

Poster Presentation

Feasibility of Using Cell Phone Reminders to Motivate Behaviour Change in Obese Adolescents in Hong Kong

AA ABRAHAM,¹ WC CHOW,¹ HK SO,² J WOO,³ SM CHAN,³ EAS NELSON²

¹Division of Family Medicine, The Jockey Club School of Public Health and Primary Care; ²Department of Paediatrics; ³Department of Medicine & Therapeutics, The Chinese University of Hong Kong, Hong Kong

Background: Obesity is an increasing public health problem affecting young people. Behavioural treatment is the mainstay of weight control programs for obese teens. Traditional behavioural-based programs are usually done face-to-face by health professionals and include strategies to increase physical activity and modify dietary habits. However, seeing medical professionals for individual consultation to discuss weight management on a regular basis can be expensive and time-consuming. In addition, many Hong Kong adolescents rely heavily on the internet to acquire updated knowledge and cell phone texting for communication.

Research purpose: We undertook a pilot study investigated the feasibility of using both an adapted internet-based curriculum with cell phone reminders and a simplified lifestyle modification programme (sLMP), consisting of four nutritional counselling sessions, as adjuncts to usual care for obese adolescents and their parents. Here we report on the feasibility of using cell phone reminders for weight management.

Methods: Forty-eight obese Chinese teens aged 12 to 18 years were randomised into three groups (control group, internet intervention (IT) group, sLMP group). The study was conducted over 24 weeks. IT group subjects were asked to view a 12-week internet-based curriculum weekly and to set specific goals related to (a) diet and (b) physical activity at baseline and then every month. A weekly semi-personalised SMS (incorporating subjects' diet and exercise goals) was sent to participants and they were asked to reply with an emotion icon to represent whether they had achieved their targets during the week. Participants were also asked in these SMSs about factors which were incentives or barriers to meeting dietary and exercise goals.

Results: The most preferred dietary and physical activity goals were eating at least two servings of fruit (62.5%) and increasing frequency of exercise by doing 30 minutes of moderate to vigorous activity three to five times per week

(75%), respectively. A total of 400 messages were sent to the 16 subjects. Fifteen subjects opted to receive the message by Whatsapp and one preferred email. The research assistant spent an average of 2 hours per week to send out the personalised cell phone reminders to the 16 participants. Participants' response rate to meeting dietary and exercise goals were 78.3% and 77.5%, respectively. However, response rate for stating personal incentives and barriers were 51.4% and 47%, respectively. All subjects and nearly 93.8% of parents found the weekly SMS and setting dietary and exercise goals useful or very useful in terms of managing their child's obesity.

Conclusions: The findings suggest that the use of cell phone reminders is feasible and well accepted by participants. Given that mobile phones are a common device among adolescents, setting specific goals related to dietary and physical activity along with personalised cell phone reminders may be an innovative adjunct to usual care of obesity. Further study is required to determine whether this intervention is a cost-effective approach to changing weight and promoting a healthy lifestyle in obese youth.

With Others and for Others: Accounting for Decisions about Genetic Testing in the Clinic

KYG AU-YEUNG,¹ O ZAYTS,² S SARANGI,³ BHY CHUNG⁴

¹Centre for the Humanities and Medicine, The University of Hong Kong, Hong Kong; ²School of English, The University of Hong Kong, Hong Kong;

³Danish Institute of Humanities and Medicine/Health, Aalborg University, Denmark; ⁴Department of Paediatrics & Adolescent Medicine and Department of Obstetrics & Gynaecology, LKS Faculty of Medicine, The University of Hong Kong, Hong Kong

While there are various factors influencing clients' decisions about genetic testing; testing for the sake of others is not uncommon. This paper focuses on decisions about testing (DOT) when a genetic mutation is identified in a Sudden Arrhythmia Death Syndromes (SADS) patient and it is unclear whether the mutation is the cause of the disease. Family members are then asked to consider genetic testing to ascertain the client's genetic status and future risk. The paper examines, at the interactional level, how genetic counselors, clients and family members negotiate decision-making involving others.

