it.

An editor's perspective on obesity stigma

Neil Leslie

Head of Content, Irish Daily Star



Biography

Neil Leslie is a media executive with 25 years' experience in some of Ireland's biggest national and local newspapers and websites. Head of News and Content at the Irish Daily Star newspaper and publisher of buzz.ie website. He is the former Managing Editor, Magazine Editor and Assistant Editor (news) at Sunday World and launch editor of sundayworld.com website. He has a BA in journalism from DIT and is a graduate in Digital Marketing at National College of Ireland. Member of judging panel for Newsbrands Ireland national journalism awards.

Words matter – a health journalist’s perspective on obesity stigma



June Shannon

Digital Health Journalist with the Irish Heart Foundation

Biography

June is an award-winning medical journalist. With almost 20 years’ experience in health and medical reporting in Ireland, June has written extensively on a range of topics from health politics and policy, to health economics, medical education, clinical developments and research. She has a special interest in women’s health, mental health and the health of socially excluded groups such as the homeless. Her work has been published in the national and specialist medical press and she has also appeared on national television and radio as a specialist health contributor. In March 2018 she was appointed Digital Health Journalist with the Irish Heart Foundation and prior to that served as the Clinical and Deputy Editor of the Irish Medical Times.

Abstract

Over the past 20 years as a medical and health journalist working in Ireland, I have been privileged to interview people living with chronic conditions. I have also written extensively on the latest news and research in all aspects of chronic disease. Journalists have a responsibility to report on all aspects of health and medicine in a responsible and informed manner and to avoid the use of stigmatising language and imagery. Unfortunately, like cancer, mental health and dementia, obesity is the latest in a long line of medical conditions where some journalists fall short. I aim to outline the history of reporting on chronic disease in the past and show how thanks to patient groups and advocates along with media guidelines and responsible journalists, things can and must improve, so that we treat obesity with the same respect demanded by other chronic illnesses.

A patient's perspective on obesity stigma



Vicki Mooney

EASO ECPO Executive Director

Biography

Vicki Mooney is a Patient Advocate and the Executive Director of the ECPO, European Coalition for People living with Obesity.

Originally from Ireland Vicki, uses her voice to help fight the stigma, bias and discrimination perpetrated against those with Obesity, as well as taking action on a European level within the European Parliament and on various projects. As well as being a Public Speaker and TV personality, Vicki is a passionate speaker about her own obesity journey.

At just 28 years old in 2005, Vicki weighed 400lbs/180kgs. She was the 50th patient in Ireland to undergo a 'Roux-en-Y' gastric bypass with the result of losing 200lbs/90kg in 1 year. Her journey of weight gain to weight loss, to regaining weight and fighting her obesity daily, is remarkably insightful to many. Her experience is an honest and raw account of her life as an obese woman.

Vicki's talks have been listened to on a world platform by medical professionals to pharmaceutical companies, and is specifically a comfort to the 90-100 million people living in Europe with Obesity to know their voice is heard.

Vicki is a single mother of 3 children, a former plus size model, an Author and Public Speaker. Her passion is to have the call for respect, acceptance, recognition and impartial discussion along with shared responsibility to stop further stigmatization of those with Obesity.

Family based cooking interventions



Sólveig Sigurdardottir

President, The EASO-ECPO

(European Coalition for People living with Obesity)

Biography and abstract

My name is Sólveig Sigurdardottir. I am from Reykjavik, Iceland and am President of the EASO-ECPO (European Coalition for People living with Obesity). I have been living with obesity nearly all my life. Changing my views on how to live healthier is probably one of the most important things I have done in my life. Let's go seven years back. It all started with my one-year course at Heilsborg in Reykjavík. I became fascinated by this way of dealing with obesity. By changing my lifestyle, the diet improved and I began to be interested in healthier food and healthier living. I have lost over 50 kilogrammes and my health is so much better. Today, I work with a team of specialists to help others change their lifestyle. I have attended numerous cooking classes, both in Iceland and in the UK, all of them emphasize healthier cooking. Today I have my own demonstrations as well as tastings of healthier and nutritious food at Heilsborg. I also work with the SidekickHealth app, where my recipes and other information are in the app. My work on social media takes a lot of time as well. I travel for obesity advocacy all around the world.

Help fight stigma and discrimination against those with Obesity.

Family based physical activity



Ms Emer O' Malley, BSc, MICSP

Senior Physiotherapist, Weight Management Service,
St. Columcille's Hospital, Loughlinstown

Biography

Emer O' Malley is a Senior Physiotherapist working as part of the Weight Management Service in St. Columcille's Hospital, Loughlinstown. She also shares this role with a 0.5 Practice Tutor post. She graduated from Trinity College Dublin with a BSc (Hons) Physiotherapy in 2004. She has worked in the area of obesity for over 10 years and her interests include: the assessment and treatment of obesity in adults, including physical function, balance, lower limb swelling, respiratory capacity and musculoskeletal health. She is a guest lecturer on the undergraduate physiotherapy programmes in Trinity College and University College Dublin and is currently completing a post graduate certificate in Teaching and Learning. Her research interests include the development of physical function tests and the assessment and management of musculoskeletal pain and chronic lower limb swelling with an obese population. She is also interested in the association of obesity with sleep, cognitive function and cardiorespiratory impairment. She recently presented at the Irish Society of Chartered Physiotherapists annual conference on the development of a screening tool to help identify those at risk of obesity hypoventilation syndrome.

Abstract

Within our daily lives we are bombarded with messages about how important physical activity is. We have reality TV series such as "The biggest loser", and "Fat families" promoting high intensity exercise, radios ads encouraging us to join a gym, and magazine racks and papers full of ways in which we can "get fit quick". Rarely do these campaigns recognise where we are starting from. Do our current financial, family or work commitments, physical or mental well-being allow us to build a physical activity routine? We know exercise is good for us but how do we make it part of everyday life? This presentation aims to recognise that everyone is different and the role that physical activity plays in our lives will also be different. There is lots of evidence to highlight the benefits of physical activity e.g. improved cardiovascular and physical health, weight management, better sleep, increased energy levels, reduced stress and improved mood. Recognising which aspect is important to each of us, is however key to supporting physical activity habits and maintenance of long-term lifestyle changes. This presentation will address some of barriers to becoming more physical active and provide evidence-based suggestions or guidance based from clinical experience on more helpful approaches. It aims to recognise the role of the family or support network in creating and facilitating opportunities for increasing family based physical activity. It will discuss the importance of tailoring family-based activity, combining goal-setting with reinforcement techniques, physical activity education and targeting the family psychosocial environment. Finally, this presentation will promote the positive long-term impact physical activity can have either individually or for the family as a whole.

Addressing weight bias and obesity stigma – A Canadian case study



Dr Ximena Ramos Salas

Executive Director, Obesity Canada

Abstract

Background: In 2008, Obesity Canada’s Board of Directors identified weight bias and stigma as top strategic priorities. The board firmly believes that everyone deserves to be treated with respect and dignity. To this end, OC works toward reducing weight bias and stigma through research, education and action. OC collaborates with researchers, patients, knowledge users and partners to develop education initiatives and practitioner resources to address weight bias in health care and education settings, the media and public policies. **Methods:** Using the Socio-Ecological Model for Health Promotion, Obesity Canada has established a comprehensive weight bias and stigma reduction strategy. The strategy addresses weight bias, stigma and discrimination at individual, interpersonal, organizational, community and public policy levels. Strategies concentrate on research, education, and interventions. **Results:** Research activities include the establishment of the EveryBODY Matters Collaborative whose mandate is to exchange knowledge, identify opportunities for collaboration across research and practice/policy sectors, and support OC’s efforts to reduce weight bias and stigma in Canada. Education activities have targeted health professionals, policy makers and individuals living with obesity as well as the media and the general public. Policy action has focused on preventing the enactment of weight bias and obesity stigma through public policies such as the Human Rights Act and the Gender-based Analysis Plus (GBA+) initiative. OC has developed resources for policy makers, clinical practice guidelines for health professionals, and guidelines for hospitals. Interventions and resources for persons living with obesity have also been developed and implemented. All OC weight bias interventions are developed and delivered in collaboration with persons living with obesity, scientists, and end-users. **Conclusions:** For the last ten years, Obesity Canada has led weight bias and stigma reduction efforts in Canada. We have built capacity for research, education and action. Activities continue to focus on all levels and sectors. Recognizing that we cannot do this alone, OC has prioritized partnerships and collaborations at local, regional, provincial, national and international levels. Recognition of weight bias and obesity stigma has increased significantly in Canada as evident by the increased number of policies, collaborators, and media coverage. Moving beyond awareness to creating change continues to be OC’s goal.

Accepted Oral Presentations

Obesity prevention during the first 1,000 days: What is the evidence for the effectiveness of interventions delivered by health professionals?

Topic: Prevention

Presentation Type: Oral

Marita Hennessy, Caroline Heary, Rachel Laws, Luke Van Rhoon, Elaine Toomey, Hazel Wolstenholme, Molly Byrne*

*NUI Galway

Background: The first 1,000 days is a critical window of opportunity for promoting healthy growth and associated behaviours in young children. Health professionals have a role to play in interventions, in part due to the multiple routine contacts they have with parents. While reviews to date have synthesised the evidence for the effectiveness of obesity prevention interventions in this timeframe, none have specifically looked at the delivery agent, or the active ingredients of interventions. Aim: To synthesise the evidence for the effectiveness of obesity prevention interventions delivered by health professionals during the first 1,000 days, and establish what behaviour change theories/techniques are associated with more effective interventions. Methodology: We systematically searched 11 electronic databases, 3 trial registry databases and cross-checked reference lists of included papers to identify eligible randomised or quasi-randomised controlled trials. The primary outcome was any weight-related measure, while secondary outcomes were diet-, activity-, and sedentary-related behaviours; environment; cost-effectiveness. Intervention details were extracted according to the TIDieR reporting guidelines. Primary and secondary outcomes were detailed. Intervention procedures were coded using the BCT taxonomy (v1), the extent to which interventions used theory via the Theory Coding Scheme, and methodological quality using the Cochrane Collaboration tool for assessing risk of bias. Findings were collated in a narrative synthesis. Results: 46 interventions from 39 trials were included. We found limited evidence for the effectiveness of health professional-delivered interventions during the first 1,000 days. Only four interventions were effective on a primary and secondary outcome measure. Several methodological limitations were noted, impacting on efforts to establish the active ingredients of interventions. Conclusions: Health professional-delivered obesity prevention interventions during the first 1,000 days have limited effectiveness. Future work should focus on interventions that operate at systems levels, targeting multiple levels of influence on behaviour, as well as the conduct and reporting of interventions.

