How can health professionals enhance interpersonal communication with adolescents and young adults to improve health care outcomes?: systematic literature review

Bora Kim and Kate White

Cancer Nursing Research Unit, CNRU, Sydney Nursing School, University of Sydney, Sydney, Australia

ABSTRACT

Health care professionals’ interpersonal communication skills with adolescents and young adults play a vital role in early identification of issues, provision of emotional support, effective illness management and health education. The aim of this systematic review of research was to examine the literature on different aspects of interpersonal communication with young clients in health care settings, in order to understand barriers and facilitating factors in their communication for better health care outcomes. Twenty-three articles published between January 2004 and September 2014 were collected via CINAHL, Medline, PsycINFO and Sociological Abstracts. The findings revealed three major themes: (1) challenges of addressing sensitive and intimate aspects of young clients’ lives; (2) trust and sense of emotional safety was a prerequisite for open and engaging communication; and (3) importance of having a sense of inclusion and autonomy. Recommendations arising from the review were: (1) overcome the barriers in discussing health-related concerns that are sensitive in nature by developing routine screening and clear intervention pathways; (2) routinely inform young clients about legal and professional obligations in treating their information; (3) develop resources and training opportunities for health professionals to build ethical reasoning skills, skills to assess young clients’ cognitive competencies, and skills to assess situational contexts to better negotiate the dynamics between parents and a young client; and (4) increase awareness of the importance of humanistic engagements to promote open and engaging communication.

HIGHLIGHTS

• Young clients and health care providers experienced communication barriers when involving young clients’ sensitive and personal aspects of life. Strategies and tools could moderate these barriers for better psychosocial care and preventative health.
• Trust and emotional safety was a critical element in communicating with young clients during health care visits, and this promoted open and engaging communication.
• It was important for young clients to feel included and autonomous during health communication. Health care providers required specific skills to balance these needs with the influence of parents.

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CONTACT

Bora Kim
bora.kim@sydney.edu.au

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Introduction

The significance of the period known as adolescence and young adulthood is highlighted in relation to the crucial developmental process of preparing and transitioning to adulthood. During this period, the important developmental milestones are reached, and the young person develops a greater understanding about who they are, and form their self-identity (Erikson, 1968; Koepke & Denissen, 2012). Becoming more independent and autonomous also occurs during this time (Blos, 1967; Koepke & Denissen, 2012). They start to recognize demands of society and find ways to reconcile these with their own desires, motivations and a sense of self (Adams & Marshall, 1996; Erikson, 1959). In doing so, they strive to establish self-sufficiency by building tangible (e.g. skills, financial, educational credentials) and intangible (resilience, interpersonal skills) capacities to adapt to a society (Côté, 1996, 2002). It is also a period for young people to make commitments through the process of actively exploring and negotiating their identity (Luyckx, Goossens, Soenens, & Beyers, 2006; Marcia, 1966, 1980).

A successful transition through these processes equips them with psychological, social and resourceful self-sufficiency. These are also prerequisites for a purposeful and fulfilling life, as well as having a healthy psychological capacity to adjust to life changes (Pals, 1999). The holistic health care of a young person must take into account these developmental processes and accompanying characteristics and health care needs. Health care professionals’ interpersonal communication skills and awareness of these developmental processes with this group play a vital role.

This systematic literature review investigates current knowledge of the health professionals’ interpersonal communication practice with this age group. In particular, it aims to identify barriers and facilitating factors to help with: firstly, identifying potential and actual health issues of adolescents and young adults; secondly, supporting their health-promoting behaviours; and thirdly, reducing their psychosocial burdens during an illness experience.

Background

Adolescence and young adulthood is a critical period of a person’s life in that one is exposed to a number of psychosocial and physical health risks. During this period, a high degree of exploratory behaviours are common as part of the process of establishing and developing self-identity (Marcia, 1966). Meanwhile, the cognitive capacity for balanced reasoning is not yet fully developed (Yurgelun-Todd, 2007). For these reasons, adolescence and young adulthood are characterized by increased likelihood of engaging in risky behaviours (Ritchie et al., 2013; Sturdevant & Spear, 2002). This exploratory nature of youth coupled with a sense of invincibility can increase risky behaviours such as illicit drug use, binge drinking and unprotected sex (Beyers, Toumbourou, Catalano, Arthur, & Hawkins, 2004). Therefore, health services need to be equipped with preventative measures, while encouraging other healthy outlets for identity explorations (Ellis et al., 2012).

Studies have documented a high prevalence of psychological symptoms and accompanied comorbidities in adolescents and young adults. The investigation of the lifetime prevalence of mental disorders conducted by Merikangas et al. (2010), using a nationally representative sample of adolescents (n = 10,123) in the US has shown significantly high prevalence of psychological symptoms. These include anxiety disorders, behaviour disorders, mood disorders and substance use disorders, from which almost 20% of the sample showed functional impairment (Merikangas et al., 2010). A longitudinal study conducted by Costello, Mustillo, Erkanli, Keeler, and Angold (2003) with a representative population sample of adolescents also supported the high prevalence of mental issues during this period. Young adults are also more vulnerable to substance use and co-occurring mental health issues compared to older adults (Chan, Dennis, & Funk, 2008). Australian data also demonstrate similar figures, showing 14.1% of children and adolescents (n = 4083) having mental health issues (Sawyer et al., 2001). In the study by Scott et al. (2012), 16% of Australian adolescents and young adults (n = 494) reported having suicidal thoughts.

When adolescents or young adults are diagnosed with a chronic illness or have a disability, the developmental process can become more complicated. Chronic illness can delay physical growth and
puberty which can hinder healthy psychosocial maturation (Suris, Michaud, & Viner, 2004). Cognitive or physical disability can interfere with a young person developing a sense of autonomy and independence (Shulman & Rubinroit, 1987). Life-limiting illness such as cancer causes intense emotional responses such as fear, anxiety, sense of uncertainty and existential concerns (Anderzén-Carlsson, Sörlie, & Kihlgren, 2012; Corbeil, Laizner, Hunter, & Hutchison, 2009; Decker, Haase, & Bell, 2007; Patterson, Millar, Desille, & McDonald, 2012; Shaha & Bauer-Wu, 2009). It also has an impact on their body image and concept of self (Carpentier & Fortenberry, 2010). Interpersonal changes especially in their peer relationships can hinder their psychosocial development (Patterson et al., 2012; Woodgate, 2006; Zebrack, Chesler, & Kaplan, 2010). Educational and vocational delays can cause distress for not being able to carry out their developmental tasks (Corbeil et al., 2009; Keim-Malpass et al., 2013; Patterson et al., 2012).

