Supplementary 1. Semi-structured questions guide for focus group discussion

1. In English

• Greeting and welcoming • Introducing self and research team • Short introduction about research (title, objective, background) • Distribution of Participant Information Sheet and Informed Consent Form • Filling up Google Form on Demographic Information	
Section A - Knowledge about sexual and reproductive health	
1.	**Perception on pre-marital pregnancy among youth** What is your opinion on premarital pregnancies among youth?
2.	**Perception on sexual transmitted infection** Why are there still so many youths in Malaysia suffering from sexually transmitted infections (STIs)?
3.	**Perception on contraceptives methods** Give me an example of a sexually transmitted infection that is common among young adults?
Section B - Youth sexual and reproductive health information source approach	
4.	**Perceived accessibility to sexual and reproductive health services** What are your thoughts on youth access to sexual and reproductive health (SRH) services?
5.	**Source of knowledge on sexual and reproductive health** Where do youth acquire SRH knowledge from? (e.g., school, peers, etc.)?
6.	**Perceived accessibility of sexual activity and contraceptives methods** How do youth learn about sexual activity and contraceptive needs?
7.	**Perception on openness to friends or family about sexual and reproductive health related issue** Do youth talk openly to friends or others about sex, and related reproductive issues? Why?
Section C - Challenges of existing sexual and reproductive health programs	
8.	**Perception on sexual and reproductive health education at school level** Is SRH education a subject or program that has been taught in schools?
9.	**Perception of challenges faced by teacher in school during sexual and reproductive health education** What are the challenges faced by teachers for sexual and reproductive education?
10.	**Perception of challenges to deliver sexual and reproductive health education to youth at school** What are the challenges in implementing sexual and reproductive education to youth in schools?
11.	**Perception on sexual and reproductive health education at the college or university level** What sexual education has been offered to college/university students and who provides these services?
12.	**Perception on the role of digital information towards sexual and reproductive health status of youth** The influence of digital information sophistication will affect the level of sexual and reproductive health, what do you think?
13.	**Perception on causes of unhealthy sexual intention among youth** What are the causes of the tendency to have bad sexual intentions among youth?
• Suggestion on the most needed topic for sexual and reproductive health intervention • Filling up Google Form on Voting • Open for suggestions • Closing	

2. In Malay Language

• Greeting and welcoming • Introducing self and research team • Short introduction about research (title, objective, background) • Distribution of Participant Information Sheet and Informed Consent Form • Filling up Google Form on Demographic Information	
Section A - Knowledge about sexual and reproductive health	
1.	**Perception on pre-marital pregnancy among youth** *Apakah pendapat anda tentang kehamilan luar nikah dalam kalangan belia?*
2.	**Perception on sexual transmitted infection** *Kenapa masih ramai lagi belia di Malaysia yang menghidap penyakit*

	jangkitan seksual (STI)?
3.	**Perception on contraceptives methods** *Apakah kaedah kontraseptif yang sering digunakan oleh belia jika hendak menghindari kehamilan?*
Section B - Youth sexual and reproductive health information source approach	
4.	**Perceived accessibility to sexual and reproductive health services** *Apakah pendapat anda mengenai akses belia ke perkhidmatan kesihatan kesihatan seksual dan reproduktif (SRH)?*
5.	**Source of knowledge on sexual and reproductive health** *Dari manakah belia memperoleh pengetahuan SRH (cth., sekolah, rakan sebaya, dsb.)?*
6.	**Perceived accessibility of sexual activity and contraceptives methods** *Bagaimanakah belia mengetahui tentang aktiviti dalam perhubungan seks dan keperluan kontraseptif?*
7.	**Perception on openness to friends or family about sexual and reproductive health related issue** *Adakah belia bercakap secara terbuka kepada rakan atau orang lain tentang seks, dan isu berkaitan?Kenapa?*
Section C - Challenges of existing sexual and reproductive health programs	
8.	**Perception on sexual and reproductive health education at school level** *Adakah subjek atau program pendidikan SRH yang telah diajar di sekolah?*
9.	**Perception of challenges faced by teacher in school during sexual and reproductive health education** *Apakah cabaran yang dihadapi oleh guru untuk pendidikan seksual dan reproduktif?*
10.	**Perception of challenges to deliver sexual and reproductive health education to youth at school** *Apakah cabaran dalam melaksanakan pendidikan seksual dan reproduktif kepada belia di sekolah?*
11.	**Perception on sexual and reproductive health education at the college or university level** *Apakah pendidikan seksual yang telah ditawarkan untuk pelajar kolej/universiti dan siapa yang menyediakan perkhidmatan tersebut?*
12.	**Perception on the role of digital information towards sexual and reproductive health status of youth** *Pengaruh kecanggihan maklumat digital akan mempengaruhi tahap kesihatan seksual dan reproduktif, apakah pendapat anda?*
13.	**Perception on causes of unhealthy sexual intention among youth** *Apakah punca kecenderungan niat melakukan hubungan seksual yang tidak baik dalam kalangan belia?*
• Suggestion on the most needed topic for sexual and reproductive health intervention • Filling up Google Form on Voting • Open for suggestions • Closing	

Supplementary 2. List of themes, sub-themes and codes

ID	CODES	SUB-THEMES	THEMES
Y13	Menstrual hygiene	Menstrual health knowledge	Physiological needs
Y04	Less knowledge on menstruation	Menstrual health knowledge	Physiological needs
Y05	Disease related to menstruation	Menstrual health knowledge	Physiological needs
Y06	Perception of pregnancy	Information on a safe pregnancy	Physiological needs
Y17	Less information on high-risk pregnancy	High-risk pregnancy	Physiological needs
Y09	Care of a high-risk pregnancy	High-risk pregnancy	Physiological needs
Y11	Cervical cancer	Disease of the reproductive system	Physiological needs
Y08	Reproductive organs and diseases	Disease of the reproductive system	Physiological needs
Y02	Type of contraception	Knowledge of contraceptives	Physiological needs
Y04	Benefit of contraception	Knowledge of contraceptives	Physiological needs
Y03	Awareness	Reproductive health services	Safety needs
Y08	School program	Reproductive health services	Safety needs
Y03	Less awareness	Reproductive health services	Safety needs
Y04	Sexual reproductive rights	Sexual and reproductive health rights	Safety needs
Y06	Dark web	Sexual health on the internet	Safety needs
Y11	Rarely search educational web	Sexual health on the internet	Safety needs
Y06	Pornography	Sexual health on the internet	Safety needs
Y08	Source of information	Sexual health on the internet	Safety needs
Y04	Myth within the community	Myths on sexual health	Safety needs
Y02	Relationship goal	Healthy relationship	Love and belonging
Y15	Various forms of sexual behavior	Sexual behaviour	Love and belonging
Y08	Prevention of sexually reproductive disease	Sexual behaviour	Love and belonging
Y07	Taboo	Sociocultural impact on sexual health	Love and belonging
Y04	Personal choices	Personal choices	Esteem
Y01	Consequences of sexual reproductive health problems	Mental condition related to reproductive health	Esteem
Y01	Relationship of mental health and sexual reproductive health	Mental condition related to reproductive health	Esteem
Y07	Quiz	Engagement	Esteem
Y04	Game	Engagement	Esteem
Y07	Game	Reward	Esteem
Y11	Self-guided	Illustration	Self-actualization
Y02	Infographics better	Illustration	Self-actualization
Y05	Less text	Illustration	Self-actualization
Y03	Less time	Time spent	Self-actualization
Y11	Less duration	Time spent	Self-actualization