MH is a PhD Scholar funded by the Health Research Board under SPHeRE/2013/1.

"The boob answers a lot of problems": What are the barriers and enablers to successful extended breastfeeding in women with high BMIs?

Topic: Implementation

Presentation Type: Oral

Sharleen O'Reilly, Eileen O'Brien, Hannah Walker, Eimear O'Carroll, Joanne Courtney & Fionnuala McAuliffe*

*UCD Perinatal Research Centre

Introduction: Ireland's breastfeeding rate is one of the lowest in the world (only 58% initiation). In Ireland, women with obesity and overweight account for >50% pregnancies and are particularly at risk of having lower breastfeeding rates. Little is known about factors that support this sub-group to successfully breastfeed. We aimed to explore barriers and enablers for: women with high body mass index (BMI) who successfully breastfed for >6 months, partners of women with >6 months breastfeeding, and healthcare professionals (HPs) who support women to breastfeed. Methods: Women with high BMIs (n=20) were recruited via an extended breastfeeding Facebook group and snowballing. Partners (n=20) were recruited via social media and word of mouth. HPs (n=19) were recruited via posters and direct invitation. Semi-structured interviews conducted either in-person or on telephone were digitally recorded. Interviews were verbatim transcribed and thematically analysed. Two research students independently coded interviews and any discrepancies were resolved by consensus. Results: Barriers identified aligned with previous research but the frequency or intensity of occurrence was higher in women with high BMIs. Common barriers were: limited breastfeeding culture; limited health services access to high-quality breastfeeding advice; large breast size; and breastfeeding in public. Enablers were: strong self-efficacy; supportive partner; creating breastfeeding-friendly networks; lactation consultant support; and breastfeeding aides. Discussion: Women with high BMIs can successfully breastfeed when they are provided with the right support at the right time and in an acceptable way. Reorientation of maternity health services to ensure more consistent support for women with high BMIs to initiate breastfeeding is needed. HPs can better support women with high BMIs by using the enablers identified and making a conscious decision to include appropriate advice and representation of women with high BMIs in their antenatal education and any postpartum services provided.

Changes in pain following a 6-week weight management in-patient programme

Topic: Treatment

Presentation Type: Oral

Kana Asada, Colin Dunlevy, Emer O'Malley, Karen Gaynor, Cathy Breen, Amanda Villiers-Tuthill, Lauren Devereux, Ruth Yoder, Donal O'Shea, Catherine Doody, Catherine Blake & Brona Fullen*

*University College Dublin

Background: Musculoskeletal (MSK) pain is a commonly reported obesity related comorbidity. Our Weight Management Service (WMS) is a national Tier 3 referral centre for the treatment of adults with severe obesity. As part of our service we deliver a 6 week weight management in-patient programme (WMIPP). This WMIPP involves a 1,100kcal liquid diet, functional rehabilitation and psychology interventions. Aim: This study evaluates the impact of the WMIPP on MSK pain. Methodology: A retrospective analysis of the WMIPP database was undertaken. Prevalence and intensity of MSK pain were established. Post programme changes in weight and pain [(numerical rating scale (NRS))] were established using the Wilcoxon Signed rank test. Measures of clinically significant change (CSC) in NRS scores (>30% change) were calculated. Missing data were not adjusted for. Results: From June 2014 to Jan 2019, 72 patients completed the WMIPP. Baseline BMI was 59.0 ± 11 kg/m², while only 14% (10/72) did not report MSK pain. Low back pain (LBP) (68% - 49/72) and knee pain (64% - 46/72) were common, 46% of patients reported both LBP and knee pain. Post programme significant weight loss was achieved ($p < 0.001$). No patients gained body weight, 86 % (62/72) of patients lost $\geq 5\%$ body weight, 14 % (10/72) were weight stable (no more than 5% weight loss). There were significant changes in LBP ($p < 0.001$) and knee pain ($p < 0.017$) NRS scores. CSC was seen in 41% (18/44) of patients with LBP and 27% (12/44) with knee pain. Conclusions: Prevalence of musculoskeletal pain is high in patients admitted to the WMIPP. The reduction in pain scores is very encouraging and highlights the holistic value of WMIPPs. Reducing pain levels has the potential to influence outcomes into the longer term.

Stigma reduction towards persons with obesity: A Comparative analysis of interventions amongst university students

Topic: Innovation

Presentation Type: Oral

Caroline Heary, Mary Doherty & Marita Hennessy*

*School of Psychology, NUI Galway

Background: Stigma towards persons with higher weight can have adverse psychological effects. However, there is a lack of consensus on which intervention type is most effective in reducing obesity stigma. Aim: This study compared a social norms intervention with an empathy-based intervention, relative to a control intervention, amongst university students, with a view to reducing obesity stigma. Methodology: The study comprised of two phases. In Phase 1, 91 participants completed a cross-sectional survey on attitudes and beliefs about the causes of obesity. The mean age of participants was 26 years (SD=8.67; range 18-55yrs). The resulting data was used to inform a subsequent social norms intervention. In Phase 2, 270 university students were randomly assigned to one of the three interventions: social norms intervention, empathy-based intervention, and control intervention. The social norms intervention relayed positive attitudes and beliefs towards persons with obesity based on data from fellow peers (see Phase 1). The empathy-based intervention involved taking on board the perspective of a person with obesity (imagine-self) and reflecting on a first-hand account of a woman's negative experience of having obesity (imagine-other). The mean age of participants was 27 years (SD=40.5; range = 17-65 yrs). Participants completed the following measures at baseline and immediately following the intervention: Attitudes Towards Obese Persons (ATOP), Beliefs About Obese Persons (BAOP) and Fat Phobia Scale. Results: Results from the Beliefs About Obese Persons scale and the Fat Phobia Scale revealed that that there was no significant effect of the intervention type across time. However, on the Attitudes Towards Obese Persons Scale, a statistically significant improvement was noted in the social norms intervention group. Conclusions: The current study demonstrates the potential to use positive social norms as a means of fostering more positive attitudes and less bias. Maintenance of these effects over time, however, was not examined.

What can researchers learn from participant involvement? Insights from the ROLO Family Advisory Committee

Topic: Policy

Presentation Type: Oral

Niamh Walsh, Eileen O'Brien, Aisling Geraghty, David Byrne & Fionnuala McAuliffe*

*UCD Perinatal Research Centre, School of Medicine, University College Dublin, National Maternity Hospital, Dublin, Ireland

Background: Public and patient involvement (PPI) describes how researchers collaborate and engage with the public in order to make research more relevant. The ROLO Family Advisory Committee is a group of parents involved in the longitudinal follow-up of the ROLO Study. Established in 2017, its goal is to achieve a partnership between ROLO families and researchers. Aim: The aim of engaging with parents from the ROLO study is to understand key outcomes of importance for parents relating to their own health and their children's health and to gain insights into how the research agenda can be more relevant to parent and child needs. Methodology: Parents involved with ROLO study were invited to join the ROLO Family Advisory Committee in 2017. Parents who had expressed interest in joining the committee were invited to attend annual ROLO Families Advisory Committee Meetings in 2018 and 2019. Parents were asked to discuss their opinions about current research projects and potential future projects, followed by an open discussion about relevant health questions. These meetings were either transcribed on the day or recorded with audio recordings transcribed verbatim and broad themes identified. Results: Mothers had greater concern for outcomes relating to their children than themselves. Parents were very interested in understanding the relationship between diet in pregnancy and child health and welcomed research regarding blood tests that could be predictors of future health. Parents were concerned about the effect social media has on child mental health and also wanted more studies conducted in the areas of fussy eating and ensuring children consume a wide range of healthy foods. It was highlighted that children and teenagers should understand healthy eating principles and ways to promote their health. Conclusion: Valuable insights were gained regarding what research parents consider relevant. The ROLO agenda has certainly been enriched by PPI.

Poster Presentations

A virtual reality (VR) training tool to improve weight-related communication across healthcare settings

Topic: Innovation

Presentation Type: Poster

Fiona Quigley, Anne Moorhead, Raymond Bond, Huiru Zheng & Toni McAloon*

*Ulster University

Background: Overweight and obesity is a global health problem and the related challenges are complex and difficult to address. Effective health communication has a positive impact on patient health outcomes, but there are few empirical studies reporting on weight-related communication and good practice. Healthcare professionals have opportunities to discuss weight, but there are perceived communication barriers. Current training addresses medical impacts of obesity, rather than the practice of sensitive communication skills to raise the topic of weight. This research is part of a PhD. Aim: The study aim is to develop and evaluate a VR training tool to improve weight-related communication with patients who are overweight and obese in healthcare settings. Methodology: The study design will use a mixed method approach, incorporating personal and public involvement (PPI) and co-production over 4 phases: (1) Systematic literature review (2) Co-design and development of the VR training tool (3) Usability testing and (4) A feasibility study of the tool. A Twitter chat will gather feedback from the public and semi-structured interviews with healthcare professionals will inform the design of the VR tool. Results: Phase 1 and phase 2 of this study are in progress. The phase 1 systematic literature review is due for completion later in 2019 and addresses the question "Do digital training tools assist with weight and obesity communication in healthcare settings?". To date, eight empirical studies have been found, with one of the main findings being the inconsistent use of theoretical educational or health communication models. Conclusion: The anticipated outcome of this study is the development and feasibility testing of a VR training tool to improve weight-related communication with patients who are overweight and obese in healthcare settings. Funding Acknowledgment: This study is funded by the Department of the Economy Northern Ireland, PhD Scholarship.