Likewise, adolescents and young adults with and without chronic illnesses are exposed to various psychological and physical health risks due to their psychosocial vulnerability, as well as their developmental characteristics and accompanying needs. Health care providers’ communication practices play a vital role in terms of early identification of concerns, emotional support, implementation of preventative measures, effective illness management and health education (Alfano, Zbikowski, Robinson, Klesges, & Scarinci, 2002; Bonito, Horowitz, McCorkle, & Chagpar, 2013; Bultman & Svarstad, 2000; Kelly, Kratz, Bielski, & Rinehart, 2002; Pollak et al., 2010; Thorne, Bultz, & Baile, 2005; Zachariae et al., 2003). Early intervention to moderate health risks can bring benefits both to the individual’s wellbeing and the health care system’s cost-effectiveness (Madras et al., 2009; Solberg, Maciosek, & Edwards, 2008). This is particularly relevant to the health care context for adolescents and young adults where exposure to preventable health risks is high, and these potentially have lasting effects on their subsequent life stages (Chandra-Mouli et al., 2013; McGorry, Purcell, Hickie, & Jorm, 2007).

Especially in adolescents and young adults who have chronic illnesses, the consequences of health risks and psychosocial complications are greater, due to the complexities of their illness burden on their development. Specialized communication skills are particularly instrumental in this context (Michaud, Suris, & Viner, 2004; Suris, Michaud, Akre, & Sawyer, 2008; Suris & Parera, 2005; Young, Dixon-Woods, Windridge, & Heney, 2003). A systematic literature review was conducted to inform health professionals how to achieve a developmentally sensitive interpersonal communication practice with adolescents and young adults.

**Aim**

The aim of the current systematic literature review was to examine published research that investigated different aspects of interpersonal communication with adolescents and young adults in health care settings, in order to understand barriers and facilitating factors in their communication for better health care outcomes. Personal, interpersonal and contextual aspects of communication were examined. The findings will inform current practice.

**Material and methods**

**Search methods**

The data were retrieved for studies published between January 2004 and September 2014, in the English language and peer reviewed. A systematic database search was undertaken including Medline, Psych INFO, CINAHL and Sociological Abstracts. Additionally, manual search strategies were used including author tracing and reviewing related articles until no more new studies were identified that met the inclusion criteria.

Target population was searched using the keywords identifying adolescents and young adults including the following: young adult* or adolescen* or teen* or youth* or young or emerging adult*. This strategy was chosen over using MeSH terms of adolescents and young adults, in order not to omit studies which defined young adults from late teens to late twenties, as MeSH terms had a limited age
scope. Themes were initially limited using MeSH terms including the domains of education, communication, decision-making, professional–patient relationship and psychotherapy. This was not refined enough to serve the purpose of this review, as this resulted in a large portion of studies in domains of health education at a public health level rather than an interpersonal level.

Subsequently, other strategies were tested. The final strategy which best identified studies examining interpersonal communication was to combine two domains of MeSH terms, and make variations of these combinations. For instance, a block of MeSH terms pertaining to professional–patient relations (exp professional–patient relations/or exp dentist–patient relations/or exp duty to recontact/or exp nurse–patient relations/or exp physician–patient relations) and a block of MeSH terms pertaining to communication (exp communication/or exp information seeking behaviour/or exp language/or exp narration/or exp negotiating/or exp nonverbal communication/or exp teach-back communication/or exp verbal behaviour) were combined. Doing so resulted in studies which focused on communication with a particular aspect of the client–health care provider relationship. More detailed descriptions of this search process are documented in Appendix 1.

Inclusion and exclusion criteria

Articles which investigated personal, interpersonal and contextual dimensions of communication between young clients (i.e. adolescent and young adult clients) and health care providers were included. Both face-to-face and other modes of communication such as the Internet were included. Intervention studies such as an evaluation of a skill training or testing of communication tools were included. Several studies included children under the age of 10 along with adolescents. Of those, studies were excluded when the data were analyzed in a manner where adolescent-relevant results could not be extracted. Furthermore, studies were excluded when the interpersonal communication components were a minor focus.

Quality appraisal and data analysis

Quality appraisal was conducted with three different tools: (1) The Critical Appraisal Skills Programme (CASP) assessment tool for qualitative studies (CASP, 2014); (2) Critical appraisal of quantitative studies by the Evidence-Based Library and information Practice (EBLIP) tool (Glynn, 2006) for quantitative studies; and (3) Critical appraisal of mixed method studies using the Mixed Methods Appraisal tool (MMAT) (Pace et al., 2012) for mixed methods studies. The quality appraisal results are reported in Appendix 2.

In order to integrate findings from different research paradigms (i.e. quantitative and qualitative), a strategy of analyzing mixed data were used. Several approaches are suggested by scholars in examining mixed data including sequential vs. concurrent integration, one being (either qualitative or quantitative) dominant analytic strategy and the other approach playing a supportive or explanatory role (Johnson & Onwuegbuzie, 2004), or modifying data (e.g. qualitizing numeric data, quantitizing qualitative data) in one form in order to enhance the analysis (Bazeley, 2012).

In this literature review, findings from quantitative and qualitative studies were concurrently synthesized by reviewing findings from three different aspects, i.e. intrapersonal, interpersonal and contextual factors hindering or facilitating communication with young clients in health care settings. Data were treated under an assumption that an integration of knowledge can become possible when fragmented knowledge derived from various analytical strategies can be combined in such a way that they become interdependent in reaching a unified explanation of topic being investigated (Bazeley, 2010).

Results

The search identified 23 studies, and the search result flow chart is presented in Figure 1. Descriptions of participants and study sites are outlined in Table 1 and the characteristics of participants are categorized in Table 2. The characteristics of included studies are described in detail in Appendix 3. Studies are
mostly conducted in primary care sites with teenage clients. The areas investigated in the papers include early identification of health-related issues, promotion of healthy life habits and supportive care. There is a lack of evidence informing communication practice with young clients who have a chronic illness, in particular during hospital stay. Little study has been conducted on the perceptions and barriers of health professionals regarding their communication practice with young clients.

The question guiding the analysis was: What act as barriers or facilitating factors when communicating with youth that influence their health care outcomes?

Three salient themes were identified as informing this research question. These provide insights into the personal, interpersonal and contextual aspects of communication barriers and facilitating factors.

