

Table 1 Summary of peer-reviewed and grey literature published between 2008 and 2018 related to family planning among young people in Jordan

Authors	Year	Title	Ecological level of focus	Population and sample size	Study design/document description	Key results
Akour A, et al.(12)	2018	Impact of a pharmacist-provided information booklet on knowledge and attitudes towards oral contraception among Jordanian women: an interventional study	Youth; supportive environment	160 married women; 33 were 18–25 years	Design: randomized intervention study with pre and post measurements. Purpose: to assess the impact of a booklet on awareness and knowledge of oral contraceptive pills	Change in mean knowledge scores improved and was constant across all age groups
Organisation for Economic Co-operation and Development (13)	2018	Youth well-being policy review of Jordan	Youth; supportive environment	Not applicable	Design: Cross-sectoral policy analysis	<ul style="list-style-type: none"> • Reproductive health of young people has secondary position in the Government of Jordan’s policy agenda. International organizations fill the gap • Current policies mention need to provide youth-friendly RH services, but no steps towards implementation have been defined • The National Reproductive Health/Family Planning Strategy (2013–2017) does not define young people as a population segment with specific needs, and focuses on three general priorities • Awareness-raising programmes do not target adolescents under 18 years because of cultural constraints

Clark CJ, et al. (14)	2017	The influence of family violence and child marriage on unmet need for FP in Jordan	Youth	Used Jordan Population and Family Health Survey. Included women 15–49 years stratified by marriage before 18 years or not. No age-disaggregated provided	Design: secondary analysis, observational study. Purpose: to examine the association between intimate partner violence, family violence and unmet need for FP	Women who were married between the ages of 15 and 18 years may be especially vulnerable to having unmet need for FP as women in this age group are less likely to use contraception, have lower autonomy and experience intimate partner violence.
Spindler E, et al. (15)	2017	Jordan's 2002 to 2012 fertility stall and parallel USAID investments in family planning: lessons from an assessment to guide future programming	Supportive environment	Used multiple data sources, including 30 project reports, 42 external studies and evaluations and 11 project briefs, as well as key informant interviews	Design: programme and policy review. Purpose: to examine the factors that contributed stalls in fertility and modern contraceptive use, the projects USAID supported and their impact, and programmatic insights gained to guide future programming	<ul style="list-style-type: none"> • No results specific to youth but extensive overview of policy and programmatic environment • Jordan's limited method mix, combined with strong sociocultural determinants around reproduction and fertility desires, have contributed to low contraceptive use in Jordan • Challenges to improved use of FP services include limited government investments in FP programmes, influential service provider behaviour and biases that limit informed choice and counselling, strong, pervasive social norms of family size and fertility, and limited availability of different contraceptive methods
Samari G (6)	2017	Syrian refugee women's health in Lebanon, Turkey, and Jordan and recommendations	Youth; supportive environment	Not applicable	Design: Literature review focused on Syrian refugees and women's health between 2011 and 2016 (also included Turkey and Lebanon).	<ul style="list-style-type: none"> • Focused primarily on refugees in camps • Baseline results show that Syrians had more concerns about effectiveness of FP method and side-effects than Jordanians

					for improved practice	<p>Purpose: to examine Jordan's response to Syrian refugee women's health and provided recommendations</p> <ul style="list-style-type: none"> • Syrian women were displeased with the quality of RH care provided to them and the limited/overstretched services. • In camps, prostitution, rape and forced underage marriages were very common • In 2014, 11% of deliveries were in girls under 18 years. These girls were four times less likely to use FP • Cost was a barrier to refugee women seeking care outside of camps • Recommend including men in RH information • Need to integrate mental health services with RH services
Higher Population Council (16)	2016	Reproductive health services among Syrians	Youth; supportive environment	572 male and female Syrian refugees living outside of camps (including young people 12–24 years). Key informants from health services organizations	<p>Design: cross-sectional survey and focus groups.</p> <p>Purpose: to measure satisfaction with health services</p>	<ul style="list-style-type: none"> • Young people reported intermediate satisfaction with health services. They were most satisfied with pre-marital testing • Most of the women noted that the centres were located far from their residencies, were overcrowded, and lacked needed medical specialists in the areas served • Most of the young people of both sexes (aged 12–24 years) said that poor treatment by health care workers at the centres was an important disincentives to seeking this type of medical care • The need for identification cards was a significant barrier.