Addressing weight stigma: The case against defining obesity as a disease

Topic: Policy

Presentation Type: Poster

Margaret Steele

University College Cork

Background: Experts across disciplines commonly push for obesity to be understood as a disease, motivated at least in part by a desire to decrease stigma. However, from a philosophical point of view, there is room for discussion over whether (1) obesity meets any robust set of criteria by which a phenomenon can be defined as a disease, and (2) whether the widespread recognition of obesity as a disease would contribute to the reduction of stigma. Aim: To outline major theories of disease in philosophy of medicine, to ascertain whether obesity meets the criteria for disease set out by any of these theories, and to discuss critically the assumption that treating obesity as a disease reduces stigma. Methodology: Review of literature; philosophical analysis. Results: When defined in terms of BMI, obesity does not clearly and uncontroversially meet any set of criteria for disease. When defined using a staging system such as the Kings or Edmonton, it can be argued that obesity meets some criteria for disease. However, defining obesity as a disease using such a staging system runs the risk of further pathologizing what is arguably the most benign – and certainly the most visible – of the symptoms included in the staging system, i.e. 'excess' adiposity. Conclusions: It is unclear whether obesity meets the criteria to be considered a disease according to any major philosophical account. In any case, defining obesity as a disease only addresses stigma if obesity-as-a-disease itself is not already a stigma-bearing category. But the notion that excess adiposity is always a marker of poor health and disease is already part of the web of beliefs contributing to weight stigma. Thus, defining obesity as a disease could actually reinforce stigma by confirming the widespread conation of adiposity and illness/poor health/disease.

Are waist circumference and waist to height ratio associated with physical activity and sedentary behaviour in Irish primary school students? Results from the Childhood Obesity Surveillance Initiative

Topic: Prevention

Presentation Type: Poster

Elizabeth Parke, Mirjam Heinen, John Mehegan, Celine Murrin & Cecily Kelleher*

*National Rehabilitation Hospital

Background: The prevalence of childhood obesity has increased globally. In 2006, the WHO European Childhood Obesity Surveillance Initiative (COSI) was established to monitor obesity trends in Europe, including Ireland. Literature shows positive associations between low physical activity levels, high inactivity levels and childhood obesity. Aim: To examine the relation between waist circumference (WC) and waist-to-height ratio (WHtR) with sedentary and physical activity behaviours in Irish primary school children. Methodology: In 2010, measured WC and WHtR were used to determine weight status and potential overweight/obesity-related risk-factors were recorded. Data were collected and analysed on 1032 first and 987 third-class primary school students. Overweight/obesity was categorised as >0.5 for WHtR and as a Z-score ≥ 1.34 (i.e. ≥ 91 st percentile) for WC. A parental survey collected information on physical activities and sedentary behaviours. Logistic Regression (Stepwise Backward Likelihood Ratio-method) was performed to investigate the risk of obesity with physical activity, sedentary behaviours and other predictor variables. Results: Prevalence of overweight/obesity (WC) was higher in first-class girls than boys (32.1% vs 21.3%, respectively; $p < 0.01$); no gender difference for third-class ($\sim 30\%$). Boys were more physically active than girls irrespective of class or weight status but spent significantly more time playing computer games at the weekend ($p < 0.01$). When using WC as the outcome, overweight/obese first-class students watched significantly more TV, but overweight/obese boys played outside for longer ($p < 0.05$). An increased risk of being overweight/obese (WC) among all children was predicted by TV/video viewing during the week only (OR 1.34, 95%CI 1.05-1.71). Other predictors were female gender, housing, parental education. Results were similar when using WHtR as the outcome or for third-class students. Conclusions: Targeting specific groups in the community to increase physical activity and focusing on sedentary behaviours to prevent obesity into adulthood is paramount.

Association between adiposity and total daily insulin requirements in young patients with type 1 diabetes: A prospective cohort study

Topic: Basic & applied sciences

Presentation Type: Poster

*Bridóg Nic Aodha Bhuí**, Rosemary Geoghegan, Gloria Avalos & Francis Finucane

*NUI Galway

Background: We postulate that excess body fat, measured by standardised body mass index (zBMI) contributes to increased insulin requirements. We aimed to determine if there was an association between zBMI and total daily insulin dose (TDI), glycaemic and metabolic control in young patients with type 1 diabetes attending our regional paediatric diabetes clinic. **Methods:** We conducted a prospective observational cohort study of all patients attending our clinic over two years. Age, ethnicity and other important confounders such as pubertal staging, self-reported carbohydrate intake, screen time and physical activity levels were recorded. **Results:** Of 136 patients who attended in that time, 99 (48.5% female, 93.9% white Irish, mean age 14 ± 3.2 years, duration of diabetes 5.7 ± 3.7 years, HbA1c 77.4 ± 17.9 mmol/mol ($9.2\pm 3.8\%$)) agreed to participate. 28.3% were pre-pubertal. 16.2% were overweight or obese. Mean zBMI was 0.36 ± 0.94 and mean TDI dose was 56.6 ± 27.9 units per day. 19.2% of patients used insulin pumps. 38.4% carbohydrate counted. Only 40.4% were strenuously active more than three times per week. Television viewing and gaming were highly prevalent. In linear regression modelling, there were strong and statistically significant associations between zBMI as the independent variable and TDI as the dependent variable. Each unit rise in zBMI was associated with an increase of 9.99 [4.37, 15.62] units of TDI ($p < 0.001$). The association remained significant after adjusting for age, sex, pubertal stage, carbohydrate intake and activity level. 43.7% of the variance in TDI was accounted for by zBMI and age. **Conclusions:** Higher adiposity in young people with type 1 diabetes is associated with higher total daily insulin requirements, even after adjusting for the potential confounding effects of age, puberty and lifestyle factors. Excess body fat appears to have a detrimental effect on metabolic health in young type 1 diabetes patients.

Barriers and facilitators to adoption, implementation and sustainment of obesity prevention interventions in schoolchildren - a DEDIPAC case study

Topic: Implementation

Presentation Type: Poster

Catherine Hayes, Miriam O'Shea, Clíodhna Foley-Nolan, Mary McCarthy, Janas Harrington*

*Trinity College Dublin

Background: The aim of the study was to explore the implementation of school-based diet and physical activity interventions with respect to the barriers and facilitators to adoption, implementation and sustainability; supportive actions required for implementation and recommendations to overcome identified barriers. Two interventions rolled out nationally in Ireland were chosen; Food Dudes, a programme to encourage primary school children to consume more fruit and vegetables and Green Schools Travel (GST), an active travel to school programme in primary and secondary schools. Trained school coordinators (teachers) cascade the programmes to other teaching staff. Methods: Multiple case study design using qualitative semi-structured interviews with key stakeholders: primary and secondary school teachers, school coordinators, project coordinators/managers, funders and intermediaries. Fifteen interviews were conducted. Data were coded using a common categorization matrix. Thematic analysis was undertaken using the Adoption, Implementation and Maintenance elements of the RE-AIM implementation framework. Results: Good working relationships within and across government departments, intermediaries and schools were critical for intervention adoption, successful implementation and sustainability. Organisational and leadership ability of coordinators were essential. Provision of participation incentives acted as motivators to engage children's interest. A deep understanding of the lives of the target children was an important contextual factor. The importance of adaptation without compromising core components in enhancing intervention sustainability emerged. Successful implementation was hindered by: funding insecurity, school timetable constraints, broad rather than specific intervention core components, and lack of agreement on conduct of programme evaluation. Supportive actions for maintenance included ongoing political support, secure funding and pre-existing healthy lifestyle policies.

Descriptive mapping of mHealth studies for childhood obesity treatment

Topic: Treatment

Presentation Type: Poster

*Louise Tully**, Amanda Burls, Riyad El-Moslemany, Grainne McCabe, Jan Sorensen & Grace O'Malley

*Population Health Sciences, Royal College of Surgeons in Ireland

Introduction: Mobile Health (mHealth) provides a means of increasing efficiency and accessibility of healthcare, by utilising the popularity of mobile devices to deliver care, resources and education. Childhood obesity remains a global public health concern, particularly in Ireland where one in four children have overweight or obesity. The multi-disciplinary capacity of mHealth may have significant potential for weight management among a generation of children accustomed to using such devices. Decision-makers increasingly demand evidence of both effectiveness and cost-effectiveness in considering novel technologies for practice. This study aims to assess the breadth and nature of the evidence describing evaluations and economic evaluations of interventions using mHealth for treatment of childhood overweight/obesity, and provide a descriptive map of the literature to date. Methods: A search of relevant academic databases, repositories and reference lists for published and grey literature was undertaken, and title/abstracts screening completed. Full text screening is underway, after which the relevant studies will be mapped according to study characteristics, including study design, nature of mHealth and the outcomes evaluated. Studies which assess the use of mobile devices for weight management, among children ≤ 17 years with overweight/obesity, were included. Studies assessing effectiveness, cost-effectiveness, acceptability, usability or adherence specifically related to the mHealth component were included. Results: 4,599 titles/abstracts have been screened, with screening of 319 full texts currently underway. An overview of the research activity around mHealth for childhood weight management will be presented, outlining the methodological nature of the evidence, based on specific study characteristics. Conclusion: This study will provide an overview of the research to date, allow scope for more focused reviews, highlight potential gaps in the literature, and enable appropriate use of resources in the design of further studies.

LT is a PhD student funded by the StAR Programme at RCSI.