**Challenges of addressing sensitive and intimate aspects of young clients’ lives**

The analysis of the included studies reported that communication barriers existed when revealing sensitive and personal aspects of young clients’ lives. The barriers deriving from this were experienced not only by the young clients, but also their parents and health care providers (Harvey et al., 2008; Quinn & Vadaparampil, 2009; Quinn et al., 2009; Woynarowska-Soldan, Tabak, & Doroszewska, 2014). Barriers and challenges were experienced when discussing what are considered to be ‘taboo’ or sensitive topics, such as sex (Harvey et al., 2008; Quinn & Vadaparampil, 2009; Quinn et al., 2009). Topics that were considered private and not normally raised in a social context between strangers such as childhood abuse and mood issues were also hard to communicate to health care providers (Harvey et al., 2008).
Discussing sexuality, sexual health and fertility matters with young clients was considered to be important due to their increased likelihood of engaging in risky sexual behaviours (Eaton et al., 2012) and developmental significance of fertility during this period (Newman & Newman, 2014). However, embarrassment and fear of being judged for being sexually active prevented young clients from discussing health-related concerns (Alli, Maharaj, & Vawda, 2013; Harvey et al., 2008). In addition, due to the social stigma that is attached to this topic, barriers existed not only in young clients, but also in parents and health professionals in a form of embarrassment and awkwardness (Quinn & Vadaparampil, 2009; Quinn et al., 2009), which is reflected in the following comments from paediatric oncologists:

Table 1. Descriptions of the participants and study sites.

| Study sites                  | Participants’ characteristics | No specific sites                                                                 |
|------------------------------|------------------------------|----------------------------------------------------------------------------------|
| Young clients                |                              |                                                                                  |
|                              | Alli et al. (2013)            | Rutherford et al. (2010)                                                        |
|                              | Britto et al. (2010)          | Schaeuble et al. (2010)                                                          |
|                              | Brown and Wissow (2009)       | Harvey et al. (2008)                                                            |
|                              | Carcone et al. (2013)         | Hum et al. (2011)                                                                |
|                              | Croom et al. (2011)           | Mulvihill et al. (2005)                                                          |
|                              | Davey et al. (2013)           | Woynarowska-Soldan et al. (2014)                                                 |
|                              | Binder et al. (2011)          |                                                                                  |
|                              | Hudson et al. (2008)          |                                                                                  |
|                              | Klostermann et al. (2005)     |                                                                                  |
|                              | Wendt et al. (2011)           |                                                                                  |
|                              | Martyn et al. (2013)          |                                                                                  |
| Young clients and health professionals |                          |                                                                                  |
| Health professionals          | McKee et al. (2011)           | Bray et al. (2012)                                                              |
|                              |                              | Quinn and Vadaparampil (2009)                                                    |
|                              |                              | Quinn et al. (2009)                                                             |
| Young clients, parents and health professionals |                          |                                                                                  |
|                              | de la Pena et al. (2012)      |                                                                                  |

Table 2. Characteristics of the youth participants.

| Types of condition | Participants with chronic illnesses | Participants with or without chronic illnesses | Studies not specifying the health status of participants | Psychosocial issues |
|--------------------|-------------------------------------|-----------------------------------------------|--------------------------------------------------------|---------------------|
| Teenagers (up to 18 or 19 years of age) | Croom et al. (2011) | Britto et al. (2010) | Brown and Wissow (2009) | Binder et al. (2011) |
|                    | van Staa (2011)                    | Klostermann et al. (2005)                      | Carcone et al. (2013)                                  | de la Pena et al. (2012) |
|                    |                                    | Schaeuble et al. (2010)                        |                                                        |                      |
| Young adults (aged between 18 and 29) |                                 |                                               |                                                        |                      |
| Teenagers and young adults |                                    |                                               |                                                        | Hudson et al. (2008) |
Talking about this (fertility matter) with males mean talking about masturbation and in some Hispanic families that is not acceptable. Having to talk through an interpreter also makes it awkward for everyone. (Quinn et al., 2009, p. 340)

There is a certain degree of embarrassment (with parents) … I’ve had parents say it’s a good idea, I want you to go talk to my kid, and I don’t want to be in the room. (Quinn & Vadaparampil, 2009, p. 398)

Unsettling emotions when revealing one’s private self to a health care provider who is a stranger but also a potential helper were reflected in several studies. Such aspects of the private self include emotional and psychological struggles (Binder, Moltu, Hummelsund, Sagen, & Holgersen, 2011), drug use (Hudson, Nyamathi, & Sweat, 2008), sexual behaviour (Alli et al., 2013; Klostermann, Slap, Nebrig, Tivorsak, & Britto, 2005), peer pressure (Klostermann et al., 2005), family issues (Klostermann et al., 2005) and romantic relationships (Schauble, Haglund, & Vukovich, 2010). In Binder et al. (2011), the experience of exposing one’s private self within the context of psychotherapy was described as ‘feeling vulnerable, ambivalent, strange, and a potentially shameful experience to open up and become emotionally engaged’ (Binder et al., 2011, p. 559). The participants expressed feeling worried for being misunderstood, belittled or judged (Binder et al., 2011).

On the other hand, a study conducted by Brown and Wissow (2009) showed that adolescents were more likely to feel more understood and actively participate in their care when primary health care providers raised sensitive health topics such as mood, substance use, relationship with parents and sexuality. It is unclear if this was due to the training undertaken by the primary health care providers who raised those sensitive matters to their young clients.

Nonetheless, studies have shown that when raised in an appropriate manner with appropriate resource support, discussing sensitive health issues can be beneficial for young clients. For instance, prematurely raising topics that were personal in nature without establishing emotional comfort acted as a barrier to communication. However, having informal conversations to ease the awkwardness and tension were appreciated by many participants, which facilitated engaging communication (Binder et al., 2011; Britto, Tivorsak, & Slap, 2010; Klostermann et al., 2005; Schauble et al., 2010). Utilizing supportive aids such as a comprehensive risk assessment tool acted as a bridge to initiate some sensitive health matters with youth in an explicit way (Martyn et al., 2013). In addition, improving external factors such as insurance coverage facilitated discussing health issues (Mulvihill et al., 2005).

As mentioned previously, literature revealed the barriers experienced not only by the young clients but also the health care providers in discussing young clients’ sensitive and private health matters. Some reported feeling uncertain as to if and how much personal history should be taken when the primary reason for the visit was not directly related to sensitive topics, and initiating potentially embarrassing conversations may or may not benefit young clients (Bray, McKenna, Sanders, & Pritchard, 2012). Some health care providers reported feeling vulnerable when initiating conversations involving sensitive topics, as they are not certain how they are legally protected, and concerned about being unfavourably treated against their young clients if and when legal disputes arise (Bray et al., 2012). Perhaps for these reasons, having youth-focused guidelines improved adolescent–provider communication in discussing health issues including substance abuse, sexual behaviours, suicide, physical abuse and mood problems (Mulvihill et al., 2005).

**Trust and sense of emotional safety was a prerequisite for open and engaging communication**

Young clients in the included studies expressed their desire to maintain a sense of integrity through humanistic interactions during health care visits, and by having their confidentiality being respected. It appeared that ensuring a sense of integrity and informational safety were vital elements in their communication to gain trust and a sense of emotional safety. This appeared promote collaborative engagement in their own care.

