

Are there Gender-based Effects for an Educational Program for Parents of Adolescents with Risk Behaviors?

Running head: Education for at-risk adolescents' parents

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Acknowledgments: The authors wish to thank the technical team of the Suspertu (Fundación Proyecto Hombre Navarra) program for assisting in the evaluation of the sample.

Conflict of interests: The authors report no conflict of interest

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Abstract

The goals of this study were to evaluate the gender-based effectiveness of the parental intervention of the Suspertu (“recovery” in English) prevention program for adolescents with risk behaviors in Spain. The sample included 229 parents (105 fathers and 124 mothers). One open-label trial with repeated measures was used. Parents received a family therapy and a group education. The intervention improved parents’ authoritative parenting style, decreasing the degree of parental stress and reducing parent’s psychopathological symptoms and maladjustment. Improvement in both groups (fathers and mothers) was mainly observed from pre- to post-intervention assessment. According to the results, prevention programs for adolescents with risk behaviors may be a suitable context both to teach parents to deal appropriately with their children’s risk behaviors, and to improve parent’s psychological state.

Keywords: *adolescence; risk behaviors; parental intervention; indicated prevention; gender.*

Are there Gender-based Effects for an Educational Program for Parents of Adolescents with Risk Behaviors?

Substance abuse and antisocial behavior are the most frequent risk behaviors in adolescents (Luengo, Romero, Gómez-Fragüela, Guerra, & Lence, 2008; MacArthur et al., 2012). Failure in school, participation in youth gangs, violent behaviors and absence of social skills are some of the problems identified in adolescents with these risk behaviors (López & Rodríguez-Arias, 2012). Moreover, family conflicts increase the risk of developing problematic behaviors like drug consumption and aggressive acts (Ary et al., 1999; Estévez, Jiménez, & Musitu, 2007).

Parents of adolescents with risk behaviors present with high levels of psychological problems, predominantly symptoms of anxiety, depression and irritability. These parents show a high level of parental stress and maladjustment in daily life (Ituráin, López-Goñi, Arteaga, Deusto, & Fernández-Montalvo, 2017; Lloret, Espada, Cabrera, & Burkhart, 2013). Although the scarce studies carried out do not take into account the gender perspective, these problems seem to be more severe in mothers than fathers, perhaps due to cultural expectations. For example, in the study by Ituráin et al. (2017), mothers of adolescents who engaged in high risk behaviors presented with more anxiety and depression symptoms than fathers.

Moreover, these families develop frequently inadequate parenting styles, ranging between permissiveness and authoritarianism. And parents may lack adequate strategies for dealing with their adolescent children (Ary et al., 1999; Ituráin et al., 2017; Parker & Benson, 2004). This is a crucial factor because recent studies show that both a suitable family environment (Jiménez, 2011) and adequate communication between family

members are relevant protective factors against developing high-risk behaviors (Cava, Murgui, & Musitu, 2008).

In recent years, specific interventions with parents have been included in some programs aimed at adolescents with problem behaviors. These interventions are a means to improve the family climate and communication (Kumpfer, Alvarado, & Whiteside, 2003; Martín-Quintana et al., 2009), and they aim to provide parents with adequate educational practices, while modifying and improving existing practices (Jackson, Henderson, Frank, & Haw, 2012; Koning et al., 2009; Rodrigo, 2016). The final goal is to promote healthy behaviors in children and minimize those that are considered negative (Kuntsche & Kuntsche, 2016; Martín-Quintana, Alemán, Marchena, & Santana, 2015; Vila, 1998). These types of interventions have been shown to be effective at promoting positive parenting styles in different contexts (Arranz et al., 2016; Centro Universitario de Psicología de la Familia, 2012; de Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008; Kumpfer et al., 2003; Martínez, 2010; Molgaard & Spoth, 2001; Nowak & Heinrichs, 2008; Rohrbach et al., 1994).