The data consists of 23 video-recorded consultations obtained from a Hong Kong hospital. Episodes of decision-making about testing are identified and extracted from the transcribed data. By using theme-oriented discourse

analysis, the analysis focuses on the discourse strategies that participants employ to foreground the possible benefits when other family members undergo the genetic test.

Preliminary findings show a disjuncture of perspectives between genetic counselors and family members in terms of the benefits of testing. While genetic counselors see testing as a means of confirming the diagnosis and managing risk, family members voice concerns about the usefulness of the test for a client's treatment. To mitigate these different perspectives on DOT, participants use a range of discourse strategies, such as contrast, foregrounding, self-and-other construction as a way of emphasizing future scenarios. This study, in sum, elucidates how other-oriented decisions are made in the clinical setting.

Oral Intake of β -glucans Containing Products Does Not Affect the Serum β -glucans Level by Using Chromogenic Limulus Ameobocyte Lysate Assay (Fungitell Test)

J CAO,¹ PL HO,² GCF CHAN¹

¹Department of Paediatrics and Adolescent Medicine, LKS Faculty of Medicine; ²Department of Microbiology, The University of Hong Kong, Hong Kong

Background: *Ganoderma Lucidum* (*G.lucidum* or Lingzhi, 靈芝) is a form of fungus that has been used as medication for a long time. *G.lucidum* has been advocated to enhance health and longevity. It has been applied to a wide spectrum of diseases including hypertension and cancer. One of the major bioactive components in *G.lucidum* is β -glucan. β -glucans are glucose polymers joined together by β -1-3 / 1-6 glycosidic linkages. Human does not have the enzymes to digest the β -1-3 / 1-6 glycosidic bonds and therefore the glucose polymers form 3-dimensional helical structures after ingestion and activate immune cells via dectin-1 receptor. However, most of the fungi also have β -glucans in their cell wall and therefore β -glucans found in the blood can be used a marker for the diagnosis of fungal infection. Chromogenic Limulus Ameobocyte Lysate (LAL) assay (Fungitell, Pyrochrome, Associates of Cape Cod, Inc, East Falmouth, USA) is the commercial product designed for the detection and quantitation of β -glucans, especially the β -(1, 3)-glucans.

Fungitell is now approved by FDA for clinical diagnosis of fungal infection. However, whether the intake of the β -glucans containing products such as Lingzhi may affect the serum β -glucans level remains unknown.

Methods: The commercially available *G.lucidum* products are provided by YorkBest International, Hong Kong. The β -glucans level has been confirmed previously by our group. Oral dosage in this study followed the manufacturing instructions (2 to 4 capsules). The serum samples from patients with confirmed fungal infection were retrieved from the department of Microbiology in order to assess the specificity and sensitivity of the Fungitell kit. Pre/Pro blood samples were collected from the volunteers before and 1hr after the intake of *G.lucidum*. The serum β -glucans level was then measured by Fungitell kit according to the manufacturer's instruction. The β -glucans level <60pg/mL is considered as negative, whereas, the values >80pg/mL is considered as positive. The values between 60 to 79pg/mL are considered as indeterminate. The data was analysed by GraphPad Prism version 5.0 software (GraphPad Software Inc, CA, USA). Comparisons between means were based on paired student's t test.

Results: Fungitell test results of patients with confirmed fungal infection shown that 5 out of 11 were detected as positive whereas another 5 were detected as negative. One out of 11 was detected as equivocal. The data showed no correlation between the fungal agents and the serum β -glucans level. The 11 confirmed fungal infection patient samples were considered as positive population while the 11 healthy donors were considered as negative population. True positive was 5 but the false negative was also 5. Since all the healthy donors were negative, the true negative cases were considered as 11 and false positive was considered as 0. In this study, all the samples from pre/pro blood collection after the intake of the β -glucans containing products fell into negative range. No significant statistical difference was observed when comparing the results from pre/pro blood samples.

Conclusion: Fungitell test has a sensitivity of 50% and specificity of 100% in detecting various fungal infections. The positive predictive value is 100% while the negative predictive value is 68.75%. The accuracy is 72.72%. It is non-specific for various fungi. The oral intake of β -glucans containing products did not affect the serum β -glucans level by using Fungitell assay.