The mediating role of identity status in the relationship between attachment styles and addiction to social media in the high school students

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The aim of this study was to investigate the mediating role of identity status in the relationship between attachment styles and addiction to social media in high school students in Meybod (Iran). The study method was descriptive-correlational and the statistical population was 1610 male and female high school students of Meybod in 2021. Participants were 310 students whom selected by random cluster sampling (197 girls and 113 boys). Data were collected using Collins and Read Revised Adult Attachment Scale, Waltz et al. Social Media Addiction Questionnaire and Berzonsky Identity Styles Questionnaire. The model was analyzed by structural equation modeling. Results indicated that secure attachment style had a direct and negative effect on addiction to social media (p <0.01), and confused identity had a direct and positive effect on addiction to social media (p <0.01). Also, secure attachment style had an indirect effect on addiction to social media by affecting confused identity (p <0.01). Based on the findings, it can be concluded that confused identity has a significant mediating role in the relationship between secure attachment style and addiction to social media; In other words, secure attachment reduces addiction to social media through confused identity in high school students.

Introduction

In the 21st century, the internet plays an increasingly important role in the lives of adolescents and young people. The allure of the internet has led many young people to replace interaction with peers and parents with computer use. This companionship with computers and other smart communication tools gradually diminishes the joy of being in a group and can lead to isolation, depression, and academic decline. Additionally, with its unique features such as easy access, ease of use, user anonymity, and low cost, the internet has become one of the most popular mass media in the world in recent years (Eslami, 2012). The use of the internet and social networks among the new generation of society is growing to the point where it has become a part of people's lives. To the extent that the expansion and popularity of social networks cannot be overlooked among users. However, recent studies have shown that internet use can lead to feelings of failure, loneliness, anxiety, and overall reduced mental health (Shahabi & Bayat, 2012). The number of internet users and social network users reached 3.48 billion in 2018. The most popular social messaging apps in the world are "Facebook," "YouTube," and "WhatsApp," respectively (Erfani, 2018). Statistics show that there are over 20 million Instagram users in Iran, of which 45% are women. In this regard, Iran ranks seventh in the world in terms of using this social network. Generally, there are more than 30 million smartphone users in Iran, and in this area, Iran ranks 16th in the world (Amini, 2017). Different social networks have provided their users with friendly environments to establish communication and solidarity in social life. However, in addition to the advantages of social networks, they have also created negative consequences and challenges in people's lives. In fact, these networks are turning into a threat, especially in our society (Adlipoor, Ma'mar, & Khaksar, 2012).

Recent researchers have shown that students use social networks on average for 5 to 9 hours a day, and each person uses the internet for more than 19 hours a week (Momeni Mohammui & Ghanbarian, 2015). It is such that today, most of our teenagers are overly involved in media consumption, and after passing through adolescence, they have only been media consumers, and there has been nothing called media production. Therefore, one of the key damages that has created the root of corruption in adolescents is excessive addiction and dependence on the internet and social networks, which has resulted in side effects such as delinquency, laziness, seclusion, false love affairs, superficial and erroneous information, artificial literacy, and lack of reading (Momeni Mohammui & Ghanbarian, 2015). The use of social networks is most prevalent among adolescents

because the ages of 12 to 18 are considered the most difficult, stressful, and exciting periods in a person's life. During this period, the formation of individuals' identities is influenced by various sources, the most important of which are family, group media, school, and peer groups. Adolescents in the period of puberty are seeking their personal identity and discovering and searching for values, and the internet, with its unlimited volume of information, confronts them with the discovery of identity through exploration and commitment. Nevertheless, it should be noted that many of the interactions available on the internet do not require human communication, and the consequences of these interactions and the limits of substituting internet interactions for human interactions are still uncertain (Bashir & Afrasiabi, 2012). Therefore, parents must be aware of their children's use of mobile phones and social networks and deal with them consciously. This is while not only have few studies been conducted in this area in Iran, but even suitable cultural, educational, and planning programs have not been implemented, and this has led to our adolescents being unable to quit and eliminate their addictive behaviors (Bashir & Afrasiabi, 2012; Momeni Mohammui & Ghanbarian, 2015).

