MASARYK UNIVERSITY

JOURNAL OF PSYCHOSOCIAL RESEARCH ON CYBERSPACE
CYBERPSYCHOLOGY

Yaffe, Y., & Seroussi, D.-E. (2019). Problematic Internet use in Israeli-Arab adolescent males: Do parenting styles matter? *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 13*(4), article 5.
https://doi.org/10.5817/CP2019-4-5

Problematic Internet Use in Israeli-Arab Adolescent Males: Do Parenting Styles Matter?

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Abstract

The current study explored the relationships between parenting styles and problematic internet use (PIU) in male adolescents from Israeli-Arab families. In the research literature, little is known about the role played by parenting in relation to children's PIU in Arab societies. One hundred and eighty male adolescents whose age ranges from 12 to 16 (M = 13.92, SD = 1.42) reported their internet behavior and their parents' parenting styles. Controlling for the participants' age, family size, and grades, parenting styles explained 24% of the variance in PIU scores, with authoritarian parenting being the only significant unique predictor. A further analysis of covariance revealed that adolescents who perceived their parents as authoritative scored lower than their counterparts in PIU. Our findings suggest that while Israeli-Arab male adolescents might benefit from authoritative parenting at home, it is the parental authoritarian practices and behaviors per se that should be targeted as part of PIU intervention and prevention efforts.

Keywords: Parenting styles; problematic internet use; Arabs; adolescents; authoritarian

Introduction

In recent years, internet usage has become a substantial part of more than 90% of children's and adolescents' life in the USA and other developed countries around the world (Bleakley, Ellithorpe, & Romer, 2016; Valcke, Bonte, De Wever, & Rots, 2010). With the internet becoming more accessible due to the sharp growth of digital technology, the extent of its use among youngsters from different cultures and socio-economic statuses is more homogeneous than before (Smith, 2014). From early childhood, the internet encompasses vast and versatile domains of children's life, from an information and communication source, through social interactions, and up to cognitive, metacognitive, and learning skills (Ihmeideh & Shawareb, 2014).

At the same time, professionals express growing concern regarding adolescents' internet misuse, overuse, and addictive use. These behaviors are parts of the phenomenon called problematic internet use (PIU) (Bleakley et al., 2016; Elsaesser, Russell, McCauley Ohannessian, & Patton, 2017; Liu, Fang, Zhou, Zhang, & Deng, 2013), which is defined as the use of the internet to such an extent that it generates psychological, social, school, and/or work difficulties in a person's life (Li, O'Brien, Snyder, & Howard, 2015).

PIU may include addiction to the internet itself (see Cash, Rae, Steel, & Winkler, 2012; Chou, Condron, & Belland, 2005 for reviews), addiction to "cyber-sex," "cyber relationships," "net compulsions," "information and research," and "computer gaming" (Young, 1999). A number of other terms have been used to describe problematic internet use, which are considered by many as conceptually synonymous: "internet addiction," "internet dependency," "pathological internet use," and "problematic internet usage" (Davis, 2001). Since the terminology for the

phenomenon tested here is still debated, based on Moreno and colleagues (Moreno, Jelenchick, Cox, Young, & Christakis, 2011), we adopt the term PIU for the current study.

The consequences of PIU on adolescents' wellbeing (Li et al., 2015) include distress, tolerance symptoms, withdrawal symptoms, and mood-altering use of the internet (Morahan-Martin & Schumacher, 2000; Weinstein & Lejoyeux, 2010). PIU also affects family life, with phenomena like a decrease in communication (Ko et al., 2015; van den Eijnden, Spijkerman, Vermulst, van Rooij, & Engels, 2010). Thus, PIU by teenagers has become one of the most concerning issues in child raising (Kaşıkcı, Çağıltay, Karakuş, Kurşun, & Ogan, 2014).

The efforts that have been made to understand the problem posed by PIU have taken two main directions. One direction is the study of the personal and environmental risk factors and correlates of PIU. The second direction is probing the efficiency of the educational means that parents can use in order to restrain this problematic behavior in their children.

