Supplementary file: Questionnaire used in the KAP study

No	Outcome	Questionnaire	Reference	Description
1	*Socio-demographics*	*Socio-demographic information*	Developed in-house	A structured questionnaire will be used to collect information on questions relating to age, gender, ethnicity, religion, marital status, education level, employment status, occupation, family composition, personal and household income, housing type and area of residence. The study will obtain self-reported information on height and weight.
2	*Diabetes recognition & knowledge*	*Diabetes recognition and knowledge using vignettes*	Developed in-house	Diabetes knowledge will be assessed via two methods: the use of a vignette, describing someone with diabetes, and KAP questionnaires. Vignettes are "short stories about hypothetical characters in specified circumstances, to whose situation the interviewee is invited to respond". Vignettes can be generated from a range of sources including previous research, consultation with experts in the fields and real-life case histories. The vignette will then be used to elicit perceptions, opinions, beliefs and attitudes about diabetes. To ensure the respondent can best relate to this person in the vignette, we will match their gender and ethnicity with that of the person described in the vignette and will use a local name to describe the person in the vignette. An example of the vignette is: *"Mr. Tan is a 68-year old male who has found activities like oil painting to fill his days since retiring from his job three years ago. Mr. Tan keeps himself busy in the mornings by looking after his plants looking after his plants in the corridor of his HDB apartment. He notices that he seems to be going to the bathroom (urinating) quite often. After eating lunch with his wife, Mr. Tan takes a walk around the block. He feels extremely tired and very thirsty upon returning home. He also notices that the wound on his foot is taking a long time to heal. He does not work on his painting sometimes because his vision is blurry."* *(The name of the character will change according to the ethnicity of the respondent)*
3	*Knowledge, attitudes and practices towards diabetes*	*Diabetes KAP questionnaire*	Eigenmann *et al.*, 2011 Tanamas *et al.*, 2013 (*questionnaire was*	Overall, the questions will focus on all three levels of diabetes prevention: 1) Primary prevention: Are healthy lifestyles adopted to prevent diabetes?

			adapted for local context)	2) Secondary prevention: Are people motivated to attend screening for diabetes and are they motivated to change their lifestyle / take part in a lifestyle program if they have pre-diabetes or seek adequate treatment if they have undiagnosed diabetes? 3) Tertiary prevention: Adherence to doctor's visits and treatments after people have been diagnosed with diabetes to prevent complications
4	*Stigma (self, public)*	*Diabetes stigma questionnaire:*	Developed in-house	Those with diagnosed diabetes will be asked questions on perceived/ self-stigma i.e. whether they feel stigmatised by others or whether they are embarrassed by their condition. Those without diabetes will be asked both about their stigmatising attitudes towards those with diabetes (public stigma) as well as the concerns they may have about being diagnosed with diabetes. Response options range from 1 to 4, from "definitely willing, probably willing, probably unwilling, definitely unwilling
5	*History of chronic medical conditions*	*Chronic conditions checklist:*	Subramaniam *et al.,* 2019	A brief medical history will be obtained using a self-report chronic conditions checklist where respondents will be asked to report being diagnosed with any of the listed 18 physical conditions in their lifetime. For those conditions which the respondents indicate they have a lifetime diagnosis, they will then be asked about the age of diagnosis and whether they received treatment for those specific conditions in the past 12 months. Responses are captured as Yes or No.
6	*Health related quality of life*	*Short Form (SF)-12*	Ware *et al.,* 1996	This will be assessed using SF-12 questionnaire, which is a multi-purpose, generic, short-form health survey with 12 items. It yields physical and mental health summary measures and a preference-based health utility index
7	*Physical activity*	*Global Physical Activity Questionnaire (GPAQ)*	Chua *et al.,* 2015 Bull *et al.,* 2009	The GPAQ consists of 16 questions designed to estimate an individual's level of physical activity in three domains (work, transport and leisure time) and time spent engaging in sedentary behaviour. This questionnaire has been validated in Singapore. Responses are captured as yes or no
8	*Health literacy*	*Brief Health Literacy Screen (BHLS)*	Chew *et al.,* 2004, Peterson *et al.,* 2011	This has been used widely to measure health literacy in diverse populations. This instrument is short, comprising three items and can

