

The Sexual and Reproductive Health of Cambodian Ethnic Minority Adolescents: a Global and National Literature Review

Submitted by Jessika Schmidt

Supervisor: Dr. Elizabeth Hoban

Supervisor: Lorretta Hoban

Student ID: 218117156

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Abstract

Introduction/background/issues

Despite continued public health reforms in Cambodia the sexual and reproductive health (SRH) literacy among ethnic minority adolescents remains poor. This study examined programming models used globally in lower-and-middle-income countries to address SRH attitudes and behaviours of ethnic-minority adolescents (EMA). Drawing on this information I then develop evidence-based recommendations which would positively address the SRH literacy of Cambodian EMAs.

Methods

A systematic search for peer-reviewed literature was conducted across seven EBSCO databases. Three different critical appraisal tools were then used to appraise literature which met the inclusion criteria (n=32). Additionally, a grey literature search was conducted to source relevant data, project reports and national policies on the topic in LMICs and Cambodia. A thematic analysis was then conducted and major themes were identified in the articles.

Results/discussions

The socio-cultural norms, insufficient health service provision, inadequate resources, lack of community support, and peer pressures significantly impact SRH among EMAs. School-based SRH education, cultural safety programming, peer education and clubs, youth centres and youth-focused health services, and community health literacy are widely accepted best-practice models. It is recommended that: 1) school-based SRH education should focus on empowerment approaches, including gender equality and goal setting skills; 2) establish community-based approaches which include grass-roots participation and needs-based assessments; 3) improve service delivery, and ensure coordinated and non-piecemeal responses. Limitations included language restrictions, limited data availability, research that relied on small samples and short research periods.

Conclusion

This study contributes to public health policy dialogue in Cambodia by providing guidance to the development and delivery of programs that address the SRH literacy of EMAs. Programming, which focuses on developing community health literacy and addresses the core socio-cultural issues unique to EMAs is urgently needed.

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List of Acronyms

ADB	Asian Development Bank
CDC	Centre for Disease Control
CDHS	Cambodian Demographic Health Survey
CSDH	Commission on Social Determinants of Health
CSE	Comprehensive Sexuality Education
EMA	Ethnic Minority Adolescents
GSWCA	Global Strategy for Women's, Children's and Adolescent's Health
HIV	Human Immunodeficiency Virus
HP	Health Promotion
ICDP	International Conference on Population and Development
LMIC	Low and Middle Income Countries
MoEYS	Ministry of Education, Youth and Sports
MRGH	Minority Rights Group International
NGO	Non-Government Organisation
PAP	Provincial Action Plan
PSL	Partnering to Save Lives
SEM	Socio-Ecological Model
SCT	Social Cognitive Theory
SDG	Sustainable Development Goals
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infection
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund

WHO World Health Organisation

Introduction/Background

Sexual and Reproductive Health (SRH) and Adolescent Health

SRH and access to SRH services is a fundamental human right and essential to overall wellbeing (Starrs *et al* 2018). The International Conference on Population and Development (ICPD) 2015 defines SRH as a “state of physical, emotional, mental and social well-being in relation to all aspects of sexuality and reproduction, not merely the absence of disease, dysfunction or infirmity” (UNFPA 2019, p. 42; Starrs *et al* 2018). The definition of SRH presented in this report is broad and comprehensive; it focuses on the right to self-determination and to govern one’s own body, and looks at the social, cultural and gender barriers which impact on the SRH of adolescents (Starrs *et al* 2018).

For the purpose of this review, the definition of youth, adolescent and young people relates to individuals between the ages of 10 and 19 years (WHO 2020; UNFPA 2018). Adolescence is a period of substantial growth and ongoing emotional, physical, cognitive and social change (UNFPA 2019). Adolescents have health care needs which are distinct from other age groups, particularly in regards to SRH, and are significantly influenced by their environments and their communities (UNFPA 2019; Zulu *et al* 2018). Negative SRH outcomes including unwanted pregnancy, unsafe abortions, early marriage and sexually transmitted infections occur when their specific needs are neglected and determinants left unaddressed (Zulu *et al* 2018).

Context of SRH and adolescents in Ethnic Minority Populations of Low-and-Middle Income Countries (LMICs)

Nearly 90% of adolescents live in LMICs, and constitute a greater proportion of the total population compared to high-income countries (Krug *et al* 2016). An estimated one billion young people, aged between 10 and 24, live in Asia and the Pacific (UNFPA 2019). Yet, SRH knowledge and service provision remains limited in these countries and many other LMICs. Poverty, cultural norms, forced marriages and inadequate health systems are key in perpetuating poor health literacy for EMAs in LMICs (Mulubwa *et al* 2020). Adolescents in socially excluded ethnic-minority groups, particularly in rural areas, are extremely vulnerable to being overlooked by health care reforms and national policies (Santhya & Jejeebhoy 2015, p. 191). Even when services are available, access and use of these SRH services among adolescents in LMICs is low (Desrosiers *et al* 2020). Contraception choice, for example, is

influenced by relationships with partners, family and peers and reflective of cultural and social factors (Samandari *et al.* 2010). Modern contraceptive methods include the pill, implants, injectables, intrauterine device, condoms (male and female), and sterilization (male and female) (WHO 2018). Traditional contraceptive methods include calendar method or rhythm method and the withdrawal methods (WHO 2018).

The review acknowledges the importance of the indigenous perspective, and uses the terms ethnic minority and indigenous peoples when referring to “those with specific social and cultural identity distinct from dominant or mainstream society” (ADB 2002, p. 10). Although these terms are used and accepted globally, this review recognises that they are generic terms being used to refer to a mosaic of different groups (UN 2013; ADB 2002; Smith 1999).

SRH of Cambodian Ethnic Minority Adolescents (EMAs)

Cambodia has the youngest population in South-East Asia, with 43% of the population below 19 years of age (CDHS 2015; UNFPA 2015). Adolescents in today’s Cambodia are growing up with very different social, political and economic settings than those of their parents and grandparents, and they have newfound freedoms and economic opportunities which expose them to contemporary influences outside of their traditional environments (UNFPA 2015; Pereiro & Cortina 2018). Cambodian EMAs experience considerably worse SRH outcomes than the wider, non-indigenous population (CDHS 2015). Physical remoteness, cultural barriers, poverty and a changing economy are significant influencers on the health and SRH literacy of adolescents in these communities and create barriers to health services and SRH resources (CDHS 2015; UNFPA 2015; Kenny *et al* 2018).

As a multi-ethnic society, Cambodia has between 18 and 24 distinct ethnic groups with a total estimated population of 200, 000 (ADB 2002; MRGI 2017). In all of these groups, indigenous languages are used for public and private everyday life, and with the Khmer language is used in schools and for public administration (ADB 2002; Pereiro & Cortina 2018). Villages are relatively small and are centred around a communal area, with the goal of developing social harmony (Pereiro & Cortina 2018; Kenny *et al* 2018). Even by Cambodian standards, people in these communities are typically incredibly poor (MRGI 2017; Pereiro & Cortina 2018). Cambodian indigenous peoples are ancient inhabitants of the land, and as such, their cultures, beliefs, and religions are founded on their relationship with their environment (ADB 2002).

The recent exposure of indigenous peoples and traditional societies to the dominant Khmer population is having an impact on gender expectations, beliefs and cultures (Maffii 2008; Pereiro & Cortina 2018). Maffii (2008) suggests, for example, that the status of women in these communities is unacknowledged, and therefore, women are facing increased responsibilities at a younger age. Early marriage, teenage pregnancy and increased responsibilities “isolates them and decreases their exposure positive changes” (Maffii 2008, p. 138).

Rates of child marriage and teenage pregnancies are significantly higher in indigenous communities. In 2016, UNICEF conducted an analysis of health centre administration data in the regional province of RatanaKiri, and found that 1 in 4 antenatal care visits were from girls under the age of 18 years (PAP 2018). A national study conducted in Cambodia in 2014, found that 95.4% of Cambodian females aged 15-19 years were not using contraceptive methods, this dropped to 70.3% among female ages 20-24 (CDHS 2014). Abortion is legal in Cambodia, but there is still a lot of confusion around its legality among adolescents (CDHS 2014)

Provincial Action Plan to Prevent Child Marriage and Teenage Pregnancy in RatanaKiri 2017 -2021

The PAP is a joint action plan between the Cambodian Provincial Department of Women’s Affairs, Cambodian Ministry of Women’s Affairs, CARE International and UNICEF Cambodia, and was designed to align with the SDG 16.1 and support the government’s commitment to end child marriage and teenage pregnancy (PAP 2018). The plan outlines four priority areas of focus: coordination and cooperation; data collection, monitoring and evaluation; primary prevention; and response (PAP 2018). The plan focuses on addressing the determinants of child marriage and teenage pregnancy as: social and cultural norms; poverty and socioeconomic inequality; lack of education and information; lack of reliable infrastructure; lack of awareness of legal protections, poor health services, and family perspectives (PAP 2018).