Developing guidance on food portion sizes for healthy eating and obesity prevention

Topic: Prevention

Presentation Type: Poster

Rebekah Creane, Shauna Quinn, Clare O'Donovan, Sinead O'Mahony, Nuala Collins, Oonagh Lyons & Mary Flynn*

*Food Safety Authority of Ireland

Awareness of portion size is an important contributor to obesity prevention. This study aims to identify the most appropriate adult portion sizes and descriptors for foods that may be used in developing dietary guidance for 1-5 year olds. A list of foods that may be used in developing dietary guidance for 1-5 year olds were identified. Recommended adult portion sizes (g/day) and descriptors (e.g. one cup) used in Ireland for these foods were determined. The foods were categorised into five groups from the Healthy Ireland Food Pyramid (HIFP). Within each group, foods with similar portion size (< 15% variance from average) were combined and assigned portion size descriptors. For the listed foods (n156), four sources of adult portion sizes were identified as most appropriate; HIFP (n118), Food Standards Agency UK (n27), MenuCal (n5), and market brand information (n6). Foods in the fruit and vegetables group (n45) were combined into twelve types with an average portion size difference of -6% to +4%; in the cereals, breads, potatoes group (n43) into seven types with an average difference of -9% to +6%; in the meats and alternatives group (n36) into seven types with an average difference of -3% to +1%; in the dairy group (n22) into six types with an average difference of -5% to +8%; in the top shelf group (n2) into one type with no average difference. Due to variability in type and portion size, 16% (n25) of foods were not combined. This study demonstrates how a wide range of foods can be categorised into five food groups and combined within these groups into an average of six types - each with a commonly-used portion size descriptor. This helps simplify food-based dietary guidance. These adult food portion sizes can be used to develop portion sizes and descriptors for 1-5 year olds.

Examination of weight status, parity and maternal education factors on intentions to breastfeed and breastfeeding duration in an Irish cohort

Topic: Prevention

Presentation Type: Poster

Shauna Callaghan, Rebecca L. Moore, Aisling Geraghty, Cara Yelverton & Fionnuala McAuliffe*

*UCD Perinatal Research Centre, School of Medicine, University College Dublin, National Maternity Hospital, Dublin, Ireland

Background: Breastfeeding can improve health outcomes and is important in reducing obesity. However, breastfeeding rates in Ireland were 59.9% in 2016, amongst the lowest internationally. Aim: To assess intention to breastfeed, feeding status at birth, one and three months postnatal and influencing factors. Methodology: Secondary data from 124 healthy pregnant women participating in an RCT in the National Maternity Hospital who recorded intention to breastfeed at booking were included. Observational data including demographic and lifestyle data was collected. Results: Of the 124 women, 80.7% were Irish, 86.2% achieved third level education, and 43.5% were multiparous. Mean age was 32.7years and mean BMI 24.9kg/m². 91.1% (n=113) reported intending to breastfeed at booking. At birth, 91% of those initiated breastfeeding (n=101/111). 78.6% (n=77/98) and 66.7% (n=58/87) of those intending to breastfeed remained breastfeeding at one and three months postnatal respectively. Intention to breastfeed in early pregnancy was significantly higher amongst women with third level education and who had breastfed previously (p< 0.001), however it did not differ significantly with maternal age, ethnicity, BMI, or parity. Women with higher education were more likely to breastfeed at delivery, one and three months postnatal (p< 0.05). Although maternal BMI was not associated with intention to breastfeed, women who did not breastfeed at delivery and three months postnatal had significantly higher BMIs compared to women who breastfed (p< 0.05). There were no significant differences regarding feeding status with maternal ethnicity, age, or parity at birth and one month postnatal (p>0.05). However, primiparous women intending to breastfeed were significantly more likely to continue breastfeeding at three months compared to multiparous women (p< 0.05). Conclusions: Many factors are shown to influence breastfeeding intention and duration including BMI, parity and education. It is important to identify these potentially inhibiting factors during pregnancy to develop support measures to encourage initiation and continuation of breastfeeding.

Exploring midwives' and obstetricians' level of knowledge of appropriate gestational weight gain, nutrition, and physical activity for pregnant women: A protocol

Topic: Prevention

Presentation Type: Poster

Shauna Callaghan, Barbara Coughlan, Aisling Geraghty & Fionnuala McAuliffe*

*UCD Perinatal Research Centre, School of Medicine, University College Dublin, National Maternity Hospital, Dublin, Ireland

Background: Maternal obesity and excessive gestational weight gain represent significant risk factors in pregnancy and public health. Pregnancy has the potential to provide a 'teachable moment' for positive health behaviour change. Maternity healthcare professionals, including midwives and obstetricians, therefore, are uniquely positioned to positively influence maternal, infant, and family health. **Aim** This study will aim to explore the current knowledge of midwives and obstetricians regarding health promotion advice in pregnancy, specifically related to weight gain, nutrition, and physical activity. **Methodology** Quantitative data will be gathered through the development of a specifically designed questionnaire. This study will involve midwives and obstetricians currently practicing in a tertiary referral hospital in Dublin and rural hospital in Wexford, Ireland. Student midwives in final stages of training will also be included. **Results** The questionnaire tool was developed through a process of reviewing of literature, Irish health policies and previously published questionnaires. A 27-question tool with 57 individual items relating to demographic information, gestational weight gain advice, nutrition, physical activity recommendations, and clinician confidence was developed. An expert panel validation will be conducted, and pilot questionnaires will be then carried out with final adjustments made. The expected outcomes from this study will be to assess current knowledge of midwives and obstetricians regarding health promotion advice in pregnancy, specifically related to weight, nutrition, and physical activity. It will also aim to identify potential gaps in maternity care providers' knowledge of health promotion in these areas and provide recommendations for education and training curricula for Midwives and Obstetricians. **Conclusion** The promotion of health and wellbeing in pregnancy is important for pregnancy outcomes, as well as maternal, child and family health. Therefore, it is important to assess understanding and knowledge levels of healthcare professionals in this area to improve delivery of health promotion advice.

Factors associated with weight loss response to GLP-1 receptor agonist treatment in individuals with obesity

Topic: Treatment

Presentation Type: Poster

*Aisling Mangan**

*National Rehabilitation Hospital

Background: Obesity is a disease which affects one in four Irish adults. Pharmacological interventions, are effective in promoting 15% body weight loss in some. However, 1 in 3 individuals are “non-responders” losing less than 5% body weight. Aim: To investigate the biological and eating behaviour factors which affect weight loss response to liraglutide. This could be used to guide prescribers and provide further understanding of the mechanistic functioning of liraglutide. Methodology: A clinical audit was carried out on 24 individuals with severe and complex obesity who underwent treatment at an obesity specialist service. Following referral, participants attended an optional initial appointment to assess factors which may promote weight loss. These included: gender, BMI, food intake and preference, GLP-1 release and reported hunger and satiety following a standard meal. Individuals then received lifestyle intervention +/- liraglutide 3.0 mg over a 12-week period. Results: The liraglutide (n=15) and lifestyle intervention (n=9) group were Caucasian, aged ~50 years and did not differ in terms of weight, waist circumference and HbA1c at baseline. At 12 weeks, both groups had significant reduction in weight, BMI and waist circumference and the liraglutide group lost more weight (9.5% vs. 4.2%, $p=0.001$). Diabetes status, gender, BMI, GLP-1 release, food preference, food intake, appetitive behaviour and reported satiety and hunger were not associated with increased weight loss response to liraglutide. Conclusion: No measured factor is associated with improved response to liraglutide. All obese individuals who have failed at lifestyle intervention have equal potential to respond and thus require equal access to liraglutide. This target is not currently met in Ireland as those with greatest BMI and diabetes have greater accessibility to these medications. Future research which highlights the health and economic benefit of obesity treatment is needed to promote greater health equality.

High birth weight predicts higher weight status and increased risk of obesity in early childhood: Findings from the ROLO study

Topic: Prevention

Presentation Type: Poster

Aisling Geraghty, Eileen O'Brien, Mary Horan, Jean Donnelly, Eleanor Molloy & Fionnuala McAuliffe*

*UCD Perinatal Research Centre 65-66 Mount Street Lower Dublin 2

Introduction: The early fetal environment during pregnancy is extremely important and research indicates that weight at birth can have crucial impacts on the individual's health later in life. With rates of childhood obesity estimated to be as high as 21% in some European countries, it is vital that early risk factors are identified so that interventions can be developed. We aimed to investigate if children born macrosomic (birth weight > 4kg) remained larger than normal birth weight babies up to 5 years of age. Materials and Methods: This is a longitudinal follow-up of 387 five-year-old children (53% born with macrosomia, 47% normal birth weight) born into the ROLO randomised control trial in the National Maternity Hospital, Dublin (ISRCTN54392969). Birth weight was previously recorded then at 6 months, 2 years, and 5 years of age child height, weight, anthropometric and skinfold measurements were collected. Body Mass Index (kg/m²) and centiles were calculated. Student t-tests and Mann-Whitney U tests were used to compare the two groups with multiple linear regression modelling to control for confounders. Results: Children with a birth weight >4kg had consistently higher weights, lengths, and BMI centiles, along with increased head and chest circumferences, compared to normal birth weight children from 6 months up to 5 years of age ($p < 0.05$). After controlling for child sex, intervention group, smoking during pregnancy, maternal education status, and maternal BMI, children with macrosomia were 0.61kg heavier than non-macrosomic infants at 5 years of age (95% CI: 0.04 – 1.18, $p < 0.05$). Discussion: Children born with a high birth weight remain heavier and larger into childhood. These individuals are at a higher risk of obesity which highlights the need for monitoring and potential interventions, both during pregnancy and in infancy, to curb the current childhood obesity crisis.