In studies conducted by Binder et al. (2011), participants described that when they experienced an authentic intention for caring, this contributed to building a sense of trust that their health care providers
were working for their best interest with a non-judgemental attitude. This enabled them to more easily
discuss health issues that can be often personal and sensitive. Humanistic engagement of health care
providers helped to foster trust from young clients which was characterized as sincere caring, being
empathetic, respectful, not objectifying, being honest, making them feel worthy of time and effort,
and being open and friendly (Binder et al., 2011; Britto et al., 2010; Hudson et al., 2008; Klostermann
et al., 2005; de la Pena, Friedlander, Escudero, & Heatherington, 2012; Rutherford, Pitetti, Zuckerbraun,
Smola, & Gold, 2010; Schaeuble et al., 2010). All these attributes contain some degree of underlying
quality of an authentic intention to care and respect these young clients (2011).

Likewise, humanistic engagement encouraged them to gain a sense of emotional safety, and open up
to their health care providers more readily and mutually discuss their health-related matters (Binder et
al., 2011; Hudson et al., 2008; Klostermann et al., 2005; Wendt, Lidell, Westerståhl, Marklund, & Hildingh,
2011). Adolescents' levels of perceived respect and quality of interpersonal communication were also
significantly correlated with the overall satisfaction in a paediatric emergency department (Rutherford
et al., 2010). In Woynarowska-Soldan et al. (2014), almost 70% of adolescent respondents (n = 716) who
reported feeling safe and secure, identified that this originated from the perception that their physician
is professional and a kind person who they can trust.

The young clients' concerns for privacy were derived from the fear of being judged by others (espe-
cially parents and health care providers), embarrassment (Britto et al., 2010; Davey, Asprey, Carter,
& Campbell, 2013; Harvey et al., 2008; Klostermann et al., 2005; Schaeuble et al., 2010), and effort to
protect their personal boundaries (Davey et al., 2013; Klostermann et al., 2005). A study conducted by
Harvey et al. (2008) reviewed adolescents' email consultations and revealed that negative keywords
such as ‘afraid,’ ‘embarrassed,’ ‘stressed’ and ‘scared’ frequently appeared with the keywords, ‘tell,’ ‘ask’
and ‘talk,’ implying adolescents' concerns about confidentiality when sharing sensitive health issues.
This was more apparent in younger adolescents, perhaps due to their being at a stage in life when
they are more self-conscious and sensitive to others’ judgement about them (Klostermann et al., 2005).

In addition, deciding whether to disclose information, and concerns for confidentiality were often
described in relation to a matter of having/or not having trust in the health care providers (Klostermann
et al., 2005; Schaeuble et al., 2010), rather than in relation to professionalism. This may be due to the
lack of understanding of legal and professional obligations regarding confidentiality (Davey et al., 2013;
Harvey et al., 2008).

**Importance of having a sense of inclusion and autonomy**

Several studies indicated how the dynamics between young clients, parents and health care providers
impacted on the way their health communication shapes, and how this influences the young client's
perception on their own health. Adolescents in the included studies tended to form triadic dynamics
during communication (Britto et al., 2010; Quinn & Vadaparampil, 2009; Schaeuble et al., 2010; van
Staa, 2011), but when the participants were in late adolescence to young adulthood, the trend was to
strive for an autonomous role and mutual relationships with their health care providers (Schaeuble et
al., 2010; van Staa, 2011).

Young clients often showed desires for mutual interactions with parents and health care providers
during health communication, playing more autonomous roles, and having a sense of ownership of
their own health care (van Staa, 2011). These study participants expressed their desire to have control
over their personal information (Britto et al., 2010; Schaeuble et al., 2010), and be treated as the pri-
mary person with whom health matters should be discussed (Britto et al., 2010; Schaeuble et al., 2010).
When the dynamics did not meet the young clients' need for independence and autonomy, this was
expressed as non-verbal communication of discontent, such as non-compliant behaviours or being
verbally rebellious (van Staa, 2011).

Some participants expressed the desire to have control over their own personal information. Tension
arose due to the nature of their transitioning period to adulthood when aiming to develop independ-
ence while some level of dependence still remained. It was evident that some parents desired and
attempted to have control over their child's health information. Some considered this as their right, as they argued that they will be affected by the consequences of their child's health-related behaviours, such as being pregnant (McKee, Rubin, Campos, & O’Sullivan, 2011).

Concerns regarding confidentiality constituted a frequent theme in the included studies (Klostermann et al., 2005; Schaeuble et al., 2010), and deemed to be an important aspect of high-quality care (Schaeuble et al., 2010). In contrast, Harvey et al. (2008) found that some adolescents acknowledged that their health information will have to be communicated to their parents eventually. However, they wanted health professionals to serve as a bridge between the two so that the conversation could be initiated and moderated by the health care providers.

Health care providers acknowledged the challenging dynamics between their young clients and parents, as well as the competing priorities in handling young clients’ information. Such priorities include young clients’ confidentiality, and the need for parental engagement in intervening in health issues (McKee et al., 2011; Quinn & Vadaparampil, 2009). However, in the study by van Staa (2011), being a negotiator between the two, and at the same time promoting young clients’ autonomous role were described as being ‘tricky’ (van Staa, 2011, p. 460).

For some parents, their desire to control their child’s health information appeared to be partly rooted in the intention to act in the best interests of their child (Quinn & Vadaparampil, 2009; van Staa, 2011). Not only young clients’ parents, but also the health professionals experienced a similar dilemma and the ensuing emotional challenges, for example whether or not to fully inform their young clients about their health information which could potentially deliver either little that was good or much distress (Quinn & Vadaparampil, 2009). All of this implies the underlying notion that they need to make decisions as to what is best for their child/young client.

From the young clients’ perspective, it was not only about a matter of making the right decision, but the significance of being included and having control over their care (Schaeuble et al., 2010), a sense that their personal information was secured (Schaeuble et al., 2010) and establishing an autonomous role in discussing their health (Hudson et al., 2008). These factors had an impact on how the young person perceived and managed their health. For instance, Croom et al. (2011) revealed a positive link between patient-centred communication and patient empowerment which then linked to improved diabetes management in adolescents (Croom et al., 2011). Health care providers’ open-ended questions while being sensitive to adolescent clients’ autonomy and personal choices in making healthy lifestyle changes were strong predictors in motivating the clients to make positive changes (Carcone et al., 2013). Similarly, adolescents who were in the ‘self-confident and autonomous patient’ category during consultation demonstrated more independence and higher self-efficacy during hospital visits compared to the ‘backseat patient’ and ‘worried & insecure patient’. Conversely, too much domineering-type communication by the therapist and competitive dynamics between young clients during counselling were linked to superficial, non-engaging and passive health communication and resulted in less mutuality (de la Pena et al., 2012).