In Europe only scarce data exist about the effectiveness of specific parental intervention programs targeting families of adolescents with risk behaviors (Becoña, 2002; Burkhart, 2011; Koning et al., 2009). The main European database that includes programs with some type of evaluation lists only two specific prevention programs in Spain (European Monitoring Centre for Drugs and Drug Addiction, 2015a, 2015b): the Suspertu (“recovery” in English) program developed by the Proyecto Hombre Navarra Foundation (Pamplona, Spain) and the Hirusta program developed by the Gizakia Foundation (Bilbao, Spain). Both are prevention programs based on a bio-psycho-social risk and protective factors model, which is aimed at promoting healthy behaviors and minimizing risk behaviors (Becoña, 2002; Schick & Cierpka, 2016). These programs

are directed at adolescents with risk behaviors (mainly substance use and aggressive behavior), and include parental interventions with fathers and mothers of these adolescents. However, although mothers seem to present a worse psychological condition than fathers when seeking help, and they use more frequently authoritative and permissive parenting styles than fathers (Ituráin et al., 2017), no studies have been carried out analyzing differences by parent gender in the intervention's effectiveness.

The present study

The main objective of this study was to evaluate the effectiveness of the parental intervention developed in the Suspertu prevention program, taking into account the gender (fathers and mothers) of the participants. There are two hypotheses: 1) the intervention will improve the parenting styles, the psychopathological symptoms and the maladjustment of the parents, and 2) mothers will experience a higher improvement than fathers. The main contribution of this research was to assess the gender-based effectiveness of this preventive intervention included in the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) database. This database provides details on a wide range of evaluated prevention, treatment, and harm reduction programs, as well as interventions within the criminal justice system. It is primarily designed to help professionals and policy-makers.

METHOD

The protocol for this study was approved by the ethics committees of the Universidad Pública de Navarra (Code: PI-003/14) and the Fundación Proyecto Hombre de Navarra (Code: 2014/2). All participants signed a written informed consent form.

Participants

The initial sample of this study included 229 consecutively recruited parents (45.9% fathers, $n = 105$; 54.1% mothers, $n = 124$) of adolescents (73.1% male and

26.9% female) ranging from 12 to 18 years old who engaged in risky behaviors, mainly drug consumption (66.5%). All parents sought assistance from 2013 to 2014 from the Suspertu prevention program (Proyecto Hombre Navarra Foundation. Pamplona, Spain). They were mainly referred by social services, school counselling departments and medical centers. This prevention program is directed at teenagers with risk behaviors (mainly for substance use and aggressive behavior) and offers intervention involving their parents. It is a voluntary program aimed at individuals who are experiencing early signs of risk behaviors, and provides weekly sessions for both adolescents and parents.

The inclusion criteria for this study were: 1) to enroll in the prevention program due to being a parent of an adolescent with risk behaviors, according to the criterion of the psychologists of the program; 2) to complete the assessment instruments at the three assessment sessions; and 3) to sign the informed consent form to participate in the study. Parents in the sample were required to attend at least the 80% of the sessions to be assessed at the post-intervention and follow-up.

According to these criteria, the number of participants who completed all phases of the study was 125 (Table 1), and the number of dropouts during the study was 104 (45%). No statistically significant differences between completers and dropouts were found in the variables studied at the pre-intervention. The sample included 51 couples ($n = 102$ participants; 81.6%), and 23 (18.4%) parents who met the program without a partner.

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The mean age of the 125 parents included in the study was 49.8 years, with mothers being significantly younger than fathers. Most of them (95%) were born in Spain. Regarding education, most of the participants had secondary studies (38.4%) or a

university degree (35.2%). Most of the sample was employed (80%). In 76.8% of cases, the whole family lived together, with a higher rate in fathers than mothers. In the remaining cases (23.2%), the original family structure had changed in different ways. The average of children in parents of the sample was 1.6 ($SD = 0.7$). A more detailed description of the sample with comparisons between fathers and mothers can be found in Table 2.

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Assessment instruments

The *Parenting Practices Questionnaire (PPQ)* (Robinson, Mandleco, Olsen, & Hart, 1995, 2001) identifies three parenting styles: authoritative, authoritarian and permissive. The questionnaire presents several statements about possible behaviors developed during the interaction with all their children. The response options range from one (*never*) to four (*always*) depending on their level of agreement or disagreement. In this study, the Spanish version with 34 items (Arranz, Oliva, Olabarrieta, & Antolín, 2010) was used. The authoritative scale includes 13 items (range: 13-52), the authoritarian scale includes 11 items (range: 11-44), and the permissive scale includes 10 items (range: 10-40). Higher scores indicate a higher presence of the parenting style assessed. The internal consistency is 0.75 for the authoritarian scale (0.70 men; 0.79 women), 0.89 for the authoritative scale (0.89 men; 0.88 women), and 0.62 for the permissive scale (0.57 men; 0.64 women).

