

**The dimensions of uncertainty and ambiguity in adolescents and young adults' romantic relationships:
A systematic review**

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Abstract

Contemporary romantic relationships in adolescence and young adulthood no longer follow a linear trajectory but come to be increasingly characterized by high heterogeneity. Social networks have also constituted a new context for interaction, which has given rise to the tendency to enact behaviors characterized by uncertainty and ambiguity. This study aims at providing a framework of the existing literature contributions on the dimensions of relational uncertainty and relational ambiguity in adolescents and young adults' romantic relationships. A state-of-art systematic review was performed on PsycInfo, Google Scholar, Scopus, and Science Direct, adopting the PRISMA statement. Through a qualitative analysis, four themes emerged from the 23 included articles: (a) the definitions of relational uncertainty and relational ambiguity, (b) the impact on the quality of the romantic relationship, (c) communicative and individual outcomes, and (d) coping strategies.

Keywords: relational uncertainty, relational ambiguity, romantic relationships, young adults, adolescents

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Introduction

Romantic relationships play a pivotal role in adolescence and young adulthood (Arnett, 2000; Seiffge-Krenke, 2003). As a matter of fact, they represent one of the major developmental tasks in both stages of life and a training ground for the acquisition of important relational skills needed to sustain and function well in future intimate relationships (Collins, Welsh, & Furman, 2009; Young, Furman, & Laursen, 2011; Davila et al., 2017; Cucci, Davila, Olivari, & Confalonieri, 2020).

Experiences in the romantic field have significant implications on individual's well-being and adjustment in adulthood, contributing to the construction of a positive self-concept and an increased social integration (Montgomery, 2005; Gómez-López, Viejo, & Ortega-Ruiz, 2019). Moreover, the development and maintenance of healthy relationships result to be associated with higher levels of self-esteem, life satisfaction, positive affectivity and fulfilment of both individual and relational aims (e.g., Dush & Amato, 2005; Davila et al., 2017).

The contemporary romantic landscape is increasingly characterized by the exploration of a variety of romantic and sexual experiences and pathways (Orpinas, Horne, Song, Reeves, & Hsieh, 2013; Lanz, Oliveira, & Tagliabue, 2017). Indeed, romantic relationships both in adolescence (Rowley & Hertzog, 2016) and young adulthood (Glenn & Marquardt, 2001) do not follow a clearly defined trajectory of development anymore. Authors, indeed, claim that contemporary romantic relationships are less scripted by social norms, thus requiring more flexible interpersonal abilities (Larson, Wilson, Brown, Furstenberg, & Verma, 2002; Lanz et al., 2017).

Within this scenario, online technologies have become an integral part of most people's lives, providing new opportunities for romantic relationships (e.g., to start relationships with people never met in offline contexts, to quickly find out information about potential partners, to publicly present one's partner to others by sharing pictures or comments online) and significantly changing relationships construction and maintenance (Gibbs, Ellison, & Lai, 2011; Rus & Tiemensma, 2017; Goldberg, Yeshua-Katz, & Marciano, 2022). As a matter of fact, a study conducted by the Pew Research Center (Lenhart & Duggan, 2014) highlighted the pervasiveness of technology on young adults' romantic relationships, as the 45% of users aged 18-29 reported that the Internet had a strong influence on their romantic relationships, either positive (e.g., offering the possibility to employ digital technologies to settle a dispute that partners were unable to solve in person) or negative (e.g., the increasing use of smartphones while spending time with one's partner).

More recently, Vaterlaus, Tulane, Porter, and Beckert (2018) examined the perceived impact of interactive technology on adolescents' romantic relationships. Results showed that participants considered the use of interactive technology as modifying the way young people relate with romantic partners. Participants identified both benefits (e.g., having more control over the self-presentation to others, to open up more easily about intimate aspects than in the face-to-face context) and costs (e.g., the reduction of face-to-face contact and the possibility to fall into misinterpretation while communicating through text-based messages, thus facilitating conflict or discussions).

In light of the previous considerations, it emerges that romantic relationships appear to be less clearly normed from a social point of view. Additionally, with the introduction of new technologies, the variety of possible configurations and trajectories of romantic relationships has exponentially increased and both adolescents and young adults tend to engage in highly heterogeneous romantic relationships.

Considering the importance of romantic relationships in adolescence and young adulthood, some scholars (e.g., Knobloch & Solomon, 1999; James-Kangal, 2020) have begun to investigate the construct of relational uncertainty and alongside the one of relational ambiguity. Overall, these two constructs both refer to confusion and concerns about one's feelings and intentions, partner's commitment and interest, and the nature and potential future course of the romantic relationship.

On the basis of this foreword, a review of the current literature on the constructs of relational uncertainty and relational ambiguity appears to be fundamental to summarize the main findings on the theme and to deepen the understanding of contemporary romantic relationships.

Aim

Literature on relational uncertainty and ambiguity is heterogeneous due to theoretical and methodological variety. Therefore, the first aim of the present review is to define relational uncertainty and relational ambiguity, clarifying their meanings. Furthermore, this review also aims to offer a critical summary of the state of evidence concerning relational uncertainty and ambiguity within romantic relationships in adolescence and young adulthood.

The present work will provide a synthesis of the evidence in the literature to delve deeper into the constructs of interest and the associated variables and outcomes. This may represent a starting point for future research on the theme and may help to better understand contemporary romantic relational dynamics.

Materials and Method

Literature Search Strategy

A review of the existing literature was conducted between January 2023 and August 2023 on the constructs of relational uncertainty and relational ambiguity through an extensive search of the following high-quality standards databases, including peer-reviewed studies: PsycInfo, Google Scholar, Scopus and Science Direct. The search terms included English keywords: *relational uncertainty*, *relational ambiguity*, *relationship ambiguity*, *relationship uncertainty*, *romantic relationship**, *intimate relationship**. The search did not have a publication year limit.

The inclusion criteria for retrieving articles were: (a) a focus on relational uncertainty and relational ambiguity specifically in the romantic context; (b) participants' age had to range between adolescence and young adulthood, namely between 14 and 30 years old; (c) published in English and Italian; (d) availability of the full text and abstract. Records that focused on other contexts (such as the working environment or the clinical setting) were excluded. Moreover, studies that comprised mixed samples (e.g., young adults and adults) or those in which part of the participants reported to be married were excluded. Additional exclusion criteria included the "grey literature" (i.e., encyclopaedias, reports from conferences or symposia, editorials, discussions, examinations) and studies in which the authors did not provide information about participants' age. Finally, to identify supplementary articles, backward citation tracking was also conducted by examining the reference lists of included articles.