Engaging young clients in health communication also required a personable approach with appropriately framed (e.g. mutual, non-judgemental) prompts so that they could evaluate own health risks and demonstrate their personal motivation to change their health-related behaviours (Carcone et al., 2013; Martyn et al., 2013). In particular, the Event History Calendar (EHC) in Carcone et al. (2013) provided a tool for health care providers and young clients to exchange contextual information to enhance individualized health communication, showing increased involvement of young clients. Interestingly, Hum, Robinson, Jackson, and Ali (2011) reported adolescent smokers’ intention to smoke declining when screened, but increased when they were both screened and advised. This outcome reflects the importance of framing the health advice with sensitivity to their developmental characteristics in order to prevent counterproductive outcomes.

**Discussion**

The present literature review explored ways to improve communication with youth in health care contexts in order to find ways to effectively address and intervene in actual and potential health-related
issues. These results were analyzed and merged into three salient domains: (1) challenges of addressing sensitive and intimate aspects of young clients’ lives; (2) trust and sense of emotional safety was a prerequisite for open and engaging communication; and (3) importance of having a sense of inclusion and autonomy. These domains provide insights into how and why some communication barriers and challenges may exist. Drawing from these findings, this paper will discuss the implications for health professionals and policy-makers.

The importance of humanistic engagement during health communication emerged as one of the most salient themes in the included studies. This seemingly taken-for-granted quality such as being kind and empathetic appears to shift the way these young clients engage in their own health care by developing a sense of emotional safety and trust, while feeling uncertain and vulnerable during health care visits. It also allows them to have more mutual and engaging interactions with health care providers. The important role of humanistic engagement in health communication is also documented in the study by Berg and Danielson (2007) who investigated a non-youth health care context. Hartrick (1997) also highlighted that therapeutic communication is fundamentally based on mutual and supportive relationships with patients, more so than skillful actions (e.g. saying the right thing). Despite its significance, organizational constraints acted as barriers to maintaining humanistic engagements (Alli et al., 2013; Berg & Danielson, 2007). The constraints such as short contact time and heavy patient loads were mistakenly interpreted as being ‘too rigid’, ‘tense’, ‘impatient’ and ‘not friendly’ by youths (Alli et al., 2013).

Implementing recommended practice warrants comprehensive approaches at different levels of health care that encompass patients’ behaviours, individual health care providers’ competencies and beliefs, team culture, organizational support, and environmental factors. Understanding the obstacles exist in different levels can lead to implementing the best recommended practice (Grol & Grimshaw, 2003). Communication barriers are also multi-levelled. This includes occupational culture discouraging and devaluing the recommended communication practices (e.g. regarding communicating with patients as a ‘luxury’ or ‘being lazy’), workload that does not allow such practices, lack of inter-professional support structure to deal with emotional distress and burnouts (Chant, Jenkinson, Randle, & Russell, 2002).

While much communication training has resulted in positive outcomes, the feasibility and sustainability of a practical application is unclear (Butler, Degner, Baile, & Landry, 2005). Chant et al. (2002) pointed out the issues of teaching ‘ideal’ communication practices which lack practical applicability. This is attributable to the lack of an organizational-level involvement in the communication research designs and project-based programmes; in this scenario their feasibility in real-life settings has not been sufficiently considered (Butler et al., 2005). As alluded to in Alli et al. (2013), improvements in communication with young clients can be expected when other factors such as time constraints and staff burnouts are also moderated. Butler et al. (2005) have argued that organizational structures need to: firstly, accommodate the recommended communication practice; and secondly, implement an ongoing accreditation process in order to create a culture that promotes a high-quality communication practice.

The current review identified that the communication barriers can stem from the dynamics between young clients and parents. Many participants in late adolescence in the included studies desired mutual communication with health care providers in their health care. There were positive health outcomes when this was respected (Levetown, 2008). This also upholds an ethical obligation of protecting the young client’s integrity and autonomy; the right to practice self-determination and be unconstrained by external agencies (Beauchamp & Childress, 2001; Rendtorff, 2002). However, this can be clinically and ethically challenging for health professionals as young clients’ chronological age does not always match their cognitive reasoning capacity (Driggs, 2001). The review also has highlighted that the health care providers often needed to negotiate young client–parent dynamics, and the extent of their involvement in decision-making and care.

Consequently, engaging young clients in making health care decisions requires health care providers with specific skills and knowledge (Chant et al., 2002). These skills and knowledge include: providing information in a sufficient, yet age-sensitive manner (Levetown, 2008; Mårtenson & Fägerskiöld, 2008); and interpersonal skills to negotiate and intervene in conflicts between a young client and parents.
sensitively to the degree that both young clients and parents feel included and display mutual trust (Mårtenson & Fägerskiöld, 2008; van Staa, 2011). It also incorporates the capacity to make a judgement when complex ethical dilemmas arise, with thorough considerations of guiding ethical principles, young clients’ cognitive competence, legal implications and situational contexts (e.g. exerted external power) (Mårtenson & Fägerskiöld, 2008; Slonina, 2007).

Several communication barriers originated from the nature of health care which inevitably involved sensitive aspects of youth clients’ lives. Concerns for confidentiality, fear of being judged, uncertainty as to how much information to share, became the barriers to having open and mutual communication with health professionals. Young clients’ lack of understanding of legal and ethical obligations of health care providers regarding confidentiality was also a communication barrier.

These communication barriers are especially problematic as many leading causes of mortality and morbidity in young clients, such as binge drinking, drug use, suicide attempts, unprotected sex and smoking, are preventable, and the damage they cause can extend well into adulthood (Eaton et al., 2012). When a young client has an illness such as cancer, these preventable health risks can exacerbate negative effects (Fern et al., 2013; Murphy, Klosky, Termuhlen, Sawczyn, & Quinn, 2013). Early identifications and referrals reduce the extent of such health risks as well as in overall functional domains such as employment, housing status and mental health (Madras et al., 2009). For this reason, informing young clients why certain questions are being asked, what services are offered, health care provider’s ethical and professional responsibilities, and policies regarding confidentiality become important elements of health communication (Davey et al., 2013; Wendt et al., 2011). When handled correctly, this can reduce the sense of uncertainty and enable young clients to maintain emotional safety, thus making it easier for them to readily discuss their health-related concerns.

Challenges were also noted by health care providers in terms of having to address some sensitive and personal information concerning young clients. These included emotional barriers such as awkwardness and embarrassment, and also a lack of protocols or knowledge on how the situation is to be handled (Bray et al., 2012; McKee et al., 2011).

Clear protocols need to be in place in handling sensitive health information, supported by referral pathways to systematically screen health risks of young clients, as well as creating a culture where the value and normality of doing so are acknowledged by both health care providers and young clients. This in turn needs to be supported by the provision of communication training that builds health care professionals’ personal insights on how their own emotions and interpersonal dynamics can influence the nature of their communication with young clients (Kelly et al., 2002; Krasner et al., 2009; Mulvihill et al., 2005).