Jordan Communication Advocacy and Policy Activity (17)	2016	Family planning among Syrian refugees living in Jordan	Youth; supportive environment	Not applicable	Design: document review; secondary analysis of family planning knowledge data. Purpose: to describe family planning policies pertinent to and knowledge among Syrian refugees living in Jordan	<ul style="list-style-type: none"> • Provides detailed review of policy changes to government fee structures for Syrian refugees relevant to FP • Unmarried Syrian and Jordanian young people had very low levels of knowledge about modern contraceptive methods • Mainly focused on camps
Jordan Communication Advocacy and Policy Activity (18)	2016	Exploring gender norms and family planning in Jordan: a qualitative study	Youth	Four key target groups: married men (18–60 years); married women (18–49); and unmarried male and female youth (18–24) for a total of 408 participants in 42 focus group discussions. Key target groups further split into subgroups by nationality (Jordanian and Syrian)	Design: Focus group discussions. Purpose: to assess how gender roles and perceptions, in conjunction with religious and cultural norms, affect FP in terms of beliefs, attitudes and practices	<ul style="list-style-type: none"> • Unmarried male and female young people lacked sufficient knowledge and awareness of FP methods and said that they would benefit from FP educational programmes to help them make informed decisions on FP and method used
Jordan Evidence-Based Medicine/Reproductive Health (JEBM/RH) Group (19)	2016	The best evidence on family planning methods and practices	Supportive environment	Not available	Purpose: to describe an intervention to improve evidence-based practices among FP providers	<ul style="list-style-type: none"> • Current barriers to uptake include lack of up-to-date information as well as a range of misconceptions by providers • These misconceptions are greatest for hormonal contraceptive methods which include oral contraceptive pills, injectable contraceptive and implants

West L, et al. (20)	2016	Factors in use of family planning services by Syrian women in a refugee camp in Jordan	Youth	16 married Syrian women in camps aged 18–35 years	Design: qualitative study using in-depth interviews. Purpose: to assess factors that influence use of FP services by women in camps	<ul style="list-style-type: none"> • Younger women reported wanting to have more children, thus not discussing FP • Cultural norms, such as concerns over fertility and pressure to begin childbearing immediately after marriage, limited FP uptake among younger participants • Mostly older women accessed FP services in camps; majority of participants did not access FP • Information on and awareness of FP was limited for all participants
World Health Organization (21)	2016	Adolescent contraceptive use: data from the Jordan population and family health survey, 2012	Youth	Used Jordan Population and Family Health Survey, 2012	Design: secondary analysis, observational study. Purpose: to examine contraceptive use among adolescents in Jordan	<ul style="list-style-type: none"> • High unmet need among married adolescents: 39.1% of married adolescent girls reported not wanting a child in the next 2 years, but only 35.2% were currently using any method to prevent pregnancy • The main reasons for not using a FP method include: breastfeeding (42.9%), fear of side-effects or health concerns (29.5%), menses had not returned after giving birth (26.7%) • Of all married adolescent girls 15–19 years, 72.5% were not using a method of contraception. • Pills and lactational amenorrhea were the most common modern methods used (11.4% and 4.1% of these adolescent girls, respectively). Use of the

