SYSTEMATIC REVIEW



Intended Adolescent Pregnancy: A Systematic Review of Qualitative Studies

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Abstract Previous research on teenage pregnancy suggests that there are distinct profiles of pregnancy intent among adolescents, reflecting differences in young people's understanding and endorsement of the concept of pregnancy intendedness. Little is known about adolescents' subjective perceptions of pregnancy intent. This systematic literature review comprehensively examines qualitative studies of intended teenage pregnancy. Several online databases were searched for publications on attitudes towards adolescents' pregnancy intentions. Following a systematic selection process, findings from included studies were analyzed and integrated using thematic synthesis. Six dominant themes emerged: pregnancy desire, negative and positive perceptions of pregnancy, ambivalence and fatalism, other people's views, and common characteristics of adolescent mothers. The themes are discussed in the context of current knowledge on adolescent reproductive health.

Keywords Intended adolescent pregnancy · Teenage pregnancy attitudes · Qualitative · Systematic review

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Introduction

Every year, approximately 16 million females aged 15-19 years and about one million females younger than 15 years old give birth worldwide (WHO 2014). Although most of these births occur in low- and middle-income countries, adolescent pregnancy remains a critical public health concern in developed countries (UNICEF 2013). From a public health perspective, adolescent pregnancy has a high-risk profile as the impact of multiple factors, including medical complications, lower educational level and longterm socio-economic consequences that confer increased risk of lifespan vulnerabilities to both mother and child. In addition, the perception of early childbearing as socially undesirable (McCarthy et al. 2014) contributes to the perception of adolescent pregnancy as a negative phenomenon (Pinzon and Jones 2012). However, there is a lack of understanding of how adolescents themselves understand adolescent pregnancy. Understanding the adolescent perspective on pregnancy could generate new insights into how policy makers as well as health and social care providers respond to the challenges of adolescent pregnancy.

There are different reasons for adolescents to become pregnant. Evidence suggests that the majority of teenage pregnancies are unplanned and undesired (e.g., Clear et al. 2012). Consequently, most studies focus on developing strategies for preventing teenage pregnancy. However, not all adolescents view their pregnancies as unintended. Recent research has begun to distinguish between different teenage pregnancy intentions profiles—in particular dividing along dimensions of intent, e.g., intended or planned, unintended, and ambiguous (Jaccard et al. 2003; Speizer et al. 2004).

Planned (as distinct from unplanned) pregnancy in youth has been given relatively little attention in previous publications (Cater and Coleman 2006). Indeed, estimates of the degree of pregnancy intendedness among adolescents differ across samples. In a sample of USA females aged 14–17 years (Bartz et al. 2007), almost 6 % of participants reported that they were currently trying to get pregnant, whereas in another sample of urban USA females approximately 12 % of 15 to 19-year-olds declared plans to conceive at the time of the study (Kavanaugh and Schwarz 2009). In the United Kingdom, *Teenage Pregnancy Strategy Evaluation* (British Market Research Bureau International 2005) estimated that up to 10 % of teenage pregnancies had been planned.

Although a substantial body of research examines adult perceptions of teenage pregnancy, relatively few studies have explored adolescents' perspectives (Herrman 2008). A number of quantitative studies examined pregnancy attitudes and intentions among young people, identifying common characteristics associated with positive attitudes toward early childbearing (e.g., Lau et al. 2014). Most of the published evidence in this group of adolescents concerns attitudes toward termination (Cater and Coleman 2006). Two narrative literature reviews have examined qualitative studies of teenage pregnancy in general, and identified evidence of positive perceptions of childbearing and a degree of planning among adolescent mothers. A meta-synthesis of studies investigating experiences of teenage mothers of children aged 3 months-3 years by Clemmens (2003) identified five themes including an observation that young motherhood, despite bringing hardship, provides a stabilizing influence and can positively transform an adolescent's life. In a descriptive review of teenage pregnancy and motherhood, Spear and Lock (2003) reported that some adolescents recollect their pregnancies as being planned. As it has been suggested that pregnancy attitudes and intendedness may influence occurrence and outcomes of adolescent pregnancies (Phipps and Nunes 2012), gaining insight into young people's attitudes toward it may improve understanding of the phenomena related to early childbearing. Consequently, the literature suggests that there is a lack of clarity over what is unique to adolescents perceptions and experiences of pregnancy, both in comparison to adult pregnancies, and in how we contextualize adolescent intended pregnancy in relation to adolescence development as a whole.

The above narrative reviews notwithstanding, there are no systematic literature reviews of how young people conceptualize intentional adolescent pregnancy. In particular, there is a paucity of qualitative examination of pregnancy perceptions (Rosengard et al. 2006). This is unfortunate, as examinations of qualitative research methods are acceptable approaches for investigating adolescents lifestyles and behaviors (Rich and Ginsburg 1999) and can be "especially appropriate for exploring issues about which little is known or written" (Burns 1999, p. 495).

Understanding young people's perceptions of the benefits and disadvantages of young parenthood is crucial for supporting adolescents in making better-informed decisions regarding their reproduction and leading them to safer and healthier futures (Rosengard et al. 2006). Improved understanding of pregnancy intent may also aid in designing more effective, appropriate and acceptable strategies for public health interventions. Cater and Coleman (2006, p. 6) argue that there is "a need for new materials/resources for professionals in order that they can work effectively with young people who have planned their pregnancy". In this respect, a qualitative approach highlighting the subjective impression of adolescents provides an important stakeholder perspective in identifying the individual needs of this group.