Risk Factors and Correlates of PIU

The probability of PIU by adolescents has been found to be enhanced by various factors, especially gender, as male adolescents are consistently found to be more prone to PIU than female adolescents (Dogan, Bozgeyikli, & Bozdas, 2015; Li, Dang, Zhang, Zhang, & Guo, 2014; Siomos et al., 2012). While the time adolescents spend online and the frequency with which they access the internet is similar for boys and girls (Rial, Gómez, Braña, & Varela, 2014), they differ in their motives for using the internet. Boys engage in more addictive and problematic internet activities (e.g., playing online games, internet gambling, and pornography viewing) (Griffiths & Barnes, 2008; Müezzin, 2015; Pujazon-Zazik, & Park, 2010). More risk factors for PIU are mental states (e.g., depression, sensation seeking, or anger/frustration) (Üneri & Tanidir, 2011; Young, 1998; Zhang, 2015), social situations like loneliness (Ahmadi, 2014; Appel, Holtz, Stiglbauer, & Batinic, 2012; Morahan-Martin & Schumacher, 2000; Üneri & Tanidir, 2011;), and personality traits like low self-esteem (Stieger & Burger, 2010), low self-control (Li et al., 2014; Li, Li, & Newman, 2013; Zhang, Li, & Li, 2015), and ADHD (Chen, Chen, & Gau, 2015).

Many correlates of PIU are linked to adolescents' families (Pednekar & Tung, 2017). They may be related to parents' mental health problems, especially depression (Lam, 2014); interparental conflict (Wu et al., 2016; Xu et al., 2014), which especially affects girls (Ko et al., 2015; Terres-Trindade & Mosmann, 2015); divorce (Ahmadi, 2014); severe familial dysfunction (Wu et al., 2016); violence exposure (Park, Kim, & Cho, 2008); family and parent-child conflict (Terres-Trindade & Mosmann, 2015; Wu et al., 2016); or simply the family providing low support or having low cohesion (Chen et al., 2015; Park et al., 2008).

Parenting in Relation to Adolescents' Use of Internet

Parents influence their children's use of the internet, both by exerting parenting styles that induce a general climate and situations that can influence children's use of the internet in different ways and by actively regulating their children's internet use (i.e., parental meditation of child's internet use).

Parenting Styles and PIU

Parent-child relationships in the family seem to be strongly related to children's psychological well-being and health behaviors, including internet behavior. Accordingly, a lack of parental emotional support (Schimmenti, Passanisi, Gervasi, Manzella, & Famà, 2014) and parental care (Bleakley et al., 2016; Chng, Li, Liau, & Khoo, 2015; Pace et al., 2014; Siomos et al., 2012; Yen, Yen, Chen, Chen, & Ko, 2007) have been previously described as associated with high PIU. Whereas maternal lack of care may constitute a risk factor for children's and adolescents' PIU (Kalaitzaki & Birtchnell, 2014; Ko et al., 2015; Xu et al., 2014), some authors claim that the best protective factor for PIU may be the perceived father-adolescent relationship (Liu et al., 2013; Bleakley et al., 2016). Among adolescents meeting the criteria of PIU, a global dissatisfaction with their parents was observed (Lam, Peng, Mai, & Jing, 2009).

A few research studies have tried to link PIU to general parenting styles. For instance, Dogan and colleagues (2015) found that the parenting style linked to the lowest probability of PIU is a style they call democratic, as opposed to

the protective-demanding style. Floros and Siomos (2013) linked low PIU to parental behavior described as "optimal parenting" (Parker, 1990), which includes parental protection but also respect of the child's privacy.

Parents' behaviors towards their child are often categorized according to Baumrind's taxonomy of parenting styles (Baumrind, 1966, 1971). She initially conceptualized three main overall types of parenting styles. These three prototypes of parental configurations include the *authoritative* style, the *authoritarian* style, and the *permissive* style. Authoritative parents are highly demanding and responsive: they exert consistent behavioral control, grant autonomy, use reasoning, and provide warmth. Authoritarian parents are highly demanding and low in responsiveness: they exert strict control, avoid negotiating, tend to use punishment, and maintain an emotional distance. Permissive parents are low in demandingness and high in acceptance: they practice lax control, avoid punishing, and maintain emotional closeness (Baumrind, 1966, 1968, 1971, 2005).