						<p>traditional method of withdrawal was high.</p> <ul style="list-style-type: none"> • Most adolescent girls obtained FP services from the private sector (38%) or pharmacy (32%)
Jordan Communication Advocacy and Policy Activity (5)	2015	Knowledge attitudes and practices toward family planning and reproductive health among married women of reproductive age in selected districts in Jordan	Youth	408 male and female participants (Jordanian and Syrian); married women and men, and unmarried young people 18–24 years (108 females, 80 males)	Design: qualitative design using focus group discussions. Purpose: to explore how gender roles and perceptions in conjunction with religious and cultural norms, affect FP in terms of beliefs, attitudes and practices.	<ul style="list-style-type: none"> • Young people (especially unmarried) lacked knowledge and awareness of modern FP methods • Half of the unmarried Jordanian and Syrian male and female young people said that discussing FP was important between spouses • Male and female young people expressed a need for formal classes or training on FP
Underwood C, et al. (22)	2014	Friday sermons, family planning and gender equity attitudes and actions: evidence from Jordan	Youth; supportive environment	375 religious leaders and 857 mosque attendees. Sample of mosque attendees included young people 18–24 years. No age disaggregated data provided	Design: baseline/endline quasi-experimental (with control site) intervention study. Purpose: to assess the effects of a health communication programme targeting religious leaders	<ul style="list-style-type: none"> • Religious leaders had higher RH and FP knowledge after the intervention. • Mosque attendees who recalled a FP message were significantly more likely to take FP-related action (such as initiated use of or talked to a partner)
Krause S, et al. (23)	2013	Reproductive health services for Syrian refugees in Zaatri refugee camp and Irbid city Jordan: an evaluation of the Minimum Initial	Youth	11 key informant interviews with programme directors, coordinators and managers working in RH in response to Syrian refugees in Jordan. Health	Design: multimethod assessment with key informant interviews, facility assessments and focus group discussions. Purpose: to examine to what extent services with the minimal initial service package were in	<ul style="list-style-type: none"> • Refugee women and adolescent girls had a negative perception of clinical services • At Zaatri camp, all facilities were open and convenient for adolescent females. None of the 5 facilities visited provided RH outreach services. In Irbid, unmarried women or girls could attend most clinics,

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facility assessment included 5 health facilities in Zaatri camp, 1 hospital in Mafraq city and 7 facilities in Irbid. Focus group discussions with women 18–24 years but no age-disaggregated sample size information was provided

place for Syrian refugees living in Jordan in order to improve the emergency response and meet the RH needs of the refugees

but they would not be provided with contraceptives

- Of the 8 groups in Zaatri, women in only 3 knew of adolescent centres in the camp. Of the women that knew about centres, they were unclear as to whether the centres offered RH services. In Irbid, most women were not aware of any centres for adolescents.
- Women were attracted to centres as they taught life skills and offered recreational activities in addition to giving RH lectures.
- At Zaatri camp, male condoms were to be in stock but female condoms were not available. Women expressed concerns about asking for condoms.
- In facilities in Irbid, condoms were not supplied to unmarried women in most clinics but men could buy condoms from pharmacies. Regardless of age, most participants knew you could find condoms at the pharmacy but the condoms were not usually free. One young woman did not know what condoms were.
- Health care services were perceived to be insufficient or of poor quality. Common problems included long wait lines, disrespect by health care providers and cost of transportation

Higher Population Council (1)	2013	National reproductive health/family planning strategy 2013–2017	Supportive environment	Not applicable	National policy document	<ul style="list-style-type: none"> • The strategy considers young people as key players in awareness, services and policies • Includes a review of ongoing projects and activities implemented by donor agencies • Includes reaching young people with FP information to change community norms through awareness-raising activities targeting schools, universities, mosques, churches, youth communities and local community leaders
Kamhawi S, et al. (24)	2013	Client-centered counseling improves client satisfaction with family planning visits: evidence from Irbid, Jordan	Youth	352 married/engaged women 15–49 years in Irbid	Design: FP client exit survey. Purpose: to examine whether client-centred counselling is associated with better client satisfaction	<ul style="list-style-type: none"> • No age disaggregated data • Client satisfaction was associated with use of the counselling protocol focused on client-centred counselling
O'Hara K, et al. (25)	2013	Experiences of intimate-partner violence and contraception use among ever-married women in Jordan	Youth	3434 women between 15 and 49 years	Design: cross-sectional study; secondary analysis of JPFS data. Purpose: to explore association between experiences of intimate partner violence and use of any form of contraception	<ul style="list-style-type: none"> • No age disaggregated data • Older women were more likely to use contraception than younger women • Women who reported severe physical violence were less likely to use contraception than women who did not experience such violence • Women who experienced sexual violence were more likely to use contraception