Research Questions, Aims and Objectives

SRH is paramount to the wellbeing and livelihoods of Cambodian EMAs, and therefore, the question should be asked: which global public health strategies and programs are positively influencing the SRH attitudes and behaviours of EMAs, and can these be used to address the underlying factors impacting on the SRH of Cambodian EMAs? As such, the purpose of this research was to examine global strategies and intervention models used to address negative

SRH attitudes and behaviours of EMAs in LMICs with similar development contexts to Cambodia. Drawing on these findings, the review made recommendations on SRH initiatives in relation to the Cambodian context. Two aims were designed to address the research question:

Aim 1:

To examine strategies used in countries with similar development contexts as those in Cambodia, to address SRH attitudes and behaviours of EMAs . Three objectives were developed to accomplish this:

- Explore the SRH attitudes and behaviours of EMAs.
- Identify strategies used to improve the SRH literacy of EMAs .
- Assess the strategies that have been shown to improve SRH literacy of EMAs.

Aim 2:

To explore the SRH literacy of adolescents in Cambodian EMAs. Three objectives were developed to accomplish this:

- Explore the determinants of SRH literacy of Cambodian EMAs , including social, economic, cultural, commercial, political and structural determinants;
- Recommend strategies that CARE Cambodia and the national technical working group can implement to improve SRH literacy of Cambodian EMAs.

Theoretical Framework Informing Research Approach

Socio-Ecological Model (SEM): a Multilevel Approach

The use of a Health Promotion (HP) framework in this review allows for examination of the underlying factors impacting on SRH behaviours and health literacy of EMAs, and the relationship between an individual and their culture, society and environment (WHO 2019). The Ottawa Charter of Health Promotion (1986) takes a holistic view on the application of HP noting that the framework should be adapted to the needs and possibilities of individuals and local communities (WHO 2019;WHO 1986).

Use of the social-ecological model (SEM) provides a framework to explore the multiple levels of influence (individual, relationship, community, society) impacting on the SRH of EMAs, and outline how SRH behaviours both shape and are shaped by the social environment (CDC 2018; CDC 2011). The Commission of Social Determinants of Health (CSDH) suggests that

“inequities in health, avoidable health inequalities, arise because of the circumstances in which people grow, live, work, and age, and the systems put in place to deal with illness” (CSDH 2008, p. 3). WHO recognises that health behaviours are shaped through an interconnecting network of determinants and circumstances of individuals’ daily life, suggesting that the socio-ecological model “treats interactions between factors at the different level with equal importance to the influence of factors within a single level” (WHO 2014).

People-Driven Approaches and SRH

Community development principles nest within the Human-Rights Based approach which recognises people as actors in their own development (UNFPA 2014). Taking this rights-based approach recognises that the individual and their communities need to be informed of their rights and be allowed to have input in decisions that will impact upon them (UNFPA 2014). Similarly, the Global Strategy for Women’s, Children’s and Adolescent’s Health (GSWCA) (2026-2030) recognises that women, children and adolescents are significant agents for improving health and changing societies (Marston *et al* 2016).

This review recognises that equitable primary health care is reliant on people-driven approaches that are “inclusive of underserved groups and is tailored to the context” (Marston *et al* 2016, p. 376). There are three recognised pillars of action for this framework: social accountability; people-centred health services; and individual and community capabilities to participate (Marston *et al* 2016). Marston *et al* (2016) states that this approach is only successful when strong networks are established between health services and communities.

Feminist Theory

There is scope within this review to use a feminist theory to explore the gendered SRH experiences of EMA, including: empowerment, ability to make SRH decisions, and the expectations of SRH behaviours and attitudes within the indigenous Cambodian context in which SRH is taboo and stigmatised. Women are disproportionately impacted by poor SRH literacy, and as such, there remains a need to embed gender equality into the fabric of development and service delivery (UNFPA 2019; Darroch & Giles 2014). Furthermore, a postcolonial feminist perspective focuses on the factors which perpetuate uneven power balance (Darroch & Giles 2014). This feminist lens can be used to expose the inequities between indigenous peoples and non-indigenous peoples, and show how power can operate based on advantage and disadvantage (Darroch & Giles 2014). In looking at the intersection of

ethnicity and gender, Smith (2008) argues that gender does not just relate to women and their part in society, but also looks at the relationships between men and women. Smith (2008) states that the concept of gender difference is a remanent of colonisation and the Western culture. As such, this review will use the postcolonial feminist perspective approach.

Methods

An extensive and comprehensive literature search was conducted over a period of seven weeks in order to identify the literature that would answer the aim and objectives. The following is an overview of the processes used:

Systematic Literature Search

To begin, an extensive and generalised search was conducted across a number of databases to establish context, identify relevant search terms, and develop an inclusion and exclusion criteria. Additionally, a comprehensive examination of national policy reports, project level evaluations and reports, guidelines, and other publicly available government and organisational literature was undertaken to ascertain Cambodian contexts, including health determinants, initiatives and political programs. From this initial search, it was identified that conducting a separate literature search for each aim was the best approach.

Following this initial search, the student met with the Deakin University Liaison Librarian to refine search techniques. As a result, it was determined that the following search terms would be used:

Aim 1 Search 1 Terms: (“Sexual and reproductive health” OR “sex* health” OR “reproduct* health” OR “SRH” OR “SRHR” OR “RSH” Or “ASRH” OR “early pregnancy” OR “teen* pregnancy” OR “early marriage” OR “teen* marriage” OR “child* marriage” OR “STI” or “sexually transmitted disease” OR “STD” OR “sexually transmitted disease” OR contraception Or “family plan*”) AND (youth OR adolescen* OR “young adult” OR teen*) AND (“ethnic minorit* OR “race minorit* OR indigenous OR “minorit* groups” OR “minorit* populations” OR “ethn* culture”) AND (“Low and middle income countr*”) OR S1 OR S2

Aim 2 Search 2 Terms: (“Sexual and reproductive health” OR “sex* health” OR “reproduct* health” OR “SRH” OR “SRHR” OR “RSH” Or “ASRH” OR “early pregnancy” OR “teen* pregnancy” OR “early marriage” OR “teen* marriage” OR “child* marriage” OR “STI” or “sexually transmitted disease” OR “STD” OR “sexually transmitted disease” OR contraception Or “family plan*”) AND (youth OR adolescen* OR “young adult” OR teen*) AND (“Ethnic minorit*” or “race minorit*” or indigenous or “minorit* groups” or “minorit* populations” or native or Broa or Chhong or Jarai or Kachak or Kavet or Kel or Koang or Koung or Kreung or Krol or Phnnong or “La Eun” or Lun or Mil or Por or Radei or “Sam Rei” or Souy or Spong

or Stieng or Thmoun or Tumpoun) AND (Cambodia or “Cambodia* province*” or ratanakiri or “ratanak kiri” or mondulkiri or “mondul kiri” or “banteay meanchey” or battambang or “kampong cham” or “kampong chhnang” or “kampong speu” or “kampong thom” or kampot or kandal or “koh kong” or kratie or “preah vihear” or “prey veng” or pursat or “siem reap” or “preah sihanouk” or “steung treng” or “svay rieng” or takeo or “oddar meanchey” or kep or pailin or “tboung khmum”)

Once these were established, a systematic search was conducted using Deakin University’s Library search database, EBSCOHost. The specific EBSCOHost databases used include: Academic Search Complete, Global Health, Medline Complete, Psycinfo, CINAHL Complete, Health Policy Reference Centre, and SocINDEX. The student added two additional databases (PubMed and GALE Database) because these frequently appeared in other search results. Where possible, limiters were applied to the databases search function to refine search results. These limiters included: scholarly (peer-reviewed) journal articles, English language only, and literature that was published from 2009 onwards. If it was not possible to apply limiters to the database search, the student added these during the screening process. See *Table 1* for systematic search results.

Table 1: Systematic Search Results

		Academic Search Complete	Global Health	Medline complete	PhyschInfo	CINAHL Complete	Health Policy Reference Centre	SociIndex	PubMed	Gale Database
Aim 1	Total number of search results found	748	181	57	33	27	52	88	700	7
	Total number of results with limiters added	235	145	26	20	26	40	40	354	4
	Total number of results once titles and abstracts assessed	53	23	11	5	3	4	4	12	2
	Total number of results assessed appropriate for critical appraisal	15	6	4	0	0	1	3	3	2
Aim 2	Total number of search results found	27	8	18	27	6	12	8	57	123
	Total number of results with limiters added	14	8	16	10	3	8	6	3	54
	Total number of results once titles and abstracts assessed	5	1	2	0	1	1	0	0	5
	Total number of results assessed appropriate for critical appraisal	1	1	1	0	1	0	0	0	2

Screening Process

This search produced a total of 655 articles (536 for Aim 1 and 119 for Aim 2) which were deemed eligible for inclusion. The title and abstracts were screened to determine which articles met the inclusion criteria and were relevant to the research aim. The inclusion criteria for aim 1 included:

- 1) Peer-reviewed journal articles;
- 2) Articles published from 2009 onwards;
- 3) Articles published in English;
- 4) Content that addresses sexual and reproductive health literacy of youth and adolescents in LMIC's ethnic minority populations.

In contrast, the exclusion for aim 1:

- 1) Publications which were not journal articles;
- 2) Articles published before 2009;
- 3) Articles published in a language other than English;
- 4) Content that focuses on topics outside of sexual and reproductive health literacy of youth and adolescents in LMIC's ethnic minority populations.