The popularity of social networks is such that individuals spend hours on them excessively and harmfully, which has drawn the attention of psychologists to the issue of addiction to social networks and the internet (Bahadori Khosravishahi & Hashemi Nasratabadi, 2012). According to Yang (1996), addiction to social networks is considered one of the forms of internet addiction and falls under the category of behavioral addictions. However, addiction to social networks has not yet been officially recognized as a disease or disorder. An individual who checks their mobile phone constantly throughout the day, even if they have not received any new messages or do not intend to send a message to anyone, is somewhat addicted (Greenfield, 2005). Addiction to social networks usually refers to compulsive behaviors that lead to negative effects. In most addictions, individuals feel compelled to engage in specific activities that have often become a harmful habit. These harmful habits interfere with important activities in the workplace, home, school, etc. (Omidvar & Sarmadi, 2002). Addiction to social networks has four types of undesirable consequences: emotional problems, relationship problems, performance problems, and health problems (Heyrooii & Augustama, 2005). The harms caused by improper and uncontrolled use of the internet and virtual space can include mental damage, such as severe emotional and mental dependence, physical damage, such as nervous pressure, obesity, and isolation, and socio-cultural damage, such as neglecting social interaction and forgetting to eat due to being engrossed in online

conversations (Heyrooii & Augustama, 2005). With the advent of the internet and virtual space into families, there can be intellectual, emotional, and physical separation between parents and children, and the remarkable progress of technology has had significant and subtle effects on the lives of young girls (Shahnavoshi & Tajii, 2012).

Given the discussions, examining the variables affecting addiction to social networks in students is of great importance. One of these variables is identity status. One of the key issues in adolescence is the formation of identity. Therefore, identity is one of the developmental challenges that prepares adolescents to transition from childhood to later stages of development. Identity is the most important psychological and social growth of humans (Bush and Card, 2012). According to Erikson (1968), identity acts as a framework that individuals use to interpret personal experiences and talk about the meaning, purpose, and direction of life. In fact, identity is the differentiation and distinction that individuals make between themselves and others. He considers identity to have components including sexual, social, physical, psychological, ethical, ideal, and occupational characteristics that together make up the individual (Ebrahimi Moghaddam and Vakbari, 2015). Erikson was the first to recognize identity as a significant advancement in adolescent personality, an important step towards becoming a productive and successful adult. Erikson called the psychological conflict of adolescence "identity versus role confusion" (Berk, 2008). Berzonsky (2008) presents a dynamic model of identity in which individuals process information and issues related to themselves in three ways: informational, normative, and diffuse/avoidant. Individuals with an informational identity style actively search and evaluate information and then use appropriate information. Adolescents with a normative identity style focus on identity issues and decision-making inharmony with the expectations and directives of important individuals and reference groups. Adolescents with a diffuse/avoidant identity style try to avoid identity issues and decision-making as much as possible. In addition to the mechanisms of identity formation, Berzonsky also emphasizes the fundamental role of commitment. Commitment creates a goal-directed feedback loop in which the individual's behaviors and feedback are reflected, evaluated, and regulated within this framework (Latif-Abadi, 2008). In fact, one of the harms of addiction to the internet and social networks is the crisis of identity and disruption in the formation of personality foundations. This issue is especially important for adolescent and young users.