Figure 1 shows the flowchart of the search strategy: 681 records were retrieved in the identification phase through the database searching and 6 additional records were identified through backward citation. Screening for duplicates, 47 records were removed. Accordingly, 640 articles were screened by evaluating the titles and abstracts and 559 were rejected because their content was irrelevant for the topic, the field of the research was not appropriate for the purpose of the present review and the sample was not that of interest. Then, 81 articles were retrieved in full text and assessed. In the third phase (i.e., inclusion), 23 articles were included in the systematic review: 19 from the databases and 4 from

other methods. Therefore, 58 articles were excluded because the sample included married participants, studies were conducted on a mixed population (e.g., young adults and adults), the age of participants was not specified (e.g., analysis were conducted on comments posted online by unknown participants), and the content was not adequate for the review purpose (e.g., uncertainty related to parent-child relationship).

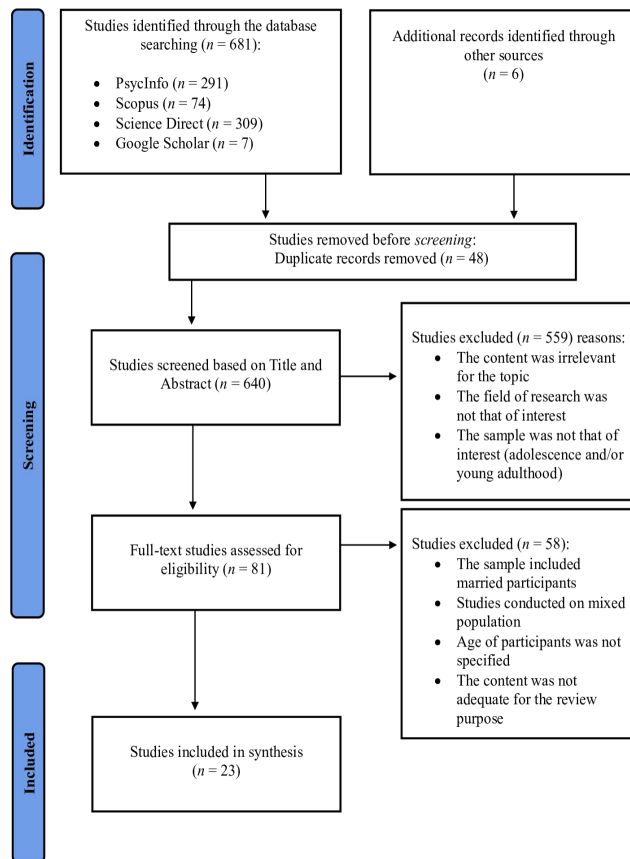


Fig. 1 - PRISMA flow diagram for study selection and inclusion

Data Abstraction, Analysis, and Synthesis

The software Zotero version 6.0.26, a reference management tool, was used to carry out the process of data management. At the beginning, all search results were exported to Zotero to enable offline title and

abstract screening. Zotero was additionally employed for the identification and the subsequent merge of duplicates before the screening phase.

A synthesis of the main characteristics of the 23 articles included was made, highlighting first author and publication year, country, sample size, age range/mean age and main findings. Successively, the articles results were descriptively summarized using thematic aggregation. Four descriptive themes emerged at the end of this process: (a) the definitions of relational uncertainty and relational ambiguity, (b) the impact on the quality of the romantic relationship, (c) communicative and individual outcomes, and (d) coping strategies.

Results

In this section the main findings that emerged in the literature on the constructs will be presented. In particular, the definitions of relational uncertainty and ambiguity, the influence of relational uncertainty on the quality of romantic relationships, the potential communicative and individual outcomes of relational uncertainty and relational ambiguity and the strategies employed to manage the related feelings will be described.

Table 1 summarizes the main characteristics of the 23 included articles by the previous review phases, reporting first author and publication year, country, sample size, age range/mean age and main findings.

Tab.1 - *Synthesis of the studies included in the systematic review in chronological order*

Reference	Country	N	Age Range/ Mean Age	Main Findings
Knobloch & Solomon, 1999	USA	162	18-30, M _{age} =20.23 (SD = 1.94)	Results identified three sources of the construct of relational uncertainty: self uncertainty, partner uncertainty and relationship uncertainty
Knobloch, Solomon, & Cruz, 2001	USA	132	18-30, M _{age} =20.27 (SD = 1.69)	Results highlighted that relational uncertainty was positively linked to cognitive jealousy
Solomon & Knobloch, 2004	USA	209	18-30, M _{age} =20.50 (SD = 1.91)	Negative appraisals and relational uncertainty were positively associated
Knobloch & Carpenter-Theune, 2004	USA	216	18-22, M _{age} =18.44 (SD = 0.78)	Findings showed that relational uncertainty was positively associated with topic avoidance. Moreover, relational uncertainty mediated the relationship between intimacy and topic avoidance

Theiss & Solomon, 2006	USA	215	18-29, M _{age} =20.71	Relational uncertainty was positively associated with appraisals of irritations and negatively associated with intimacy. Moreover, self-uncertainty was negatively correlated with direct communication about potential conflicts
Theiss & Solomon, 2006	USA	295	18-30, M _{age} =20.72	Relational uncertainty was negatively correlated with intimacy and communicative directness and positively associated with cognitive jealousy
Solomon & Theiss, 2008	USA	315	18-30, M _{age} =20.72	Intimacy was negatively correlated with relational uncertainty. Moreover, the perceived level of intimacy predicted perceptions of relational uncertainty
Draucker, Martsolf, & Stephenson, 2012	USA	88	18-21	Relationship ambiguity stems from inexperience, reluctance to define the relationship from one or both partners, different expectations concerning intimacy, fidelity and obligation, lack of communication. Relationship ambiguity could eventually lead to violence and aggression within the relationship
McCurry, Schrodt, & Ledbetter, 2012	USA	204	M _{age} =19.00 (SD=1.85)	Relational uncertainty appeared to be negatively associated with the frequency and comfort in discussing religious and/or spiritual topics with the partner. Similarity in religious affiliation and intimacy moderated the relationship between relational uncertainty and religious conversation frequency
Stewart, Dainton, & Goodboy, 2014	USA	281	18-30, M _{age} =20.05 (SD = 1.72)	Relational uncertainty was negatively correlated with Facebook maintenance behaviors (FB assurances and FB openness) and positively associated with online monitoring
Montoya, Faiella, Lynch, Thomas, & Deluca 2015	USA	Study 1= 42; Study 2= 78	Study 1: M _{age} =18.70 (SD=0.72) Study 2: M _{age} =18.91 (SD = 0.90)	Study 1: females tend to like more people whose expressed attraction is certain, rather than uncertain Study 2: uncertainty from a possible partner is associated with greater attraction, which is mediated by the desire to reduce the uncertainty condition
Len-Ríos et al., 2016	USA	44	15-19, M _{age} =16.39	Latino adolescents believe that platforms that allow one-to-one communication (e.g., Skype) may reduce uncertainty and increase intimacy with the partner. On the other side, SNSs represent a context that endorses relational uncertainty
Vallade, Dillow, & Myers, 2016	USA	36	19-24, M _{age} =21.19 (SD = 1.33)	One of the main motives of extradyadic interactions with friends is trying to manage/reduce relational uncertainty experienced within the relationship with the partner
Solomon, Knobloch, Theiss, & McLaren, 2016	USA	/	/	Relational uncertainty is linked to biased cognitive appraisals which undermine the understanding of a specific situation and the processing of information