Underwood C, et al. (26)	2013	Religious leaders gain ground in the Jordanian family-planning movement	Supportive environment	136 religious leaders at baseline, 115 at endline	Design: baseline/endline intervention study with self-administered questionnaire. Purpose: to assess the effect of a training programme on knowledge of and attitudes to family welfare topics – specifically FP and RH	<ul style="list-style-type: none"> • Religious leaders had higher knowledge of the dangers of pregnancy in women under of 20 years • Religious leaders were more supportive of birth spacing messages for maternal health after the intervention
Cetorelli V, et al. (27)	2012	Is fertility stalling in Jordan?	Youth	Used Jordan Population and Family Health surveys from 1997 to 2009	Design: secondary analysis observational study. Purpose: to examine patterns in fertility from 1997 to 2009 and to review FP policy	<ul style="list-style-type: none"> • Percentage of women between 15 and 19 years who had never been married, and percentage of married women between 15 and 19 years using contraception increased between 1997 and 2009 • In 2009, 27% of married women 15–19 years and 43% of married women 20–24 year used contraceptives • Fertility peaked around 25–29 years
Hamza S (28)	2012	Long-acting hormonal contraceptives: without them, Jordan will not meet the population development goals	Supportive environment	Not available	Design: assessment of Ministry of Health service statistics. Purpose: to examine whether a team of stakeholders focused on expanding contraceptive	<ul style="list-style-type: none"> • Preliminary results suggest that contraceptive implants are available and in use by clients in 40% of hospitals and 10% of health centres. • Before the start of the programme, only 10% of hospitals and less than 4% of health centres provided contraceptive implants.

					implants increased availability at facilities	
Jordan Health Communication Partnership (29)	2012	Evaluation of the Arab Women Speak Out (AWSO) Initiative – 2nd Tier (phase I) – in Irbid Governorate, Jordan, 2011	Youth	408 women, 20.8% between 15 and 24 years	Design: post-test, non-equivalent control group. Purpose: to increase information about FP through distribution of flash cards	<ul style="list-style-type: none"> • No age disaggregated data • 76% recalled messages related to women’s role in making family-related decisions • 90% recalled messages about benefits of FP; 94% in treatment vs 74% in control group reported positive attitudes to modern contraceptives • 90% indicated that they would convey messages about delaying marriage until the age of 18 years for women for a happy, healthy life
Jordan Health Communication Partnership (30)	2012	Evaluation of the Arab Women Speak Out (AWSO) Initiative – 2nd Tier (Phase II) – in Irbid Governorate, Jordan, 2012	Youth	408 women, 26.5% between 15 and 24 years	Design: post-test, non-equivalent control group. Purpose: to increase information about FP through distribution of flash cards	<ul style="list-style-type: none"> • No age disaggregated data • 92% in treatment arm vs 74% in control arm reported positive attitudes to FP
Jordan Health Communication Partnership (31)	2012	Evaluation of the <i>hayati ahla</i> film in the Civil Status and Passports Department (CSPD) Offices Jordan – 2012	Youth	Visitors to the Civil Status and Passports Department, 3.8% under 20 years and 28.9% between 21 and 30 years	Design: post-test, intervention study. Purpose: to target new parents with information on FP and RH with a film	<ul style="list-style-type: none"> • No age disaggregated data • Small improvements in FP knowledge and attitudes • Most viewers thought that the video should be present in all offices of the Civil Status and Passports Department