The Current Review

The current review aimed to synthesize and critically evaluate published qualitative literature regarding intended adolescent pregnancy. The focus of the review is on nonmedical aspects of teenage pregnancies and births, particularly adolescent females views on the subject. Review of the qualitative literature was chosen as an appropriate way to represent the subjective views of young women. Unintended pregnancy, males expectations, abortion, and concerns relating exclusively to sexual health such as contraception use and Sexually Transmitted Infections were considered to be outside the scope of the present review and were not examined. The primary research objective was to identify and evaluate the major themes emerging from the studies. A secondary aim was to identify methodological sources of bias in the qualitative literature.

Methods

Design of Review

Interpretive synthesis (IS) was utilized as the conceptual framework for the review. This approach, initially defined by Noblit and Hare (1988) and refined by Dixon-Woods et al. (2005), is grounded in the data reported from primary studies and assists the researcher to avoid specifying concepts and theories in advance of qualitative synthesis. An IS framework was chosen as the most adequate for reviewing the literature on a subject interweaving various scientific domains which has not been previously explored systematically (Dixon-Woods et al. 2005).

The current systematic review was conducted in three stages:

- 1. Systematic search of qualitative studies reporting on intended teenage pregnancy
- 2. Data extraction and critical appraisal of the studies included in the review
- 3. Synthesis of the data

Systematic Search

The following databases were searched between 24 April and 14 June 2015 to identify eligible articles: Ovid MEDLINE (1946-June 2015), PsycINFO (1806-June 2015), Embase (1974–June 2015), The Joanna Briggs Institute Evidence Based Practice Database (1996-June 2015), ASSIA (1987-June 2015) and CINAHL Plus (1937–June 2015). The final search terms consisted of three main categories: attitudes, age group, and the phenomenon under investigation. The first group incorporated words capturing psychological aspects of the research question: the attitudes, beliefs and perceptions of young people regarding teenage pregnancy (including intentions to become pregnant or remain non-pregnant). The second category pertained to the age group of participants studied in the review. The last group indicated the phenomenon studied: terms such as planned, wanted, intended or intentional combined with pregnancy, motherhood or childbearing were searched for. Boolean search operators were utilized to connect key terms. Truncation was used where appropriate. The extended search strategy is detailed in Appendix A of supplementary material.

Inclusion and Exclusion Criteria

Studies were included if they met following criteria:

- 1. Qualitative design
- At least 50 % of the studied sample included adolescents aged 10–19 years old
- 3. Study aims included examining thoughts, beliefs and attitudes regarding intended pregnancy in adolescents (actual or potential)
- 4. English language
- 5. Peer-reviewed article

Studies were excluded if they focused solely on:

- 1. Contraception use (other than discussing pregnancy intention as a reason for contraceptive failure)
- 2. Medical aspects of pregnancies or births
- 3. Pregnancy or Sexually Transmitted Infections (STI) prevention interventions
- 4. Male participants

- 5. Unintended adolescent pregnancy
- Reproductive behaviors in adolescents with HIV or diabetes
- 7. Abortion and its consequences

Study Selection

The results of the search strategy are illustrated in Fig. 1. Records were identified through database searching. In addition, 30 additional records identified through screening of reference lists. Articles were screened via title screening, abstract screening and full-text articles assessment. Study selection was based on the above inclusion and exclusion criteria. Where there was a query on whether the article met the inclusion criteria, the full-text was retrieved and evaluated by a second reviewer. Final decisions on eligibility were made through consensus discussion. Eight articles were discussed this way, four of which were ultimately included and four excluded.

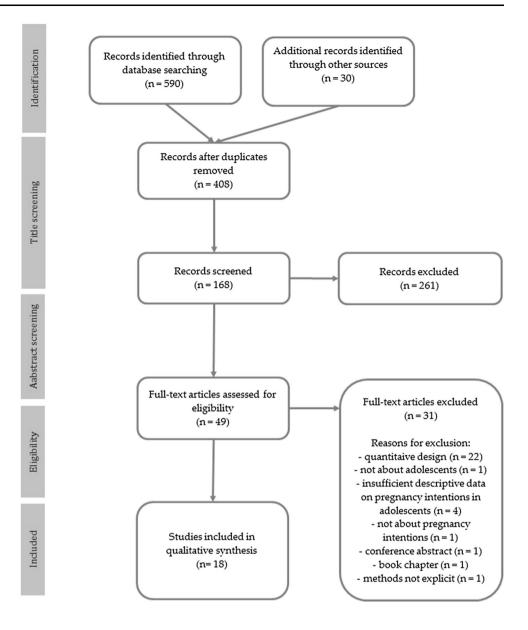
Data Extraction

Data from the articles were extracted using a bespoke proforma, incorporating elements from previous similar systematic reviews (e.g., Valderas et al. 2012). Bibliographic information, study characteristics, methods, main findings (including identified themes) and the interpretations of the authors (including recommendations) were collected. With regard to data from individual studies, where possible, relevant information was gathered using direct quotations from participants or authors interpretations in order to preserve the original meaning. In cases where only part of the findings of a study regarded pregnancy intentions among adolescents, the component which was assessed as irrelevant (i.e. directly corresponded to the exclusion criteria) was documented and reasons for excluding it from further synthesis were given. This ensured data collected was relevant to the subject of the review without unnecessarily excluding whole studies. For example, the study "Factors influencing teenage mothers participation in unprotected sex" by Burns (1999) generated six themes, yet only the ones related to pregnancy desire were extracted for the synthesis.

Critical Appraisal

Qualitative research is a heterogeneous field encompassing a diversity of methods (Willig 2013). Correspondingly, there are no unified protocols for quality assessment of qualitative studies (Dixon-Woods and Fitzpatrick 2001). The Critical Appraisal Skills Programme (CASP, Hawker et al. 2002) tool was chosen to appraise the quality of the

Fig. 1 PRISMA flowchart of search and paper extraction



studies included in the synthesis and to ensure consistency. The tool consists of nine questions with which studies are scored as "good", "fair", "poor" or "very poor" on a range of criteria (Appendix B of supplementary material). Given the high degree of methodological variation across included studies, the rigor in documentation of study procedures was closely appraised as a key component of competent qualitative research (Willig 2013). The researcher assessed all studies and 25 % of them were checked by an independent rater to ensure the reliability of the quality measures, with a substantial level of agreement.