Clifford, Vennum, Busk, & Fincham, 2017	USA	244	$M_{age}=19.50$ (SD = 1.41)	Relational uncertainty was found to positively correlate with avoidance of relationship talk and negatively correlate with relationship dedication
Birnbaum et al., 2018	Israel	160	Study 4: 18-30, $M_{age}=24.50$ (SD = 2.27)	Low levels of uncertainty regarding partner's intentions associated with partner's expression of interest correlate with higher levels of partner's desirability
Frampton & Fox, 2018	USA	36	18-23, $M_{age}=20.06$ (SD = 1.29)	SNSs are used to gather information about own partner's previous romantic relationships. This may lead to feelings of uncertainty, which subsequently may increase retrospective jealousy
Brisini & Solomon, 2019	USA	265	18-28, $M_{age}=20.12$ (SD=1.34)	Relational uncertainty resulted to be positively associated with relational distancing Moreover, relational uncertainty appeared to be positively associated with taking conflict personally; daily hassles; cognitive, emotional, and behavioral jealousy; negative affect; directness of communication about irritations, hurt, and jealousy; and topic avoidance
McManus, Yurashevich, & McDaniel, 2019	USA	369	18-27, $M_{age}=20.50$ (SD = 2.00)	People turn to friends in order to reduce the uncertainty perceived in their romantic relationships. In particular, when participants perceived positive expected outcomes and had higher efficacy ratings, they provided more and more accurate information to their peers
James-Kangal, 2020	USA	Study 1= 144; Study 2= 233	Study 1: 18-24, $M_{age}=19.11$ (SD = 1.36) Study 2: 18-27, $M_{age}=23.99$ (SD = 1.47)	Study 1: EFA revealed that relational ambiguity comprises four dimensions: own ambivalence, partner ambiguity, behavioral uncertainty and exclusivity uncertainty Study 2: relational ambiguity is negatively associated with self-esteem and positively associated with stress, anxiety, depression and substance use
Carpenter & Spottswood, 2021	USA	218	$M_{age}=25.05$ (SD = 8.62)	Partner interactions with unknown potential rivals resulted to be positively correlated with relational uncertainty, while partner interactions with known potential rivals were found to be less correlated with relational uncertainty
Knobloch, Solomon, Theiss, & McLaren, 2021	USA	/	/	Relational uncertainty is linked to biased cognitive appraisals which in turn influence communication
Saha & Abir, 2022	Bangladesh	120	20-25	Smartphone and consequent online interactions seem to represent a fertile ground for relational uncertainty, which leads to carry out a series of surveillance activities

Definitions of Relational Uncertainty and Relational ambiguity

The construct of relational uncertainty has been firstly defined by Knobloch and Solomon (1999) as people's level of confidence in their perceptions about the romantic relationship and it comprises three dimensions: *self-uncertainty*, which encompasses concerns about one's own commitment to the relationship; *partner uncertainty*, that refers to doubts about partner involvement; and *relationship uncertainty*, which reflects general questions about the nature of the relationship itself.

More recently James-Kangal (2020) proposed the construct of relational ambiguity as an umbrella term that refers to a dearth of clarity regarding the status and the future course of the romantic relationship, and the adequate behavior to implement with the partner. This conceptualization of ambiguity posits four specific domains of this construct: according to the author, ambiguity could be related to the self (i.e., one's perception of the relationship current and potential future status), to the partner (i.e., feeling of ambivalence over the partner's level of commitment and participation in the relationship and its future intentions); to the behavior (i.e., concern and confusion about the proper behavior to act in the absence of clear norms and a defined relationship); and to exclusivity (i.e., which may be translated in expectations concerning the grade of exclusivity of the relationship and the consequent behaviors carried out within it). Thus, it emerges that in the definition of relational ambiguity (James-Kangal, 2020) more attention is given also to the behavioral sphere.

Therefore, relational uncertainty mainly focuses on emotions (e.g., hesitation about interest and feelings) and thoughts (e.g., confusion about intentions, questions about the nature of the relationship and its potential future trajectory) associated to unclear situations and behaviors, while relational ambiguity particularly stresses the behavioral dimension (e.g., dubiety regarding how to act properly within an undefined romantic situation).

Also noteworthy seems to be the origin of the constructs. As a matter of fact, the construct of relational uncertainty was derived from the Uncertainty Reduction Theory (URT; Berger & Calabrese, 1975; Berger & Bradac, 1982), a communication theorization which depicts uncertainty as the individual's inability to comprehend, explain and predict the conduct of another person within social exchange. Driving from this conceptualization, Knobloch and Solomon (1999) operationalized the construct of relational uncertainty in order to specifically capture the content of uncertainty within close relationships.

On the contrary, relational ambiguity has been conceptualized in the field of psychology, through a literature review of romantic relationships and the consultation of experts in the field (James-Kangal, 2020).

Another difference that was found between the constructs concerns the phase of the relationship and the typology of relationship. With this regard, although authors (e.g., Solomon & Knobloch, 2004; Solomon & Theiss, 2008) recognize that relational uncertainty may be present in each stage of the relationship, they also claim it to be quite circumscribed in nonintimate relationships or at the beginning of an acquaintance. Therefore, relational uncertainty is considered to possibly arise within more stable involvements and especially during turning points, such as the transition from casual to committed relationships (e.g., Solomon & Knobloch, 2004). Ambiguity is instead expected to be mainly experienced within undefined relationships that lack a clear label or a reciprocal agreement on its nature (e.g., James-Kangal, 2020), such as at the beginning of a relationship. As a matter of fact, James-Kangal (2020) suggests that commitment generally has the function to lessen doubts and insecurities, consequently stabilizing the romantic attachment, while unclear involvements may frequently lead to an increase of questions and concerns about the relationship itself or own and partner's intentions and interest.

Finally, the heterogeneity at the theoretical level matches with a variability in the methodological level. Indeed, both relational uncertainty and relational ambiguity have been studied through the employment of different scales of measure (e.g., Knobloch & Solomon, 1999; Brisini & Solomon, 2019; James-Kangal, 2020; Carpenter & Spottswood, 2021) or through different qualitative approaches, such as the interpretative phenomenological analysis (e.g., Draucker, Martsolf, & Stephenson, 2012) or the grounded theory (Vallade, Dillow, & Myers, 2016), thus rendering difficult the comparison of results as well as their generalizability.