Using Baumrind's theoretical framework, researchers found that the authoritative parenting style was linked to lower occurrence of PIU (Leung & Lee, 2012; Moazedian, Taqavi, HosseiniAlmadani, Mohammadyfar, & Sabetimani, 2014; Rosen, Cheever, & Carrier, 2008; Tao, Ying, Yue, & Hao, 2007; Wong, 2011; Xiuqin et al., 2010), whereas the authoritarian and permissive parenting styles constitute risk factors in this respect (Zhang et al., 2015). More precisely, in a study involving 1771 Chinese secondary school students, Cheung, Yue, and Wong (2015) used cluster analysis to compose mixed parenting patterns from the three-fundamental parenting styles - authoritative, permissive, and authoritarian. Accordingly, they defined five parenting patterns based on their level in each parenting style. The "inconsistent" parenting pattern, which balances between permissive, authoritarian, and authoritative parenting styles (with high scores on all of these three parenting scales), was found to be linked with the lowest degree of PIU. The high-level authoritative parenting pattern and then the moderate-level authoritative parenting pattern, in that order, were also associated with lower levels of PIU. In contrast, the authoritarian parenting pattern was associated with the highest level of PIU. While the findings connecting parenting and PIU are also demonstrated in this collectivistic culture's society, this study's findings also underline the possible merits of balanced parenting in preventing PIU among Chinese students. Yet, some studies have reported their failure to show statistical associations between some parental patterns (e.g., the quality of parent–child attachment, support, behavioral control, and psychological control) and PIU (Lau & Yuen, 2013; van Rooij & van den Eijnden, 2007).

Parental Mediation of the Child's Internet Use and PIU

While not enough research has been done connecting PIU to parenting styles, there is a considerable body of work on parental mediation of internet use and children's internet behavior that provides important insights into how parents affect their children's PIU. This parental mediation refers to parents' regulation of children and teenagers' online activities (Livingstone & Helsper, 2008), and consists of the use of rules, discussion of content, blocking, and co-viewing of the internet at home. It is commonly divided into three categories (Clark, 2011; Mendoza, 2009; Nikken & Jansz, 2006): 1) *Restrictive mediation* refers to parents' setting and enforcing rules limiting and controlling adolescents' internet activities in terms of time (i.e., how much and when they can surf the net), place (e.g., where the computer or the T.V. is placed in the home), and content (e.g., forbidding pornography) (Livingstone & Helsper, 2008). 2) *Evaluative mediation* or "active mediation" refers to the parental presence during internet use, open discussion concerning the internet, and joint creation of rules. It includes both positive/instructional and negative/critical forms of mediation (Livingstone & Helsper, 2008; Nikken & Schols, 2015). 3) *Co-using or enabling mediation* (i.e., parents' active participation in the youth's online use, including recommending websites and participating in online activities) is mostly used when parents feel that the media offer educational or entertainment opportunities (e.g., Sonck, Nikken, & de Haan, 2013; Valkenburg, Krcmar, Peeters, & Marseille, 1999) and by parents whose child is more skilled in computers (Livingstone et al., 2017).

Like in the case of general parental behaviors, the context of parental mediation has been modelized by some authors under the form of parenting style, based on appropriate questionnaires (see for instance: Lou, Shih, Liu, Guo, & Tseng, 2010). In the context of the internet, Baumrind's (1971) typology of parenting styles was considered the most relevant, since, logically, internet parenting styles constitute a specific expression of general parenting practices (Rosen et al., 2008). "Parental strategies in relation to domestic media reveal both the enactment of and the negotiations over the typically informal and implicit rules and roles in family life" (Livingstone, 2007). This notion has found support in most research findings (Chou & Lee, 2017). For instance, authoritative parents use

evaluative techniques (co-viewing or discussing content) and restrictive techniques (time or content limits or technological mediators) more than other techniques (Eastin, Greenberg, & Hofschire, 2006). Thus, like any parental behavior, parental mediation of internet use was divided by theoreticians into the two main directions of control and warmth. And upon Baumrind's typology of general parenting, a new construct called Internet Parenting Style (IPS) (van Rooij & van den Eijnden, 2007) was set up, which describes parents' behavior in respect to children's internet use in terms of general categories like authoritative, authoritarian, and "laissez-faire" internet parenting style (Valcke et al., 2010).