Data Synthesis

Data-driven thematic analysis was chosen as the most effective method for synthesizing diverse types of evidence (Dixon-Woods et al. (2005). This was also the most appropriate approach to integrate descriptive data, given the relevant lack of data on subjective appraisals of teenage pregnancy intent in the existing literature. Lack of clarity regarding standardized procedures involved in the process of thematic analysis is often perceived as the central limitation of this form of analysis (Braun and Clarke 2006). This obstacle was addressed by applying guidelines for thematic synthesis of qualitative research (Thomas and Harden 2008).

The extracted data were repeatedly re-read to identify patterns. Each sentence (including both direct quotations and researchers descriptions of collected data) was analyzed and relevant content coded. Codes were collated and grouped according to their meaning. When appropriate, new codes were created to name groups of initial codes. A network of interlinked items was analyzed and reorganized, and emerging overarching families of codes were labeled as individual themes. Extracted data was independently assessed by the second author, and the final set or themes was established through consensus agreement between authors. In the last stage of the synthesis the author supplemented an interpretation of patterns identified across studies, reflecting the differences in designs and contexts of each study.

Results

Study Designs

The systematic search identified 18 published articles, reporting findings from 14 cohorts. Key characteristics are detailed in Table 1. All studies were published between 1995 and 2013. The majority of the studies were based in the USA (10 out of 14 cohorts), two in Australia and two in the UK. All studies employed a qualitative design, although three reported mixed method designs combining qualitative and quantitative methods (Kendall et al. 2005; Rosengard et al. 2006; Schwartz et al. 2010). All studies were cross-sectional with the exception of one cohort that was examined two times over an interval of 4 years (Smith Battle 1995, 1998). Data from two cohorts (five articles in total) describe findings from cross-sectional cohorts incorporating analyses of subsets of each cohort. Data collection methods comprised focus groups (four cohorts), observation combined with interviews (two cohorts), questionnaires combined with other methods (one cohort) and various forms of interviews (six cohorts). One study used Q-methodology (Schwartz et al. 2010).

Most authors used thematic analysis to interpret data (ten cohorts). Two studies employed a hermeneutic approach to data analysis and one used by-person factor analysis of Q-sort data. One author used a method proposed by Giorgi (1970) (Montgomery 2001, 2002, 2004) and in one cohort the methods were described as both thematic analysis and hermeneutic analysis (Spear 2001, 2004).

Four articles (Coleman and Cater 2006; Montgomery 2001, 2002, 2004) had a primary focus intended teenage pregnancy. The remaining studies included in the review were designed to answer questions not immediately related to the subject, but incorporated direct examination of pregnancy intendedness. Four studies examined adolescents attitudes and perceptions of teen pregnancy, three studies sought to explore experiences of teenage motherhood, three investigated women's perceptions of pregnancy intendedness, and two explored qualitative reasons for failing to use contraception.

Characteristics of Included Studies

The total number of participants in the reviewed cohorts was n = 920. Number of participants in each individual study ranged from 5 to 247 (mean n = 66). The majority of studies only recruited females, while three cohorts also included male adolescents (Herrman 2008; Kegler et al. 2001; Redwood et al. 2012). The age of participants ranged from 12 to 38 years, with the majority of cohorts (eight) involving adolescents within the 14–18 years category.

Participants reproductive status varied across studies. Two studies examined the attitudes of adolescents who were pregnant at the time of data collection, five cohorts consisted of teenagers who had given birth prior to the data collection, and two studies did not explicitly report the parenting status of participants. The remaining cohorts comprised mixed samples of parenting, pregnant or not pregnant participants (three cohorts).

Synthesis

The findings from the synthesis were grouped in six main areas. The six themes and associated sub-themes are presented in Fig. 2 and described in below sections. Full delineations of themes, sub-themes and item level descriptors are contained in Appendix C of supplementary material. Table 2 illustrates the mapping of sub-themes to included articles.

Desire and Closeness

This theme consisted of five sub-themes reflecting reasons for becoming pregnant or wanting to be a parent. A detailed diagram of the theme and some exemplary quotations are available in Appendix Ci of supplementary material. Self-oriented desire includes visions of parenting as an attractive life pathway alternative to educational or professional career, which were not always perceived as real possibilities by the participants. Liking babies and desire to play with them were listed as key reasons for becoming pregnant. For example, a participant in Montgomery (2002, p. 287) took pleasure in looking after children and "wanted a baby around". For some participants becoming pregnant served as means for filling the gap left by something they felt was lacking from their lives, or compensating for something that they were resentful about. Examples of items in the former category are fighting loneliness and providing some form of occupation: "I'd be there for it and it will give me something to do" (Montgomery 2002, p. 287). The need for positive change in one's life was also grouped in this category: "[G]rowing up she was often separated from her siblings and that this