**Conclusion**

Communicating with adolescents and young adults needs to reflect the unique nature of their health care needs during their developmental period when increased preventative health risks and complicated illness experiences can impact on their development. This systematic literature review examined intrapersonal, interpersonal and contextual elements which hinder and facilitate communication with young clients in health care settings, in order to suggest ways for improvement. Collectively, the following suggestions are made from the current literature review: (1) implement strategies to reduce the barriers in raising and discussing health-related concerns that can be sensitive and personal in nature, by creating a culture of doing so as a normal and necessary process, supported by clear pathways of interventions and referral systems; (2) making a routine practice of informing youth clients about legal and professional obligations in treating their information; (3) developing resources and training opportunities for health professionals to build ethical reasoning skills, skills to assess young clients’ cognitive competencies and skills to assess situational contexts. The skills training should also consolidate interpersonal skills to negotiate dynamics between parents and a young client, in a way that maintains a sense of inclusion of both parties, as well as a sense of autonomy of a young client; and (4) increase awareness of the importance of humanistic engagements when communicating with youth.
This needs to be supported by research that produces evidence measuring the amount of resources that are required for such recommended practice to become feasible.

**Disclosure statement**

No conflict of interest has been declared by the authors.

**Notes on contributors**

*Bora Kim* is a research officer at the Cancer Nursing Research Unit, University of Sydney, Australia. She has research interest in improving the psychosocial care of patients with cancer, especially in the adolescents and young adult group.

*Kate White* is a chair of Cancer Nursing Research Unit, University of Sydney, Australia. She has research interest in improving the care of patients in cancer services.

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### Appendix 1. Search Strategies

**A search strategy using Ovid Medline (1946 to September Week 2 2014) and PsychINFO (2002 to September Week 3 2014) combined search via Ovid databases**

All blocks of the search processes were limited to the English language, peer reviewed journals, and published between 2004 and September 2014.

(1) **Block 1. Target population**
1. (young adult* or adolescent* or teen* or youth* or young or emerging adult*).ti.-306262

(2) **Block 2. Theme**
Initially used MeSH terms for ‘education’, ‘communication’, ‘decision-making’ and ‘professional–patient relationship’. This strategy was not refined enough for the purpose of this review. Therefore, two or more MeSH term results were combined, resulting in more refined results.

2. education/or exp education, nonprofessional/or exp health education/or exp consumer health information/or exp health education, dental/or exp health fairs/or exp patient education as topic/or exp sex education/or exp teach-back communication/-257163
3. exp communication/or exp information seeking behaviour/or exp language/or exp narration/or exp negotiating/or exp nonverbal communication/or exp teach-back communication/or exp verbal behaviour/-517569
4. exp decision-making/or exp choice behaviour/or exp consensus/or exp ‘dissent and disputes’/or exp negotiating/or exp uncertainty/-177261
5. exp professional–patient relations/or exp dentist–patient relations/or exp duty to recontact/or exp nurse–patient relations/or exp physician–patient relations/-124771
6. psychotherapy/or crisis intervention/or narrative therapy/or psychoanalytic therapy/or psychotherapeutic processes/or psychotherapy, brief/or psychotherapy, multiple/or psychotherapy, psychodynamic/or psychotherapy, rational-emotive/or reality therapy/or socioenvironmental therapy/-112063
7. 3 and 5 – 27,746
8. 3 and 4 – 20,356
9. 4 and 5 – 8341
10. 2 and 5 – 10,743
11. 5 and 6 – 9134
12. 7 or 8 or 9 or 10 or 11 – 64,869
Population combined with themes
(3) Block 3. Methodology
14. limit 13 to (‘therapy (maximizes sensitivity)’ or ‘diagnosis (maximizes sensitivity)’ or ‘prognosis (maximizes sensitivity)’ or clinical prediction guides (maximizes sensitivity)’ or ‘qualitative (maximizes sensitivity)’) – 976

(4) Block 4. Language, publication types and time period
15. limit 14 to English language – 886
16. limit 15 to peer reviewed journal – 874
17. limit 16 to yr = '2004 –Current’ – 559

A search strategy using CINAHL

All blocks of the search processes were limited to the English language, peer reviewed journals, and published between 2004 and September 2014.

(1) Block 1. Target population
1. (young adult* or adolescent* or teen* or youth* or young or emerging adult*).ti, 756

(2) Block 2. Theme
The following index have been used: ‘education’, ‘teaching’, ‘communication’, ‘information’, ‘decision-making’ and ‘psychotherapeutics’:
2. educate/or educates/or educated/or educating/education/or educational/or educationally/or educations/- 1540
3. teach/or teaches/or teaching/- 31
4. communicate/or communicates/communicated/or communicating/communication/or communications/- 233
5. information/or informed/or informants/or informant/or informer/or informers/- 1866
6. decide/or decides/or deciding/or decision/or decision-maker/or decision-makers/or decision-making/or decisions/- 630
7. psychotherapeutics/or psychotherapy- 28
8. 2 or 3 or 4 or 5 or 6 or 7- 3830
Population combined with themes
13. 1 and 7 – 229

A search strategy using Sociological Abstracts

(1) Block 1. Target population
1. (young adult* or adolescent* or teen* or youth* or young or emerging adult*) in publication title, limited to the English language, peer reviewed journals, and published between 2004 and September 2014- 5358

(2) Block 2. Theme
Initially used the keywords ‘communication’, ‘education’, ‘teaching’, ‘information’, ‘decision-making’ and ‘psychotherapy’. This strategy was not refined enough for the purpose of this review. Therefore, index results were combined with the keyword ‘communication’, resulting in more refined results.
2. pub(communicat*) AND ab(educat*)- 134
3. pub(communicat*) AND ab(teach*)- 31
4. pub(communicat*) AND ab(informat*)- 481
5. pub(communicat*) AND ab(decision*)- 87
6. pub(communicat*) AND ab(psychotherap*)- 2
7. 2 or 3 or 4 or 5 or 6 – 676
Population combined with themes
8. 1 and 7 – 25
### Appendix 2. Quality appraisal results