The research about the role of parents in relation to children's PIU is a relatively new area, and it is growing gradually. At the present time, the research about the efficiency of restrictive strategies displays some contradictory results (Li et al., 2013). On the one hand, most researchers found that internet risks are reduced when parents have a certain control over their children's internet use (Bleakley et al., 2016; Ko et al., 2015; Lee, 2012; Leung & Lee, 2012; Li et al., 2013; Lin, Lin, & Wu, 2009; Livingstone & Helsper, 2008; Terres-Trindade & Mosmann, 2015), when they take part in their children's activity (Ang, Chong, Chye, & Huan, 2012; Appel et al., 2012, Lin et al., 2009), or when they use orientated action and active control through disciplinary and technological means (Nikken & Jansz, 2014; van den Eijnden et al., 2010). So, parental behavioral control (used by the authoritative parent) seems to moderate the influence of risk factors like sensation seeking, low self-control, or sleep-wake patterns (Lee, 2012; Lin & Gau, 2013; Zhang et al., 2015) and is even considered as the most effective mean of reducing PIU (Valcke, Schellens, Van Keer, & Gerarts, 2007).

But on the other hand, there seem to be limits to the toughness of successful parental control: psychological control (e.g., love withdrawal, guilt induction, or authority assertion) (Li et al., 2013), and excessive strict rules have been shown to achieve the opposite results to those intended (Li et al., 2013; van den Eijnden et al., 2010). Several authors even found that parental monitoring, such as time restrictions, does not help (Lee & Chae, 2012), weakly helps (Eastin et al., 2006; Giles & Price, 2008), or leads to undesired effects like more online chat (Vaala & Bleakley, 2015). In one case, a positive correlation (possibly due to reverse causality) was found between internet addiction and time restriction of internet use (Wu et al., 2016) or negative control behavior (Li et al., 2014). These contradictory results may be explained by the efficiency of parental mediation depending on the children's age (Lwin, Stanaland, & Miyazaki, 2008) and on cultural factors (Cheung et al., 2015; Lekes, Gingras, Philippe, Koestner, & Fang, 2010; Liu & Guo 2010), but the general picture is not yet clear and calls for further research.

The Current Study

From the information summarized here, it appears that the parent-child relationship is related to children's internet use both directly and indirectly. On the one hand, parenting styles set the general emotional and disciplinary climate at home, and this climate, in turn, establishes children's norms and shapes their behavioral tendencies, including their use of the internet. As discussed above, effective parenting styles and children's appropriate internet use have been empirically linked. Nonetheless, as shown by the preceding review, our understanding of the link between parenting and children's internet use (in particular PIU) still contains several gaps shown by some inconsistencies in the findings.

As suggested earlier, addressing the cultural factor in this context might help to clarify the issue further. Studying ethnic collectivistic groups, such as Arab societies, where the family structure is more traditional, may help to achieve this aim. Israeli-Arab families in the Middle East have been described as emphasizing traditional conservative values in the family (Al-Simadi & Atoum, 2000), tending to endorse greater parental authority and more autocratic parenting (Yaffe, 2019). Several reports have shown that parenting styles in Arab families are not distributed like in Western families. Hence, when Arab youths describe their parents' authority, authoritative parenting is often highly correlated with permissive parenting, and the overall proportion of authoritarian parenting is higher than in Western families (Dwairy, 2010). This basic difference in adolescents' living conditions may present an opportunity to deepen the link between parenting styles and PIU from a different angle than the one presented in most research on PIU.

The current study aims to explore the unique associations between parenting styles and PIU among adolescents from Israeli-Arab families, where the parental role in relation to the former variable may differ from that in western families. Little is known about the status of PIU in Arab societies, particularly among Israel-Arab adolescents, and

about the role of parenting styles in relation to their online usages. Initial evidence suggests that in Arab societies, PIU is significantly more prevalent among young males, rather than young females (Bener & Bhugra, 2013). Hence, the current study used male adolescents exclusively in order to examine its following research hypothesis:

The authoritative parenting style would be negatively associated with PIU and the non-authoritative parenting styles (that is, authoritarian and permissive) would be positively associated with PIU. Thus, male adolescents who perceive their parents as authoritative are expected to show lower PIU as compared to their counterparts who perceive their parents either as authoritarian or permissive.

