Conference presentation

Digital Bangladesh: Using Formative Research to Develop Phone Messages for the Prevention and Control of Diabetes in Rural Bangladesh.

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Background: As with many low-income countries, diabetes is an increasing issue in Bangladesh affecting an estimated 20% to 30% of the population either as intermediate hyperglycaemia or fully expressed diabetes mellitus (Bhowmik et al., 2012). The Bangladesh D-MAGIC project is a cluster randomised control trial to test the effectiveness of interventions to improve detection, management and control of diabetes in rural Bangladesh. One of these interventions is an mHealth intervention, which involves sending health promotion voice messages to individuals' mobile phones to target diabetes prevention and management. In-depth formative research (interviews and focus group discussions) has been undertaken in rural Faridpur District in order to gain a greater understanding of people's beliefs, practices and behaviour regarding diabetes prevention and control and their access to and use of mobile phones. The findings of the research, used within the COM-B framework (Michie et al 2011), are being used to inform and appropriately tailor the voice messages to the needs of the target population. This presentation will highlight key findings of the formative research and discuss how these findings are being used to design the mHealth intervention. Aim: To identify key issues for the content and delivery of voice messages regarding the prevention and control of diabetes in rural Bangladesh through in-depth formative research. Methods: We conducted sixteen semi-structured interviews with purposively sampled diabetics, non-diabetics and health professionals. In addition, nine focus group discussions with diabetics and non-diabetics were conducted in villages in three sub-districts of Faridpur. We explored beliefs and behaviour regarding diet, exercise, smoking, stress and care-seeking. The findings from the interviews and focus group discussions were analysed thematically, and specific enablers and barriers to behaviour change related to diabetes identified. Additionally 20 questionnaires were carried out with men and women in Faridpur to gain a better understanding about mobile phone access and use. Results: We found that while there was awareness that diabetes sufferers should control their diet and exercise, a general understanding of the links between food and exercise in preventing diabetes was lacking. Informants reported to prefer sweet and oily foods and there was a social expectation to provide certain foods (with high sugar and fat content) to friends and family. Food cooked at home was perceived as "good" and snacks (often deep-fried) bought outside the home were unhealthy. Women reported being reluctant to walk alone, and said they didn't have time to exercise. Sports were viewed as an activity for young men. Despite these barriers to exercise, diabetics reported that they were able to go for walks in their village to control their diabetes. Men reported social pressure to smoke and being addicted to smoking, and there was a general lack of knowledge regarding the harmfulness of smoking. Informants suffered from stress but were unaware of

strategies to deal with it. We found that people frequently expressed fatalistic views of health, and a belief that poor health is the "will of Allah", yet diabetics did tend to go to health facilities when they felt unwell. Informants reported shortages of health providers and facilities in rural areas. Informants were keen to increase their knowledge about healthy lifestyles. The mHealth intervention will build on people's existing knowledge and keenness to learn. For example the message could contain specific dietary information for the whole family (portion sizes, amounts of sugar etc.) and relevant alternative snacks. Voice messages could promote walking in groups and recommend how long people should walk for. The content may also include information about available health facilities and the harmfulness of smoking. Finally, building on the importance of religion to people, messages in-line with Islamic principles of maintaining good health could be incorporated into messages. Conclusions: It is important to ensure that interventions are adapted to the local context. Our formative research has provided rich information to inform the content of voice messages to encourage healthy behaviours in rural Bangladesh. These messages will deliver information to increase knowledge of how to prevent diabetes, and will engage individuals and families to change their behaviour. We will test their effectiveness in enabling men and women to prevent and control diabetes.

References

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