In these years, individuals' identities have not yet fully formed, and being present in ambiguous and complex virtual spaces, from chat rooms to social networks, allows them to create an identity different from the real world, leading to increased imagination and distancing from accepting real-life conditions (Soleimani Pour, 2010). In this regard, Michel and Welsh (2010) found in their study on students that those who have moderate to high levels of internet addiction tend to have a more confused/avoidant identity style. Additionally, Ghaybi and Vaziri (2018) found a significant negative relationship between informational identity style and commitment and internet addiction, while there was a significant positive relationship between normative and diffuse/avoidant identity styles and internet addiction. Ahqar's study (2016) on identity styles and internet addiction in high school students showed that normative and diffuse/avoidant identity styles had a significant positive relationship with internet addiction, while informational identity style had a significant negative relationship with internet addiction. The results of Monakis et al.'s (2017) study showed that normative and diffuse/avoidant identity styles are risk factors, while informational identity style is a protective factor in internet addiction. Siyahi (2017) predicted addiction to Instagram based on the variables of loneliness and attachment styles and found that the variables of ambivalent attachment style, avoidant attachment style, and loneliness can predict addiction to social networks.

Another important psychological variable that may be related to addiction to social networks is attachment styles. The development of attachment in humans is a long process that creates changes in their psychological structures. The first emotional bond of the child is established with the mother (caregiver). This bond creates the concept of attachment. According to Bowlby (1988), attachment arises from a deep and stable biological, psychological, and social situation that is formed based on the relationship between the child and his/her caregivers in the early years of life (Berk, 2007). Bowlby's attachment theory suggests that children form emotional bonds with their caregivers with stability in result of their experiences during childhood through four attachment patterns, which is one secure attachment style and three insecure attachment styles (avoidant, resistant, and disorganized). These bonds are very stable and consistent and extend to adolescence and youth relationships, shaping the individual's experiences, perceptions, and behaviors (Sharifi Daramadi, 2001). Individuals with a secure attachment style think positively about themselves and their loved ones, have a positive outlook on their interpersonal relationships, often feel satisfied and happy with their relationships, feel comfortable in both intimate and independent relationships,

and usually seek a balance between intimacy and independence in their relationships. Individuals with insecure attachment styles feel uncomfortable about getting close to others; it is difficult for them to trust or become dependent on others. On the one hand, these individuals tend to want to establish emotional intimacy, and on the other hand, they feel uncomfortable with this emotional closeness. These feelings are accompanied by negative attitudes about themselves and their spouse and friends; they feel worthless and cannot trust their friends. They often do not feel intimacy with their spouse and suppress their feelings and hide them (Khoshabi & Abouhamze, 2014).

According to Bowlby, many psychological disorders and personality disorders are the result of children's deprivation of maternal care or the instability of their relationship with their primary caregiver. He clearly predicted that the disruption of the attachment relationship, by creating anxiety and distrust in the child, would lead to psychological disorders (Sohrabi et al., 2016). The internet can be used as a mechanism for regulating emotions and coping with psychological problems by individuals with an ambivalent attachment style, as social networks can lead to long-term relationships, filling leisure time, lack of real interaction with people, and social situations (Edenberg, Diba, & Vashat, 2017). For example, Ghiami and Salariyan (2017) showed a significant positive relationship between the components of mental health (depression, anxiety, and stress) and anxious attachment style with addiction to social networks. Sanderson (2000) found a negative relationship between secure attachment style and internet addiction, and a positive relationship between ambivalent and avoidant attachment styles and internet addiction. Ambivalent attachment style was the strongest predictor of internet addiction compared to the other two styles. Khanjani and Aligholizadeh (2016) found that as the ambivalent attachment style increases, the level of addiction to social networks increases, while the use of social networks decreases with an increase in secure attachment style. Shin, Kim, and Kang (2011) found that avoidant and anxious attachment styles explain the problematic use of the internet, fear, and depression in a study of 300 Chinese students.