Method

Participants

The study consisted of 180 Israeli-Arab male adolescents whose age ranges from 12 to 16, who reported their internet behavior, their school grades, and their parents' parenting styles. The participants were conveniently sampled from five Arab villages in northern and central Israel, through a few Arab research assistants who visited the participants' homes, schools, and some informal venues in their villages. All participants belonged to traditional nuclear families whose sizes ranged from 4 to 14 people (including parents), with the majority of them (about 80%) belonging to families whose size ranges from 5 to 8 people. Only one adolescent from each family took part in the study. All the participants speak Arabic as their native language and Hebrew as their second language, with the vast majority of them (95%) being Muslim and the rest Christian. The means, standard deviations, and zero-order correlations for all of the research variables appear in Table 1. Additionally, the participants were asked to give an estimation of their GPA and their mothers' education. The education of the participants' mothers was distributed as follows: about 3% had elementary school or lesser education; about 48% had a high school diploma; and about 49% had academic or other professional education.

Measures

Parental Authority Questionnaire (PAQ). The PAQ (Buri, 1991) contains 30 items and was used to classify parents into to one of Baumrind's three parenting styles (Baumrind, 1971), based on the child's self-report: *Authoritative* (10 items, e.g., "As I was growing up, once family policy had been established, my parents discussed the reasoning behind the policy with the children in the family"), *Authoritarian* (10 items, e.g., "As I was growing up my parents did not allow me to question any decision they had made"), and *Permissive* (10 items, e.g., "As I was growing up my parents seldom gave me expectations and guidelines for my behavior"). The response scales for an item range from 1 (strongly disagree) to 5 (strongly agree). The index for each parenting style is the sum of the relevant items of each scale. Thus, the total score for each parenting scale ranges from 10 to 50, with a higher score reflecting a higher specification of the style. PAQ is a valid questionnaire with relatively high internal consistency and test-retest reliabilities (0.74 to 0.78) (see: Buri, 1991; Smetana, 1995), widely used in Israel (e.g., Enten & Golan, 2009; Myselles, Scharf, & Sholt, 2003; Yaffe, 2017) and around the world to measure Baumrind's (1971) three basic styles of parenting. Previous research has shown supportive evidence for the PAQ's validity in its Hebrew version, with adequate rates of reliability and internal consistency (Yaffe, 2017). The current study recorded Alpha coefficients for the permissive, authoritarian, and authoritative scales of .85, .91, and .92 (respectively), which are consistent with the reliability data found for the tool in past research. The scores obtained in the current sample for the instrument's scales appear in Table 1.

Problematic Internet Use (PIU). *Problematic Internet Use* was measured by Young's Internet Addiction Test (IAT: Young, 1998), based on a 5-point Likert scale (from "rarely" to "always"). The scale consists of 20 self-reporting items, generally measuring the magnitude of one's compulsive internet use and its impact on one's life (e.g., "How often do you block out disturbing thoughts about your life with soothing thoughts of the internet?"). The scale's total score ranges between 20 to 100, with a cut-off point score of 50 regarded as the lower bound indicator for PIU (Yoo et al., 2004). In the current sample, we observed 137 out of 180 participants who met this criterion (about 76%). The original instrument was validated using a group differences criterion (Young, 1998), and tested for a variety of populations in wide geographic distributions (Frangos, Frangos, & Sotiroplulos, 2012). The IAT was translated and adopted to Hebrew by Yaffe and Burg (2015). Consistent with their report, this Hebrew version

used for the current study yielded a high internal-consistency reliability coefficient (α = 0.93). The mean scores and standard deviation obtained for this scale in the current sample are reported in Table 1.

Procedure

Upon the authorization of an institutional ethics committee, the potential participants were contacted by the research assistants and were informed about the research objectives (in general, studying parent-child relationships and young Arab adolescents' internet usage). The research assistants elaborated on the research procedure layout and the participants' ethical rights, which generally included information about the questionnaires' contents (i.e., what kind of questions they were about to be asked), the anonymity of their participation, and the participants' rights to withdraw from taking part in the study at any time. Those Hebrew-speaking adolescents who expressed their interest were recruited to take part in filling in the research questionnaires. While Hebrew was their second language, all the participants demonstrated good Hebrew literacy skills.

During 2017-2018, participants were given a link to online Hebrew questionnaires, which they were requested to complete anonymously using their cell phones, subject to their informed consent and to their parental approval. The participants' parents were asked to read a form with the research details (i.e., objectives, tools, procedure, and ethical aspects) and to hand over their approval through their children prior to them filling out the online questionnaires (submission was enabled only upon parental authorization). The research assistants were present during the procedure of filling out the questionnaires, in order to guide the participants and address any possible problem or question. The submitted forms were tested and the valid responses were transformed into SPSS data for analysis. Due to the negligible rate of reported learning disabilities in the sample (about 6%), participants who had learning disabilities were included in the general research group.