The inclusion criteria for aim 2 also includes peer-reviewed journal articles dated from 2009 onwards, and published in English. However, the content for aim 2 is focused on the sexual and reproductive health literacy of youth and adolescents in Cambodian ethnic minority populations. Conversely, exclusion criteria for aim 2 included publications which were not journal articles, published not in English and dated prior to 2009, and content which did not address youth and adolescents in Cambodian ethnic minority populations (see *Appendix A* for comprehensive inclusion/exclusion chart).

At the end of this screening process, and following the removal of duplicate articles, there were a total of 120 articles remaining (105 for Aim 1 and 15 for Aim 2). These remaining articles were read in full, and were assessed against their relevancy to the aims of the study. This resulted in 36 articles (34 for Aim 1 and 2 for Aim 2) remaining and they are used in the literature review.

Critical Appraisal

After the final screening was completed, a comprehensive critical appraisal was conducted on the final 32 articles to assess scholarly rigor and hierarchy (Aveyard 2007). Three different evidence-based tools were selected to perform these appraisals: The Critical Appraise Skills Programme (CASP), Joanna Briggs Institute's Checklist for Text and Opinion (JBI), and Deakin University CRAAP guidelines (Critical Appraisal Skills Programme UK 2018a, 2018b, Joanna Briggs Institute 2017, Deakin University N.D, Aveyard 2007). The Critical Appraisal Skills Programme (CASP) tool was used to critically appraise the qualitative studies and systematic reviews (Critical Appraisal Skills Programme UK 2018a, 2018b). These articles were given a ranking of 1 to 10 based on how many of the CASP questions could be answered positively. For the articles which are explanatory but are not qualitative studies or systematic reviews, the Checklist for text and Opinion guidelines was utilised (Joanna Briggs Institute 2017). Articles were ranked on a scale from 1 to 11 for this tool. Finally, the Deakin University CRAAP guidelines were used for articles that did not fit into any of the above categories (Deakin University N.D). The generality of the CRAAP tool meant that not all the questions were relevant to the critical appraisal. As such, only the questions which were deemed most appropriate for determining credibility and scholarly rigor of the articles were used. As a result, articles were ranked on a scale of 1 to 13 for this tool (See *Appendix B* for results)

Grey Literature

Grey literature was sourced to support peer-reviewed literature with relevant data, current information, project information and evaluations. These sources were gathered through separate searches of Google, Google Scholar, Relief Web, WHO, and UNFPA. Alternatively, if grey literature was referenced in journal articles and deemed relevant, the student would seek it out to verify evidence or data. Additionally, some forms of grey literature, including NGO policies and project evaluations, reports and government documents were sourced from key stakeholders during the student's internship in Cambodia.

Deductive Thematic Analysis

Using the deductive thematic analysis method outlined by Braun & Clarke (2008), the articles were coded and mapped and major and minor themes were identified. This allowed the author to explore consistencies and inconsistencies, areas of commonalities and recommendations with

the relevant literature. The themes identified aligned with the aims and objectives, and are the focus of chapter 3.

Findings

SRH Attitudes and Behaviours of Male and Female Adolescents LMIC's Ethnic Minority Populations

Research on the SRH attitudes and behaviours of male and female adolescents in ethnic minority populations is limited. Although nearly 90% of the world's adolescent population live in LMICs, the EMAs in these countries are often overlooked by national policies and SRH programs (Catalano *et al* 2019). This situation occurs because of the social, cultural, economic, political and geographical barriers which these communities face in their everyday experience, however they are not being appropriately addressed by public health systems (Wehr & Turner 2013). Consequently, adolescents from ethnic minority populations often display higher rates of risky SRH behaviours, including an aversion towards using modern contraceptive methods and, instead, they rely on withdrawal or traditional methods which are less effective (Capurchande 2016; Dansereau 2017; Gabster 2019). Additionally, Wehr and Turner's (2013) research illustrates that an adolescent's ability to negotiate SRH rights with their partner, family and friends is impacted by their lack of information, skills and capacity. This then suggests that a limited understanding of sexuality, reproduction, and SRH is significantly influencing the SRH behaviours of adolescents in ethnic minority populations.

In her report, Priego-Hernandez (2017, p. 22) states that “the social dimension of a healthy youth is defined by the behavioural expectations set in dialogue with ideas from elders”. Pressure to marry early and bear children young is a norm for many adolescents in ethnic minority populations in LMICs. Indeed, early parenthood is common in many South-East Asian, South American and Sub-Sahara African (SSA) countries (Sychareun *et al* 2018; Capurchande *et al* 2016; Wehr & Turner 2013). Embedded cultural pressures and traditions have a significant impact on the SRH behaviours of adolescents in these indigenous communities, and often culminate in poor adolescent SRH outcomes (Krugue *et al* 2018). Sychareun *et al* (2018) notes that there is a general understanding within ethnic minority communities that early pregnancies and poor SRH practices can have negative health outcomes, and yet, these risky behaviours continue to be encouraged and remain a part of the cultural norm. Some South-East Asian cultures, for example, have traditional practices which encourage young adults to engage in sexual activity at an early age and with multiple partners (Sychareun *et al* 2018; Sychareun *et al* 2011a). While other cultures have been observed

celebrating adulthood or perceived maturation with traditional sex ceremonies or ‘sex acts’, including the customary *thong thong* (break through vagina) practice in Lao PDR (Sychareun *et al* 2011a; Sychareun *et al* 2011b). However, this seemingly liberal interpretation of adolescent SRH is often negated by a negative rhetoric of shame and embarrassment, which hinders adolescents from seeking health services and information, and therefore, is detrimental to the wellbeing of these young adults (Olusanya *et al* 2013).

In this respect, adolescents have indicated that they feel too uncomfortable to openly seek SRH information or engage in SRH discussions, because this is perceived to be a private and secretive issue (War & Albert 2013). This is common in many ethnic minority populations which value tradition and indigenous identity, and are entrenched in cultures which disparage positive SRH dialogue, or may not have the knowledge required, or simply may not have the language needed to discuss these topics (Capurchande *et al* 2016; Olusanya *et al* 2013; Lambert *et al* 2018). Furthermore, the SRH behaviours of adolescents are often treated as problematic and negative, and consequently, this is reflected in the SRH attitudes of adolescents in these communities (Capurchande *et al* 2016). Singleton *et al*'s (2016, p. 1047) analysis of stories written by adolescents that encompass the topic of SRH, found that there was a recurrent theme of ‘melodramatic love affairs’ with ‘inexorable negative [SRH] consequences’. Conversely, Singleton *et al* (2016) notes the few narratives with positive endings (which did not result in unwanted pregnancy, unsafe abortion, infant’s abandonment or death) were the only stories in which relationships exhibited gender equality, mutual respect and shared decision-making. This study suggests that the overwhelmingly negative SRH attitudes of adolescents are being developed from a young age and are being influenced predominantly by culture and social concepts of ‘love’ and ‘relationships’.

Strategies used to Improve the SRH Literacy of EMAs

School-based SRH education and Comprehensive Sexuality Education (CSE)

WHO states that school-based SRH education is one of the most significant and effective methods for improving adolescent SRH behaviours and attitudes (WHO 2009). Studies have shown that school-based programs that incorporate an empowerment approach and focus on developing gender equality are significantly more effective at improving adolescent SRH (UNESCO 2018; War & Albert 2013; Muchabaiwa & Mbonigaba 2019). In fact, Muchabaiwa

& Mbonigaba (2019) found that addressing gender and power as core elements of SRH can be up to five times more effective. However, school-based SRH education and CSE have two major weaknesses: firstly, the delivery of the information is totally reliant on the pedagogy skills and knowledge of teachers, and secondly, adolescents must be attending school to access these programs (War & Albert 2013; UNESCO 2018; Kenny *et al* 2019).

Effective delivery and implementation are paramount to the success of SRH education programs. Yet, studies conducted globally indicate that many school-based programs are not implemented in an appropriate manner which is sustainable and comprehensive (UNFPA 2018). UNFPA (2018) has reported that programs often do not contain enough basic SRH information, and/or do not adequately empower youth and adolescents to make positive SRH behavioural changes (UNFPA 2018). Additionally, as previously stated, the delivery of these school-based programs is totally reliant on teachers, however, teachers are often extremely ill-equipped, under resourced or too uncomfortable to meet the delivery needs of these programs (Kenny *et al* 2018; War & Albert 2013). This suggests that students' expectations and objectives of school-based SRH programs and CSE's are not always congruent with the material used to deliver the program.