The impact of relational uncertainty on the quality of the romantic relationship

Several authors underlined that relational uncertainty may undermine the perceived quality of the romantic relationship. Instead, as regards relational ambiguity, no study in literature has examined the relationship between this construct and the perceived quality of the romantic relationship.

In particular, literature evidence showed that relational uncertainty in young adulthood may negatively influence the perception of intimacy between partners as well as intimacy may predict the perception of

uncertainty within the relationship (e.g., Solomon & Knobloch, 2004; Theiss & Solomon, 2006a; Solomon & Theiss, 2008). More specifically, when relationships are poor in intimacy (in terms of feelings of affiliative need, readiness to assist the other and exclusivity toward the partner), young adults report higher levels of relational uncertainty; on the contrary, relational uncertainty tend to decrease in those couples characterized by moderate or high levels of intimacy.

More recently, Clifford, Vennum, Busk, and Fincham (2017) assessed in 7-week longitudinal study the direct impact of relational uncertainty on relationship satisfaction and relationship dedication in a sample of emerging adults. Results showed that a higher perception of relational uncertainty caused a decrease in participant's grade of dedication to the relationship but not in the perception of relationship satisfaction. In other terms, those perceiving higher levels of uncertainty tend to less invest in their relationship and carry out relationship maintenance behaviors. Adopting a correlational design, Brisini and Solomon (2019) showed that higher levels of relational uncertainty were associated to lower levels of relationship satisfaction, emotional intimacy and perceived closeness to the partner and to higher relational distancing. As a matter of fact, authors suggested that feelings of uncertainty are related to a set of relational variables, particularly referring to emotions and affection in young adults.

Research in this field also focused on the initial stages of romantic relationships, investigating the role played by relational uncertainty on interest, desirability and attraction towards a potential partner. With this regard, Montoya, Faiella, Lynch, Thomas, and Deluca (2015), employing an experimental design, conducted two studies with the purpose to examine the role of relational uncertainty on the experience of interpersonal attraction in female young adults. Findings highlighted that individuals tend to like more people who express attraction towards them, rather than people whose level of attraction is unclear. Nevertheless, in the second study, it emerged that uncertainty from a possible partner was linked to greater attraction. However, this was motivated by the desire to reduce the uncertainty condition by trying to discover if the other "really" liked the participant.

Similarly, adopting experimental and daily diary designs, Birnbaum and colleagues (2018) investigated the effects of relational uncertainty on the hypothetical and current partner's desirability in young adults. Authors found that partner's perception of romantic interest influenced partner's perception of desirability through the mediation of certainty about the potential partner's intentions. In other terms, romantic interest was linked to increased levels of certainty, which consequently predicted

higher partner's desirability. These results suggest that expressions of romantic interest and low levels of uncertainty regarding another's intentions may strengthen partner's sexual appeal. Thus, during daily life encounters with potential partners, when there is a genuine risk of rejection, signs of romantic interest may reduce defensiveness and promote approach motivation as the likelihood of rejection decreases.

Considering that the advent of new technology (e.g., smartphones, social networking sites) has entailed important implications for the romantic field, enabling people to develop and nurture their offline romantic relationships also in the online reality (e.g., Len-Ríos et al., 2016), some authors also focused on the role played by technology on perceived uncertainty within the romantic relationship. In this regard, Stewart, Dainton, and Goodboy (2014) highlighted that SNSs use among young adults, particularly Facebook, may contribute to relational uncertainty and consequently be used to manage it. In this study it emerged that the subdimension of relationship uncertainty negatively correlates with the use of functional maintenance behaviors, such as Facebook assurances (i.e., explicit reassurances about one's own involvement through expressions of affection, support, satisfaction...) and Facebook openness (namely, self-disclosure and metarelational communication). In other terms, a lack of clarity about the nature and the future course of the relationship might restrain the partner from publicly opening up and carrying out online intimate behaviors.

Using a qualitative methodology, Len-Ríos and colleagues (2016) investigated Latino adolescents' perception of social media influence on romantic relationships. Findings showed that SNSs (e.g., Facebook or Instagram) may negatively impact on the quality of the relationship by arising relational uncertainty about partner's intentions and romantic history. More specifically, uncertainty seems to stem from three sources: visual evidence (i.e., photographic contents that sometimes may be misinterpreted and/or old pictures of previous relationships that may affect the current one because of comparison and lack of clarity about the intentions of the partner), partner comments (i.e., posting publicly comments in a code language referred to the actual partner) and third-party comments (i.e., comments of a third person that may be interpreted as ambiguous or flirty). Also, the findings of a qualitative research conducted by Frampton and Fox (2018) on a sample of emerging adults are in line with the previously mentioned studies, suggesting that seeking information about the partner's past romantic history may arise a series of questions regarding own relationship stability and commitment with the partner by comparing one's relationship to contents of the partner's former ones.

More recently, a study conducted by Saha and Abir (2022) found that the use of smartphone may promote the perception of relational uncertainty within the couple and increase feelings of mistrust between young adult partners. Indeed, while on the one hand the smartphone makes it easier to sustain romantic relationships, on the other side it generates relational uncertainty by allowing people to interact with an endless number of potential rivals who may endanger the relationship.

The potential communicative and individual outcomes of relational uncertainty and relational ambiguity

Some scholars argue that uncertainty may not only lead to impactful consequences on the quality of the romantic relationship but together with ambiguity may also negatively influence communication and individual well-being.

Further to this point, uncertainty has been linked to a series of dysfunctional attitudes, primarily related to communication processes. Concerning this point, several authors examined the link between relational uncertainty and different variables, such as: talk avoidance (Clifford et al., 2017), topic avoidance (e.g., Knobloch & Carpenter-Theune, 2004), frequency and comfort about discussing religious topics (e.g., McCurry, Schrodt, & Ledbetter, 2012), communicative directness (e.g., Theiss & Solomon, 2006a, 2006b), directness of communication about hurt (e.g., Brisini & Solomon, 2019). Overall, it emerged that the more young adults' partners perceive high levels of relational uncertainty within their romantic relationships the more they will avoid conversations aimed at clarifying the status of the relationship and the grade of the involvement (Clifford et al., 2017) and feel uneasy addressing sensitive issues considered as both significant and menacing, such as negative life experiences, extra-relationship activities, past romantic history, relationship norms and potentially conflict-inducing topics (e.g., religious beliefs and spirituality, jealousy, irritations, hurt) (Knobloch & Carpenter-Theune, 2004; Theiss & Solomon, 2006a, 2006b; McCurry et al., 2012; Brisini & Solomon, 2019). Communication issues may be explained considering the impact of relational uncertainty on cognitive appraisals (Solomon, Knobloch, Theiss, & McLaren, 2016; Knobloch, Solomon, Theiss, & McLaren, 2021). As a matter of fact, due to relational uncertainty, people derive biased cognitive appraisals because of a dearth of insights necessary to interpret incoming inputs. Thus, in the absence of trustworthy information, individuals who experience relational uncertainty rely on heuristic cues and mental

shortcuts to evaluate interpersonal circumstances, which foster cognitive reactivity, consequently hampering engagement in communication and influencing the type of communication used.