Results

Table 1 presents the descriptive statistics data for the demographics and the research variables. The mean scores of the parenting scales show that the sample's adolescents (male Israeli-Arab adolescents) perceived their parents as more authoritative than permissive and authoritarian ($F(2,178) = 14.79$, $p < .001$). Additionally, with respect to PIU, it is noteworthy that the sample's average exceeded the 50-score cut point, normally considered as the low threshold of addictive internet behavior.

Table 1. *Correlation Matrix, Means, and Standard Deviations for the Demographics and the Research Variables in the General Sample of Israeli-Arab Adolescents*.

Variable	1	2	3	4	5	6	7
1. Age	-	-.32***	.41***	-.44***	-.18*	.32***	-.40***
2. Family size		-	-.24***	.10	.20**	-.21**	.36***
3. Mean grades (GPA)			-	-.10	-.22**	.33***	-.33***
4. Permissive parenting style				-	-.11	.38***	.11
5. Authoritarian parenting style					-	-.45***	.58***
6. Authoritative parenting style						-	-.37***
7. Problematic internet use (PIU)							-
Mean	13.92	6.86	80.72	27.34	29.30	31.59	58.14
SD	1.42	1.93	10.47	6.45	7.51	7.32	12.89

Note. $N = 180$; ** $p < .01$, *** $p < .001$

First, we considered the zero-order correlations between the research variables. As shown in Table 1, the parenting style scales are in part significantly correlated: the permissive scale is positively associated with the authoritative scale, and the authoritarian scale negatively associated with the authoritative scale. That is to say, the sample's adolescents partially linked parental authoritativeness with lax-control parental patterns (permissive parenting), while viewing authoritative parenting as considerably contrary to parental authoritarianism. Moreover, the authoritative and authoritarian parenting styles were significantly inversely correlated with PIU among the

sample's adolescents, with authoritative parenting being associated with a lower level of PIU and authoritarian parenting being associated with higher levels of it.

It was hypothesized that the authoritative parenting style would be negatively associated with PIU and non-authoritative parenting styles (that is, authoritarian and permissive) will be positively associated with PIU. This hypothesis was initially confirmed by the correlational results. However, the need arose for a further examination designed to inspect the parenting styles' unique associations with the adolescents' internet behavior because the participants' age and family size (accounted demographics) were significantly correlated with almost all of the research variables, and also due to the parenting scales' commonality. Thus, we conducted a multivariate regression analysis predicting PIU from parenting styles while controlling for these demographics. In order to refine the parental link to problematic internet use among Arab adolescents, due to the relevance of functioning, we also accounted for their grades in school as a control variable.

Table 2 displays the results of the regression analysis predicting Arab adolescents' PIU from the parenting styles (entered as second cluster), while controlling for the child's age, family size, and grades (entered as first cluster). After accounting for the controls, parenting styles uniquely explained about 24% of the variance of the PIU scores in the current sample, with authoritarian parenting being the only significant predictor (partial r = .56). This confirms that patterns of authoritarian parenting (e.g., over-controlling, punitive, and emotionally distant) were associated with increased PIU among male Israeli-Arab adolescents, while in this population patterns of authoritative parenting (i.e., autonomy-granting) were not necessarily related to the inverse tendencies of internet behavior.

Table 2. *The Regression Analyses Results of Predicting Adolescent's Problematic Internet Use (PIU) From the Parenting Styles.*

	β	***B***	**95%CI**	***SE***	***t***	***R^2***	***F***
Control variables						24.0%	17.25***
Adolescent's age	-.30	-2.75	-4.12, -1.37	.70	-3.94***		
Family size	.19	1.30	0.34, 2.26	.49	2.68**		
Mean grades (GPA)	-.15	-0.19	-0.37, -0.01	.93	-2.043*		
Parenting Styles						24.0%	24.61***
Permissive parenting style	.10	0.20	-0.11, 0.52	.16	1.27		
Authoritarian parenting style	.48	0.83	0.61, 1.05	.11	7.33***		
Authoritative parenting style	-.10	-0.17	-0.46, 0.13	.15	-1.12		

Note. N = 180; * p < .05, ** p < .01, *** p < .001

In order to further inspect the relationship between parenting styles and PIU, we sorted the sample into one of three parenting styles group and compared their scores using univariate analysis of covariance (Table 3). We sought to determine the difference in PIU (and its size) between children of authoritative and non-authoritative parents on the dependent variables. It was hypothesized that adolescents who perceived their parents as authoritative would obtain lower PIU scores, as compared to their counterparts who perceived their parents as non-authoritative (i.e., authoritarian and permissive).