Lilleston P (32)	2012	Planning for Life Phase 2: Evaluation Report	Youth	Out-of-school young people between 15 and 24 years (number not provided)	Design: pre- and post-intervention survey. Purpose: to integrate RH and FP into development programmes for young people	<ul style="list-style-type: none"> • The intervention significantly improved RH information and attitudes in participants • Implementing partner was surprised how receptive Jordanian young people were to the intervention
Shakhatreh F (33)	2012	Family planning in women of childbearing age in disadvantaged south Jordan	Youth; supportive environment	816 women 15–49 years	Design: randomized household survey. Purpose: to investigate current use of FP methods among Jordanian women, intention to use FP, faith in health services, and suggestions to improve health services	<ul style="list-style-type: none"> • No age disaggregated data presented • Main reasons for not currently using FP were: want more children, disapprove of the use of FP, refused by husband to use FP, and side-effects • Use of FP methods increased with increasing parity, level of education and age (until 40 years) • 26.8% of women had no faith in the Ministry of Health services. Bad doctor–patient communication was the main reason (47.3%) followed by lack of health care providers (10.9%) • Women suggested providing and training health care providers and improving doctor–patient communication
Connelly M (2)	2011	Baseline study: documenting knowledge attitudes and practices of Iraqi refugees and the status of family planning services in	Youth	Household survey: 407 households (14.8% of the respondents were between 15 and 19 years, 32.2% were between 20 and 29 years). Focus groups: Three	Design: mixed methods cross-sectional study; household survey and focus group discussions. Purpose: to document knowledge, beliefs, perceptions and practices of refugees related to FP services	<ul style="list-style-type: none"> • Very limited RH knowledge among adolescents 15–19 years, largely due to cultural norms that prohibit sex between unmarried people • Very few young people had heard of emergency contraception or female condoms. • Of the 407 households, 6.57% of women 15–24 years were using FP methods

		UNHCRs operations in Amman Jordan		groups of unmarried girls 15–19 years, and three groups of unmarried boys 15–19 years		<ul style="list-style-type: none"> • Most common concern in women 15–24 years who wanted to limit or space births was related to fertility • Boys and girls 15–19 years would seek RH information from their parent first • Participants thought that sexual activity in adolescents was rare, but happened sometimes; sometimes sex was transactional in nature • An unmarried pregnant girl would bring shame on her family and would be at risk of honour killing or forced marriage
Jordan Health Communication Partnership (34)	2011	Evaluation of the consult and choose initiative in Zarqa Governorate, Jordan, 2011	Youth	6.7% of the sample were young people under 20 years and 44.7% were between 21 and 30 years	Design: post-test, exit survey. Purpose: to evaluate the effect of training programmes for health providers including posters, wall charts and client cue cards in maternal and child health centres	<ul style="list-style-type: none"> • No age disaggregated data • Most participants saw the poster, found it helpful and were satisfied with the intervention
Jordan Health Communication Partnership (35)	2011	Evaluation of the Arab Women Speak Out (AWSO) Initiative in Irbid Governorate, Jordan, 2011	Youth	472 women, 35.2% aged 18–29 years	Design: intervention study; pre-test/post-test non-equivalent control group. Purpose: to evaluate the effect of group discussion to discuss health-related needs	<ul style="list-style-type: none"> • No age disaggregated data • Participants had improved attitudes to birth spacing, longer pregnancy intervals, associating FP with birth spacing rather than birth control
Jordan Health Communication Partnership (36)	2011	Evaluation of the consult and choose initiative in Irbid	Youth	472 men and women, 1.7% under 20 years and 52.9%	Design: post-test exit survey. Purpose: to evaluate the effect of a provider training	<ul style="list-style-type: none"> • No age disaggregated data • 80% of women who saw the video recalled messages about FP methods