Moreover, relational uncertainty has been found to affect emotional well-being, arousing jealousy. Different studies (e.g., Knobloch, Solomon, & Cruz, 2001; Theiss & Solomon, 2006a; Brisini & Solomon, 2019), indeed, highlighted that higher levels of cognitive, behavioral and emotional jealousy are associated with higher levels of relational uncertainty in young adulthood. More specifically, cognitive jealousy (Knobloch et al., 2001; Theiss & Solomon, 2006a; Brisini & Solomon, 2019) and behavioral jealousy (Brisini & Solomon, 2019) resulted to be associated to each source of relational uncertainty (self-uncertainty, partner uncertainty, and relationship uncertainty), while emotional jealousy was found to be correlated just to the subdimension of relationship uncertainty in the study conducted by Knobloch and colleagues (2001).

Research suggested that also ambiguity may entail negative consequences. In this regard, a qualitative study conducted by Draucker and colleagues (2012) highlighted that ambiguity may elicit conflict or violence between partners, therefore representing a risk factor for Adolescent Dating Violence (ADV). More specifically, the tentative and unclear nature of the relationship may frequently generate different expectations. When divergencies become evident and the couple abstain from discussing own points of view, partners often behave coherently with own expectations (e.g., about intimacy, commitment and obligation), sometimes trying to force these on the other partner. This may frequently arise disputes that provide the backdrop for violence and aggression.

Moreover, ambiguity may impact on psychological well-being, fostering anxiety, stress and depression, promoting the engagement in alcohol and substance use and negatively influencing self-esteem in young adults (James-Kangal, 2020).

Finally, James-Kangal (2020) discovered a negative correlation between ambiguity and relational competence, which refers to the conviction to possess the ability to sustain healthy long-term relationships, the recognition of relationship risk factors, the ability to make thoughtful choices within the relationship and the mutual understanding of needs, desires, and expectations regarding the relationship. In other terms, a higher perception of ambiguity within the couple is associated with a decrease in the ability to live romantic relationships in a functional way in young adulthood.

Strategies employed to reduce/manage feelings of relational uncertainty

As for the role of dysfunctional communication, scholars highlighted that in order to reduce or to manage feelings of relational uncertainty, individuals tend to adopt two different types of coping strategies: social support and online monitoring. The first one appears to be more centred on the self, while the second predominantly on the partner.

Regarding the first typology of strategies, through a qualitative study Vallade and colleagues (2016) examined the motives for extradyadic communication in young adulthood. Relational uncertainty management was found to be one of the main reasons to seek for information support, namely searching for assistance identifying and comprehending issues. Friends represent the privileged interlocutors to consult in the attempt to reduce feelings of uncertainty, especially peers who have experienced similar romantic circumstances. Specifically, individuals refer to friends to sift through the possible explanations for their partner's behaviors, to ask for advice regarding what should be one's "next move" with the partner (e.g., how to respond to texts, what to say or do when they next meet their partner) or whether they should keep the relationship going. Additionally, people tend to want approval from peers, a confirmation that their actions or reactions were appropriate, and expecting their friends to share their viewpoint on the situation.

In line with previous findings, also a quantitative study conducted by McManus, Yurashevich, and McDaniel (2019) highlighted that young adults tend to discuss the uncertainty they perceive in their romantic relationships with friends. However, the amount and the accuracy of information shared appear to be strongly associated to one's expectations, particularly to individual's positive expected outcomes and efficacy assessment. In other terms, when people perceive that opening up could be beneficial for them, think to own the ability to express efficaciously the information and to successfully deal with friends' feedback they are more likely to discuss relational uncertainty topics with friends.

On the other side, some authors (Stewart et al., 2014; Carpenter & Spottswood, 2021; Saha & Abir, 2022) identified online monitoring as another uncertainty reduction strategy. More specifically, Stewart and colleagues (2014) found that the perception of relational uncertainty, in terms of relationship uncertainty, may lead young adults to control partner's activity. More recently, Carpenter and Spottswood (2021) examined the processes that may underlie the experience of relational uncertainty due to the observation of romantic partner's interactions on

Facebook in a sample of young adults. Findings showed that partner interactions with unknown potential rivals resulted to be positively correlated with self, partner and relationship uncertainty, while partner interactions with known potential rivals were found to be less correlated with relational uncertainty, suggesting that shared networks tend to decrease feelings of uncertainty.

Finally, a study conducted by Saha and Abir (2022) confirmed that in order to manage concerns of infidelity and feelings of relational uncertainty emerging adults may carry out a series of monitoring behaviors, such as reading text messages and checking call history or incoming calls.

Discussion

The present systematic review aims to clarify the definitions of relational uncertainty and relational ambiguity and to provide a synthesis of the current state of evidence about these constructs in adolescents and young adults' romantic relationships.

In the first place, considering all the results in the present review, it emerged that relational uncertainty appears to be the main construct authors referred to as it was firstly conceptualized (e.g. Knobloch & Solomon, 1999; Solomon & Theiss, 2008; Montoya et al., 2015; Clifford et al., 2017). However, recently, authors (James-Kangal, 2020) introduced the construct of relational ambiguity, which presents some overlaps with that of relational uncertainty. Although the line between the two constructs seems to be very blurred and their meanings may appear to be superimposable, it seems that relational uncertainty regards more the range of thoughts and emotions concerning one's commitment and feelings, which may originate from ambiguous situations and/or behaviors. Relational ambiguity rather seems to refer more to the experienced situation and to the behaviors through which uncertainty is expressed (e.g., contradictory behaviors that do not allow for a clear interpretation of the partner's intentions). On the basis of these considerations, it seems to be overriding to focus on the construct of relational uncertainty, perhaps taking into consideration also relational ambiguity for a more practical operationalization of the construct of uncertainty.