UNFPA (2019) stated that by the age of ten the concept of gender roles is cemented in a child's psyche, and for this reason, suggest that age-appropriate SRH education and discussion should begin for children around the age of 5. Children should begin learning the foundational information of SRH education, including anatomy, emotions, respect, relationships and gender (UNFPA 2019; UNFPA 2018; Nash *et al* 2019; Kenny *et al* 2019). Moreover, this education should not shy away from boys and girls learning about each other together (UNFPA 2019). Krugu *et al*'s (2016) systematic review showed that students who had developed the capacity and had been taught to set future goals and develop a 'higher purpose' were more likely to use contraception and pregnancy prevention measures than those students who had not. Krugu *et al* (2016) also suggests that setting goals empowers adolescents girls, and helps them develop self-awareness and to better understand their capabilities. Furthermore, Nash *et al* (2019) outlines that it is important that SRH education be participatory and delivered in indigenous languages in order to further empower students

Culturally Safe Health Care and Indigenous Languages

Finding a balance between the individual and the community has been a major challenge for many SRH programs in LMICs (Undie & Izugbara 2011). As the literature demonstrates, understanding and interpreting the indigenous cultures is key to successful contemporary programme strategies (Undie & Izugbara 2011; War & Albert 2013). In this regard, culturally safe programming which bridges the gap between indigenous and modern health care must be based on mutual respect, recognition of knowledge, and a willingness to engage and commit to an integrated health system (UN 2014). That is, culturally safe practices must work to bridge the gap between indigenous traditions and modern health systems (UN 2014; Richardson *et al* 2016; Priego-Hernandez 2017).

The use of indigenous languages is an important component of culturally safe health care as it enables information to be disseminated to a wider audience with greater impact (Dansereau *et al* 2017). As the Singleton *et al*'s (2016) report suggests, indigenous languages act as a roadmap to the local customs and culture, and open the door for allowing health services to be integrated into the consciousness and fabric of a community because indigenous languages act as a gateway into history and traditions of a society. The traditional stories, songs and folklore offer insight into cultural values, ideals and expectations (Singleton's *et al* 2016). As the global literature shows, understanding the link between tradition, society and language is essential for effective health literacy and development.

Peer Education and Clubs

Research findings on peer education in LMICs have been mixed. While most researchers suggest that peer education has made little headway on making substantial systemic changes to risky SRH behaviours in ethnic minority populations, findings from peer-education programs, such as the Guatemalan '*Abriendo Oportunidades*' have shown some positive behavioural outcomes (Wehr & Turn 2013). Nevertheless, studies show that peer educators actually benefit more from peer education programs than students, and that these programs are more likely to impact SRH attitudes rather than influence behavioural shifts (not to understate the importance of addressing SRH attitudes) (Wehr & Turner 2013). A study conducted in regional southeast Africa revealed that 65% of health facilities and 74% of health based outreach programmes reported having peer educators, and yet, neither peer educators or outreach workers were quoted by adolescent-clients as being a significant source for receiving SRH information (UNFPA/IPPF 2017, p. 16). Both peer educators and community workers in this study indicated that a lack of refresher training meant that their confidence in discussing

SRH with adolescents diminished over time (UNFPA/IPPF 2017). Gibbs *et al* (2014) points out that peer education programs offer the most benefit when they are incorporated into broader holistic health responses, and are best employed as a point of referral for youth and adolescents into health services and for practitioners.

Health Services, Youth Centres and Adolescent Friendly Health Systems

Global research indicates that youth centres are not cost effective, and have varied success rates when it comes to improving adolescent SRH behaviours (Denno *et al* 2014; Atuyambe *et al* 2015). In fact, Denno *et al*'s (2014) study on youth centres found that adolescents rarely used health services located within youth centres, and instead, used the centres mostly for recreational purposes. It was also found that these centres were overwhelmingly accessed by older adolescent males who resided close to the facility (Denno *et al* 2014; Atuyambe *et al* 2015).

Globally, many qualitative studies have shown that adolescents are not seeking youth centres or specialised youth services, but instead, state they would prefer existing health services and facilities be more accessible and focus on better addressing the needs of adolescents by: improving access to SRH information, offering health related counselling services, and providing readily available SRH resources including condoms (Capurchande *et al* 2016; Atyumbé *et al* 2015). Further, research indicated that adolescents were more likely to attend health centres and services if they felt they were visiting a 'safe space' or a 'youth-friendly' facility (Dansereau *et al* 2017; Richardson *et al* 2016). In these studies, adolescents have identified that they want greater privacy and confidentiality and to not feel judged when seeking health support (Richardson *et al* 2016).

Community-Focused Approaches

The literature shows that, above all else, SRH strategies are more effective when they incorporate community-based education and/or a whole-of-community response (Sychareun *et al* 2018; Lemon *et al* 2017). Many researchers outline the importance of involving all levels of community in the development of interventions, communication, engagement and education (Olusanya *et al* 2013; Atuyambe *et al* 2015). Research undertaken in a number of different global indigenous populations has shown that adolescents are seeking SRH information from peers, community members, religious leaders and older family members (Atuyambe *et al*

2015; Denno *et al* 2014). Building community capacities and knowledge, and having the community invested in the initiative will help ensure that no matter where an adolescent goes for SRH support, accurate and factual SRH information is being delivered and disseminated correctly (Atuyambe *et al* 2015; Lemon *et al* 2017). However, it has been noted that this must be done through sustainable methods; simply facilitating a high-profile public meeting in order to share information or urging the community to change their practices will not work (Lemon *et al* 2017; Denno *et al* 2015). Long-term, on-going intergenerational dialogue with community members and leaders has significantly greater impact on bringing about sustained behaviour change (Denno *et al* 2015). Initiatives must acknowledge and understand the ties which adolescents have to their communities, and understand how they impacted by each other.

SRH Literacy of Cambodian EMAs

SRH among Cambodian EMAs is extremely poor, and yet, there is limited research available on the topic (Pereiro & Cortina 2018; PAP 2018; CSDH 2014). However, it is clear that social pressures and cultural responsibilities are having a significant impact on the SRH behaviours of these adolescents. The study conducted by Pereiro & Cortina (2018) in RatanaKiri, a north-eastern province of Cambodia, illustrates that adolescents are very conscious of how they are perceived by their communities and their peers. The study shows that adolescent women are often fearful of being alone or being perceived as being alone by their peers and community (Pereiro & Cortina 2018; PAP 2018). Furthermore, number of studies show that the young women in these ethnic-minority communities tend to leave school once they have a boyfriend because it is deemed unreasonable, by their peers, that they have an interest in ongoing education at the same time as being in a relationship (Pereiro & Cortina 2018; Kenny *et al* 2018)

Similar studies conducted in rural ethnic minority communities in Cambodia have indicated that modern influences and a changing economy have had a notable impact on the SRH literacy of adolescents and youth (Pereiro & Cortina 2018; PAP 2018; CDHS 2014). As with other LMICs, Cambodian indigenous adolescents place high value on the tradition of marriage and deferment of sexual activity until marriage (Lopez *et al* 2015). Yet, Cambodia has exceptionally high rates of sexual activity occurring before marriage, and as such, high rates of teenage pregnancy (Lopez *et al* 2015). These indicators suggest there are other varying determinants which are impacting on the SRH of these adolescents. Of particular note is the

lack of intergenerational communication, and the lack of factual information being received from peers, families and in the communities (Kenny *et al* 2018; Lopez *et al* 2015; Pereiro & Cortina 2018). Most significantly, research shows that there are prevailing gender-related expectations on male and female adolescents which are drastically influencing the SRH behaviours and attitudes of these adolescents (Lopez *et al* 2015).

Determinants of SRL literacy among Cambodian EMAs

Some of the prominent determinants of the SRH of Cambodian EMAs are discussed below:

Social Determinants

There are a number of social determinants which negatively influence the SRH behaviours of Cambodian adolescents, including: non-indigenous languages, social pressure and norms, and misinformation (Pereiro & Cortina 2018; PAP 2018; CSDH 2014; UNFPA 2018). Social determinants are having some of the greatest impacts on SRH behaviours of EMAs. Research indicates, for example, that adolescents in Cambodian ethnic populations do not view education as relevant for their expected success in adulthood (Pereiro & Cortina 2018). Yet, Lopez *et al*'s (2015) research shows that the relationships that adolescents have with the adults in their lives, including teachers, play a significant role in the decisions that they will make around SRH.

Economic Determinants

The changing national and local economy has had an influence on the SRH of EMAs. The move from a self-sufficient economy to a market-based economy has caused massive disruptions to the traditional life-styles and livelihoods of ethnic minority populations (Pereiro & Cortina 2018; Kenny *et al* 2019). Nowadays these populations have significant exposure to and contact with the Khmer and Western cultures which has been facilitated by rapid economic and social changes taking place in Cambodia (Pereiro & Cortina 2018). As such, adolescents are experiencing different lived experiences and undertaking different activities than their parents or grandparents which is having an enormous impact on intergenerational communication and knowledge transfer (Pereiro & Cortina 2018; Rizvi *et al* 2020)

Cultural Determinants

Ethnic minority populations have strong indigenous cultural identities and the adolescents in these communities are intrinsically linked to this culture (Pereiro & Cortina 2018). These cultural links significantly influence the SRH decisions of EMAs in their use of modern contraception or their engagement in safe, non-traditional sexuality behaviours (Pereiro & Cortina 2018; Kenny *et al* 2019; Rizvi *et al* 2019; Lopez *et al* 2015). Use of traditional contraceptive methods and herbs are still preferred by adolescents in these populations (Samandari *et al* 2010; Rizvi *et al* 2019). These cultural and traditional norms can also mean that adolescents do not always receive accurate SRH information from their families, local teachers, or from community members (Kenny *et al* 2019; Pereiro & Cortina 2018). This can have significant ramifications on the health of these young adults. In many ethnic populations, parents and community elders lack the educational background to address the SRH of concerns of youth and adolescents, which perpetuates the promotion and continual use of traditional contraceptive methods despite their low efficacy (Lopez *et al* 2015; Rizvi *et al* 2019; Samandari *et al* 2010).