		Governorate, Jordan, 2011		between 18 and 29 years	programme including posters, wall charts and client cue cards in maternal and child health centres	<ul style="list-style-type: none"> • The client counseling materials used as part of the were associated with patient satisfaction
Jordan Health Communication Partnership (37)	2011	Evaluation of the Arab Women Speak Out (AWSO) Initiative in Zarqa Governorate, Jordan, 2009–2010	Youth	919 men and women, 23.0% between 18 and 29 years	Design: Pre-test/post-test, non-equivalent control group. Purpose: to evaluate the effect of participatory exercise to discuss health-related needs	<ul style="list-style-type: none"> • Younger respondents were more likely to report positive attitudes to the use of FP in the future than older respondents
Jordan Health Communication Partnership (38)	2010	Evaluation of the “mabrouk II: you’ve become a mother and a father” initiative	Youth	1217 men and women, no age data provided	Design: post-test. Purpose: to evaluate the effect of FP material distributed to newlyweds at the Civil Status and Passport Department	<ul style="list-style-type: none"> • No age disaggregated data • Mean age of the women was 24.7 years • The material had a positive effect on knowledge of and attitudes to FP and birth spacing
Al-Awaki N (39)	2010	Private sector project for women’s health evaluation report: evidence-based medicine (EBM) for family planning program	Supportive environment	180 private sector FP providers in Jordan	Design: pre- and post-intervention study. Purpose: to improve knowledge of, and attitudes and practices to combined oral contraceptives through evidence-based medicine round tables	<ul style="list-style-type: none"> • At baseline, correct knowledge and prescribing practices about combined oral contraceptives were poor • The intervention increased the per cent (from 78% to 92%) of providers willing to prescribe combined oral contraceptives to a newly-married 21-year-old who wished to delay childbirth • Female providers were more willing than male providers to prescribe combined oral contraceptives to a newly-married, young women who wished to delay childbirth

Khalaf I, et al. (40)	2010	Youth-friendly reproductive health services in Jordan from the perspective of the youth: a descriptive qualitative study	Youth; supportive environment	60 participants (27 males and 33 females) between 12 and 18 years	Design: qualitative study using focus group discussions. Purpose: to identify RH services that young people need, identify problems young people encounter when accessing RH services, and explore their perceptions of youth-friendly services	<ul style="list-style-type: none"> • Male and female participants were confused about what RH meant and could not identify key components • Most participants did not know that RH services were available • Participants wanted services but would be afraid to access them because of fears over acceptance by community members • Barriers to using services included problems in accessing services because of distance and poor organization of health services (crowded, dirty) • Participants reported poor treatment by providers at health services and poor quality of services; but participants said they had never used RH services • Participants wanted a health centre only for young people, with suitable hours, visual aids, and providers able to give correct information in creative ways and be respectful
Abel E. (41)	2009	Jordan's reproductive health policy environment score: measuring the degree to which the policy environment in Jordan supports effective policies and programs for reproductive health	Youth; supportive environment	Used data from the policy environment score assessments in 1997, 2000 and 2008	Design: longitudinal descriptive study. Purpose: to measure the degree to which the policy environment supports RH	<ul style="list-style-type: none"> • The number of policy formulation, organization, and programme components increased greatly between 2000 and 2008 for adolescent FP and RH • Political support and resources for adolescent FP and RH declined considerably • The policy environment for adolescents is weak and has remained so since 2000

Health Communication Partnership (42)	2008	Motivating healthy timing and spacing of pregnancies – lessons from the field	Youth	12 focus group discussions with women and men of reproductive age who had at least one child under 5 years to understand social norms and perceived barriers to birth spacing	Design: qualitative study. Purpose: to understand how to motivate mothers and communities to adopt safe birth intervals	<ul style="list-style-type: none"> • No specific age disaggregated data presented • Childbearing was the main expectation for and by couples • FP was more problematic than birth spacing • Barriers to birth spacing include family and community pressure, desire for male heirs, woman's late age at marriage, and poor knowledge of contraception and fear of side-effects • Motivators for spacing births included high cost of living, desire to give attention to each child, mother and child health, and better quality of life for the couple • Respondents suggested entertainment education such as radio and television series, soap operas, testimonials, talk shows, and other entertainment formats to relay messages. Other suggestions concerned policies, educational role of health providers, and improving the quality of services
Jurdi P (43)	2008	Unintended pregnancies remain high in Jordan	Youth	Secondary analysis of the Jordan Population and Family Health Survey (2002) including married women 15–19 years and 20–24 years (sample size not provided)	Design: secondary analysis. Purpose: to describe fertility and unintended/mistimed pregnancy in the Jordan population	<ul style="list-style-type: none"> • 18% of pregnancies were unintended in women 15–19 years; 26% were unintended in women 20–24 years