The ROLO study was supported by the Health Research Board Ireland, the Health Research Centre for Health and Diet Research, The National Maternity Hospital Medical Fund and the European Union's Seventh Framework Programme (FP7/2007-2013), project EarlyNu

Impact of the sugar sweetened beverage tax on drinks consumption among pregnant women: A 6-month rapid review

Topic: Policy

Presentation Type: Poster

*Eileen O'Brien**, Fionnuala McAuliffe & Sinead Curran

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Introduction: In Ireland, more than 50% of pregnant women have a BMI >25kg/m² at their first antenatal appointment. The government of Ireland introduced a sugar sweetened beverage tax in May 2018 in response to increasing global concerns that sugar in liquid form is contributing to shifts in BMI trends. Aim: To evaluate the impact of the tax on a representative sample of pregnant women 6 months after its introduction. Methods: Cross-sectional study of 987 pregnant women carried out at the National Maternity Hospital, Dublin, Ireland in 2018, one month before the sugar sweetened beverage tax was introduced (April 2018) and 6 months after introduction (September 2018). At both time points, all women attending antenatal clinics over five consecutive days were invited to participate. Women were asked to complete a 16-item semi-quantitative food frequency questionnaire (FFQ) indicating frequency of consumption of 200ml of each of the beverages listed. Results: Completed surveys were returned by 503 women at the pre-tax timepoint and 484 women at the post-tax timepoint. Comparing consumption from pre- to post-tax, no difference was observed in carbonated soft drinks (42.6% vs 42.5%, P=0.988); low calorie soft drinks (40.5% vs 40.8%, P=0.934); pure fruit juice (74.6% vs 74.4%, P=0.948); flavoured water (21.9% vs 21.9%, P=0.990); water (95.0% vs 93.0%); or milk (80.0% vs 79.7%, P=0.914). Among consumers of carbonated soft drinks, weekly consumption was 182 ml (equivalent to 0.13 portions per day) and did not differ between pre- and post-tax (P=0.920). No difference in frequency of consumption of any drinks mentioned above was observed from pre- to post-tax. Conclusions: This 6-month rapid review of the impact of the sugar sweetened beverage tax did not identify differences in patterns of consumption of drink categories among pregnant women from pre- to post-tax. One-year post-tax evaluation is planned.

Latch On protocol: Multi-centre, randomised controlled trial of perinatal support to improve breastfeeding outcomes in women with overweight and obesity

Topic: Implementation

Presentation Type: Poster

Eileen O'Brien, Sharleen O'Reilly, Lucille Sheehy, Lorraine O'Hagan, Rosie Murtagh, Barbara Coughlan, Denise O'Brien, Denise McGuinness, Marie Corbett, Michelle Walsh, Paula Power, Marie Woodcock, Amy Carroll, Stephanie Murray, Charmaine Scallan, Elizabeth Dunn & Fionnuala McAuliffe*

*UCD Perinatal Research Centre, School of Medicine, University College Dublin, National Maternity Hospital, Dublin, Ireland

Background: Breastfeeding rates in Ireland are among the lowest worldwide with 35% fed any breastmilk at 3 months. Women with a high BMI are likely to have lower initiation rates and duration of breastfeeding observed. In Ireland, >50% of women have a BMI of >25 kg/m² at their first antenatal appointment, thus, improving breastfeeding practices is a pertinent health promotion activity for these women and their infants. Aim: To improve breastfeeding duration at 3 months among women with a BMI >25 kg/m², using a previously-tested, multicomponent intervention. Methodology: This is a protocol for a multi-centre, randomised controlled trial of perinatal breastfeeding support, using a previously-tested, multi-component intervention. The primary outcome is any breastfeeding at 3 months. Primiparous women with a singleton pregnancy, BMI >25 kg/m² and 26-34 week's gestation who are attending antenatal clinics at four of the Ireland East Hospital Group maternity units will be eligible. The intervention will be delivered by lactation consultants and will include group antenatal education for mothers and support partners, individual support post-delivery, drop-in clinic to 6-weeks post-partum and weekly phone calls to 6-weeks post-partum. The intervention will target attitudes toward breastfeeding, breastfeeding self-efficacy, and subjective norms around infant. Validated questionnaires and qualitative interviews will be used to measure outcomes and intervention effectiveness. Ethical approval has been sought and recruitment will start in May 2019. Results: We anticipate that the intervention will be well-accepted and feasible, based on results from our pilot trial among 100 women. Discussion: The proposed intervention will be invaluable to policy-makers as it will provide insights into what specific interventions are effective in improving breastfeeding rates for women with a raised BMI and will highlight the measures that would be most cost-effective to implement nationally.

Maternal perceptions of 5-year-old child weight status and factors influencing perceptions: Findings from the ROLO Kids Study

Topic: Prevention

Presentation Type: Poster

Anna Gouldson, Aisling Geraghty, Eileen O'Brien, Mary Horan, Jean Donnelly, Elizabeth Larkin & Fionnuala McAuliffe*

*UCD Perinatal Research Centre, School of Medicine, University College Dublin, National Maternity Hospital, Dublin, Ireland

Introduction: Obesity is a global condition affecting both adults and children. Mothers play an important role in identifying problems with their child's weight. However, studies are limited on the accuracy of maternal perceptions of her child's weight status in early childhood. The aim of this study was to look at maternal perceptions of her child's weight status in 5-year-old children and to investigate factors influencing this. Methods and Materials: 339 mother and child pairs were followed up from the ROLO Kids study in the National Maternity Hospital, Dublin, Ireland. Height and weight of the mother and the child were measured, and BMI was calculated. Demographic details were collected and questionnaires asked mothers to assign their child to a weight category and to give the reason they put their child in this particular category. KAPPA analysis and student t tests were used to analyse the data. Results: In this cohort over 75% of the children were normal weight, 14.7% were in the overweight category, and 8.5% in the obese category. The KAPPA score for maternal-perceived category and actual weight status was 0.037 which is a low level of agreement. Mothers were more likely to underestimate their child's weight, with 28.5% underestimating the appropriate weight category for their child compared with 2.4% who overestimated. Maternal age, education, and child sex did not influence accurate weight assessments; however, mothers with a higher BMI were more likely to inaccurately assess their child's weight ($P < 0.05$). Conclusions: Maternal perception of their child's weight status is not an accurate indication of child weight, particularly for mothers with a raised BMI. This research highlights the important role of health care providers in assessing child weight status, rather than relying on parental reports alone, in order to appropriately intervene to reduce the incidence of childhood obesity.

Mobile health (mHealth) applications with children in treatment for obesity: A randomised feasibility study

Topic: Treatment

Presentation Type: Poster

Sarah Browne, Gerardine Doyle, Tahar Kechadi, Shane O'Donnell, James O'Connor, Louise Tully, Mckenzie Dow & Grace O'Malley*

*Royal College of Surgeons in Ireland / Temple St. Children's University Hospital

Background: Smartphone mHealth apps can help children with obesity reduce rate of eating and monitor physical activity. Owing to adherence issues, mHealth interventions require feasibility testing. Aim To evaluate, using a randomised design, the feasibility and acceptability of a mHealth intervention to reduce eating rate and track physical activity among children in treatment for obesity. Methodology: The Research Ethics Committee at Temple St. Children's University Hospital granted ethical approval. Children (9-16 years) with obesity (BMI \geq 98th centile) were eligible. Following informed consent and assent, participants completed 2-week baseline testing including anthropometry, rate of eating by Mandometer[®] and physical activity using myBigO app. Thereafter participants were randomised to: Treatment: Usual care+Mandometer[®] training or Control: Usual care. After a 4-week treatment period, participants repeated the 2-week testing period. Feasibility measures included fidelity with planned recruitment, randomisation, intervention delivery and attrition. Acceptability measures included objective clinical portal data and participant feedback. Results: Of 20 recruited, 8 were randomised to intervention and 12 to control, with no significant age, gender or BMI SDS differences between groups. 87.5% intervention and 66.7% control participants recorded baseline eating rate. Eighteen participants registered with myBigO app, with 16 recording data successfully. Two had smartphones incompatible with myBigO, 2 did not engage with myBigO (n=1 intervention;n=1 control). Exposure to Mandometer[®] intervention ranged from 7%-92% of planned meals among 4 participants. 37.5% intervention and 58.3% control participants completed post-intervention measures. Attrition was higher in intervention (n=5;62.5%) than control (n=3;25%) group. Reasons for withdrawing included loss of interest (n=3 intervention), child overwhelmed or self-conscious (n=2 control), no time (n=1 intervention), behavioural issue (n=1 control), family illness (n=1 intervention). Engagement and feedback indicated mixed acceptability among this cohort. Conclusion: If engagement is to be maximised, the current protocol for study design and intervention requires improvement.

The study is part of EU H2020 BigO Study (Big Data Against Childhood Obesity, Grant No. 727688.<https://bigoprogram.eu/>). Study partners, The Mando Group AB, Stockholm, Sweden, provided equipment for use in this study.