The attachment style can have a direct relationship with addiction to social networks and can indirectly affect addiction to social networks by influencing the identity of adolescents. It seems that one of the influential factors in identity style is attachment style. Marcia (1966), by expanding and analyzing Erikson's theory, considers personal identity as a psychological and social structure that includes the way of thinking, beliefs, and how individuals relate to others. Marcia has proposed four identity statuses based on two elements of commitment and exploration (successful, delayed,

premature, confused or disoriented). In a successful identity, individuals have successfully passed the identity crisis, gained independence, and achieved behavioral stability (high exploration and high commitment). Individuals with a premature identity are insecure. They are concerned about their relationships and try to maintain their attachment to others as soon as possible and, in fact, immaturely. These individuals are highly influenced by their parents and other people's programs (low exploration, high commitment). Individuals with a delayed identity are safe (high exploration, low commitment) and not worried about delays, but if it continues, it may cause some kind of irresponsibility for them. In a confused identity, the individual is irresponsible and is in a state of uncertainty and ambiguity. There is no commitment or, if any, it is low (low exploration and commitment). The behavior of this group of people is superficial and pleasure-seeking (Amani & Mojaveri, 2011).

Therefore, it can be said that the attachment of adolescents to parents and peers mediates their individual and social identity styles, creating a path for identity growth by providing a secure base (Erikson, 1963). In this regard, Amani and Mojaveri (2011) conducted a study to predict identity styles based on attachment styles and found a significant and positive relationship between secure attachment style and informational identity style and a significant and negative relationship between secure attachment style and normative identity style. There is also a significant and negative relationship between secure attachment style and confused identity style, and finally, a secure attachment style has the ability to predict informational identity style.

The study by Mohammad and Fouladchang (2018) showed that secure attachment has an indirect effect on positive and negative cognitive emotion regulation strategies through informational identity style. Anxious attachment also had an indirect effect on positive cognitive emotion regulation strategies through informational identity style, and had an indirect effect on negative cognitive emotion regulation strategies through both informational identity style and normative influence. Ayyala, Cabral, and Matos (2011) found that secure attachment between mother and child facilitates identity development. In another study, Hajazi and Negahban Salami (2009) found that secure attachment to parents predicts identity styles, normative influence, and identity commitment, while secure attachment to peers is significantly related to normative identity style. Overall, based on the theoretical and empirical evidence, it can be concluded that identity status may play a significant mediating role in the relationship between attachment styles and social media addiction. This relationship is proposed in the model presented in the study.

Based on the studies mentioned, it appears that secure attachment to parents and peers, informational identity style, normative influence, identity commitment, and cognitive emotion regulation strategies are all important factors in preventing addiction to social media and online communication.

According to the proposed model, informational identity style and normative influence have a direct effect on cognitive emotion regulation strategies. In addition, secure attachment to parents and peers has a direct effect on informational identity style, normative influence, and identity commitment. In other words, secure attachment can serve as an important factor in influencing identity status and cognitive emotion regulation strategies.

On the other hand, informational identity style and normative influence have a direct effect on secure and anxious attachment. Anxious attachment, as a mediating variable, has an indirect effect on cognitive emotion regulation strategies through informational identity style. Meanwhile, secure attachment, as a mediating variable, has an indirect effect on cognitive emotion regulation strategies through both informational identity style and normative influence. Overall, this model indicates that identity status may play a significant mediating role in the relationship between attachment and cognitive emotion regulation strategies, which can be effective in preventing addiction to social media.

In conclusion, based on these studies, the importance of secure attachment to parents and peers in preventing addiction to social media is very high. Additionally, informational identity style, normative influence, and identity commitment are also important factors in this relationship. Therefore, it is suggested that strengthening secure attachment to parents and peers, improving informational identity style and normative influence, and enhancing cognitive emotion regulation strategies can all help prevent addiction to social media.