 Table 1
 Characteristics of studies included in the review

References		Country	Sample			Data collection	Analysis	
			Number	Gender	Age (years)	Reproductive status		
1	Burns (1999)	USA	8	Females	14–19	Parenting	Interviews	Thematic analysis
2	Coleman and Cater (2006)	UK	41	Females	13–21	Parenting, pregnant	Interviews	Thematic analysis ^a
3	Crump et al. (1999)	USA	37	Females	14–17	Non-parenting	Focus groups	Thematic analysis ^b
4	Hanna (2001)	Australia	5	Females	Not stated	Parenting	Interviews, observation	Thematic analysis
5	Herrman (2008)	USA	120	Females, males	Mean 16.1	Parenting, pregnant, not pregnant	Focus groups	Thematic analysis ^b
6	Kegler et al. (2001)	USA	102	Females, males	12–16	Not stated	Focus groups	Thematic analysis ^a
7	Kendall et al. (2005)	USA	77	Females	14–38	Parenting, pregnant, not pregnant	Interviews with open- and closed-ended questions	SPSS, thematic analysis ^c
8	Montgomery (2001)	USA	8	Females	14–17	Pregnant	Interviews	Giorgi method ^f
9	Montgomery (2002)							
10	Montgomery (2004)							
11	Redwood et al. (2012)	UK	6 focus groups of 6–8 participants	Females, males	14–19	Not stated	Focus groups	Thematic analysis
12	Rosengard et al. (2006)	USA	247	Females	12–19	Pregnant	Structured questionnaires, open-ended questionnaires	Thematic analysis ^d
13	Schwartz et al. (2010)	USA	147	Females	15–25	Not pregnant	Surveys, Q-methodology	By-person factor analysis of Q-sort data ^e
14	Smith et al. (2013)	Australia	56	Females	14–19	Parenting, pregnant, not pregnant	Interviews	Thematic analysis
15	Smith Battle (1995)	USA	16	Females	14–18	Parenting	Interviews, observation	Hermeneutic analysis
16	Smith Battle (1998)	USA	13 (of the sample from 1995)	Females	Mean 19.4	Parenting	Interviews, observation	Hermeneutic analysis
17	Spear (2001)	USA	8	Females	13–19	Pregnant	Interviews	Hermeneutic analysis
18	Spear (2004)							Thematic analysis

Data analysis using different versions of software: ^a 'NUD*IST', ^b 'Etnograph', ^c 'dtSearch', ^d 'NVIVO', ^e 'PQMethod'; ^f data analysis using a method described in Giorgi (1970)

separation also contributed to her wanting to become pregnant, again to keep someone close to her and for the stability that it provided" (Montgomery 2001, p. 24). Further examples of positive changes expected to be brought by pregnancy included gaining a new sense of identity as a parent, or provision of a motivating factor to stop engaging in risky behaviors.

This theme also incorporated compensation for negative experiences from the past such as unhappy childhood or the recent disappointment of a miscarriage. Self-oriented

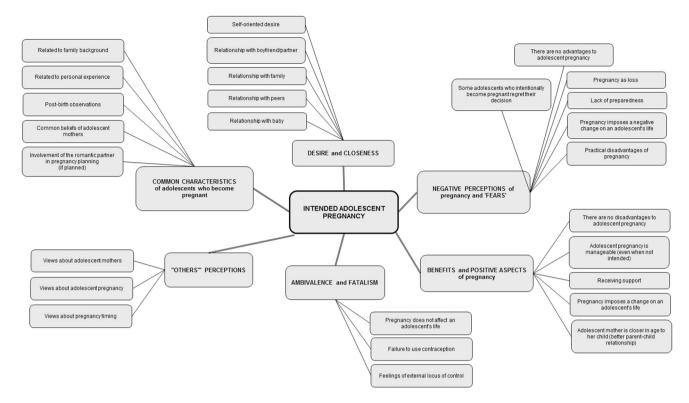


Fig. 2 Main themes and sub-themes

desire also included items related to timing of pregnancy such as pressure to complete reproduction early in life and fear of being infertile. Pregnancy was also viewed as an attempt to secure the relationship with boyfriend or bring it to the next level by starting a family (Relationship with boyfriend/partner). Seeking attention from parents, trying to mend their marital conflict, or wanting to follow ones mother's example in early pregnancy were grouped in Relationship with family. Motivations related to Relationship with peers included seeking their attention, wanting to "fit in", or proving ones womanhood or manhood. The last category in this theme was linked to the Relationship with baby. Desire to have somebody to love or to be unconditionally loved was mentioned in a number of studies: "I want to have someone that can love me when I want them to love me" (Herrman 2008, p. 47). Some participants reported (often retrospectively) a natural and inexplicable drive to be a mother and some regarded motherhood as a way of proving to others their capability of bringing up a child of their own.

Negative Perceptions of Pregnancy and "Fears"

This group of sub-themes identified perceptions of negative aspects of teenage pregnancy as well as content expressing young people's fears and anxieties (as shown in detail in Appendix Cii of supplementary material). Some participants were unable to describe any advantages of adolescent pregnancy and some openly regretted their decision to become mothers. Pregnancy was seen as restricting ones freedom, impeding achievement of one's life goals as well as imposing a negative change to an adolescents relationships with a romantic partner and parents. Furthermore, participants mentioned lack of preparedness and general competence to have children in one's teenage years: "I really don't think anybody that's underage or anybody at school because they have like no experience for that kind of stuff" (Kegler et al. 2001, p. 248). Practical disadvantages of pregnancy such as impediments to education or employment as well as being stigmatized were also described.

Benefits and Positive Aspects of Pregnancy

A detailed diagram of the theme and exemplary quotations are available in Appendix Ciii of supplementary material. Some young people saw adolescent pregnancy in a more favorable light, including claiming it had no disadvantages at all. Some agreed that teenage pregnancy is manageable, even when not intended. Receiving public aid and support from family and peers were described as benefits. Pregnancy was reported to impose a positive change on an adolescent's life in a number of ways. Becoming pregnant was seen as making young people more mature (in terms of