The *Parental Stress Scale (PSS)* (Berry & Jones, 1995) assesses the degree of stress and gratification perceived by parents regarding their parental roles. It consists of 12 statements with five response options ranging from one (*strongly disagree*) to five (*totally agree*) depending on the degree of agreement. Higher scores indicate a higher degree of parental stress (range: 12-60). Moreover, this scale includes two subscales: a) Rewards

(five items), which assess the gratification perceived in one's role as a parent, and b) Stressors (seven items), which assess the perceived stress in one's role as a parent. In this study, the Spanish version by Oronoz, Balluerka and Alonso-Arbiol (2007) was used. The internal consistency is 0.76 for the stressors subscale (0.74 men; 0.76 women), and 0.86 for the rewards subscale (0.87 men; 0.86 women).

The *Symptom Checklist (SCL-90-R)* (Derogatis, 1992) assesses the presence of psychopathological symptoms. It is composed of 90 items with five response options, grouped in nine dimensions of primary symptoms. Moreover, it includes three global indexes of severity: Global Severity Index (GSI), Positive Symptom Distress Index (PSDI) and Positive Symptom Total (PST), whose percentiles were considered. In this study, the Spanish version by González de Rivera (2002) was used. The internal consistency ranges from 0.70 to 0.90 (for men and women).

The *Maladjustment Scale* (Echeburúa, Corral, & Fernández-Montalvo, 2000) is a Spanish tool that assesses the degree of maladjustment to six areas of everyday life: studies or work, social relationships, spare time, intimate partner relationships, family life, and global maladjustment. This scale is made up of six items, ranging from zero (*nothing*) to five (*a lot*). The total scale range is 0-30. The cut-off point signifying significant maladjustment is 12 points. The internal consistency is 0.85 (0.84 men; 0.85 women).

Intervention program

The Suspertu program is an indicated prevention program (i.e. intervention with individuals who are experiencing early signs of substance abuse and other related problem behaviors associated with substance abuse). It is a voluntary program (without any specific incentive for attending) composed of two intervention components, which are implemented simultaneously: a family therapy and a group education. Both components are implemented by master's level psychologists with more than five years

of experience in treating parents of adolescents with risk behaviors. Whereas the family therapy is focused on specific daily life problems in the family, the parental group education is aimed at providing general parental skills.

Family therapy. This is a cognitive-behavioral intervention that is based on a risk/protective factors perspective, taking into account specific problems that parents do not know how to deal with. Specifically, the program involves tailored sessions with both parents (one family at a time), in which daily conflict management skills and emotional support are provided, and family gatherings with parents and the teenager, aimed at mediating and confronting specific situations, are held. Sessions are conducted by one psychologist, but they are supervised by the intervention team. Successful program completion usually requires 12 months. The therapy includes weekly sessions (60 minutes) during the first 6 months, and every other week sessions (60 minutes) during the rest of the time.

Parental group education. This manualized intervention is aimed at teaching and training parents to cope with daily conflicts and improve parent-child relationships. Specifically, it involves psychoeducational components, behavior modification techniques, communication skills, and coping skills to manage disturbed emotional states associated with situations of conflict. The intervention is conducted in groups of approximately 20 parents and consists of 24 weekly ninety-minute sessions.

Design

A prospective open-label trial (both researchers and participants know which intervention is being administered), with repeated measures (pre-intervention, post-intervention and 6-month follow-up), was used to analyze the results of the program, and to compare the results on gender basis.

Procedure

The initial assessment of the participants was conducted over two sessions based on the standard protocol of the program. In the first session, data on socio-demographic characteristics, parenting styles (PPQ), and the perceived stress (PSS) were collected. During the second meeting, psychopathological symptoms (SCL-90-R) and the extent of maladjustment to everyday life (Maladjustment Scale) were assessed. All participants were interviewed by the psychologists of the Suspertu program. All the assessment instruments were administered in the presence of the interviewers. The following evaluations (with the same instruments) occurred at the end of the program and at the 6-month follow-up.