The use of social media has an impact on various aspects of individuals' personal and social lives. Addiction to social networks has affected all levels of an individual's life, and in the case of adolescents, it has become more significant due to their age of maturity and identity formation, as well as the important role of this period in academic progress and employment. Therefore, adolescents, who use the internet more than other age groups, are more vulnerable and have encountered problems in the areas of education and entering the job market. If the opportunities provided by social media are not used properly, they will be lost and gradually become a threat. Various factors contribute to addiction to social networks, including family structure and

interactions, and parent-child relationships. In the absence of proper attention from parents and cultural and educational authorities, the negative consequences of using social networks will gradually increase. Therefore, one of the important responsibilities of families and education is to create appropriate cultural awareness and mechanisms to control students' use of these networks. Considering the fact that very few studies have investigated the role of identity and attachment in addiction to social media, this study aimed to examine the mediating role of identity status in the relationship between attachment styles and addiction to social networks among high school students in Meybod city.

Materials and Methods

The study was of the descriptive-correlational type. The statistical population consisted of 1610 high school students in Meybod city in the academic year of 2019-2020. Using the Morgan table, the sample size was determined to be 310, of which 197 were female students and 113 were male students, selected cluster-randomly. One class was randomly selected from each of the 5 girls' schools and 5 boys' schools, and all students in the selected class were included in the sample. If a person did not want to complete the questionnaires or handed in incomplete questionnaires, another person from the same school was randomly selected as a replacement. Then, the collected data from students were analyzed using structural equation modeling with AMOS software.

The tools used in the study were:

1- Social Media Addiction Questionnaire: This questionnaire consists of 23 questions and was prepared by Walsh in 2010. This questionnaire measures the dimensions of addiction to social networks in four factors of individual performance, time management, self-control, and social relationships. Scoring is done on a 5-point Likert scale from completely disagree (1) to completely agree (5). The content validity ratio and index of the Persian version of the questionnaire were calculated as 95.0 and 86.0, respectively, and its internal reliability was obtained with Cronbach's alpha coefficient of 0.92 (Ahmadi, Paladi, & Bahrami, 2019).

2- Adult Attachment Style Questionnaire: This questionnaire consists of 18 questions and was prepared by Collins and Read in 1990. This questionnaire has three subscales of secure attachment style, avoidant attachment style, and ambivalent/anxious attachment style, each consisting of 6 items. Scoring is also done on a 5-point Likert scale from completely disagree (1) to completely agree (5). The content and face validity of the Persian version of this questionnaire have been

confirmed, and the Cronbach's alpha coefficient for each of the secure, avoidant, and ambivalent attachment styles was calculated as 0.81, 0.78, and 0.85, respectively (Pakdaman, 2004).

3- Identity Style Inventory (ISI): This questionnaire consists of 40 questions, of which 11 questions are related to the informational subscale, 9 questions to the normative subscale, 10 questions to the diffuse-avoidant subscale, and 10 questions to the commitment subscale. It measures a person's self-concept and their interpersonal and social behaviors. Scoring is also done on a 5-point Likert scale from completely disagree (1) to completely agree (5). This questionnaire was prepared by Berzonsky et al. in 2004, and the Cronbach's alpha coefficient for the questionnaire was calculated as 0.90.

After collecting the data, the obtained information, including correlation coefficients, partial correlation coefficients, total correlation coefficients, path coefficients, and statistics related to the proposed mechanisms of the research (such as stability, validation, and predictive ability models), were analyzed using structural equation modeling with AMOS software. To test the research hypotheses, the path analysis and frequency statistics methods were used. Finally, by analyzing the results, conclusions were drawn about the relationship between social media addiction and attachment styles and identity styles (Ahmadi, Paladi, & Bahrami, 2019; Pakdaman, 2004; Berzonsky et al., 2004).

Results

Out of the total 310 research participants who were in the age group of 16 to 18 years old, the age group of 16 years old with 115 people (31.5%) and the age group of 17 years old with 134 people (50%) were the largest age groups of participants. The age group of 18 years old with 61 people (18.5%) had the fewest participants. The participating students were in grades 10 to 12, with grade 10 having the highest number of participants with 196 people (63.3%) and grade 11 having the lowest number of participants with 55 people (17.7%). Grade 12 had 59 participants (19%). In the field of study variable, the fields of experimental sciences, mathematics, humanities, and technical and vocational studies were included, with the technical and vocational field having the largest number of participants with 123 people (39.7%). The field of experimental sciences had 68 participants (21.9%), the field of humanities had 93 participants (30%), and the field of mathematics had 26 participants (8.4%). The mean and standard deviation of the studied variables are presented in Table 1.