Table 2 Mapping of identified themes onto included studies

Theme	Sub-theme	Burns	Coleman and Carter	Crump et al.	Hanna	Herrman	Kegler et al.	Kendall et al.	Montgomery (2001)	Montgomery (2002)
Desire and	Self-oriented desire	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
closeness	Relationship with boyfriend/partner	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark
	Relationship with family							\checkmark		
	Relationship with peers			\checkmark			\checkmark	\checkmark		
	Relationship with baby	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark
Negative perceptions and "fears"	There are no advantages of adolescent pregnancy					\checkmark				
	Some adolescents who intentionally become pregnant regret their decision		\checkmark							
	Pregnancy as loss					\checkmark				
	Lack of preparedness			\checkmark		\checkmark	\checkmark			
	Pregnancy imposes a negative change on an adolescent's life					\checkmark	\checkmark	\checkmark		
	Practical disadvantages of pregnancy					\checkmark	\checkmark	\checkmark		
Benefits and positive aspects of pregnancy	There are no disadvantages of adolescent pregnancy									
	Adolescent pregnancy is manageable (even when not intended)			\checkmark						
	Receiving support					\checkmark				
	Pregnancy imposes a positive change on an adolescent's life			\checkmark	\checkmark	\checkmark		\checkmark		
	Adolescent mother is closer in age to her child (better parent-child relationship)		\checkmark			\checkmark				
Ambivalence and fatalism	Pregnancy does not affect an adolescent's life									
	Failure to use contraception	\checkmark		\checkmark				\checkmark		
	Feelings of external locus of control	\checkmark	\checkmark					\checkmark		

Table 2 continued

Theme	Sub-theme	Burns	Coleman and Carter	Crump et al.	Hanna	Herrma	an Kegler et al.	Kendal et al.		ontgomery 01)	Mont (2002	gomery)
"Others"" perceptions	Views about adolescent mothers			\checkmark		\checkmark						
	Views about adolescent pregnancy		\checkmark	\checkmark							\checkmark	
	Views about pregnancy timing		\checkmark				\checkmark	\checkmark	\checkmark			
Common characteristics	Related to family background		\checkmark		\checkmark							
of adolescents who become	Related to personal experience		\checkmark		\checkmark							
pregnant	Post-birth observations		\checkmark		\checkmark	\checkmark		\checkmark				
	Common beliefs of adolescent mothers		\checkmark					\checkmark				
	Involvement of the romantic partner in pregnancy planning (if planned)		\checkmark						\checkmark		\checkmark	
Theme	Sub-theme	Mo (20	ntgomery 04)	Redwood et al.	Roser et al.		Schwartz et al.	et al.	Smith Battle (1995)	Smith Battle (1998)	Spear (2001)	Spear (2004)
Desire and	Self-oriented desire			\checkmark	\checkmark						\checkmark	
closeness	Relationship with boyfriend/partner				\checkmark			\checkmark	\checkmark			\checkmark
	Relationship with family								\checkmark			
	Relationship with peers										\checkmark	
	Relationship with baby			\checkmark	\checkmark			\checkmark	\checkmark		\checkmark	
Negative perceptions and "fears"	There are no advantages of adolescent pregnancy				\checkmark							
	Some adolescents who intentionally become pregnant regret their decision	e .							\checkmark			
	Pregnancy as loss			\checkmark	\checkmark							
	Lack of preparedness											
	Pregnancy imposes a negative change on an adolescent's life			\checkmark					\checkmark	\checkmark		
	Practical disadvantages of pregnancy			\checkmark	\checkmark							

Table 2 continued

Theme	Sub-theme	Montgomery (2004)	Redwood et al.	Rosengard et al.	Schwartz et al.	Smith et al.	Smith Battle (1995)	Smith Battle (1998)	Spear (2001)	Spear (2004)
Benefits and positive aspects of pregnancy	There are no disadvantages of adolescent pregnancy			\checkmark						
	Adolescent pregnancy is manageable (even when not intended)						\checkmark		\checkmark	\checkmark
	Receiving support			\checkmark			\checkmark			\checkmark
	Pregnancy imposes a positive change on an adolescent's life	\checkmark		\checkmark			\checkmark	\checkmark	\checkmark	
	Adolescent mother is closer in age to her child (better parent– child relationship)			\checkmark						
Ambivalence and fatalism	Pregnancy does not affect an adolescent's life								\checkmark	\checkmark
	Failure to use contraception					\checkmark			\checkmark	\checkmark
	Feelings of external locus of control					\checkmark			\checkmark	
"Others'" perceptions	Views about adolescent mothers									
	Views about adolescent pregnancy	\checkmark	\checkmark	\checkmark			\checkmark		\checkmark	\checkmark
	Views about pregnancy timing			\checkmark	\checkmark				\checkmark	
Common characteristics	Related to family background						\checkmark	\checkmark	\checkmark	
of adolescents who become	Related to personal experience						\checkmark	\checkmark	\checkmark	
pregnant	Post-birth observations	\checkmark					\checkmark		\checkmark	\checkmark
	Common beliefs of adolescent mothers						\checkmark	\checkmark	\checkmark	
	Involvement of the romantic partner in pregnancy planning (if planned)					\checkmark	\checkmark			\checkmark

changing their priorities and attitudes toward life), triggering a modification of one's living arrangements, and improving relationships with romantic partners, family and peers:

"Young mothers alluded to holding on to true friends, making better choices in friends and activities, developing new friends as a result of the pregnancy or parenting, and receiving support and child care assistance from peers" (Herrman 2008, p. 45). Moreover, being closer in age to one's child was seen as a factor improving parent-child relationship.

Ambivalence and Fatalism

This theme covers items relating to indifference and ambivalence regarding sexual relations, pregnancy and parenting (as shown in Appendix Civ of supplementary material). Attitudes presented here are less clear-cut in terms of pregnancy intentions. This may be partially attributable to a spillover effect, as content was often identified in studies primarily focused on contraceptive failure. Sub-themes for Ambivalence and Fatalism include reasons for not using contraception effectively despite awareness of the potential of conceiving, a conviction that pregnancy does not significantly affect an adolescent's life "(It [having a child] won't affect me that much; I have my mom. I don't have to grow up faster, 'cause my mom's gonna help me and stuff" Spear 2001, p. 577); and identification of an external locus of control ("You can try to get in the way of fate, but it won't do you any good ... we're just not in control in this life." Burns 1999, p. 497 and "It just happens-it's one of those things that happen. It's gonna happen." (Kendall et al. 2005, p. 303). These last two quotes relate to the view that the individual has no actual control over their fertility.