Night eating syndrome among adults with obesity attending a tier 3 weight management service

Topic: Treatment

Presentation Type: Poster

Cathy Breen, Karen Gaynor, Amanda Villiers-Tuthill, Lauren Decereux, Natalie Wallace, John Mehegen, Jean O'Connell, Donal O'Shea. Colin Dunlevy, Emer O'Malley & Johan Meurling*

*Health Service Executive

Background: Night Eating Syndrome (NES) is an eating disorder, diagnosed using the following criteria: consumption of $\geq 25\%$ of food intake after the evening meal and/or ≥ 2 nocturnal ingestions/week, in addition to ≥ 3 of: morning anorexia; a strong urge to eat between dinner and sleep onset and/or during nocturnal awakenings; insomnia $\geq 4-5$ times/week; a belief that eating is necessary to initiate/return to sleep; and depressed mood that worsens during evening hours. Methods: We examined the presence of NES at baseline and repeat among adults attending a Tier 3 Weight Management Service (a behavioural intervention involving individualised dietary, activity and medical strategies) using the validated Night Eating Questionnaire. A score of ≥ 25 is strongly suggestive of NES. Data were analysed using SPSSV24 (IBM, USA). Statistical significance was determined using paired t-tests for continuous and Chi-squared for categorical data. Data are expressed as mean \pm standard deviation. Results: Paired data were available on n448 (62.7% female), baseline age 45.7 \pm 12.0 years, weight 146.3 \pm 27.8 kg and body mass index 50.7 \pm 8.9 kg/m². At baseline NEQ score was 15 \pm 6 with n34 (7.6%) meeting diagnostic criteria for NES. At the repeat time-point (9.2 \pm 4 months) there was a significant reduction in both weight (-6.1 \pm 9.8kg / -4 \pm 6.3%; $p < 0.001$) and NEQ (-2.4 \pm 5.7; $p < 0.001$). The proportion of individuals meeting NES criteria was lower than baseline (7.6% [n34] vs. 4.9% [n22]; $p < 0.001$). Weight change was not influenced by the presence of NES at baseline (-5.3 \pm 6.3 vs. -4.0 \pm 6.4%; $p = 0.824$). Discussion / Conclusions: NES scores improve and individuals with NES achieve significant weight loss when attending a behavioural intervention involving individualised dietary, activity and medical strategies. Individuals attending obesity services should be screened for NES to allow for individualised treatment. Recommended behavioural strategies for NES include self-monitoring food intake and regulating eating patterns across the day, in addition to cognitive components such as restructuring maladaptive thoughts.

Novel methods to examine overweight and obesity in Irish children

Topic : Prevention

Presentation Type: Poster

Aisling O'Donnell & Breige McNulty*

*University College Dublin

Body mass index (BMI) (kg/m^2) is the primary method used to define overweight and obesity (OW/OB) in children but it can be inaccurate. Crucial to lessening the burden of childhood OW/OB is utilizing methods which correctly identify children with excess body fat. The novel tri-ponderal mass index (kg/m^3) (TMI) can estimate body fat levels more accurately than BMI in children. Whilst, waist: height ratio (WHtR) is superior to BMI at identifying children at risk of obesity-related diseases. The aim of this research was to calculate and compare the BMI, TMI, and WHtR of children. Analysis was based on data collected from a nationally representative sample of Irish children aged 5-12years from The National Children's Food Survey (www.iuna.net). Anthropometric measurements were carried out by qualified nutritionist's using standardized techniques. Height, weight, and waist circumference were collected from 594 children (51% female). BMI, WHtR and TMI were calculated along with OW/OB classification per method (BMI; The-International-Obesity-Taskforce-Cut-Offs; WHtR; ≥ 0.50 ; TMI; $\geq 14.2\text{kg}/\text{m}^3$ -Boys; $\geq 14.7\text{kg}/\text{m}^3$ -Girls). Pearson correlations were performed to examine the relationship between techniques. A strong significant relationship was found between TMI and WHtR (0.876^{**}), TMI and BMI (0.752^{**}) with the weakest relationship occurring between BMI and WHtR (0.699^{**}). Variation in weight status classification occurred across all methods, which appeared greater in boys. The difference in classification between BMI and TMI in boys ranged from 15.7% in 5-8-year-olds to 2% in the 9-12-year-olds. For girls, the gap between BMI and TMI was 6% in the 5-8-year-olds and rose to 7.8% in the 9-12-year-olds. Less variation occurred between WHtR and TMI in both genders. Future analysis should involve the comparison of methods with percentage body fat to determine their ability to identify Irish children with excess adiposity.

Obesity stigma in Ireland. A pilot study

Topic: Policy

Presentation Type: Poster

Finian Fallon, Werd Al-Najum & Carel Le Roux*

*City Colleges

Background: While there is research into obesity stigma in many countries, this issue in Ireland is not well recognized. Aim: This study aims to provide data on the experience of obesity stigma among a group of patients with overweight in Ireland. Methodology: A survey was administered online and in person to attendees at an obesity clinic (n=32). The survey presented standard questions and a free text / comment section for participants to provide feedback on their stigma experiences. Results: The majority of the respondents (97%) report having a doctor recommend a diet, even if they did not attend to discuss weight loss. Around three quarters of the respondents (72%) report public stigmatising remarks such as overhearing negative comments or children making loud remarks (69%). Themes around clothes purchases and travel challenges were identified in the participant comments. Conclusion: Obesity is a growing issue in Irish public health domains. Early treatment and intervention is preferable. However, stigma may interfere with optimal treatment and help-seeking behaviours. There may be significant lifetime stigma experienced by overweight patients in Ireland.

PREgnancy Nutrition: a protocol for the development of a Core Outcome Set (PRENCOS)

Topic: Policy

Presentation Type: Poster

Sarah Louise Killeen, Eileen O'Brien, Aisling Geraghty & Fionnuala McAuliffe*

*UCD Perinatal Research Centre, School of Medicine, University College Dublin, National Maternity Hospital, Dublin, Ireland

Background: Maternal nutrition during pregnancy is a modifiable risk factor for health outcomes including obesity for both mothers and their children. Heterogeneity in outcome reporting in studies evaluating nutrition in pregnancy limits their comparability and is a barrier for high quality evidence synthesis. A core outcome set (COS) is set of outcomes which are agreed by consensus, to be a minimum standard to report within a particular area of research. **Aim:** The aim of this study is to develop a COS for maternal nutrition research in pregnancy. **Methodology:** A systematic review will be conducted to identify studies evaluating maternal nutrition during pregnancy and outcomes will be extracted from eligible studies. We will supplement this with outcomes from other sources, including qualitative interviews with mothers. A modified Delphi survey will be conducted with relevant international stakeholders including healthcare professionals, researchers and mothers. The survey will include two rounds. In the first round, participants will be invited to rank the importance of including each outcome in the final COS. In round two, participants will be presented with the score they provided each outcome in round one and the consensus for each stakeholder group. Participants can change their score or remain outside the consensus. Finally, a face-face meeting will be held with representatives from all stakeholder groups to finalise the COS. **Results:** We will identify the outcomes reported in maternal nutrition research. We will also determine the outcomes which are important to pregnant women and if these are missing from the literature. A final COS for nutrition research in pregnancy will be identified. **Conclusion:** The PRENCOS will support the harmonisation of outcome reporting in maternal nutrition research. This will aid advancement of clinical practice, policy development and resource allocation on nutrition in pregnancy so that we can improve the standards of nutritional care and health promotion for mothers.

Prevalence of overweight and obesity in young children: An analysis of child growth criteria and data from the Growing Up in Ireland infant cohort

Topic: Prevention

Presentation Type: Poster

Samira Jabakhanji, Fiona Boland, Mark Ward & Regien Biesma*

*Royal College of Surgeons in Ireland

Background: Early childhood overweight and obesity (OWOB) in Ireland is understudied. Consensus on the definition of OWOB in young children is missing, which contributes to the lack of consistent and up-to-date surveillance studies across countries (1). Aim: This study aimed to explore OWOB levels in young children in Ireland. Methodology: Using child growth criteria identified in literature, prevalence of OWOB was assessed through secondary analysis of the Growing Up in Ireland National Longitudinal Study of Children. Standardised weight and length/height were collected from the nationally representative infant cohort in 2008, when the children were nine months old (n=11,134), and again at three years (n=9,793) and five years (n=9,001). Results: The World Health Organization growth standard (WHO-S), World Health Organization growth reference (WHO-R) and International Obesity Task Force growth reference (IOTF-R) were identified as suitable criteria to define OWOB in this cohort. Significant differences existed between prevalence estimates retrieved from the various criteria. Using the WHO-S and WHO-R (sex- and age-specific 1-z-score threshold), 40.4% of the nine-month-old children had OWOB, 45.7% of three-year-olds and 31.5% of five-year-olds. Additionally, prevalence was significantly higher at all ages in boys ($p < 0.05$). Using the IOTF-R, 23.5% and 19.8% of children had OWOB at three and five years, respectively, and sex trends at age five years were reversed. Conclusions: Use of the various child growth criteria across the literature was inconsistent and non-transparent. The OWOB prevalence in young Irish children is high; however it decreased over time. This may reflect age-typical patterns or actual declines in prevalence in Ireland. Transparent reporting guidelines are needed to enhance the comparability of OWOB estimates across studies and age groups.

(1) Jones R, Jewell J, Saksena R, Ramos Salas X, Breda J, 2017. doi: 10.3389/fpubh.2017.00058

This research was kindly funded through the Irish Research Council Postgraduate Scholarship 2015.

Psychological health and disadvantage in children and adolescents who attended a clinical weight management program in Ireland

Topic: Treatment

Presentation Type: Poster

*Mckenzie Dow**

*W82GO Programme

Title: Psychological health and disadvantage in children and adolescents who attended a clinical weight management program in Ireland Theme: Treatment Background: Childhood overweight and obesity has been associated with problems of psychological health and disordered eating behaviours, yet the relationship between these variables in children from clinical populations is less understood. Childhood obesity has also been associated with economic disadvantage in previous research. Aim: The aim of this research is to understand the incidence of psychosocial difficulties, low self-concept and disordered eating, as well as the deprivation profile of a clinical sample of children diagnosed with obesity in Ireland. Method: Psychosocial difficulties, self-concept, and eating behaviours were assessed in children aged between 6 and 16 who attended a clinical service for the management of paediatric obesity between 2010 and 2018. The Child Behavior Checklist (CBCL), the Piers-Harris Self-Concept Questionnaire and the Dutch Eating Behaviour Questionnaire (DEBQ) child version, were used to measure the psychological constructs related to obesity. Obesity was measured using weight and height to calculate BMI. All participants are in the 98th percentile or above for BMI, according to the UK 1990 growth charts and classification systems. Preliminary frequency analyses were conducted on a subsample (n=302, 65%) for whom complete data was available for the CBCL measure. Results: Preliminary analyses of the total CBCL scores found that 36.42% of service-users' psychological adjustment was in the clinical range. 18.87% were in the clinical range for the externalising difficulties and 45.03% were in the clinical range for the internalising difficulties. The study is ongoing and updated results for the preliminary analyses of the psychosocial difficulties, self-concept scores, and disordered eating behaviours will be provided.