Table 1. Table 1 - Descriptive statistics of research variables

Variable	Mean	SD	Max.	Min.
Information identity	36.12	5.6	55	20
Normative identity	30.86	4.57	44	15
Avoidant identity	27.40	5.06	41	14
obligation	34.38	6.11	50	20
safe style	12.07	3.08	18	4
Avoidant style	12.45	2.64	19	5
Ambivalent style	12.64	5.12	24	1
Addiction to virtual networks	60.36	16.08	102	23

Before testing the research hypotheses, the normality of the score distribution was examined. According to the results of the Kolmogorov-Smirnov test, the significance levels in all variables were greater than 0.05, indicating a normal distribution of scores. The Pearson correlation between variables is also shown in Table 2.

Table 2 . Correlation matrix of research variables

	Variables	1	2	3	4	5	6	7	8
1	Secure attachment	-							
2	avoidant attachment	-.12*	-						
3	Ambivalent attachment	-.27**	.25**	-					
4	Information identity	.15**	.09	-.07	-				
5	Normative identity	.05	-.14*	-.09	.54**	-			
6	Avoidant identity	-.08	.004	.07	-.06	-.02	-		
7	obligation	.16**	-.11*	.02	.48**	.67**	-.26**	-	
8	Addiction to virtual networks	-.13*	.17**	.27**	-.17**	-.32**	.23**	-.36**	-

As shown in Table 2, safe attachment style, informational and normative identity, and commitment had a significant negative correlation with addiction to social media. Furthermore, avoidant and ambivalent attachment styles and avoidant identity had a significant positive correlation with addiction to social media ($p<0.05$). Safe attachment style had a significant positive correlation with informational identity and identity commitment. Avoidant attachment style also had a significant positive correlation with normative identity ($p<0.05$). No significant correlation was found between the remaining attachment styles and identities ($p>0.05$). Structural equation modeling was used to evaluate the default model of the research. The fit indices of the model showed that the default model did not fit well, although this was expected due to the non-significant Pearson correlation coefficients between some variables. However, to improve the fit of the model, the modification indices suggested by the software were used. One item from informational and

normative identity and confusion, and one item from addiction to social media were removed due to having a factor loading of less than 0.4. Additionally, the ambivalent attachment style was excluded from the model, and the paths from informational and normative identity and identity commitment to addiction to social media were removed. The modified model is shown in Figure 2 (Table 3), and the fit indices indicate that the measures have achieved a desirable fit.

Table 3. Fit indices of the measurement model

CIMIN/DF	CFI	PCFI	RMSEA	HOELTER
1.78	.68	.65	.05	203

Finally, out of a total of 19 direct paths in the initial model, eight significant paths were observed in the modified model. Safe attachment style had a significant positive effect on informational and normative identity and identity commitment, and a significant negative effect on normative identity. Avoidant attachment style also had a significant negative effect on normative identity and identity commitment ($p<0.05$). Among the identity statuses, only confused identity had a significant positive effect on addiction to social media ($p<0.05$). Among the attachment styles, only safe attachment style had a significant negative effect on addiction to social media ($p<0.05$). The standardized and unstandardized coefficients of the direct paths are shown in Table 4.