"Others'" Perceptions

This theme reflects an aggregation of commonly held views about adolescent pregnancy (as shown in Appendix Cv of supplementary material). It is divided into three main sub-themes: views about adolescent mothers, adolescent pregnancy, and pregnancy timing. The first sub-theme reflects both positive and negative perceptions of teenage mothers, such as deserving respect for managing their lives as young parents, and being treated differently by professionals because of their young age (regardless of the intendedness of pregnancy). Comments about adolescents being unaware of burdensome responsibilities associated with pregnancy and the fact that teenagers who are aware of them avoid pregnancy were also categorized in this group.

Views about adolescent pregnancy included opinions about its prevalence ("My whole school is pregnant" and "Every girl I grew up with is pregnant" Crump et al. 1999, p. 37). There were also observations that acceptance of, and attitudes toward, adolescent pregnancies vary across social groups and backgrounds, a notion that some adolescents do plan their pregnancies. Finally, some participants also expressed the belief that teenage pregnancy has little impact on an adolescent's life.

Opinions regarding pregnancy timing were also varied, with little consistency emerging from the literature. Some participants stated that one should wait until after the teenage years. Others stated that capability to raise a child is not age related, but depends on other factors: "You should be financially stable, emotionally stable, able to take care of the kids, finish high school. It isn't really about age." (Kendall et al. 2005, p. 304). Other factors identified included independence from one's family of origin, vocational stability, or the stability of the relationship with the partner.

Common Characteristics of Adolescents Who Become Pregnant

This theme reflects participant's beliefs that adolescents who become pregnant share specific common characteristics. A detailed diagram of this theme is available in Appendix Cvi of supplementary material. The items grouped in this theme reflect an aggregation of observations provided by adolescent mothers, non-parenting and non-pregnant peers and researchers' findings are also included. However, a noticeably consistent set of themes emerged across these diverse samples. We also highlight that this theme is closely linked to Theme 3.3.5 "*Others*" *perceptions*.

The first sub-theme consists of characteristics related to family background, such as growing up in an unsettled environment (parental conflict, violence, frequent house moves, etc.) or involvement in the social care system, and being raised in a community where early motherhood was a social norm. There is an underlying implication that adolescent intended pregnancy either occurs within, or as a response to a context of disruption.

The second sub-theme includes observations regarding adolescent mothers' personal experiences preceding the conception. Examples of items in this group are: experiencing previous pregnancy (resolved by abortion, miscarriage or birth; keeping the infant or surrendering it for adoption), having a history of fighting behaviors, and having negative experiences and attitudes toward formal education.

The next sub-theme groups reflections relating to postbirth circumstances of adolescent mothers. Such observations include: strong motivation to do well in life and to be a good parent, and not remaining in a relationship with the father of the first child. Furthermore, adolescents who intentionally became pregnant may see less negative aspects of early motherhood than females who had unplanned pregnancies.

This theme also includes researchers' reflections about common beliefs of adolescent mothers, with evidence of compartmentalization of different sets of concepts. For instance, separation of pregnancy, motherhood, and marriage was mentioned by Spear (2001), and separation of pregnancy, motherhood, and continuing the relationship with the father of the child was noted by Kendall et al. (2005). Conviction that one's education or employment options were limited and confidence in one's competence to be a mother were also described (e.g., Coleman and Cater 2006). A last sub-theme relates directly to intended pregnancy and the degree to which the romantic partner is involved in pregnancy planning. Three profiles of romantic partners' participation were identified: involved, ambivalent, or not involved. In the first circumstance, partners had a conversation about intentions and agreed to try to become parents in the near future; in the second option, the father's opinion was not clear; and in the last circumstance there was no clear communication between partners regarding pregnancy intentions:

"I wanted to have a baby; I told him (the boy who likely fathered her baby) I wanted to. It seems like he was havin' sex just to have sex. He didn't care about what I had to go through now. I think I might quit havin' sex, it can hurt. I want to know who the baby's father is" (Spear 2004, p. 341) Discussion between the adolescent mothers and their romantic partners regarding becoming pregnant was sometimes mentioned, but the father's level of involvement in the actual decision to conceive was not always clear.

Quality Criteria Findings

Quality review indicated that the included studies had considerable variation in methodological quality (see Table 3). However, given the limited nature of research conducted to explore young people's views and the variety of methods used to collect data, this level of variance between studies is not unexpected. (Rich and Ginsburg 1999).

The most consistent limitation noted in the included studies was poor quality reporting regarding procedures used. Vague or limited description of methods and inadequate description of data collection were commonly noted across studies. Divergence in descriptions of the research process was also observable between the articles reporting findings from the same cohort (e.g., Montgomery 2001, 2002). In addition, sampling reporting was inconsistent. There were also concerns regarding generalizability, in terms of the extent to which theory derived from qualitative research is applicable to other individuals in similar situations (Horsburgh 2003).

Discussion

The primary aim of the current review was to identify and evaluate the major themes emerging from qualitative studies exploring intended adolescent pregnancy. Six overarching themes emerged from the synthesis of the included studies: Desire and Closeness; Negative perceptions of pregnancy and "fears"; Benefits and positive aspects of pregnancy; Ambivalence and Fatalism; Others perceptions; Common characteristics of adolescents who become pregnant. The majority of the data collected in these studies express a sampling of young people's views. In this respect, the review provides a synthesis of themes that represent the perspectives of adolescents' themselves on the topic of intended adolescent pregnancy. The participants were adolescents of different reproductive status (pregnant, not pregnant, or parenting), and therefore the synthesis results combined accounts of young people's views from several vantage points.