Commercial Determinants

Access to reliable and accurate resources is one of the main barriers for positive SRH behaviours. Having culturally safe health practices, confidential access to contraceptive methods, accurate information dissemination and dedicated health services/practitioners is paramount to changing SRH behaviours and attitudes (Pereiro & Cortina 2018; Dansereau *et al* 2017). In order to purchase contraception or access SRH services, adolescents are sometimes required to travel to neighbouring villages or large centres which are many kilometres away (Kenny *et al* 2019). This journey can be hindered or exacerbated during wet season or during natural disasters, such as flooding (Pereiro & Cortina 2018; Kenny *et al* 2018). Minimising the commercial determinants of poor SRH behaviours will have flow on affects to other underlying issues, such as reducing teenage pregnancies and improving STIs rates (Kenny *et al* 2018; Lopez *et al* 2015).

Political Determinants

Cambodia's SRH policies, strategies and resources have limited impact on the SRH of adolescents in ethnic minority populations. There is an overwhelming understanding that the non-recognition of the indigenous populations' status and of collective rights has perpetuated the underlying issues which contribute to their poor SRH (Maffii 2008; ADB 2002; PAP 2018).

This non-recognition has hindered the development and implementation of sufficient culturally safe health care programming, including the recognition of the need for the integration of Indigenous languages in government policies, higher level of formal education and resource development. Furthermore, Lopez *et al* (2018) suggests that the governments poor enforcement and governance of child marriage are impacting on the rate at which indigenous youth are marrying, and consequently, falling pregnant.

Structural Determinants

Health care services and resource access for adolescents in ethnic minority communities is poor (Rizvi *et al* 2020; Kenny *et al* 2019; Pereiro & Cortina 2018). In fact, a report from WHO stated that only 1 in 3 villages in rural Cambodia have community-based contraceptive method distribution (Rizvi *et al* 2020). Consequently, health literacy is also poor. It is well documented by studies in neighbouring countries, including Laos and Thailand, that adolescents enrolled in formal education are less likely to engage in risky SRH behaviours than those who drop out of high school (Rizvi *et al* 2020). Rizvi *et al* (2020) points out that this lack of education perpetuates the low socioeconomic status and low household wealth. Adolescents from ethnic minority communities in rural Cambodia are unlikely to graduate high school, which has significant impact on the SRH of these young adults, and their ability to improve their health literacy.

Discussion

This literature outlines some of the underlying factors that influence the SRH attitudes of adolescents in Cambodia's ethnic minority populations, including societal pressures, cultural norms and gendered expectations. Most critically, the findings indicate that SRH behaviours of the Cambodian indigenous adolescents tend to be driven by a deeply embedded fear of being alone or perceived as being alone (Singleton *et al* 2016; Pereiro & Cortina 2018). In combination with prevailing gender-related expectations, the notion that relationships and marriage are paramount to self-identity, autonomy and education is a driving factor of unhealthy SRH attitudes (Pereiro & Cortina 2018). Perhaps the most disturbing and telling of these findings is that adolescents will actively sacrifice their education to ensure they fulfil their gender-related expectations and experience their own 'melodramatic love affair' (Singleton *et al* 2016, p. 1047; Pereiro & Cortina 2018). These deep-seated insecurities about community and peer perceptions are rooted in the notion that marriage and childbearing are an indication of adulthood and a change in societal status (Capurchande *et al* 2016; Mulubwa *et al* 2020; Sychareun *et al* 2011b). As such, neither education nor a subsequent career are viewed as important in their transition to adulthood.

Looking at the global literature, it is evident that the attitudes around adolescent SRH are influenced by the indigenous perspective and cultural understandings of what constitutes a relationship and marriage. As illustrated by Singleton *et al* (2016), the SRH attitudes of EMAs are overwhelmingly influenced by the culture and social concepts of love. Globalisation, Westernisation, technological advances and modern influences mean that the concept of love is often construed by modern influences (War & Albert 2013; Singleton *et al* 2016; Aupribul *et al* 2016; Pereiro & Cortina 2018). Moreover, many EMAs are exposed to contradictory SRH information from a young age. For example, there is often significant pressure on EMAs to get married and start child bearing, and yet, SRH is shrouded in secrecy and stigmatised (Lemon *et al* 2017). Similarly, EMAs are exposed to many contradictory factors, including: folklore, traditional customs, technology, pornography, and inadequate SRH education (Dansereau *et al* 2017; Gabster *et al* 2019; Ishida *et al* 2012; Lemon *et al* 2017). Most significantly, EMAs are taught that sexual activity and love affairs have inexorable harmful consequences and that SRH behaviours are problematic.

School-Based SRH Education

In a number of global studies there is an underlying understanding that incorporating gender equality, strength-based and empowerment approaches in SRH initiatives will negate some of these harmful, contradictory practices (Lemon *et al* 2017; Muchibaiwa & Mbonigaba 2019; Richardson *et al* 2016; Singleton *et al* 2016; Sadawarte *et al* 2015). Singleton *et al* (2016) School-based SRH education has been proven to be a significant method for influencing SRH behaviours (UNESCO 2018; UNFPA 2011). The findings suggest that the effective delivery of education programs can lower risky behaviours and influence healthier relationships among EMAs (UNFPA 2011). In the Cambodian context, the delivery of school-based SRH education is reliant on the teacher's willingness and skills which, as discussed in the findings, is potentially problematic (Kenny *et al* 2019). Outcome 4 of the PAP 2017-2021 focuses on education and the retention rate of adolescent girls in high school. The plan suggests the use of youth peer groups and expanding access to materials which promote the benefit of completing school (PAP 2018). However, Muchibaiwa & Mbonigaba's (2019) study shows that developing goal setting strategies can have a greater impact on influencing adolescents' decision to stay in school.

Recommendations for school-based SRH education:

1. Review of the school-based SRH education programs in ethnic minority communities
 - a) School-based SRH must move away from consequence-focused rhetoric, and instead, employ empowerment approaches which focus on gender equality, healthy relationships and developing goal setting skills.
 - b) Age appropriate school-based SRH education should start at the age of five, and be delivered in indigenous languages

Whole of Community Response: Health Literacy

The link between EMAs and their communities is inextricable. The SRH initiatives for EMAs must focus more of the indigenous perspective and the cultural impacts of SRH. Currently, programs such as the PAP (2018), are focused on driving change. The studies show that indigenous youth ascribe to many of the deep-rooted socio-cultural norms which subsequently influence their SRH behaviours and attitudes. Pereiro & Cortina (2018) and Lopez *et al* (2015) both note the significance of the relationships which adolescents develop within their

communities and the information they obtain from community members. This highlights the importance of gaining community support when implementing initiatives and working within the framework of the Humans-Rights Based approach. As such, Batterham *et al* (2014) indicates that community-based approaches should draw on a needs assessment conducted at community level.

When looking at global literature, there are patterns within the findings which indicate why the some strategies improve health literacy or others do not. The strategies which fail to improve behaviours do not fully comprehend the context in which they work, and/or attempt to drive change through channels which are not viable. For example, the strategy of peer education makes assumptions about the flow of information within the communities, but we know from the literature that peer education only benefits the educator themselves and that adolescents seek information from other places first. This also indicates that the SRH burden should be shared among stakeholders and community, and not sit on the shoulders of the adolescents themselves (Mulubwa *et al* 2020). Mulubwa *et al* (2020) believes that community-based SRH is key to accomplishing the SDGs.

This review looks more to the community health literacy strategy. The findings outlines this a multi-dimensional concept that embodies cognitive, affective, social and personal skills attributes. As such, the review recommends Batterham's *et al* (2016) process of using health literacy profiling and community engagement to bring about health reform. Rather than trying to force change, this response first assesses strengths and weaknesses to determine how to respond to these (Batterham *et al* 2014). This process is a step-by-step process which assesses every level of need, and then pilots interventions to assess their outcomes (batterham *et al* 2014). Health education in itself is not enough to bring about sustainable, transformative change; a holistic approach which recognises social contexts is needed (Nutbeam 2008).

Recommendations for community health literacy:

2. Use health literacy profiling and community engagement to influence SRH literacy as outlined in the Ophelia process (Batterham *et al* 2014)

Delivery of Services: Sustainability, co-design and co-ordination

After examining global strategies and program models being used to address SRH, it is apparent that the delivery and implementation of a program is paramount to its success (Kenny

et al 2019; Pereiro & Cortina 2018). The necessity of developing and delivering strategies which complement and work within the cultural environment and everyday lived-experience of adolescents is evidenced by Danereau *et al* (2017), who illustrates how important it is to incorporate indigenous languages into service delivery process. Well structured, planned and designed interventions can be hampered by poor or piecemeal delivery. SRH intervention delivery should be considered and calculated. Ultimately, delivery of SRH interventions must be underpinned by cultural safety practices and accommodate the needs of the communities. Realistically, programs which are designed on funding cycles are not sustainable. The findings from the literature review , and the above program models, suggest that local and indigenous programs which are community-led are more sustainable then programs which rely on constant funding.