Data analysis

Descriptive analyses were performed for all variables. Distribution of missing data was studied, without finding significant differences between subjects with and without available data in all variables studied in the pre-treatment. Anyway, in this study the listwise deletion method was used, excluding an entire record from analysis if any single value was missing. Therefore, the statistical analyses were conducted with a sample of 125 patients who completed the three evaluation points. Due to the sample included 51 couples (n = 102 participants), correlations between men and women who were partners were conducted to test the degree of interdependence. All the correlations were below ± 0.25 . Consequently, statistical analyses for independent data were carried out. In the bivariate analyses, a χ^2 or a Student's *t* test for independent samples were used depending on the nature of the variables analyzed. Pearson's correlations were carried out in order to avoid redundant variables and to select the specific variables included in the analyses. Once the variables were selected, a repeated-measures multivariate analysis of variance (MANOVA) was carried out to evaluate the results of the intervention (pre, post and follow-up) and the interaction by gender. A difference of

$p < .05$ was considered significant. All statistical analyses were performed using SPSS (vs. 23.0) software.

RESULTS

Results in correlations among variables

In Table 3, results of the Pearson's correlations among the variables in the three assessment sessions are shown. According to the results, due to the high correlations found between several variables, the final variables selected for the analyses were the following ones: SCL-90-R-GSI, PSS-Rewards, PSS-Total, Maladjustment, Authoritative and Authoritarian parenting styles.

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Results of the intervention

Before computing the MANOVA, a Box's M test of equality of covariance matrices was performed and it was not significant (Box's $M = 134.318$; $F = .973$; $df 1 = 120$; $df 2 = 41781.21$; $p = .567$). Moreover, Bonferroni type adjustments for univariate F-tests were carried out to prevent from an inflated Type I error rate. In addition, the Levene's test of equality of error variances was calculated for each dependent variable, without significant values.

The result of the repeated-measures MANOVA for the intervention (pre, post and follow-up) shows a significant Wilks' Lambda ($F = 22.28$; $d.f. = 10.0$; $p < 0.001$). However, no significant Wilks' Lambda was found for gender x time interaction ($F = 1.03$; $d.f. = 10$; $p = .419$). In table 4 the Lambda values for each dependent variable is shown.

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When each measure was examined separately, statistically significant improvements between pre and post-intervention were found. These results were maintained in the follow-up assessment.

DISCUSSION

The results obtained in this study showed that the parental intervention of the Suspertu prevention program for adolescents with risk behaviors improved the parenting style. Specifically, scores on authoritative style increased in fathers and mothers, and scores in authoritarian style decreased. Moreover, both fathers and mothers presented a decrease in the degree of parental stress. After the intervention, parents perceived their role as father/mother to be less stressful and more rewarding. Finally, an important reduction in psychopathological symptoms and maladjustment was also observed in parents after the intervention. Overall, an improvement in both fathers and mothers was mainly achieved at the post-intervention assessment. The effect observed at the post-intervention assessment was maintained at the 6-month follow-up.

The global results obtained are in line with those found in other studies with parents of adolescents aimed at promoting positive parenting styles in different contexts (Arranz et al., 2016; Centro Universitario de Psicología de la Familia, 2012; de Graaf et al., 2008; Jackson et al., 2012; Martin-Quintana et al., 2009; Martínez, 2010; Nowak & Heinrichs, 2008; Rodrigo, 2016). Therefore, the inclusion of specific interventions involving parents in prevention programs seems to be an effective means to provide emotional support and skills to cope with daily conflicts with their adolescent children, mainly in cases of drug abuse (Koning et al., 2009; Kumpfer et al., 2003; Molgaard & Spoth, 2001; Rohrbach et al., 1994). Overall, similar scores observed in fathers and mothers after the intervention. Contrary to our hypothesis, there were no gender-based

differences in the results. Anyway, more studies taking into account the differential progression by gender are needed in order to confirm these results.

The level of attrition found in this study is similar to that obtained in other programs (Koning et al., 2009; Rohrbach et al., 1994). The disagreement between the intervention team and the family regarding the achievement of therapeutic objectives might be the main cause of dropouts. Frequently, when the family situation improves and the arguments decrease, parents tend to believe that the therapeutic goals have been achieved, and decide to finish the intervention. Another difficulty related to parents' dropout could be related to the rigorous schedule and intensity of the intervention with busy families having a hard time to put in an entire year's worth of treatment. A promising future line of research is to know in depth the reasons for dropout in order to increase the retention rates.