Table 4. Standardized and unstandardized coefficients of direct paths in the structural model of the research

Path			B	Beta	S.E	C.R	p
Secure attachment	to	Confused identity	-.02	-.27	.07	-2.65	.008
Secure attachment	to	Information identity	.55	.53	.13	4.24	.001
Secure attachment	to	Normative identity	1.82	.91	.4	4.54	.001
Secure attachment	to	obligation	.55	.42	.19	2.76	.006
Secure attachment	to	Addiction to the virtual network	-.55	-.49	.13	-4.05	.001
avoidant attachment	to	Normative identity	-1.1	-.42	.44	-2.49	.01
avoidant attachment	to	Obligation	-.34	-.68	.15	-2.28	.002
Confused identity	to	Addiction to the virtual network	.22	.15	.11	1.96	.04

Table 5. Indirect effects of the structural model using bootstrapping

Predictor	Mediator	Criterion	Indirect effect	Low limit	High limit	p
Secure attachment	Confused identity	Addiction to the virtual network	-.04	-.10	.007	.03

The examination of the direct coefficients in the modified model showed that safe attachment style had a significant negative effect on confused identity. Considering that confused identity also had a significant effect on addiction to social media, bootstrapping was used to investigate the indirect effect of safe attachment style on addiction to social media through confused identity. The results of the bootstrapping test showed that the indirect effect of safe attachment style on addiction to social media through its effect on confused identity was -0.04, which was significant ($p<0.05$). Based on the findings, it can be concluded that confused identity plays a significant mediating role in the relationship between safe attachment style and addiction to social media, meaning that safe attachment style reduces addiction to social media among high school students by reducing confused identity.

Discussion

The findings of this study showed that only secure attachment style has a direct, negative, and significant effect on addiction to social media in high school students in Meybod. In other words, increasing secure attachment in students reduces their addiction to social media. This finding is consistent with the results of Sanders' study (2000) and Maghni-Zadeh and Vafaei-Najjar (2015). Moreover, the results showed that insecure attachment styles did not have a significant relationship with addiction to social media in the structural equation model, which is inconsistent with the results of Ghaemi and Ali-Gholizadeh (2016), Elhami et al. (2016), Bahadori-Khosroshahi and Hashemi-Nasratabad (2011), Sun et al. (2008), Edinburg et al. (2017), and Shin et al. (2011), as well as the study of Eliyari et al. (2015). It can be concluded that individuals with secure attachment style acquire less confused identity and therefore use the internet in a calculated way and for specific goals. In other words, such individuals are less likely to develop addiction to social media. Adolescents with secure attachment style cope better with stressful situations and engage less in avoidance coping styles and addictive behaviors such as spending time on social media. Another finding of this study was that secure attachment style had a direct positive effect on identity information and normative identity commitment and a direct negative effect on confused identity. Additionally, avoidant attachment style had a direct negative effect on normative identity commitment and identity information. Overall, these findings are consistent with the results of Amani and Mojzavi (2011), Owe et al. (2011), and Mohammadi and Fooladchang (2018), and

Hajazi and Naghavian-Salami (2009), but inconsistent with the results of Bakker (2006). Mohammadi, Kazemi, Ghasemi-Argeneh, Kazemi, and Moosavi (2015) found that anxious attachment style has a negative correlation with confused identity, and avoidant and secure attachment styles do not have a significant correlation with identity styles. It can be concluded that individuals with secure attachment style often explore options and feel confident, which enables them to organize new information and pursue new goals. This psychological foundation facilitates their commitment to worldview, role, profession, and personal aspirations without shame, guilt, or regret, and creates the conditions for the formation of normative and informational identity styles while reducing the likelihood of developing confused identity. In explaining the relationship between avoidant attachment style and normative identity commitment and identity information, it can be said that adolescents who have identity problems experience a deep lack of trust in the availability and responsibility of their caregivers to meet their attachment needs, and compared to secure individuals, they have a negative, content-free, and internalized view of themselves. Avoidant attachment style generally makes exploring and especially searching for personal identity very difficult for them, which leads to the formation of confused identity and distancing from normative identity commitment and identity information.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

AF, YR and AP contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Payam Noor University, Taft, Iran.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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