Although extremely comprehensive, some government plans including the *PAP* 2017-2020, run the risk of failing due to the large quantity of strategy proposals and unattainable timelines. Without extensive funding and resources, it is unlikely that the plan will be delivered in a systematic and non-piecemeal manner which will provide sustainable, long-term results. This literature review shows that a reassessment of the development and delivery of these Cambodian SRH interventions is urgently needed (Muchabaiwa & Mbonigaba 2019; Mulubwa *et al* 2020). The findings outline the importance of moving away from a focus on the reproductive and health aspects of EMA development, and moving towards a more integrated and comprehensive approach that considers the lived experience of EMAs, their environments and, most importantly, their ethnic identity (Smith 2008; Mulubwa *et al* 2020; Capurchande *et al* 2016).

Recommendations for service delivery:

1. The delivery of service should be calculated and considered:
 - a) Multicomponent programs must be coordinated and succinct
 - b) Delivery of programs should accommodate the needs of the community, be culturally safe and use indigenous language.

Conclusion

SRH literacy in Cambodian EMAs is extremely poor; with the rate of teenage pregnancies in these communities continuing to rise (UNFPA 2018; Pereiro & Cortina 2018; CDHS 2014). High rates of teenage pregnancies and early marriage have contributed significantly to perpetuating the cycles of poverty in these ethnic minority communities (CDHS2014; PAP 2018; UNFPA 2018). In an attempt to meet the SDG target 5.3, the Cambodian government made a commitment to improve adolescent SRH (UNFPA 2018). However, with the continued neglect and non-recognition of indigenous rights in Cambodia, including economic inequalities and loss of traditional lands, the indigenous communities remain underserved and overlooked (Pereiro & Cortina 2018).

The aim of this literature review was to analyse global and Cambodian literature to develop recommendations which effectively address the poor SRH literacy of Cambodian EMAs. This was achieved through: a) examining the strategies being used to address the SRH attitudes and behaviours of ethnic minority adolescents in other LMICs, and b) exploring the determinants, enablers, barriers and challenges impacting Cambodian adolescents' SRH. After conducting a thematic analysis of (32) articles it was found that: school-based SRH education, cultural safety programming, peer education and clubs, youth centres and youth-focused health services, and community health literacy are widely accepted strategies used to address SRH in ethnic minority communities. These strategies have had various results in LMICs on influencing SRH attitudes and behaviours, with some producing better outcomes than others. However, as stand-alone strategies, these all have limitations. Societal and cultural pressures, scarcity of adequate resources, insufficient health service provision, lack of community support, structural determinants, and peer pressures were recognised as some of the core drivers for negative SRH behaviours among the EMAs of rural Cambodia.

Recommendations

The use of the HP framework in this review allowed for a comprehensive examination of the underlying factors impacting on the SRH attitudes and behaviours of EMAs. Understanding that the framework should be adapted to the needs and possibilities to the EMAs, this review developed recommendations that would target the social, cultural and gender barriers. These

recommendations where design for three areas: school-based education; community development; and service implementation. These recommendations are designed to improve both community health literacy and an individual's right to self-determination, and as such, begin to foster the idea of the indigenous identity being a core component of SRH strategies.

Recommendation 1

School-based SRH education is very effective at impacting SRH behaviours for adolescents who attend them (Pereiro & Cortina 2018; Kenny *et al* 2019). This review recommends that school-based SRH education is best placed to address gender-equality issues in younger adolescents. SRH education should begin with young children and focus on developing skills which are relevant to the childrens' lived experience. A number of authors suggested better cultural safety practices in school-based SRH education, for example, the use of indigenous languages and embedded cultural practices (Singleton *et al* 2016; Pereiro & Cortina 2018; Denno *et al* 2015).

Recommendation 2

For adolescents who do not attend school, Recommendation 1 is not effective. A common theme in the literature was adolescents obtaining SRH information from the community around them, whether that be through families, peers, or religious leaders (Capurchande *et al* 2016; Kenny *et al* 2019; Krugu *et al* 2016). Often, there is a degree of taboo and shame in seeking this information. Examining the SRH behaviours of EMAs, it is clear that communities and culture are of significant influence, whether from societal pressures or through cultural practices. As such, the review recognises the need for a whole-of-community response. However this review suggests that this response must work within indigenous identity. As such, this model should begin with a needs-based assessment, health literacy profiling and community consultation. Understanding the indigenous identity is paramount to the success of this strategy.

Recommendation 3

Following on from Recommendation 2, the final recommendation looks at the delivery and implementation of SRH strategies. It was evident in the global literature that how a strategy is delivered is fundamental to its success and sustainability. As such, SRH interventions must be co-designed and delivered in a culturally sensitive way. This is best achieved when there is equal partnership between the individuals delivering the healthcare and the individuals who have

experience of using the healthcare system. Co-design involves using the knowledge of each party to achieve outcomes and improve efficiency. Therefore, recommendation 3 states that effective delivery of strategies must not be overlooked and that implementation of strategies should also take into account the needs of the community

Significance

This literature review contributes to otherwise scarce research on the SRH of Cambodia's overlooked EMA population. The findings and recommendations highlight the importance of investing in local programs and supporting integrative, people-driven approaches which encompass cultural traditions and indigenous identities. These programs must validate the lived experience, the right to self-determination and the indigenous perspective and, in doing so, they must indoctrinate languages and cultural knowledge. Systemic and lasting change only occurs when there is a comprehensive understanding of the context in which that change takes place. Unless development agencies and national systems choose to move away from top-down models, there is little chance of the happening.

Systemic and lasting change only occurs when there is a comprehensive understanding of the context in which that change is taking place. Unless national governments and development agencies choose to move away from top down models, there is little chance of this happening. It is apparent that there is a direct link between ground-level approaches, participatory practices, and social emancipation. Understanding how these concepts interact and relate will help develop greater understanding around the experiences of ethnic minority adolescents, and help build stronger programs. CARE Cambodia and affiliated agencies must move into a position of assisting and supporting, rather than implementing and directing change. This will require a reassessment of the development and delivery of SRH interventions and the instrumentalisation of communities. Through this co-design process, agencies such as CARE Cambodia have an opportunity to utilise needs-based assessments and community-based demonstration projects to inform national policy, push for a coordinated national response and strengthen national prevention efforts.

References

ADB – see Asian Development Bank

Asian Development Bank, 2002, *Indigenous Peoples/Ethnic Minorities and Poverty Reduction*, Environment and Social Safeguard Division Regional and Sustainable Development, Manila, Philippines, retrieved 17 march 2020, <
<https://www.adb.org/publications/indigenous-peoples-ethnic-minorities-and-poverty-reduction-cambodia>>

Atuyambe, L, Kibira, S, Bukenya, J, Muhumuza, C Apolot, R, Mulogo, E 2015, 'Understanding sexual and reproductive health needs of adolescents: evidence from a formative evaluation in Wakiso district, Uganda', *Reproductive health*, vol 12, no. 35, doi: 10.1186/s12978-015-0026-7

Aurpibul, L Tangmunkongvorakul, A Musumari, PM, Srithanaviboonchai, K, Tarnkehard, S 2016, 'Patterns of Sexual Behaviour in Lowland Thai youth and ethnic minorities attending high school in rural Chiang Mai, Thailand', *PLoS ONE*, vol 11, no. 12, doi: 10.1371/journal.pone.0165866

Aveyard, H 2007, *Doing a literature review in health and social care*, McGraw-Hill Companies Inc., retrieved 16 October 2019, via Proquest Ebook Central

Batterham, R, Buchbinder, R, Beauchamp, A, Dodson, S, Elsworth, G, Osbourne, R, 2014, 'The OPTimising HEalth LIterAcY (Ophelia) process: study protocol for using health literacy profiling and community engagement to create and implement health reform', *BMC Public Health*, vol. 14, no. 694, <http://www.bomedcentral.com/1471-2458/14/694>

Braun, V & Clarke, V 2006, 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, vol. 3, pp. 77-101, retrieved 17 November 2019, doi: 10.1191/1478088706qp063oa

CASP – see Critical Appraisal Skills programme UK

Catalano, R, Skinner, M, Alvarado, G, Kapungu, C, Reacle, N, Patton, G, Jessee, C, Plaut, D, Moss, C, Bennet, K, Sawyer, S, Subany, M, Sexton, M, Olenik, C, Petroni, S 2019, 'Positive Youth Development Programs in Low- And Middle-Income Countries: A Conceptual Framework and Systematic Review of Efficacy', *J Adolesc Health*, vol. 65, no. 1, pp. 15-31, doi:10.1016/j.jadohealth.2019.01.024

Capurchande, R, Coene, G, Schockaert, I, Macia, M, Meulemans, H 2016, ‘‘It is challenging... oh nobody likes it!’’: a qualitative study exploring Mozambican adolescents and young adults’ experiences with contraception’, *BMC Women’s Health*, vol. 16, no. 48, doi: 10.1186/s12905-016-036-2