Critical appraisal of qualitative studies using the Critical Appraisal Skills Programme (CASP) assessment tool (CASP, 2014)

| References                | Aims and methods | Research design | Recruitment strategy | Data collection | Reflexivity | Ethical considerations | Data analysis and results | Discussion of findings | Theoretical or practical values | Overall quality |
|---------------------------|------------------|-----------------|----------------------|-----------------|-------------|------------------------|----------------------------|------------------------|-------------------------------|------------------|
| Alli et al. (2013)        | Strong           | Moderate        | Weak                 | Weak            | Weak        | Moderate               | Moderate                   | Strong                 | Moderate                      | Moderate         |
| Binder et al. (2011)      | Strong           | Strong          | Strong               | Strong          | Strong      | Moderate               | Strong                     | Strong                 | Strong                         | Strong           |
| Bray et al. (2012)        | Strong           | Strong          | Strong               | Strong          | Strong      | Moderate               | Strong                     | Strong                 | Strong                         | Strong           |
| Britto et al. (2010)      | Strong           | Strong          | Strong               | Strong          | Moderate    | Moderate               | Strong                     | Strong                 | Strong                         | Strong           |
| Davey et al. (2013)       | Strong           | Strong          | Strong               | Strong          | Moderate    | Moderate               | Strong                     | Strong                 | Strong                         | Strong           |
| Hudson et al. (2008)      | Strong           | Strong          | Strong               | Strong          | Unclear     | Strong                 | Moderate                   | Strong                 | Strong                         | Strong           |
| Klostermann et al. (2005) | Strong           | Strong          | Strong               | Strong          | Unclear     | Moderate               | Moderate                   | Moderate               | Moderate                      | Moderate         |
| McKee et al. (2011)       | Strong           | Strong          | Strong               | Strong          | Strong      | Moderate               | Moderate                   | Strong                 | Strong                         | Strong           |
| Quinn and Vadaparampil (2009) | Strong        | Moderate        | Strong               | Strong          | Unclear     | Weak                   | Strong                     | Strong                 | Strong                         | Strong           |
| Quinn et al. (2009)       | Strong           | Strong          | Strong               | Strong          | Unclear     | Weak                   | Strong                     | Moderate               | Moderate                      | Moderate         |
| Wendt et al. (2011)       | Strong           | Strong          | Strong               | Strong          | Moderate    | Moderate               | Strong                     | Strong                 | Strong                         | Strong           |

Critical appraisal of quantitative studies using the Evidence-Based Library and information Practice (EBLIP) tool (score of 75% or above indicates that it is safe to conclude the study is valid) (Glynn, 2006)

| References | Calculation for overall validity (%) |
|------------|--------------------------------------|
| Brown and Wissow (2009) | 85 |
| Carcone et al. (2013) | 82.6 |
| Croom et al. (2011) | 91.3 |
| de la Pena et al. (2012) | 72.7 |
| Harvey et al. (2008) | 88.2 |
| Hum et al. (2011) | 65.2 |
| Mulvhill et al. (2005) | 77.2 |
| Woynarowska-Soldan et al. (2014) | 69.5 |

Critical appraisal of mixed method studies using the Mixed Methods Appraisal tool (MMAT) (Pace et al., 2012, p. 51, 52)

| References | Qualitative (1.1–1.4) | Quantitative descriptive (4.1–4.4) | Mixed methods (5.1–5.3) | Overall |
|------------|-----------------------|-----------------------------------|------------------------|---------|
| Martyn et al. (2013) | Moderate              | Strong                            | Strong                 | Strong  |
| Rutherford et al. (2010) | Weak                   | Strong                            | Moderate               | Moderate|
| Schaeuble et al. (2010) | Strong                 | Weak                              | Strong                 | Strong  |
| van Staa (2011) | Strong                 | Strong                            | Strong                 | Strong  |
### Appendix 3. Summary of study characteristics