As for the second aim, one major focus that emerged in the identified studies was on the potential impact of uncertainty on the quality of romantic relationships. Findings showed that this dimension may largely negatively impact on different aspects of the romantic relationship, such as intimacy, relationship satisfaction and relationship dedication, which

in turn may undermine the quality of the romantic relationship (e.g., Theiss & Solomon, 2006a; Solomon & Theiss, 2008; Clifford et al., 2017; Brisini & Solomon, 2019). Moreover, relational uncertainty seems to potentially damage not only more stable and committed relationships, but also new acquaintances, weakening interest and attraction towards a possible partner, thus representing an important ingredient of romantic relationships at any stage of their development. Some authors also highlighted that the use of interactive technologies may be associated to higher levels of relational uncertainty, thus negatively influencing the quality of the romantic relationship, both in adolescence (e.g., Len-Ríos et al., 2016) and young adulthood (e.g., Stewart et al., 2014; Frampton & Fox, 2018; Saha & Abir, 2022). At the same time, the perception of relational uncertainty may lead the partners to engage in a series of online monitoring activities on social networks (Stewart et al., 2014). Therefore, findings seem to suggest that on one hand a certain use of social networks has a negative impact on the relationship quality by increasing uncertainty, but on the other hand it is also possible to state that in uncertain relationships partners use social networks in a way that confirms the unclear character of relationship itself. From this perspective, social networks may not always be the cause of ambivalent relational practices, rather they may represent another context that endorses adolescents and young adult's inclination for uncertainty and ambiguity, which in turn may negatively influence the quality of the romantic relationship. This contributes to the physiognomy of newly emerging phenomena, that literature has recently begun to address, such as: *ghosting*, a dissolution strategy in which the breakup partner unilaterally ends the affair by refusing physical and online communication with the other partner (e.g., Koessler, Kohut, & Campbell, 2019; LeFebvre & Fan, 2020; Thomas & Dubar, 2021); *orbiting*, a practice employed to end the relationship by disappearing, characterized by contradictory behaviors (e.g., the disengager continues to follow the ex-partner on social networks, sporadically replying to the contents he/she uploads) (e.g., Pancani, Mazzoni, Aureli, & Riva, 2021; Pancani, Aureli, & Riva, 2022); and *breadcrumbing*, the action of dispatching flirting but non-committal messages to seduce the other with little effort or to keep the other's interest after the breakup (e.g., Navarro, Larrañaga, Yubero, & Villora, 2020).

Another aspect that emerged in the considered studies concerns the potential outcomes of individuals who experience relational uncertainty or relational ambiguity within the couple. As a matter of fact, literature underlined that uncertainty and ambiguity may largely impact on psychological and relational well-being, for example undermining

emotional well-being (e.g., Knobloch et al., 2001), contributing to the development of both internalizing and externalizing symptoms (James-Kangal, 2020) and fostering conflict and aggression, thus representing risk factors within the romantic relationship.

Additionally, in the face of the fact that uncertainty may be a risk factor, the literature highlighted more or less functional strategies that may be employed in the attempt to manage and/or reduce relational uncertainty: the search for social support (e.g., Vallade et al., 2016; McManus et al., 2019) and online monitoring (Stewart et al., 2014; Carpenter & Spottswood, 2021; Saha & Abir, 2022).

In light of these considerations, we confirm the importance of relational uncertainty due to its theoretical solidity and its potential negative impact on nowadays romantic relationships in both adolescence and young adulthood. Moreover, considering the developmental stages of adolescence and young adulthood, we think it is extremely interesting to investigate uncertainty, also including the behavioral dimension emerging from the conceptualization of ambiguity, and considering the specific characteristics of these developmental stages. As concerns adolescence, this is the “age of exploration” (Marcia, 1966; Erikson, 1968; Crocetti, 2017) and one of the developmental tasks is the involvement in first romantic experiences (e.g., Furman & Wehner, 1997; Connolly & McIsaac, 2009) as well as the development of some romantic skills (Cucci et al., 2020). Therefore, uncertainty together with ambiguity may be the results of the process of exploration in the romantic field and may be connected to the fact that their romantic skills haven’t matured yet. As regards young adulthood, Arnett (2000, 2004) defines it as the “age of possibilities and instability” since young adults have to manage the wide range of opportunities for the future and to commit into some of them. This also includes the romantic domain since romantic relationships become progressively more stable and committed, but the process of the establishment of these kinds of relationships may entail a certain level of uncertainty.

The present review has some limitations. In the first place, a limit may be constituted by the paucity of studies on adolescents, thus limiting the opportunity to examine in depth uncertainty and ambiguity also in this stage of life. Future research, indeed, needs to focus on the developmental stage of adolescence, which remains understudied, and compare adolescents to young adults in terms of experiences of uncertainty and ambiguity in order to understand possible different meanings of these dimensions and their potential outcomes.

Moreover, another limitation is that the majority of studies has been conducted in the USA and consequently may be not exhaustive for the understanding of the constructs of relational uncertainty and relational ambiguity in other cultural realities, such as the Italian one, in which no study has been carried out on the constructs of interest. Finally, the use of different measures of relational uncertainty and relational ambiguity could represent another limitation when defining the constructs.

However, the inclusion of studies which employ mixed methodologies (qualitative and quantitative) and designs (exploratory, correlational, longitudinal and experimental) represents a strength of the current review. Additionally, the focus on both constructs of relational uncertainty and relational ambiguity may be considered as a value added.

Another possible suggestion for future research is to investigate relational uncertainty and ambiguity in association with the timing of the romantic relationship and the different types of romantic relationships (e.g., dating, long-distance relationships, cohabitation) to better understand the dynamics and the evolution of these dimensions. Also, it could be interesting to examine the role played by attachment and familiar bonds with respect to uncertainty and ambiguity. Particularly, nowadays there is an increasing enhancement of a familial model based on strong bonds and unconditional affection. Some authors (e.g., Pietropolli Charmet & Turuani, 2015), indeed, suggested that this relational model may lead young people to always expect certain affections, thus possibly leading them to less tolerate uncertainty and ambiguity within romantic experiences.

Moreover, future research could expand the examination of the possible strategies that may be used in order to reduce relational uncertainty and consequently live healthier and more functional romantic relationships.

Furthermore, it could be interesting to examine the influence of individual variables, such as personality traits and attachment style, on relational uncertainty and relational ambiguity. Finally, considering that uncertainty seems to be a core element of contemporary romantic relationships and considering that only a few studies examined its potential negative outcomes for psychosocial adjustment and the coping strategies used to manage the related feelings, it could be important to better understand which aspects and skills may be improved to allow people to experience functional and healthy relationships.

The current review provides some insights for the clinical work with adolescents and young adults within the context of romantic relationships. Particularly, considering that relational uncertainty and ambiguity increase when individuals struggle to comprehend their

partner's messages and do not communicate efficaciously (Draucker et al., 2012; Solomon et al., 2016), practical intervention should focus on enhancing communication skills, which constitute a crucial aspect for establishing and maintaining healthy romantic relationships (Davila et al., 2021).