CDC – see Centre for Disease Control and Prevention

Centre For Disease Control and Prevention (CDC), 2020, *The Social-Ecological Model: A Framework for Prevention*, US Department of Health and Human Services, retrieved 17 December 2019, <<https://www.cdc.gov/violenceprevention/publichealthissue/social-ecologicalmodel.html>>

--2011, *Principles of Community Engagement: Clinical and Translational Science Awards Consortium Community Engagement Key Function Committee Task Force on the Principles of Community Engagement*, NIH Publication, retrieved 17 December 2020, <https://www.atsdr.cdc.gov/communityengagement/pdf/PCE_Report_508_FINAL.pdf>

CDHS – see National Institute of Statistics, Directorate General for Health, and ICF International

Commission on Social Determinants of Health (CSDH), 2008, *Closing the gap in a generation: health equity through action on the social determinants of health*, Final Report of the Commission on Social Determinants of Health, WHO, Geneva,

Critical Appraisal Skills programme UK 2018a, *CASP qualitative checklist*, CASP UK, retrieved 20 November 2019, <https://casp-uk.net>

--2018b, *CASP systematic review checklist*, ASP UK, retrieved 10 February 2019, ,<https://casp-uk.net>>

CSDH – see Commission of Social Determinants

Dansereau, E, Schaefer, A, Hernandez, B, Nelson, J, Palmisano, E, Rios-Zertuche, D, Woldeab, A, Zuniga, M, Iriarte, E, Mokdad, A, Bcheraoui, C 2017, ‘Perceptions of and barriers to family planning services in the poorest regions of Chiapas, Mexico: a qualitative study of men, women, and adolescents’, *Reproductive Health*, vol. 14, no. 129, doi: 10.1186/s12978-017-0392-4

Desrosiers, A, Betancourt, T, Kergoat, Y, Servilli, C, Say, L, Kobeissi, L 2020, ‘A systematic review of sexual and reproductive health interventions for young people in humanitarian and lower-and-middle-income country settings’, *BMC Public Health*, vol. 20, no. 666, doi: <https://doi.org/10.1186/s12889-020-08818-y>

Deakin University N.D., *Researching for your assignment*, Deakin University, retrieved 16 November 2019, <<https://create.piktochart.com/output/16960394-deakin-library-craap-guidelines>>

Denno, D, Hoopes, AJ, Chandra-Mouli, V 2015, 'Effective Strategies to provide adolescent sexual and reproductive health services and to increase demand and community support', *Journal of Adolescent Health*, vol. 56, pp. s22-s41, doi: 10.1016/j.jadohealth.2014.09.012.

Gabster, A, Mayaud, P, Pascale, J, Cislghi, B 2019, 'Gender norms and sexual behaviours among Indigenous youth of the Comarca Ngäbe-Buglé, Panama', *Culture, Health Sexuality*, <https://doi.org/10.1080/13691058.2019.1648873>

Gibbs, S, Cu Le, L, Dao, HB, Blum, RW 2014, 'Peer and community influences on the acceptance of premarital sex among Vietnamese adolescents', *Journal of Paediatrics and Child Health*, vol. 50, no. 6, <https://doi.org/10.1111/jpc.12512>

Joanna Briggs Institute 2017, *JBI critical appraisal checklist for text and opinion papers*, Joanna Briggs Institute, retrieved 16 November 2019, <<http://joannabriggs.org>>

Krugu, J, Mevissen, F, Flore, K, Ruiters, R 2018, 'Girls cannot be trusted: young men's perspectives on contraceptive decision making and sexual relationships in Bolgatanga, Ghana', *Eur J Contraception Reproductive health Care*, vol. 23, no. 2, pp. 139-146, doi: 10.1080/13625187.2018.1458225.

Krugu, JK, Mevissen, F, Prinsen, A, Ruiters, R 2016, 'Who's that girl? A qualitative analysis of adolescent girls' views on factors associated with teenage pregnancies in Bolgatanga, Ghana', *Reproductive Health*, vol. 13, no.39, doi: 10.1186/s12978-016-0161-9

Lambert, L, Hatchet, J, Wang, X 2018, 'Access to Reproductive health Services and maternal Perceptions on Family Planning in an Indigenous Guatemala Valley', *International Journal of Reproductive Medicine*, vol. 2018, <https://doi.org/10.1155/2018/7879230>

Lemon, E, Hennink, M, Saquic, N 2017, 'Pathways to Adolescent Childbearing Among Kaqchikel women in Guatemala', *Cultural health Sexuality*, vol 19, no 10, doi: 10.1080/13691058.2017.1298841

Lopez, JR, Mukaire, PE, Mataya, RH 2015, 'Characteristics of youth sexual and reproductive health and risky behaviours in two rural provinces of Cambodia', *Reproductive Health*, vol. 12, no. 83, doi: 10.1186/s12978-015-0052-5

Maffii, M 2008, 'Changes in gender roles and women's status among indigenous communities in Cambodia's Northwest', in Hammer, P (eds) *Living on the margins: minorities and borderlines in Cambodia and Southeast Asia*, Siem Reap, Centre for Khmer Studies

Marston, C, Hinton, R, Kean, S, Baral, S, Ahuja, A, Costell, A, Portela, A, 2016, 'Community participation for transformation action on women's, children's and adolescents' health', *Bulletin World Health Organisation*, vol. 94, pp. 376 - 382

Minority Rights Group International (MRGI), 2017, *World Directory of Minorities and Indigenous Peoples – Cambodia: Indigenous Peoples*, RefWorld, Retrieved May 6th 2020, <<https://www.refworld.org/docid/5b9b75bf7.html>>

MoEYS – see Ministry of Education, Youth and Sport

Muchabaiwa, L Mbonigaba, J 2019, 'Impact of adolescent and youth sexual and reproductive health strategies on service utilisation and health outcomes in Zimbabwe', *PLoS one*, vol. 14, no. 6, retrieved 2 February 2020, <<https://doi.org/10.1371/journal.pone.0218588>>

Mulubwa, C, Hurtig, AK, Zulu, JM, Michelo, C, Sandoy, IF, Goicolea, I 2020, 'Can sexual health interventions make community-based health systems more responsive to adolescents? A realist informed study in rural Zambia', *Reproductive Health*, vol. 17, no. 1, <https://doi.org/10.1186/s12978-019-0847-x>

National Institute of Statistics, Directorate General for Health, and ICF International (CDHS), 2015, *Cambodia Demographic and Health Survey 2014*. Phnom Penh, Cambodia, and Rockville, Maryland, USA

Nash, K, O'Malley, G, Geoffrey, E, Schell, E, Bvumbwe, A, Denno, D 2019, "'our girls need to see a path to the future'" –perspectives on sexual and reproductive health information among adolescent girls, guardians, and initiation counsellors in Mulanje district, Malawi', *Reproductive Health*, vol.16, no. 8, <https://doi.org/10.01186/s12978-018-0661-x>

Nutbeam D, 2008, 'The evolving concept of health literacy', *Social Science & Medicine*, vol. 67, pp. 2072-2078, Elsevier, retrieved 28 February 2020, <http://www.ncbi.nlm.nih.gov/pubmed/18952344>

Olusanya, O, Ariiesuya, A, Olusanya, O, 2013, 'Parent-child communication an adolescent sexual behaviours among the Yoruba ethno-cultural groups of Nigeria', *Semantic Scholar*, retrieved 14 November 2019, <<https://www.semanticscholar.org/paper/Parent-Child-Communication-and-Adolescent-Sexual-of-Olusanya-Arijesuyo/411cc14433b6ed9adcc03b94561b944aed4570b7>>

PAP – see Provincial Administration of RatanaKiri

Pereiro, AP & Cortina, JL 2018, *Adolescent Fertility & Early Marriage Among indigenous Communities in Northeastern Cambodia*, Breogan Consulting, Partnering to Save Lives, Cambodia

Priego-Hernandez, J, 2017, 'Sexual Health in transition: A social representations study with indigenous Mexican young women', vol. 22, no. 5, pp. 661 -673, doi:10.1177/1359105315611954

Provincial Administration of RatanaKiri (PAP) 2018, *Provincial Action plan to Prevent Child Marriage and Teenage Pregnancy in RatanaKiri 2017 -2021*, Provincial Women's and Children's Consultative Committee, Cambodia, Phnom Penh

Richarson, E, Allison, K, Gesink, D, Berry, A 2016, 'Barriers to accessing and using contraception in highland Guatemala: the development of family planning self-efficacy scale', *Contracept.* Vol.7, pp. 77-87, doi: 10.2147/OAJC.S95674

Rizvi, F, Williams, J, Maheen, H, Hoban, E 2020, 'Using Social Ecological Theory to identify factors associated with risky sexual behaviour in Cambodian adolescent girls and young women aged 10 to 24 years: a systematic review', *Asia pacific Journal of Public Health*, vol.1, no. 10, pp. 1 -10, doi: 10.1177/1010539520911493

Sadawarte, S, Nandanwar, D, Sunita, S, 2016, An interventional study to assess the change in knowledge and attitude regarding health care of pregnant women among adolescents of Tribal Ashram Shala, Sakwar, Paghar, by four-pronged approach', *International Journal of Medical Science and Public Health*, doi:10.5455/ijmsph.2016.170620544