This study has some limitations. First, it would be interesting to enroll a larger sample, which would allow for a greater number of fathers and mothers in the post-intervention and follow-up assessments, as well as an increased statistical power. Second, in this study, a 6-month follow-up was conducted. A longer follow-up period would have enabled an exploration of whether the results obtained remained the same over a longer period. Third, this study sample was composed of fathers and mothers seeking assistance from one specific prevention program in Spain (Suspertu) and thus may have created a bias that prevents us from generalizing the results to other parental intervention programs carried out in other contexts. Fourth, the Permissive scale was not considered due to the low internal consistency. Future studies should analyze this parental style in parents with these types of problems. Fifth, in this study the adolescents' results were not taken into account. Future studies should consider the effect that the parental intervention has on adolescents' progression. Finally, the

parental intervention evaluated in this study was part of one prevention program. As is often the case in the field of prevention, it is difficult to know the extent of the results obtained by these preventive interventions in the long term. Therefore, the results of this study must be verified by further studies analyzing the specific contribution of the different components of the prevention program. Moreover, future studies should consider the influence of other contextual factors, like emotional support, family warmth, or the influence of culture (Becoña et al., 2012), as well as some couple processes, such as co-parenting ability or couple satisfaction.

Despite these limitations, the specific contributions of this study are the following: 1) This is the first Spanish gender-oriented evaluation of a prevention program for parents of adolescents with risk behaviors, which is based on a bio-psycho-social risk and protective factors model; and 2) the study supports that prevention programs for adolescents with risk behaviors are a suitable context for intervening with their parents to teach them to deal appropriately with risk behaviors. The change in parental styles becomes crucial for the improvement of the family situation, which constitutes an important goal of these types of programs.

Beyond the intervention with parents of adolescents with risk behaviors, the results of this study should be considered by marriage, family and systemic therapists. Researches focused on underserved populations to provide effective interventions are needed. This is a first study showing that teaching parents adequate parenting styles and communication and coping skills could be an effective way in preventing the development of later problems in their adolescent children.

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Table 1
Rate of participants' completion of the study

	Total		Fathers		Mothers		X^2 (<i>df.</i>)	<i>p</i>
	<i>N</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)		
Pre-intervention	229	(100%)	105	(100%)	124	(100%)	--	--
Post-intervention	158	(69.0%)	72	(68.6%)	86	(69.4%)	0.1 (1)	.898
6-month follow-up	125	(54.6%)	55	(52.4%)	70	(56.5%)	0.2 (1)	.636

Table 2
Characteristics of the sample

	Total (N = 125)		Fathers (n = 55)		Mothers (n = 70)		<i>t</i> (d.f.)	<i>p</i>
	<i>M</i>	<i>S.D.</i>	<i>M</i>	<i>S.D.</i>	<i>M</i>	<i>S.D.</i>		
Age	49.85	5.12	51.20	4.92	48.79	5.05	2.7 (123)	.008
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%	<i>X</i> ² (d.f.)	<i>p</i>
Education level								
Primary	33	26.4%	17	30.9%	16	22.9%		
Secondary	48	38.4%	18	32.7%	30	42.9%	1.6 (2)	.445
University	44	35.2%	20	36.4%	24	34.3%		
Labor situation								
Homemaker	6	4.8%	1	1.8%	5	7.1%		
Employed	100	80.0%	48	87.3%	52	74.3%	10.4 (3)	.015
Unemployed	16	12.8%	3	5.5%	13	18.6%		
Retired	3	2.4%	3	5.5%	0	--		
Type of family								
Family of origin	96	76.8%	44	80.0%	52	74.3%		
Reconstituted family	5	4.0%	2	3.6%	3	4.3%	0.6 (2)	.750
One-parent family	24	19.2%	9	16.4%	15	21.4%		