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Data availability statement and data deposition

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References

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American psychologist*, *55*(5), 469-480. DOI: 10.1037//0003-066X.55.5.469.
- Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. Oxford: Oxford University Press.
- Berger, C. R., & Bradac, J. J. (1982). *Language and social knowledge: Uncertainty in interpersonal relationships*. London: Edward Arnold.
- Berger, C. R., & Calabrese, R. J. (1975). Some explorations in initial interaction and beyond: Toward a developmental theory of interpersonal communication. *Human Communication Research*, *1*, 99-112. DOI: 10.1111/j.1468-2958.1975.tb00258.x.
- Birnbaum, G. E., Kanat-Maymon, Y., Mizrahi, M., Barniv, A., Nagar, S., Govinden, J., et al. (2018). Are you into me? Uncertainty and sexual desire in online encounters and established relationships. *Computers in Human Behavior*, *85*, 372-384. DOI: 10.1016/j.chb.2018.04.023.
- Brisini, K. S. C., & Solomon, D. H. (2019). Relational turbulence in college dating relationships: Measurement, construct validity, and comparison to marriage. *Communication Quarterly*, *67*(4), 424-443. DOI: 10.1080/01463373.2019.1605398.
- Carpenter, C. J., & Spottswood, E. L. (2021). The Hyperperception Model: Which Facebook Friends Inspire Jealousy & Uncertainty. *Communication Studies*, *72*(5), 883-898. DOI: 10.1080/10510974.2021.1975144.
- Clifford, C. E., Vennum, A., Busk, M., & Fincham, F. D. (2017). Testing the impact of sliding versus deciding in cyclical and noncyclical relationships. *Personal Relationships*, *24*(1), 223-238. DOI: 10.1111/per.12179.
- Collins, W. A., Welsh, D. P., & Furman, W. D. (2009). Adolescent romantic relationships. *Annual review of psychology*, *60*, 631-652. DOI: 10.1146/annurev.psych.60.110707.163459.
- Connolly, J. A., & McIsaac, C. (2009). Romantic relationships in adolescence. In R. M. Lerner & L. Steinberg (eds.), *Handbook of adolescent psychology: Contextual influences on adolescent development*, (pp. 104-151). Hoboken, New Jersey: John Wiley & Sons.
- Crocetti, E. (2017). Identity formation in adolescence: The dynamic of forming and consolidating identity commitments. *Child Development Perspectives*, *11*(2), 145-150. DOI: 10.1111/cdep.12226.
- Cucci, G., Davila, J., Olivari, M. G., & Confalonieri, E. (2020). The Italian adaptation of the Romantic Competence Interview: A preliminary test of psychometrics properties. *Journal of Relationships Research*, *11*. DOI: 10.1017/jrr.2020.3.
- Davila, J., Mattanah, J., Bhatia, V., Latack, J. A., Feinstein, B. A., Eaton, N. R., et al. (2017). Romantic competence, healthy relationship functioning, and well-being in emerging adults. *Personal Relationships*, *24*(1), 162-184. DOI: 10.1111/per.12175.

- Davila, J., Zhou, J., Norona, J., Bhatia, V., Mize, L., & Lashman, K. (2021). Teaching romantic competence skills to emerging adults: A relationship education workshop. *Personal Relationships*, 28(2), 251-275. DOI: 10.1111/per.12366.
- Draucker, C. B., Martsof, D., & Stephenson, P. S. (2012). Ambiguity and violence in adolescent dating relationships. *Journal of child and adolescent psychiatric nursing*, 25(3), 149-157. DOI: 10.1111/j.1744-6171.2012.00338.x.
- Dush, C. M. K., & Amato, P. R. (2005). Consequences of relationship status and quality for subjective well-being. *Journal of Social and Personal Relationships*, 22(5), 607-627. DOI: 10.1177/0265407505056438.
- Erikson, E. (1968). *Identity, youth and crisis*. New York: Norton Company.
- Frampton, J. R., & Fox, J. (2018). Social media's role in romantic partners' retroactive jealousy: Social comparison, uncertainty, and information seeking. *Social Media+ Society*, 4(3), 1-12. DOI: 10.1177/2056305118800317.
- Furman, W., & Wehner, E. A. (1997). Adolescent romantic relationships: A developmental perspective. New directions for child and adolescent development. In S. Shulman & W. A. Collins (Eds.), *Romantic relationships in adolescence: Developmental perspectives* (pp. 21-36). Hoboken, New Jersey: John Wiley & Sons.
- Gibbs, J. L., Ellison, N. B., & Lai, C. H. (2011). First comes love, then comes Google: An investigation of uncertainty reduction strategies and self-disclosure in online dating. *Communication Research*, 38(1), 70-100. DOI: 10.1177/0093650210377091.
- Glenn, N., & Marquardt, E. (2001). *Hooking up, hanging out, and hoping for Mr. Right: College women on dating and mating today*. Institute for American Values.
- Goldberg, S., Yeshua-Katz, D., & Marciano, A. (2022). Online construction of romantic relationships on social media. *Journal of Social and Personal Relationships*, 39(6), 1839-1862. DOI: 10.1177/02654075211067814.
- Gómez-López, M., Viejo, C., & Ortega-Ruiz, R. (2019). Well-being and romantic relationships: A systematic review in adolescence and emerging adulthood. *International journal of environmental research and public health*, 16(13), 1-31. DOI: 10.3390/ijerph16132415.
- James-Kangal, N. (2020). *Development and Initial Validation of the Relational Ambiguity Scale* [Doctoral dissertation, University of Cincinnati].
- Koessler, R.B., Kohut, T., & Campbell, L. (2019). When boo becomes a ghost: the association between breakup strategy and breakup role in experiences of relationship dissolution. *Collabra: Psychology*, 5(1). DOI: 10.1525/collabra.230.
- Knobloch, L. K., & Carpenter-Theune, K. E. (2004). Topic avoidance in developing romantic relationships: Associations with intimacy and relational uncertainty. *Communication Research*, 31(2), 173-205. DOI: 10.1177/0093650203261516.