			be administered by the interviewer with minimal training. Responses include "all of the time, most of the time some of the time, a little of the time, none of the time".
9	*Social desirability*	*Marlowe-Crowne Social Desirability Scale (MC-SDS)*	Crowne *et al.,* 1960	This scale measures and controls for social desirability. The scale represents culturally acceptable items that are unlikely to happen. The scale comprises 33 statements to which respondents are asked to answer "true" or "false" with true answers given a score of 1 and false scored 0. Higher scores indicate more social desirability. This scale is useful in surveys to assess the degree of bias in the responses, in a socially desirable direction than actual behaviour.
10	*Social constraints*	*Lepore's social constraints scale*	Lepore *et al.,* 1996, Braitman *et al.,* 2008	The scale measures the cognitive processing of those with diabetes via sharing the diabetes-related experiences to others. Talking about the disease to someone who is supportive is believed to aid in coping, to promote self-care and to desensitise people from disease-related thoughts. A higher score indicates higher social constraints. The scale consists of 15 items with response options that range from "never", "rarely", "sometimes" and "often".
11	*Dietary habits*	*Diet screener*	Whitton *et al.,* 2017, 2018	The diet screener includes a list of 37 items developed to meet the dietary style of the local population with a 10-point frequency scale. The scale was developed and validated locally and includes healthy food items recognised internationally and locally. Frequencies of "never or rarely, once a month, 2-3 a month, once a week, 2-3 a week, 4-6 a week, once a day, 2-3 a day, 4-5 a day, 6+ a day are captured for each item.
12	*Barriers and enablers of diabetic screen*	*Barriers and facilitators of diabetes health screen*	Developed in-house	The questionnaire includes questions on diabetes health screening frequency, factors that facilitate attendance to health screens and barriers to regular health screening. It also includes items to measure the motivators to facilitate regular health screening. Responses include "strongly agree, agree neutral, disagree and strongly disagree"
13	*Disability*	*Disability screening questionnaire*	CDC, 2016	This questionnaire is meant to understand the health problems or impairment due to physical, mental or emotional health conditions. Responses include "not really a barrier, somewhat of a barrier, very much a barrier".

14	*Barriers to physical activity*	*Barrier to physical activity questionnaire*	Developed in-house	This question lists down common factors that could potentially act as barriers to become physically active in the local contest. It includes 12 items that are relevant locally and captures response under the options "not really a barrier, somewhat of a barrier, very much a barrier"
15	*Awareness towards on-going anti-diabetes campaigns*	*Awareness towards diabetes programme*	Developed in-house	This section includes questions to understand the public's awareness towards the ongoing anti-diabetes campaigns. It also captures their perceived effectiveness of these campaigns and feedback for improvements.
16	*Lifestyle*	*Lifestyle questionnaire*	Developed in-house	The questionnaire carries various domains to measure the current lifestyle of the respondent, reasons for adopting healthy lifestyle (25 items), factors that can promote healthy lifestyle (25 items) and guidelines/regulation that could help people to achieve healthy lifestyle (8 items). The response options include "strongly agree, agree neutral, disagree and strongly disagree".
17	*Acceptability and readiness towards E-health*	*E-health*	Wootton *et al.,* 2011 Klein *et al.,* 2010 (*questions were modified and adapted*)	The questionnaire measures readiness for e-health, acceptability, perceived advantages and disadvantages of e-health services for diabetes care.
18	*Diabetes disease severity*	*The Diabetes Mellitus Disease Severity Index (DCSI)*	Glasheen *et al.,* 2017 (*adapted*)	This scale is a refined and validated version of the DCSI according to ICD-10 criteria. Based on 7 dimensions and scores 0-2, described by Glasheen *et al* (2017) a specific grading criterion for individual dimensions to match the local clinical cases was developed by the diabetologists in the study team. The data will be extracted by clinicians and research officers trained and supervised by the clinicians. Associations of these categories with both socio-demographic characteristics as well as KAP will be examined. Scores are given from 0-2 for 7 severity dimensions (retinopathy, nephropathy, neuropathy, cerebrovascular, cardiovascular, peripheral vascular disease, and metabolic)

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