| Research designs | Settings | Participants characteristics | Sample sizes | Investigated communication components | Aims and main findings |
|------------------|----------|------------------------------|--------------|----------------------------------------|------------------------|
| Alli et al. (2013) | In-depth interviews with health care providers | University health care facility | Young clients 18–24 years | 200 young clients 4 staff members | Interpersonal dynamics during communication | The aim of the study was to investigate the effects of interpersonal relationships on young people’s access to health services and their satisfaction. Although young people were aware of the importance of assessing reproductive health care, they experienced communication barriers with health care providers. This suggests the need for adequate training to overcome communication barriers and interact with young clients that facilitate their access to services. |
| Binder et al. (2011) | Interviews | Outpatient clinics in public mental health system | Adolescent clients (16–19 years, requiring mental health intervention) | 14 adolescent clients | Interpersonal dynamics during communication | The aim was to explore how adolescents preferred their therapists to interact with them when establishing a therapeutic relationship. The study illustrated that they felt vulnerable at the beginning of therapy. They needed to establish a working relationship with therapists in a way that fosters trust and autonomy. |
| Bray et al. (2012) | Focus groups | Acute health care hospital | Health care providers (nurses, allied health professionals, psychologists, doctor) | 24 health care professionals | A topic of communication (sexual health) | The aim was to explore how health care professionals initiate and maintain sexual health conversations with youth in an acute care setting. The study highlighted the different approaches taken by health care providers including avoidance, reluctance and confidence. These were influenced by their level of knowledge, information, personal beliefs and environmental factors. |
| Britto et al. (2010) | Focus groups | Participants recruited from outpatient and community settings (church, school, summer recreation programme) | Adolescent clients (11–19 years, with or without chronic illnesses) | 54 adolescent clients | An element of communication (Privacy) | The aim was to understand adolescents’ preferences for different aspects of privacy in health care settings. The study highlighted that adolescents not only valued informational privacy, but also other aspects of privacy including psychological, social and physical privacy. |
| Study | Methodology | Setting | Participants | Analysis | Findings |
|-------|-------------|---------|--------------|----------|----------|
| Brown and Wissow (2009) | Secondary analysis of a randomized controlled trial evaluating communication trainings | Primary health care setting | Adolescent clients (11–16 years) | 358 adolescent clients | An element of communication (sensitive health topics) <br>The aim was to determine whether the discussion of sensitive health topics during primary care visits was correlated with young clients' treatment participation and perceptions of the health care providers. The study found that discussing sensitive health topics during primary care visits may positively influence their perceptions of care |
| Carone et al. (2013) | Coding videotaped motivational interviewing sessions | Clinic | Adolescent clients (12–17 years) | 37 adolescent clients | Communication strategy (motivational interviewing) <br>The aim was to identify communication strategies that most predict adolescents’ motivational statements for weight loss. Reflective statements and open-ended questions focusing on the clients’ personal circumstances with sensitivity to their autonomous decision-making were effective communication strategies. They evoked adolescent participants’ motivational statements |
| Croom et al. (2011) | Survey, laboratory results | Clinic | Adolescent clients (11–14 years, with type 1 diabetes) Parents | 190 adolescent clients | A communication framework (patient-centred communication) <br>The aim was to examine if adolescents’ perceptions of patient-centred communication with the health care workers correlate with patient empowerment and treatment outcomes. The study found that the perceptions of patient-centred communication during health care visits may empower adolescents and parents in managing diabetes |
| Davey et al. (2013) | Interviews | GP practices | Young adult clients (18–25 years) | 20 young adult clients | Communication barriers <br>The aim was to examine possible reasons for less satisfaction in young clients’ health care. The study identified barriers to primary care services including difficulties negotiating the services, and issues regarding communication and mutual trust with their GP |
| de la Pena et al. (2012) | Sequential analyses of videotaped family therapy sessions | Clinic | Adolescent clients (13–18 years) Families Health care providers (therapists) | 39 adolescent clients and their families | Interpersonal dynamics during communication <br>The aim was to examine the associations between the working alliance and therapist–adolescent communication patterns in conjoint family therapy. The study found that the competitive responses by therapists were associated with problematic alliance and poor communication with adolescent clients |
| Harvey et al. (2008) | Corpus linguistic analysis of emails | Online | Adolescent clients (teenagers) | 62,794 emails written by teenage users | Mode of communication <br>The aim was to investigate concerns and communication barriers among teenagers seeking online health advice. The study found that teenagers readily expressed their health concerns and showed directness in their email consultations. This suggests that email has the potential to facilitate and supplement traditional in-person consultations |
| Research designs | Settings | Participants characteristics | Sample sizes | Investigated communication components | Aims and main findings |
|------------------|----------|-----------------------------|--------------|----------------------------------------|-----------------------|
| Hudson et al. (2008) | Focus groups | Shelters | Young adult clients (18 and 25, homeless youth with substance abuse) | 54 young adult clients | Interpersonal dynamics during communication Non-verbal communication | The aim was to explore the perspectives and experiences of homeless youth regarding interpersonal relationships with health care providers. Four themes emerged relating to interpersonal barriers to their care, suggesting several strategies to re-integrate this population into society. |
| Hum et al. (2011) | Survey | Unable to determine (participants recruited from schools) | Young clients (average age 16.9 years) | 5154 respondents | Effects of communication on preventative health (on tobacco use) | The aim was to examine the relationship between the perceived physician communication and adolescents' attitudes towards and knowledge about smoking, and quitting behaviours. The study found physicians' screening and advice on tobacco use indicated positive effects on tobacco cessation in adolescent clients. |
| Klostermann et al. (2005) | Focus groups | Community and hospital-based clinics | Adolescent clients (11–19 years, with or without chronic illness) | 54 adolescent clients | Elements of interpersonal communication (trust, confidentiality) | The aim was to explore how adolescents perceive patient-physician trust and to identify physician behaviours that can be modified to promote their health care. The study describes strategies that foster patient-physician trust. |
| Martyn et al. (2013) | A secondary analysis of a randomized controlled trial evaluating a communication tool and guidelines | Clinics | Young clients (15–27 years) | 186 young clients | Usefulness of communication tools | The aim was to compare communication outcomes after the use of EHC and GAP. The study found both EHC and GAP to be an effective communication tool when caring for youths. |
| McKee et al. (2011) | Interviews | Urban health centres in areas of paediatrics, family medicine, and adolescent medicine | Health care providers (nurse practitioners or physicians) | 18 primary care clinicians | An element of interpersonal communication (confidentiality) Interpersonal dynamics during communication (between adolescent client and parent) | The aim was to explore primary care clinician's patterns and decisions regarding having time alone with adolescents and their parents, and experiences of delivering confidential services. The study found that clinicians reported commitment to offering time alone with adolescent clients, but practiced inconsistently. |
| Mulvihill et al. (2005) | Survey | Unable to determine (participants recruited through an organization) | Adolescent clients (12–18 years) | 1689 respondents | Structural factors influencing communication (having health insurance) | The study examined the effects of insurance enrollments on adolescent-provider communication. Results revealed that having insurance increased adolescent participants' readiness to discuss health-related issues. |
| Study                         | Methodology                                      | Setting                                      | Participants                                      | Elements of Communication                                      | Findings/Research Questions                                                                                                                                                                                                 |
|-------------------------------|--------------------------------------------------|----------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quinn and Vadaparampil (2009) | Interviews                                       | Clinical centres                            | Health care providers (oncologists)               | 24 oncologists                                                  | The aim was to explore the barriers experienced by physicians in discussing fertility issues with adolescents in the cancer care context. The finding illustrated several sources of barriers including: feeling awkward due to the limited options; and difficulties in negotiating between adolescent clients and their parents. |
| Quinn et al. (2009)           | Interviews                                       | Cancer centres                              | Health care providers (paediatric and adult oncologists) | 26 paediatric oncologists, 28 adult oncologists                 | The aim was to examine if physicians' personal discomfort with the topic of fertility preservation and cancer patients' prognosis would influence the likelihood of having discussions regarding fertility preservation. The study found that the majority of respondents' personal comfort with discussing fertility preservation was related to the likelihood of having the discussion. |
| Rutherford et al. (2010)      | Survey                                           | Paediatric emergency department             | Young clients (13–21 years)                      | 100 young clients                                               | The aim was to measure adolescents' overall health care satisfaction and contributing factors to satisfaction. It examined how these factors interacted with length of stay and triage acuity. The study showed that the overall satisfaction was strongly correlated with interpersonal communication and respect. |
| Schaeuble et al. (2010)       | Focus groups survey                              | Paediatric primary care clinic, a regional paediatric hospital and health system | Young clients (14–19 years with and without chronic conditions) | 24 adolescent clients                                           | The aim was to examine adolescents' preferences for provider interactions. Four themes emerged from the study: forming a relationship, informing confidentiality, caring attitude and supporting independence. |
| van Staa (2011)               | Sequential mixed methods (interviews, Q-methodology, observations, focus groups, web-based questionnaires) | Hospital setting                             | Face-to-face interviews: young clients (12–19 years, with chronic conditions) | 31 adolescents (face-to-face interview)                         | The aim was to integrate findings of mixed methods research to understand adolescents' preferences and competencies for communication during consultations. The study found that adolescents had different preferences regarding health communication, but wished to be involved as a main contributor. There were discrepancies between self-efficacy and actual involvement during consultations, suggesting the need for promoting their autonomous roles. |
| Wendt et al. (2011)           | Survey                                           | Youth centres responsible for cervical screening | Young females (23–29 years)                      | 413 young females                                               | The aim was to illustrate young women's perceptions of being asked questions regarding sexuality and sexual abuse by midwives or doctors during gynaecological examination. Six categories emerged describing why it was considered appropriate to raise questions. |
| Woynarowska-Soldan et al. (2014) | Survey                                          | Unable to identify (participants recruited from a school) | Adolescent clients (14–15 years)               | 716 adolescent clients                                         | The aim of the study was to understand adolescents' feelings of connectedness with physicians during medical visits and perceptions of their caring behaviours. The study results provided descriptions of these feelings and perceptions. It also highlighted important elements of interpersonal communication with adolescents. |