- Knobloch, L. K., & Solomon, D. H. (1999). Measuring the sources and content of relational uncertainty. *Communication Studies*, 50(4), 261-278. DOI: 10.1080/10510979909388499.
- Knobloch, L. K., Solomon, D. H., & Cruz, M. G. (2001). The role of relationship development and attachment in the experience of romantic jealousy. *Personal Relationships*, 8(2), 205-224. DOI: 10.1111/j.1475-6811.2001.tb00036.x.
- Knobloch, L. K., Solomon, D. H., Theiss, J. A., & McLaren, R. M. (2021). Relational Turbulence Theory: Interpersonal Communication During Times of Transition. In D. O. Braithwaite & P. Schrodt (Eds.), *Engaging theories in interpersonal communication: Multiple perspectives* (pp. 366-378). London: Routledge.
- Lanz, M., Oliveira, M., & Tagliabue, S. (2017). Uno sguardo oltre l'adolescenza. Le relazioni sentimentali dei giovani adulti. In E. Confalonieri & M. G. Olivari (Eds.), *Questioni di cuore. Le relazioni sentimentali in adolescenza: traiettorie tipiche e atipiche* (pp. 67-96). Milano: Ed. UNICOPLI.
- Larson, R. W., Wilson, S., Brown, B. B., Furstenberg, F. F., Jr., & Verma, S. (2002). Changes in adolescents' interpersonal experiences: Are they being prepared for adult relationships in the twenty-first century?. *Journal of Research on Adolescence*, 12(1), 31-68. DOI: 10.1111/1532-7795.00024
- LeFebvre, L. E., & Fan, X. (2020). Ghosted?: Navigating strategies for reducing uncertainty and implications surrounding ambiguous loss. *Personal Relationships*, 27(2), 433-459. DOI: 10.1111/per.12322.
- Lenhart, A. & Duggan, M. (2014). *Couples, the internet, and social media: How American couples use digital technology to manage life, logistics, and emotional intimacy within their relationships*. Pew Research Center.
- Len-Ríos, M. E., Streit, C., Killoren, S., Deutsch, A., Cooper, M. L., & Carlo, G. (2016). US Latino adolescents' use of mass media and mediated communication in romantic relationships. *Journal of Children and Media*, 10(4), 395-410. DOI: 10.1080/17482798.2016.1144214.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3, 551-558. DOI: 10.1037/h0023281.
- McCurry, A. L., Schrodt, P., & Ledbetter, A. M. (2012). Relational uncertainty and communication efficacy as predictors of religious conversations in romantic relationships. *Journal of Social and Personal Relationships*, 29(8), 1085-1108. DOI: 10.1177/0265407512449402.
- McManus, T. G., Yurashevich, Y., & McDaniel, C. (2019). Explaining how college-aged individuals provide information to friends experiencing romantic relational uncertainty. *Interpersona: An International Journal on Personal Relationships*, 13(1), 31-46. DOI: 10.5964/ijpr.v13i1.327.
- Montgomery, M. J. (2005). Psychosocial intimacy and identity: From early adolescence to emerging adulthood. *Journal of Adolescent Research*, 20(3), 346-374. DOI: 10.1177/0743558404273118.

- Montoya, R. M., Faiella, C. M., Lynch, B. P., Thomas, S., & Deluca, H. K. (2015). Further exploring the relation between uncertainty and attraction. *Psychologia*, *58*(2), 84-97. DOI: 10.2117/psysoc.2015.84.
- Navarro, R., Larrañaga, E., Yubero, S., & Villora, B. (2020). Ghosting and breadcrumbing: prevalence and association with online dating behavior among young adults. *Escritos de Psicología*, *13*(2), 46-59. DOI: 1024310/epsiesepsi.v13i2.9960.
- Orpinas, P., Horne, A. M., Song, X., Reeves, P. M., & Hsieh, H. L. (2013). Dating trajectories from middle to high school: Association with academic performance and drug use. *Journal of Research on Adolescence*, *23*(4), 772-784. DOI: 10.1111/jora.12029.
- Pancani, L., Aureli, N., & Riva, P. (2022). Relationship dissolution strategies: Comparing the psychological consequences of ghosting, orbiting, and rejection. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *16*(2). DOI: 10.5817/CP2022-2-9.
- Pancani, L., Mazzoni, D., Aureli, N., & Riva, P. (2021). Ghosting and orbiting: An analysis of victims' experiences. *Journal of Social and Personal Relationships*, *38*(7), 1987-2007. DOI: 10.1177/02654075211000417.
- Pietropolli Charmet, G., & Turuani, L. (2015). *Narciso innamorato. La fine dell'amore romantico nelle relazioni tra adolescenti*. Segrate: Rizzoli Editore.
- Rowley, R. L., & Hertzog, J. L. (2016). From holding hands to having a thing to hooking up: Framing heterosexual youth relationships. *Marriage & Family Review*, *52*(6), 548-562. DOI: 10.1080/01494929.2016.1140104.
- Rus, H. M., & Tiemensma, J. (2017). "It's complicated." A systematic review of associations between social network site use and romantic relationships. *Computers in Human Behavior*, *75*, 684-703. DOI: 10.1016/j.chb.2017.06.004.
- Saha, S. R., & Abir, T. M. (2022). Smartphone, Relational Uncertainty and Monitoring in Romantic Relationships. *Advances in Applied Sociology*, *12*(12), 773-781. DOI: 10.4236/aasoci.2022.1212055.
- Seiffge-Krenke, I. (2003). Testing theories of romantic development from adolescence to young adulthood: Evidence of a developmental sequence. *International journal of behavioral development*, *27*(6), 519-531. DOI: 10.1080/01650250344000145.
- Solomon, D. H., & Knobloch, L. K. (2004). A model of relational turbulence: The role of intimacy, relational uncertainty, and interference from partners in appraisals of irritations. *Journal of Social and Personal Relationships*, *21*(6), 795-816. DOI: 10.1177/0265407504047838.
- Solomon, D. H., Knobloch, L. K., Theiss, J. A., & McLaren, R. M. (2016). Relational turbulence theory: Explaining variation in subjective experiences and communication within romantic relationships. *Human Communication Research*, *42*(4), 507-532. DOI: 10.1111/hcre.12091.
- Solomon, D. H., & Theiss, J. A. (2008). A longitudinal test of the relational turbulence model of romantic relationship development. *Personal Relationships*, *15*(3), 339-357. DOI: 10.1111/j.1475-6811.2008.00202.x.

- Stewart, M. C., Dainton, M., & Goodboy, A. K. (2014). Maintaining relationships on Facebook: Associations with uncertainty, jealousy, and satisfaction. *Communication Reports*, 27(1), 13-26. DOI: 10.1080/08934215.2013.845675.
- Theiss, J. A., & Solomon, D. H. (2006a). Coupling longitudinal data and multilevel modeling to examine the antecedents and consequences of jealousy experiences in romantic relationships: A test of the relational turbulence model. *Human Communication Research*, 32(4), 469-503. DOI: 10.1111/j.1468-2958.2006.00284.x.
- Theiss, J. A., & Solomon, D. H. (2006b). A relational turbulence model of communication about irritations in romantic relationships. *Communication Research*, 33(5), 391-418. DOI: 10.1177/0093650206291482.
- Thomas, J. O., & Dubar, R. T. (2021). Disappearing in the age of hypervisibility: Definition, context, and perceived psychological consequences of social media ghosting. *Psychology of Popular Media*, 10(3), 291-302. DOI: 10.1037/ppm0000343.
- Vallade, J. I., Dillow, M. R., & Myers, S. A. (2016). A qualitative exploration of romantic partners' motives for and content of communication with friends following negative relational events. *Communication Quarterly*, 64(3), 348-368. DOI: 10.1080/01463373.2015.1103291.
- Vaterlaus, J. M., Tulane, S., Porter, B. D., & Beckert, T. E. (2018). The perceived influence of media and technology on adolescent romantic relationships. *Journal of Adolescent Research*, 33(6), 651-671. DOI: 10.1177/0743558417712611.
- Young, B. J., Furman, W., & Laursen, B. (2011). Models of change and continuity in romantic experiences. In F. D. Fincham & M. Cui (Eds.), *Advances in personal relationships. Romantic relationships in emerging adulthood* (p. 44-66). Cambridge: Cambridge University Press.