In terms of the predominant themes emerging from the synthesis, *Desire and Closeness* was prominent, reflecting the high frequency and salience within the articles of a rationalization of the desire to become pregnant or to "have a baby". Items in this theme emphasized relational aspects of motherhood, in contrast with more practical aspects. The latter consideration was reflected in the theme *Benefits and positive aspects of pregnancy*.

Although it is estimated that the majority of teenage pregnancies are unintended and "the first conscious decision that many teenagers make about their pregnancy is whether to have an abortion or to continue with the pregnancy" (Social Exclusion Unit 1999, p. 28), the findings of the review show that for some adolescents a certain degree of decision-making occurs prior to conception. Despite the common belief that adolescent pregnancies are outcomes of inadequate sexual education and ignorance about contraception (Drife 2004), many participants described a coherent awareness of the connection between sexual intercourse and pregnancy, and clear intentions to conceive.

One possibility is that the *desire* theme reflects an attachment or relational perception of the baby as a contributor to the mother's emotional wellbeing (Goldberg 2000). For instance, longing for love from parents, partner, or the future child, was a notable construct. Similarly, the need for stability in life and compensation for emotional neglect experienced from carers were frequently mentioned motives. It is noteworthy, however, that for some participants a desire to have a baby was not directly linked to being a parent as presented by one of Montgomery's (2002) interviewees who wanted a baby around, but said that a younger sibling would have been equally satisfying.

The perceived drawbacks of pregnancy were grouped in the theme *Negative perceptions of pregnancy and "fears"*. Particularly relevant to the subject of the reviews the notion that some adolescents who became pregnant intentionally were disappointed with how reality did not meet their expectations. This post-birth construct juxtaposed with the striking optimism presented by some pregnant interviewees (e.g., Spear 2001) draws attention to the role of the possibility of having an idealized image of what life would be like after conception. It has been suggested that cognitive maturity plays a role in sexual and reproductive decision-

Table 3 (Quality	assessment	of	included	studies
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References	Abstract and title	Introduction and aims	Method and data	Sampling	Data analysis	Ethics and bias	Results	Transferability or generalizability	Implications and usefulness
Burns (1999)	Good	Good	Good	Poor	Good	Good	Good	Poor	Good
Coleman and Cater (2006)	Fair	Fair	Good	Poor	Fair	Fair	Good	Poor	Good
Crump et al. (1999)	Good	Fair	Good	Poor	Fair	Fair	Good	Poor	Good
Hanna (2001)	Fair	Poor	Fair	Poor	Poor	Poor	Fair	Poor	Fair
Herrman (2008)	Good	Fair	Good	Poor	Good	Good	Good	Poor	Good
Kegler et al. (2001)	Fair	Fair	Good	Poor	Good	Fair	Good	Poor	Good
Kendall et al. (2005)	Fair	Fair	Good	Poor	Good	Poor	Good	Poor	Poor
Montgomery (2001)	Fair	Very poor	Fair	Poor	Fair	Fair	Good	Poor	Fair
Montgomery (2002)	Good	Good	Good	Poor	Good	Good	Good	Poor	Good
Montgomery (2004)	Fair	Fair	Good	Poor	Fair	Good	Good	Poor	Good
Redwood et al. (2012)	Fair	Fair	Fair	Poor	Poor	Fair	Good	Poor	Fair
Rosengard et al. (2006)	Good	Fair	Good	Poor	Good	Fair	Good	Poor	Good
Schwartz et al. (2010)	Good	Good	Good	Good	Good	Poor	Good	Good	Good
Smith et al. (2013)	Good	Fair	Good	Poor	Good	Fair	Good	Poor	Good
Smith Battle (1995)	Fair	Good	Good	Poor	Fair	Poor	Good	Poor	Good
Smith Battle (1998)	Fair	Fair	Fair	Poor	Good	Poor	Good	Poor	Good
Spear (2001)	Fair	Fair	Good	Poor	Good	Good	Good	Poor	Good
Spear (2004)	Fair	Good	Good	Poor	Good	Good	Good	Poor	Good

making (Shearer et al. 2002) and, depending on an individual's cognitive stage, the ability to accurately envisage the consequences of pregnancy may be limited (Gordon 1990). Sheeder et al. (2009) noted that adolescents are prone to define benefits and costs of parenting by the circumstances of their relationship with their partner rather than in consideration of life plans.

Perceived benefits of early childbearing were grouped in *Benefits and positive aspects of pregnancy*. Although a great part of the literature emphasizes the disadvantages of teenage parenthood (Coleman 2011), observations such as that pregnancy causes a favorable change in an adolescent's life and is not an obstacle for vocational accomplishments are supported by some more recent studies (e.g., Ermish and Pevalin 2003). Zeck et al. (2007) examined long term outcomes of Austrian females who gave birth at the age of 17 or younger and found that within 5 years

from delivery a significant part of mothers obtained higher level education and were more satisfied in certain aspects of life compared with a reference group. Such reports of young mothers' subjective assessment indicate that the common belief that adolescent pregnancy generates hardship may not be true for all teenage mothers, although this may itself be subject to contextual considerations, such as cultural background.