This research is funded by the HRB Centre for Health and Diet Research.

Staff perceptions of calorie posting and traffic light systems differ by gender following introduction in a University teaching hospital staff canteen

Abstract Topic: Implementation

Presentation Type: Poster

Kirsten Doherty, Ciara Flood, Elaine Cunniffe, Ailsa Lyons, Sinead Stynes, Abigail Pilkington, Elizabeth Barnes, Theresa Peare, Cecily Kelleher & Patricia Fitzpatrick*

*St. Vincent's University Hospital

Restaurants in Ireland will be required to display calorie counts on menus by end of 2019. The introduction of hospital calorie-posting is HSE policy. Such initiatives are not always systematically evaluated. The Health Promotion, Dietetics and Catering teams worked together to introduce calorie posting and a traffic light system (TLS) for all foodstuffs available in a university teaching hospital staff canteen. A calorie posting launch took place in September 2018. The aim of this study was to determine staff perception of calorie posting and TLS. One month after launch, 343 staff members were surveyed at 3 time points daily over one week, coinciding with main meals. A pre-designed Sphynx-software questionnaire was either interview- or self-administered. Analysis was conducted using SPSS. 343 questionnaires were returned (65.3% female; 18-44 years 65.3%, 45+ 32.1%, unknown 2.6%). More staff found calorie posting helpful compared to TLS (66.5% vs 43.7%; $p=0.001$). More females than men found both calorie posting (72.3% vs 53.3%; $p=0.001$) and TLS (49.1% vs 31.8%; $p=0.001$) helpful. 46% of all made themselves aware of calorie count always/mostly and 26.2% sometimes. More respondents identified calorie posting than TLS as influencing food choice at least sometimes (60.3% vs 36%; $p = 0.0001$) Females were more likely to make a food choice change based on TLS (39.7 vs 20.6%; $p=0.01$). Age and frequency of canteen use were not associated with either. The results suggest significant gender differences; calorie posting is more likely to be used than TLS, and females are likelier to use both. Although self-selection may affect findings, nonetheless there were important moves in both genders and all age-groups to make healthier choices. Further promotion of TLS/calorie posting has taken place in the hospital including at Hospital Health Fair in March 2019. Regular audit has been established.

The association between breastfeeding exposure and dietary intakes at five-years of age: Findings from the ROLO kids study

Topic: Prevention

Presentation Type: Poster

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Introduction: Breastfeeding is recommended for infants exclusively for the first 6 months with the continuation up to 2 years and beyond. Evidence suggests that breastfeeding is associated with healthy dietary patterns in childhood, however, current literature is restricted by its retrospective nature with limited studies investigating this association in older children. Aim: To investigate the association between breastfeeding exposure and dietary intakes at 5 years in an Irish cohort. Methods: 302 mother-child dyads from the ROLO study, a birth cohort study with a longitudinal follow-up, were used in this analysis. Women were recruited in early pregnancy and have been followed-up with their child at birth, 3 months, 6 months, 2 years and 5 years. Data were collected on breastfeeding exposure through hospital discharge data and mother's self-reporting. Child dietary intakes were collected using a 51-item food frequency questionnaire. Food groups were created based on food pyramid guidelines. Data on anthropometry, and lifestyle factors were collected. Statistical analysis was carried out using t-tests, and man-Whitney-u tests. Non-normal variables were logged prior to multiple linear regression, and controlled for maternal pre-pregnancy body mass index, maternal education, maternal age, and child weight at 5 years. Results: Results showed 68.9% of the cohort initiated breastfeeding. Unadjusted analysis found that breastfeeding exposure was significantly associated with increased consumption of vegetables ($P=0.08$), fats, spread and oils ($P=0.015$), meats, fish and eggs ($P=0.028$); and meat ($P=0.034$). On multiple linear regression, only vegetables remained positively associated with any breastfeeding exposure ($B = 2.45g$; $P=0.025$) controlling for all confounders. Discussion: Breastfeeding exposure is associated with increased intake of vegetables at 5-years of age. The association between breastfeeding and child diet may be an important factor to consider when examining associations between breastfeeding and child obesity and chronic diseases. Further research is needed to explore this relationship further.

The development of an audit tool to assess the food environment of children's social spaces on the Island of Ireland

Topic: Innovation

Presentation Type: Poster

Naomi Sloane, Celine Murrin, Christine Shan, Clare Corish, Moira Dean & Katherine Loayza*

*University College Dublin

Background: The local food environment has been shown to be an important influence on children's eating behaviours. Social spaces, where children exercise, socialise and play are ideal settings to support health promoting behaviours such as healthy eating. Previous research has indicated that the food environment within these social spaces are not conducive to healthy food choices. A paucity of research exists of the food environment within children's social spaces specific to the Island of Ireland. Aim: The aim of this study is to examine the food environment within children's social spaces and to understand the factors influencing food provision in these settings. An audit tool was developed to capture the food environment in these venues on the Island of Ireland. Methodology: A literature review was conducted of food environments within children's social spaces. Based on previous research, the audit tool was designed to comprehensively take account of the types of food and drink offered in these venues. Literature additionally highlighted the importance of documenting food marketing occasions and the presence of any health-promoting material in centres. As a result, the audit tool was designed to record the presence of such. The developed audit tool was reviewed by various professionals - dietitians, researchers of nutrition and public health nutrition before pilot testing. The audit tool was pilot-tested to test for face and construct validity. Conclusions: The finalised audit tool will be used to capture data on the food environment within children's social spaces across the Island of Ireland.

This study has been funded by safefood.

The effect of a novel probiotic on metabolic and inflammatory markers in women with overweight and obesity: a protocol for the GetGutsy study, a double blind, placebo-controlled randomised controlled trial

Topic: Innovation

Presentation Type: Poster

Sarah Louise Killeen, David F. Byrne, Cara A. Yelverton, Aisling A. Geraghty, Radka Fahey, Douwe Van Sinderen, Paul D. Cotter, Eileen F. Murphy, Fionnuala M. McAuliffe

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Background: Obesity is associated with chronic low grade inflammation, a contributing factor in the development of the metabolic syndrome. In pregnancy, metabolic syndrome is associated with an increased risk of adverse outcomes, such as gestational diabetes mellitus and preeclampsia. Evidence suggests that the gut microbiome is associated with metabolic health. Probiotics may improve inflammatory markers in people with overweight and obesity through modulating the gut microbiome. Aim: The aim of this study is to determine if a novel Bifidobacteria can positively impact markers of metabolic health in women with overweight and obesity. Methodology: The study follows a double blind, placebo-controlled randomised controlled design and is twelve weeks in duration. Eighty women aged 18-65 years will be recruited to the study and randomised to receive either a probiotic capsule containing a novel strain of Bifidobacterium or a placebo. Women will be eligible to take part if they have a body mass index ≥ 28 kg/m², a waist circumference of >80 cm or waist:hip ratio ≥ 0.85 cm and evidence of dyslipidaemia (triglycerides ≥ 1.7 mmol/L or HDL cholesterol ≤ 1.29 mmol/L). Participants will be asked to avoid food sources of probiotics for the duration of the study. The primary outcome measure is the change in high-sensitivity CRP from baseline to post the twelve week intervention. Secondary outcomes include, but are not limited to, markers of blood lipids and systemic inflammatory markers. Conclusion: Probiotics may be a viable option for women with overweight and obesity to improve their metabolic health and reduce their risk of comorbidities throughout the life course.

Trial registration: ISRCTN11295995 <https://doi.org/10.1186/ISRCTN11295995>

The effect of a 6-week community-based lifestyle intervention on the physical, metabolic and cardiovascular health of female adults over 50 years

Topic: Implementation

Presentation Type: Poster

Diane Cooper, Laura Keaver & Ruth Kavanagh*

**True Fitness*

Ageing elicits negative adaptations in body composition, muscle strength, aerobic fitness, metabolic and cardiovascular health. The ageing process is exacerbated by physical inactivity and the menopause. Aim: to determine the effects of a 6-week community-based intervention on the physical, metabolic and cardiovascular health of women over 50 in Laois. 19 female participants (57 ± 6 years, 32.4 ± 7.2 kg/m²) completed a 6-week lifestyle intervention consisting of 4 hours of physical activity (2 instructor led strength sessions and 2 home based aerobic sessions) and one 60-minute nutrition and health workshop per week. Body weight, BMI, body composition and waist circumference were measured pre and post intervention. Lower body strength endurance and cardiovascular endurance were assessed using the sit-to-stand and the 6-minute walk tests respectively. Point-of-care testing was used to determine fasting glucose and lipid profile. Statistical analysis was completed on SPSS version 24.0. There were significant reductions in body weight (-2.2 ± 2.0 kg, $p < 0.000$), percent body fat ($-1.0\pm 1.5\%$, $p=0.008$) and waist circumference (-2.6 ± 2.5 cm, $p=0.000$) post intervention. Sit-to-stand performance increased (12 ± 9 repetitions, $p=0.000$). The distance covered in the 6-minute walk test increased (82.4 ± 1.2 m) but this was not statistically significant. Fasting glucose levels improved post intervention ($p=0.006$). There was no statistically significant change in total cholesterol but there was a clinical significance as four participants normalised their total cholesterol levels. There was a non-significant increase in HDL cholesterol ($p=0.56$) and decrease in LDL cholesterol ($p=0.15$), triglycerides ($p=0.12$) and total cholesterol/HDL ratio ($p=0.07$). This 6-week community intervention successfully improved body weight, body fat % and waist circumference of participants. Lower body strength improved significantly. Cardiovascular fitness did not improve significantly which may be due to a limitation in maximum walking speed of participants. Metabolic health improved with a trend towards improved cardiovascular health.