The sorting procedure into the groups was carried out by using the participants' highest score of the PAQ scales as the dominant type (as advised by the instrument's manual), which reduced the sample size due to the omission of participants with undifferentiated scores on at least two scales. Holding participants' age, grades, and family size as covariances, we observed a significant main effect for parenting styles on PIU of medium effect size. Examining the individual differences in PIU between the groups using Tukey's post-hoc test revealed significant differences between the authoritative group and the permissive group (M_{diff} = -9.32, p < .001), and between the authoritative group and the authoritarian group (M_{diff} = -8.52, p < .001). This confirmed that Arab adolescents who perceived their parents as authoritative scored lower on the PIU scale than their counterparts who perceived their parents as either permissive or authoritarian. No significant differences were found in PIU scores between the permissive and the authoritarian groups.

Table 3. *Means, Standard Deviations, and the Results of a Univariate Analysis of Covariance for the Differences Between Parenting Styles' Groups in Problematic Internet Use (PIU) (N = 150).*

	Permissive (*n* = 31)		Authoritarian (*n* = 52)		Authoritative (*n* = 67)		*F*	Partial η^2	Observed power
	M	*SD*	*M*	*SD*	*M*	*SD*			
PIU	62.97	8.55	62.37	11.95	52.48	13.73	9.49***	.12	.98

Note. Partial η^2 is a measure of effect size after accounting for the covariates of age, grades, and family size. *** $p < .001$

Discussion

The study aimed to inspect the relationships between parenting styles and male adolescents' problematic internet use (PIU) in a sample of Israeli-Arab families, as little is known about the role of parenting in relation to children's online usages (especially PIU) in Arab societies. After controlling for parenting styles, solely the authoritarian parenting style was found to be uniquely associated with boys' PIU in the current sample (with a partial correlation approaching .60). Hence, Israeli-Arab adolescent boys who perceived their parents' parenting style as more authoritarian were considerably more predisposed to problematic internet usage.

Beyond previous studies, where the link between parent-child emotional relationships and PIU was established (Bleakley et al., 2016; Pace et al., 2014; Siomos et al., 2012; Xiuqin et al., 2010; Yen et al., 2007), our findings underscore the role of parental authoritarian patterns as a risk factor for PIU in adolescents. While several studies also documented these particular associations between authoritarian parenting and PIU around the world (Cheung et al., 2015; Li et al., 2013; Lou et al., 2010; van den Eijnden et al., 2010; Xiuqin et al., 2010), the current study is among the first to signify this trend in Arab families.

With a considerable proportion of the variance in PIU scores explained by parenting styles, our findings suggest that families may play a pivotal role in enhancing or reducing problematic internet usage among Israeli Arab adolescent boys. This must be considered when planning and implementing prevention programs at all levels. Our findings specifically suggest that it is the adverse aspects of the authoritarian parenting (e.g., over-controlling, punitive, and emotionally distant) that are substantially associated with PIU, rather than the merits of authoritative parenting per se. This may mean that PIU prevention efforts should first and foremost be targeted at reducing harmful authoritarian parental behaviors and practices. However, due to the inability to determine a causality with respect to the findings linking between parenting and PIU in the current sample of Arab families, a more versatile research design needs to be applied in order to reinforce and generalize our conclusion.

From a cultural point of view, the substantial link between authoritarian parenting and PIU in ethnic Arab families, revealed in our study, shows that there is no cultural variation in the link between parenting and internet misuse. Since in Arab families, parental authority seems to be favored (see for instance: Yaffe, Seroussi, & Kharanbeh, 2017), this finding is meaningful. Moreover, the relatively high PIU scores observed in the current sample (with the mean score exceeding the cut-point of normal internet use), magnifies even further the importance of advocating the etiology research of this growing phenomenon (i.e., PIU) also among traditional-cultural groups such as Arab families.