In contrast to the unequivocal perceptions depicted above, the synthesis revealed a group of concepts expanding beyond a simplistic desire to become pregnant. Some statements indicated young people's ambivalence toward pregnancy and a fatalistic vision of conception as an event being beyond their control. Such voices were grouped in the theme *Ambivalence and Fatalism*. In some cases the reason for failure to use contraception was an intention to conceive. However, for a percentage of

participants there was no conscious intent to do so, and vet they deliberately neglected to use contraception. Equivocal viewpoints have also been observed in quantitative investigations of adolescents' attitudes toward childbearing. Stevens-Simon et al. (1996) found that in a group of 200 pregnant teenagers 20 % said they did not use contraception because they "did not mind getting pregnant" (p. 48). Additionally, Jaccard et al. (2003) in their longitudinal study showed that between 15 and 30 % of participating teenagers presented "some degree of ambivalence toward becoming pregnant relative to their peers" (p. 79). Therefore, our themes and existing research suggest that there is a lack of coherence and contradiction within adolescent's attitudes to intended pregnancy that fits with the position of adolescence as a developmental period where individuals demonstrate fluidity in their identity and beliefs.

Our synthesis also clarifies how much existing health education and/or folk beliefs regarding adolescent childbearing inform young people's subjective understanding of intended pregnancy. General statements about teenage motherhood were distinguished from more specific observations regarding common characteristics of adolescent pregnant females. Views that went beyond participants' personal experiences were grouped in the theme Others perceptions. For example, opinions such as that teenage pregnancy is a common and acceptable event, and that pregnancy does not significantly alter one's life were placed in this theme. Such beliefs suggest that in some social contexts early childbearing may be a norm. We also note that the observation that "[t]he social networks of young people in their families and communities are significant sources of cultural beliefs and of social support" has significant implications (Jones 2005, p. 3). In communities where early parenting is acceptable and encouraged, ordinary attempts to reduce unintended pregnancy rates may prove unsuccessful.

Findings from qualitative research cannot be statistically representative of other populations (Horsburgh 2003), however, some of the Common characteristics of adolescents who become pregnant identified in the synthesis are consistent with findings from quantitative studies. For example, risk factors for teenage pregnancy identified by Dennison (2004) include experiencing deprivation, being a child of an adolescent mother, and low educational achievement. However, a USA longitudinal study that used pregnancy intentions as a variable showed that in terms of social milieu features (such as parental relationship status, household-social problems, and having a friend who experienced pregnancy) teenage pregnant females who wanted a baby did not differ from participants for whom pregnancy "just happened" (Rubin and East 1999). Further research should address these contradictory findings.

Limitations

We acknowledge several limitations of the current review, both in terms of the implementation of the review and the limitations of the primary research. Firstly, with regard to the review methodology, there are several approaches to integrating qualitative research (e.g., meta-ethnography, grounded theory, case survey, narrative summary), and this review was naturally constrained by the limitations of the chosen method (Saini and Shlonsky 2012). The process of qualitative synthesis is inherently interpretive, therefore open to subjectivity and potential bias (Dixon-Woods et al. 2005). In this respect, we acknowledge the first author's midwifery background and the second author's training as Clinical Psychologist could have influenced their interpretation.

Secondly, we note limitations inherent to the reporting of the primary research included in the review. The quality of the review may have been constricted by the variability of the included studies. Methodological shortcomings of the included studies including lack of clarity regarding what constitutes a theme, and differences in reporting made it difficult to extract and synthesize data. These difficulties are common weaknesses in synthesizing findings from qualitative studies. (Sandelowski and Barroso 2002). Nevertheless, given the scarcity of eligible data in this emerging field, it may be justified to have broad inclusion criteria to accurately summarize the literature. It has, however, been noted that general standards regarding systematic synthesis of qualitative data are needed (Carroll et al. 2012).

A further limitation was multiple reporting from similar cohorts (e.g., Montgomery 2001, 2002), including discrepancies in documented procedures within different publications from the same cohort. Furthermore, data could be extracted in different quantities from various articles due to the diversity of included studies. For example, a great proportion of original data was extracted from studies focusing primarily on planned teenage pregnancy (e.g., Montgomery 2002), while studies such as Schwartz et al. (2010), which used a nearly quantitative design, provided little qualitative data that could be synthesized.

Implications for Research and Practice

Studies used various forms of pregnancy intentions measurements and many used retrospective assessment of such intentions. Retrospective evaluation of attitudes toward conception may be a source of recall bias due to *ex post* rationalization (Joyce et al. 2002). Therefore, a more unified, efficient, and reliable tool to assess pregnancy attitudes among young people is needed (Smith et al. 2013). Both qualitative and quantitative longitudinal studies exploring pregnancy intentions may help achieve that goal.

Another explanation for the disparate findings of the review may be the lack of clarity regarding definitions in this area (Rocca et al. 2010). Further research is warranted to illuminate how young people, practitioners, and researchers understand these constructs. Likewise, more practical aspects of attitudes toward pregnancy should be further explored. A previous quantitative study found that, regardless of age, and in comparison with those who conceive unintentionally, adolescents who intend to become pregnant do so from a position of personal and social strength; yet this strong background was not reflected in more healthy behaviors (Sheeder et al. 2009). Identifying whether negative outcomes associated with teenage pregnancy (e.g., Fraser et al. 1995) apply equally to pregnancies that are anticipated as to unwanted conceptions could be the goal of future research. Similarly, clarification of characteristics placing adolescents at higher risk for pregnancy due to positive attitude toward early childbearing will aid development of mental and physical health policies tailored to the needs of this specific group.

Conclusion

The research on intended teenage pregnancy reviewed in the article was heterogeneous and presented several methodological shortcomings. That said, the findings draw attention to the complexity of adolescent pregnancy intentions and indicate the potential differences in attitudes that occur across various social contexts (Carter and Spear 2002). This variance has important implications for needsmatched health care as different groups may require different approaches. Moreover, inaccurate perceptions of the benefits associated with pregnancy suggest there may be a need for more comprehensive reproductive health education. The identified shortcomings in the research in this field could be addressed by selecting adequate designs and emphasizing the need for transparency in reporting. Future research should focus on providing a greater understanding of pregnancy intentions among adolescents and developing more efficient measures of these attitudes.

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