Funding acknowledgements: Laois Sports Partnership.

The effectiveness of an educational short film and an evidence-based comic intervention in reducing weight bias among medical and healthcare students: a randomized control trial

Abstract Topic: Prevention

Presentation Type: Poster

Bronadh Rooney, Marita Hennessy, Oli Williams, Caroline Heary*

*School of Psychology, NUI Galway

Background: The stigma attached to weight is a serious concern that may exacerbate the physiological and psychological problems typically associated with obesity (Pearl, 2018). Knowledge of effective interventions for reducing weight stigma remains limited and inconsistent (Alberga et al, 2016). Some interventions have been guided by empathy and perspective-taking approaches (Gloor & Puhl, 2016), others have used educational films, designed specifically for trainee health care professionals and have shown modest results (Swift et al, 2013). The 'Weight of Expectation' (WoE) comic book was published following the ethnographic research of Williams and Annadale (2018) and presents the lived experiences of individuals affected by weight stigma. The current study explores its potential as a weight stigma intervention. Aim: The aim of this project is to investigate the effectiveness of different intervention approaches to reducing weight bias. A traditional film condition (education), an evidence-based comic condition (education and empathy evoking) and a control group will be compared. Methodology: Participants will be registered medical and healthcare students in a third level institution, randomly assigned to one of three groups: comic book + video, traditional weight stigma video and control group (general health related video). Measures of explicit weight-biased attitudes and beliefs will be obtained at three time periods: pre intervention, one-week post intervention, and at a 6 month follow up. Conclusions: The 6 month follow up design will help determine the maintenance of intervention effects, which are seldom investigated in intervention studies (Alberga et al, 2016). Exploring an online comic book as a means of enhancing learning and empathy and reducing stigma is novel and thus can inspire new insights and avenues for future research.

The Food – Environmental Policy Index (EPI): monitoring and benchmarking government policies and actions to improve the healthiness of food environments in Ireland: Process Outline.

Topic: Policy

Presentation Type: Poster

Janas Harrington, Charlotte Griffin, Eimear Scanlan & Eva Molloy*

*School of Public Health, University College Cork

Background: Food-EPI has been developed by the International Network for Food and Obesity / Non-communicable Diseases (NCDs) Research, Monitoring and Action Support (INFORMAS). It is classified in two components: ‘policies’ and ‘infrastructure support’. The policy component includes seven domains to address the key aspects of food environments that can be influenced by governments to create readily accessible, available and affordable healthy food choices. The infrastructure support component includes six domains that facilitate policy development and implementation to prevent obesity and NCDs. Examples of good practice statements are proposed within each domain, that describe the ‘best practices’ (policies and infrastructure support) that governments put in place to contribute towards a healthier food environment. Aim: To assess and compare the extent of implementation of national government policies and actions in Ireland, for creating healthy food environments against international best practice, and to identify the major implementation gaps. Methods: Evidence on the extent of government implementation of different policies on food environments and infrastructure support was collected. Government officials have been identified to validate the evidence document. An online survey with public health experts and NGO representatives to rate performance of government for seven policy and seven infrastructure support domains against international best practice will be conducted. The experts will independently score the degree of implementation of those policies against international benchmarks. Following rating, a one-day workshop will be convened with the expert rating panel to identify and prioritise actions. Results: ‘The collection of relevant data to show the degree of policy implementation in Ireland, that forms the Irish Food-EPI evidence paper is being finalised. Conclusion: This work will allow for the first time international benchmarking of Irish food environment policies. Preferred presentation format: oral presentation.

This research is funded by the HRB and forms part of the European research project “Policy Evaluation Network” (PEN), financed by the Joint Programming Initiative – A Healthy Diet for a Healthy Life (JPI HDHL).

The impact of obesity on demand and cost of hip and knee replacements in Ireland

Topic: Policy

Presentation Type: Poster

*Samira Jabakhanji**, Anna Mealy & Jan Sorensen

*Royal College of Surgeons in Ireland

Background: In 2017, 23% of Irish adults had obesity (1). Obesity increases the risk of osteoarthritis and the need for total knee (TKA) and hip replacements (THA) (2). Aim: To determine the proportion of TKA and THA that is attributable to obesity in Ireland, and to project the cost consequences of potential increases in population age and obesity prevalence. Methodology: Nationally representative weight and height data were obtained from the 2015 Healthy Ireland survey; public hospital provision of TKA/THA, revisions after TKA/THA and infection after TKA/THA were obtained from the national Hospital In-Patient Enquiry system; current and future population characteristics were retrieved from the Central Statistics Office. Through a literature review we obtained relative risks of TKA/THA for different weight groups, and projections of obesity trends until 2025. A mathematical model estimated the demand for TKA/THA, associated resource use, and costs related to obesity. Results: In 2015, 2,296 TKA and 3,411 THA were performed in public hospitals. Assuming relative risks of 5.96 and 2.86, respectively, 1,564 (68.1%) and 1,797 (52.7%) of these procedures were in patients with obesity, equating to €33million of hospital costs. The projected rise in obesity prevalence (from 25% to 38% in men and from 22% to 37% in women) and population age implies an additional demand of 1,736 TKA (+75.6%) and 1,866 THA (+54.7%) in 2025. Accordingly, TKA/THA costs would rise from currently €55million to €93million (77.9% of which due to obesity) in 2025. Conclusions: A substantial proportion of healthcare costs for joint replacement is attributable to obesity. This is expected to rise by 2025, due to proportional increases in obesity and population age. It will be challenging to satisfy the predicted future demand without additional real resources. Cost-effective interventions to reduce the prevalence of obesity are urgently needed.

(1) IpsosMRBI. Healthy Ireland Survey 2018. (2) Richmond et al., 2013. doi: 10.2519/jospt.2013.4796.

Weight cycling, weight loss expectations and confidence in ability to manage weight among obese adults attending a tier 3 weight management service

Topic: Treatment

Presentation Type: Poster

*Amanda Villiers-Tuthill**

*Health Service Executive

Background: Baseline weight loss expectations predict attrition among patients with obesity entering a weight management program. High expectations followed by discontinuation of active weight management attempts may lead to repeated weight loss cycles. Weight cycling is associated with binge eating, anxiety, depression, and lower well-being. Aim: To investigate associations between baseline weight loss expectations, weight cycling history and confidence in ability to manage weight of patients attending a Tier 3 specialist weight management service. Methodology: Data was gathered using a questionnaire modified from the National Weight Control Registry questionnaire including questions on frequency of weight cycling (defined as loss and regain of ≥ 10 kg), weight loss expectations and confidence in ability to manage weight (rated on a scale from 1 to 7). Data was analysed using Microsoft Excel 2010 (Microsoft, Washington, USA). Results: Patients' (n=1051, 65.9% female) mean age was 47.7 +11.9 years, and mean BMI was 51.2 +8.6kg/m². Average weight loss expectations were 17.15+9.7kg and 32.37+17.4kg for 6 and 12 months respectively. A significant number of respondents had no specific weight loss targets for the next 6 (43.7%, n=459) or 12 (41.2%, n=433) months. Most (62.3%) respondents had weight cycled at least twice, 24.8% (n=261) reporting weight cycling more than 5 times. Mean confidence score was 4.85+1.66. History of weight cycling was significantly associated with level of confidence in managing weight ($X^2(24, N=1051) = 50.226, p=.001$) such that those who had weight cycled at least once had greater confidence in their ability to manage weight than those who had never weight cycled. Conclusions: Prevalence of repeated weight cycling was high, highlighting the challenge weight loss maintenance. Despite adverse associations with weight cycling reported in the literature, previous significant weight loss, even if regained, was associated with increased confidence in ability to manage weight, which is a predictor of success in weight management interventions.

Weight loss in a meal replacement programme for adults with severe and complicated obesity is proportional to the change in the degree of fasting ketosis

Topic: Treatment

Presentation Type: Poster

Mohammed Faraz Rafey, Conor Murphy, Helena Griffin, Paula O'Shea & Francis Finucane*

*University College Hospital Galway

Introduction: Several studies have described the use of ketogenic diets in intensive lifestyle modification programmes for obesity. Typical initial weight loss is approximately 10kg, but often weight regain limits the longer term efficacy of these interventions and attrition can be high. Ketosis has been shown to attenuate increases in ghrelin and appetite that occur with dietary restriction. Ketogenic diet interventions have shown therapeutic promise, but there is a significant knowledge deficit relating to how the degree and duration of ketosis might influence outcomes. Methods: We conducted a single centre prospective cohort study of individuals undergoing our milk-based meal replacement programme over eight weeks. Routine anthropometric and metabolic data were recorded every two weeks, while fasting plasma ketones were measured at zero and eight weeks using gold standard headspace gas chromatography analysis. Means were compared with a t-test, while linear regression was used to quantify the association between the change in weight and the change in fasting ketosis. Results: In 27 (8 male, 8 T2DM) patients aged 48.5 ± 13.4 years completing eight weeks of milk-based meal replacement, mean BMI decreased from 50.5 ± 7.9 to 45.5 ± 7.5 kgm⁻², with a mean weight loss of 14.1 ± 4.3 kg. Fasting ketones increased from 153 ± 147 to 431.1 ± 595 nmol/l between zero and eight weeks. The magnitude of the weight loss was associated with the change in fasting ketosis from zero to eight weeks ($\beta=48.2$ [14.3, 82.1], $p=0.007$) in both unadjusted and adjusted analyses. Conclusion: In adults with severe and complicated obesity undergoing an eight-week milk-based meal replacement programme, there was an increase in fasting ketosis, and the magnitude of this increase was associated with the magnitude of weight loss. Rather than an abstract mechanistic consideration at the patient's bedside, the state of therapeutic ketosis might be a relevant and quantifiable indicator of weight loss intervention efficacy.