Table 3
Correlations at pre, post-intervention and follow-up

	SCL-90-R PSDI	SCL-90-R PST	Rewards	Stressors	PSS Total	Maladjustment
PRE-PRE						
SCL-90-R-GSI	.748**	.956**	-.343**	.489**	.488**	.486**
SCL-90-R-PSDI	1	.564**	-.265**	.356**	.363**	.448**
SCL-90-R-PST		1	-.317**	.474**	.465**	.455**
Rewards			1	-.487**	-.843**	-.282**
Stressors				1	.881**	.395**
PSS Total					1	.153
POST-POST						
SCL-90-R-GSI	.714**	.856**	-.184*	.474**	.513**	.626**
SCL-90-R-PSDI	1	.451**	-.036	.339**	.237**	.451**
SCL-90-R-PST		1	-.318**	.474**	.488**	.554**
Rewards			1	-.355**	-.585**	-.235**
Stressors				1	.926**	.558**
PSS Total					1	.546**
FOLLOW-UP-FOLLOW-UP						
SCL-90-R-GSI	.618**	.955**	-.364**	.505**	.509**	.547**
SCL-90-R-PSDI	1	.400**	-.114	.257**	.223*	.285**
SCL-90-R-PST		1	-.381**	.497**	.511**	.561**
Rewards			1	-.514**	-.832**	-.392**
Stressors				1	.903**	.531**
PSS Total					1	.540**
Authoritarian Permissive						
PRE-PRE						
Authoritative	-.451**	-.146				
Authoritarian	1	.411**				
POST-POST						
Authoritative	-.416**	-.401**				
Authoritarian	1	.572**				
FOLLOW-UP-FOLLOW-UP						
Authoritative	-.343**	-.348**				
Authoritarian	1	.530**				

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 4
Repeated-measures multivariate analysis of variance

	Pre-intervention (T1)		Post-intervention (T2)		Follow-up (T3)		Intervention T1-T2-T3			Post-hoc (intervention) T1-T2 T1-T2 T2-T3			Time x gender*		
	<i>M</i>	<i>S.D.</i>	<i>M</i>	<i>S.D.</i>	<i>M</i>	<i>S.D.</i>	<i>F (d.f.)</i>	<i>p</i>	η^2	<i>p</i>	<i>p</i>	<i>p</i>	<i>F (d.f.)</i>	<i>p</i>	η^2
SCL-90-R-GSI	66.74	30.33	45.85	31.66	42.57	31.80	51.1 (2)	< .001	.294	< .001	< .001	.318			
Fathers (<i>n</i> = 55)	63.98	32.08	48.44	31.49	43.80	33.22							1.9 (2)	.150	.015
Mothers (<i>n</i> = 70)	68.91	28.93	43.81	31.87	41.60	30.84									
PSS-Total	36.36	5.07	28.73	9.26	29.30	9.27	56.1 (2)	< .001	.313	< .001	< .001	.986			
Fathers (<i>n</i> = 55)	35.73	5.51	28.13	9.37	29.54	8.90							0.6 (2)	.535	.005
Mothers (<i>n</i> = 70)	36.86	4.67	29.20	9.21	29.10	9.61									
Maladjustment	14.87	5.69	10.00	6.57	9.17	6.73	50.7 (2)	< .001	.292	< .001	< .001	.437			
Fathers (<i>n</i> = 55)	13.60	5.38	10.05	6.72	9.54	6.92							3.5 (2)	.033	.027
Mothers (<i>n</i> = 70)	15.87	5.76	9.96	6.51	8.87	6.62									
Authoritative	39.29	6.71	42.33	6.54	41.77	6.34	16.2 (2)	< .001	.116	< .001	< .001	.940			
Fathers (<i>n</i> = 55)	37.95	6.53	40.20	6.64	40.00	6.33							0.8 (2)	.450	.006
Mothers (<i>n</i> = 70)	40.34	6.71	44.00	5.99	43.16	6.03									
Authoritarian	16.86	3.47	13.95	2.76	13.82	2.49	71.3 (2)	< .001	.367	< .001	< .001	.999			
Fathers (<i>n</i> = 55)	16.64	3.09	14.22	2.94	14.04	2.57							1.4 (2)	.240	.012
Mothers (<i>n</i> = 70)	17.03	3.74	13.74	2.62	13.64	2.42									

Bonferroni adjustment was carried out for multiple comparison

* Post-hoc analyses for interaction time x gender were not carried out because no significant Wilks's Lambda was found