Samandari, G, 2010, 'Contraceptive use in Cambodia: a multi-method examination of determinants and barriers to modern contraception', University of North Carolina, retrieved 16 March 2020, < <https://cdr.lib.unc.edu/concern/dissertations/5712m671b>>

Santhya, KG, Jejeebhoy, SJ 2015, 'Sexual and reproductive health and rights of adolescent girls: Evidence from low- and middle- income countries', *Global Public Health*, vol. 10, no. 2, pp. 189-221, doi: 10.1080/17441692.2014.986169

Singleton, R, Schroffel, H, Findley, T, Winskell, K 2016, 'Cultural scripts surrounding young people's sexual and romantic relationships in the Western Highlands of Guatemala', *Culture, Health & Sexuality*, vol. 18, no. 9, pp. 1039 – 1053, <http://dx.doi.org/10.1080/13691058.2016.1142611>

Smith, L, 2008, *Decolonising Methodologies*, Zed Books Ltd, UK, London

Starrs, AM, Ezech, AC, Barker, G, Basu, A, Bertrand, J, Blum, R, Coll-sek, A, Grover, A, Laski, L, Roa, M, Sathar, Z, Say, L, Serour, G, Singh, S, Stenberg, K, Temmerman, M, Biddlecom, A, Popinchalk, A, Summer, C, Ashford, L, 2018, 'Accelerate progress – sexual

and reproductive health and rights for all: report for the Guttmacher-Lancet Commission', *Lancet*, vol. 391, pp. 2642-2692

Sychareun, V, Vongxay, V, Houaboun, S, Thammavongsa, V, Phummavongsa, P, Chaleunvong, K, Durham, J 2018, 'Determinants of adolescent pregnancy and access reproductive and sexual health services for married and unmarried adolescents in rural Lao PDR: a qualitative study', *BMC Pregnancy and Childbirth*, vol. 18, no. 219, <https://doi.org/10.1186/s12884-018-1859-1>

Sychareun, V, Thomsen, S, Faxelid, E 2011a, 'Concurrent multiple health behaviours among adolescents in Luangnamtha province, Lao PDR', *BMC Public Health*, vol. 11, no. 36, <https://doi.org/10.1186/1471-2458-11-36>

Sychareun, V, Faxelid, E, Thomsen, S, Somphet, V, Popenoe, R 2011b 'Customary Adolescent Sexual Practices among the Akha of Northern Lao PDR: Considerations for Public Health, *Culture Health Sexuality*, vol. 13, no. S2, p. s249-s262, doi: 10.1080/13691058.2011.634924

Undie, C, Izugbara, C 2011, 'Unpacking rights in indigenous African societies: indigenous culture and the question of sexual and reproductive rights in Africa', *BMC International Health and Human Rights*, vol. 11, no. S2, <http://www.biomedcentral.com/1472-698X/11/S3/S2>

UN – see United Nations High Commissioner of Human Rights

UNESCO – see United Nations, Educational, Scientific and Cultural Organisation

UNFPA – see United Nations Population Fund

United Nations, Educational, Scientific and Cultural Organisation (UNESCO), 2019, *Sexual and Reproductive Health and Rights: An essential element of universal health coverage*, Nairobi summit on ICPD25, retrieved 2 March 2020, <https://www.unfpa.org/sites/default/files/pub-pdf/SRHR_an_essential_element_of_UHC_SupplementAndUniversalAccess_27-online.pdf>

--2018, *International Technical Guidance on Sexuality Education: an evidence-informed approach*, UNAIDS, retrieved 3 march 2020, <https://www.unaids.org/sites/default/files/media_asset/ITGSE_en.pdf>

--2015, *Sexual and Reproductive Health of Adolescents and Youth in Cambodia Analysis of 2000 - 2014 Cambodia Demographic and Health Survey Data*, UNFPA and National Institute of Statistics, Cambodia, Phnom Penh

--2014, *The Human Rights-Based Approach*, HRBA Portal, retrieved 20 May 2020, <<https://www.unfpa.org/human-rights-based-approach>>

United Nations High Commissioner for Human Rights, 2013, *The United Nations Declaration on the Rights of Indigenous Peoples*, Asia Pacific forum of national Human Rights Institutes, retrieved 20 April 2020, <<https://www.ohchr.org/documents/issues/ipeoples/undripmanualformhris.pdf>>

United Nations Population Fund (UNFPA) & Centre for Indigenous Cultures of Peru (CHIRAPAQ), 2018, *Recommendations of the UN Permanent Forum on indigenous Issues regarding Sexual and Reproductive Health and Rights & Gender Based Violence: Report on Progress and Challenges*, UNFPA, retrieved 3 March 2020, <<https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/04/Executive-Summary.pdf>>

War, RJ & Albert, A 2013, 'Sexuality and 'silence' among Khasi youth of Meghalaya, Northeast India', *Cultural Health and Sexuality*, vol. 15, no. s3, <https://doi.org/10.1080/13691058.2013.792955>

Wehr, H & Tum, S 2013, 'When a Girl's Decision Involves the Community: The Realities of Adolescent Maya Girls' Lives in Rural Indigenous Guatemala', *Reproductive Health Matters*, vol. 21, no. 41, pp. 136-142, doi: 10.1016/S0968-8080(13)41684-1

WHO – see World Health Organisation

World Health Organisation (WHO), 2020, *Adolescent Health in South-East Asia Region*, retrieved 17 March 2020, < <https://www.who.int/southeastasia/health-topics/adolescent-health>>

--2019, *WHO consolidated guideline on self-care interventions for health: sexual and reproductive health and rights*, Sexual and Reproductive Health and Research, retrieved 14 April 2020, <<https://www.who.int/publications/i/item/9789241550550>>

--2018, *WHO recommendations on adolescent sexual and reproductive health and rights*, Department of Reproductive Health and Research, retrieved 3 March 2020, <<https://www.who.int/reproductivehealth/publications/adolescent-srhr-who-recommendations/en/>>

--2014, *The ecological framework*, Violence Prevention Alliance, retrieved 23 May 2020, <<https://www.who.int/violenceprevention/approach/ecology/en/>>

--2009, *Promoting adolescent sexual and reproductive health through schools in low income countries: an information brief*, Department of Child and Adolescent Health and Development, Switzerland, Geneva

--1986, *The Ottawa Charter for Health Promotion*, First International Conference on Health Promotion, Ottawa, 21 November 1986, retrieved 21 May 2020, <https://www.healthpromotion.org.au/images/ottawa_charter_hp.pdf>

Zulu, J G, Goicolea, I, Kinsman, J, Sandov, I, Blystad, A, Mulubwa, C, Makasa, M, Michelo, C, Musonda, P, Hurtig, A, 2018, Community based interventions for strengthening adolescent sexual reproductive health and rights: how can they be integrated and sustained? A realist evaluation protocol from Zambia', *Reproductive health*, vol. 15, no. 145, <https://doi.org/10.1186/s12978-018-0590-8>

Appendix

Appendix A: Inclusion/Exclusion Chart (Aim 1 and 2)

	Inclusion	Rationale
Demographics	Ethnic Minority populations	Main population impacted by poor SRH policies
	Youth/adolescent (age range: ≥ 10 years - ≤ 24 years)	Age range based on the WHO definitions of youth and adolescents (WHO).
	Male & Female	Both genders are impacted by poor SRH
Countries	LMICs	Closer match to development contexts and issues of Cambodia – allows for better analysis Based on the World Bank income classification system as determined by the gross national income per capita.
Language	English	The author does not have resources

	Exclusion	Rationale
Demographics	Majority populations and socially marginalised populations other than ethnic minorities	This study would be too extensive and would lose its focus. Strategies and policies being used in majority populations and other socially marginalised groups may not be effective in ethnic minority populations due to different determinants.
	Children and adults (age range < 10 and/or > 24 years)	Children ≤ 10 years are too young to be significantly impacted by SRH, while adults ≥ 25 years have different determinants, challenges and barriers to

		necessary to evaluate non-English literature
Date of publication	2009 - 2019	Relevancy to current population demographics, technological advances, government and organisational projects, and social norms.
Type of Publication	Peer-reviewed journal articles Grey literature including government reports, national policies, project level evaluations, project reviews guidelines, and government and NGO reports	To ensure scholarly rigor (Aveyard 2007) Allows for a comprehensive assessment of the policies, strategies and interventions which are being attempted by the government and organisations in LMICs to address SRH issues.
Content of publication	Publications which address the SRH of youth/adolescents in ethnic minority populations in LMICs	Relevant to aim of research

Countries	High income countries	Programming and strategies would not be relevant to those in Cambodia which is a LMIC
Language	Non-English publications	The author does not have resources necessary to evaluate non-English literature
Date of publication	Published prior to 2009	Resources older than 10 years do not account for the population growth, technological changes, government and organisational developments, and/or economic changes.
Type of publication	Editorials, commentary, abstracts, books, drafts, or work-in progress	Unreliable and incomplete
Content of publication	Publications which do not address SRH of	Not relevant to the aims of the study

	youth/adolescent in ethnic minority populations	
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Appendix B: Critical Appraisal Results