Our comparison of the PIU levels between the three groups (i.e., authoritative, authoritarian, and permissive) shows that Israeli-Arab adolescent boys may also benefit from their parents being more authoritative, as those sample's participants who perceived their parents as authoritative reported significantly lower PIU compared to their counterparts. In terms of parental control over internet behaviors in children and adolescents, authoritative parents tend to use evaluative and restrictive practices, such as co-viewing, discussing content, and time or content limits (Eastin et al., 2006). Alongside being attentive and responsive (i.e., parental warmth), the behavioral control used by the authoritative parent (as opposed to the type of control used by the authoritarian parent), may moderate the influence of risk behaviors related to cyberspace (e.g., sleep-wake patterns, low self-control) (Lee, 2012; Lin & Gau, 2013; Zhang et al., 2015) and, in turn, reduce PIU (Valcke et al., 2007). Noteworthy is the fact that the sample's adolescents viewed authoritative parenting as contrasting to authoritarian parenting (which was found here to be strongly related to PIU), and did not identify between the two forms of parental authority.

While our findings are in line with previous research (Cheung et al., 2015; Moazedian, 2014; Rosen et al., 2008; Tao et al., 2007; Wong, 2011; Xiuqin et al., 2010; Zhang et al., 2015), they extend the evidence supporting authoritative parenting as the favorable style in terms of low PIU to Israeli-Arab adolescent boys. With approximately 45% of the sample's participants, the adolescents who perceived their parents as authoritative represent the majority of the three parental groups, and they exhibited relatively normal PIU scores. Indeed, authoritative parenting is seemingly the cross-culturally preferred style in diverse developmental contexts of children's internalizing and externalizing behaviors problems (Pinquart & Kauser, 2018). Yet, due to the limited number of studies available in the current research area (see: Ihmeideh & Shawareb, 2014), the establishment of this conclusion in the context of youngsters' internet behaviors amongst Arab populations requires further examination and more empirical support.

Several aspects must be addressed regarding the study's limitations. First, all the indexes used here are based on self-report of the participants' subjective perceptions and, hence, are vulnerable to measurement biases and correlational inflation due to single informant (Campbell & Fiske, 1959). The study's conclusions referring to the relationships between parenting styles and internet behaviors among Israeli-Arabi male adolescents should be accordingly restrained. Moreover, since the study's questionnaires referred to both parents together, our findings do not distinguish between their links to the adolescents' internet use. Given the role that gender may play in parenting styles (see for instance Liu et al., 2013), our findings that address mothers and fathers together might be deficient and not apply to both parents equally. The reinforcement of the associations that underlie the current study's conclusions requires further examination, using reports for both parents and for the children separately. Finally, while PIU is considered to be more common amongst males than females (especially in Arab societies, such as used here), a more profound view of this phenomenon in youngsters requires the inclusion of both genders, particularly when dealing with this in the context of parent-child relations. Indeed, the study's findings from Arab families, where PIU in the marital context has not been previously studied, hold great merits. Yet, this study's focus solely on boys provides a partial glance into the studied variables, confining the generalizability of its conclusions regarding the association between parenting styles and PIU in adolescents. Especially with respect to such a conservative group of reference (i.e., Arab families, where boys and girls are treated very differently by parents in terms of protection and control), a further examination of the current study's hypothesis must be employed among adolescent girls to determine how its conclusions apply to them.

General Conclusion

The current study offers important evidence linking between parenting styles and problematic internet behaviors among adolescent males from Arab families in Israel, where this issue has rarely been studied in any context. With a considerable proportion of PIU explained by parenting styles (deriving from a unique strong link between authoritarian parenting and PIU), it is suggested that over-exposure to authoritarian parental behaviors (e.g., psychologically controlling, punitive, and emotionally distant) is closely related to problematic internet behavior among Israeli-Arab adolescent males. With the reverse effect also being fairly plausible (i.e., PIU employed by the adolescents provokes authoritarian parental behaviors), our findings among Arab families are cross-culturally consistent with previous findings from western societies, where the authoritarian parental patterns were found to be associated with children's poor well-being, and particularly with PIU among adolescents. As is the case with the western child, presumably Israeli-Arab adolescent males can also benefit from authoritative parenting in the family.

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Editorial record: First submission received on June 20, 2018. Revisions received on February 7, 2019, June 14, 2019, and September 29, 2019. Accepted for publication on October 30, 2019.
Editor in charge: Michel Walrave

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