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Three reasons why parental burnout is more prevalent in individualistic countries: a mediation study in 36 countries

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Abstract

Purpose The prevalence of parental burnout, a condition that has severe consequences for both parents and children, varies dramatically across countries and is highest in Western countries characterized by high individualism.

Method In this study, we examined the mediators of the relationship between individualism measured at the country level and parental burnout measured at the individual level in 36 countries (16,059 parents).

Results The results revealed three mediating mechanisms that is, self-discrepancies between socially prescribed and actual parental selves, high agency and self-directed socialization goals, and low parental task sharing, by which individualism leads to an increased risk of burnout among parents.

Conclusion The results confirm that the three mediators under consideration are all involved, and that mediation was higher for self-discrepancies between socially prescribed and actual parental selves, then parental task sharing, and lastly self-directed socialization goals. The results provide some important indications of how to prevent parental burnout at the societal level in Western countries.

Keywords Exhaustion · Culture · Individualism · Mothers · Fathers

Introduction

Having no energy left to take care of their children, feeling so exhausted in their parental role that sleeping does not allow them to recover, no longer being able to show how

much they love their children, feeling zero pleasure in being with them, and feeling ashamed of the parents they have become: this is how thousands of mothers and fathers currently feel around the world [1]. These parents suffer from parental burnout, a condition characterized by physical and emotional exhaustion in parenting, emotional distancing from children, a loss of pleasure and effectiveness as a parent, and contrast with previous parental self, which results

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from a chronic imbalance between parenting stressors and resources [2, 3].

Over the past fifteen years, parental burnout has received increasing attention around the world [e.g., 4–8]. In spite of this worldwide interest in the topic, the International Investigation of Parental Burnout (IIPB) recently highlighted considerable variations in the prevalence of parental burnout across countries [1]. A prevalence lower than 1% was observed in countries such as Thailand and Cuba, whereas parental burnout affects 5–8% of parents in Western countries like the United States, Canada, Poland, France and Belgium.

The significant variations in the prevalence of parental burnout across countries have led researchers to investigate the cultural factors associated with it. They have found that sociodemographic and economic factors contribute only marginally to parental burnout [e.g. 9–12], whereas cultural values and, in particular, individualism explain a significant part of its variation across countries. The individualism of a country corresponds to a particular form of relationship between individuals and the groups to which they belong [13, 14]. In individualist countries, individuals maintain relatively loose ties and put their own needs before those of the group. In contrast, in collectivist countries, individuals are tightly connected and the needs of the group are put before the needs of the individual. Based on his research, Hofstede ranked almost all countries in the world on a relative continuum from 0 (minimum level of individualism) to 100 (maximum level of individualism).

Based on a study of 42 countries around the world, the IIPB showed that the higher the level of individualism in a country, the higher the level of parental burnout reported by parents [1]. However, the mechanisms by which individualism leads to an increased risk of burnout among parents remain unknown. Investigating these mechanisms involves studying the mediators of the relationship between individualism measured at the country level and parental burnout measured at the individual level.

To identify possible mediators explaining why parents are more prone to burnout in individualistic countries, a look at the construct of individualism at the individual level is helpful. Individualistic people are characterized by autonomy and independence, individual achievement and responsibility, self-reliance [15], lack of concern for others [16], motivation for their own needs, goals and preferences, competition [17–19], self-direction, stimulation, power, hedonism [20–22], and perfectionism [23]. The characteristics of individualistic people provide important insights into how individualism can concretely affect the experience of parenting, from which we identified three relevant mediators to test.

First, in line with the individualists' characteristics of independence, individual achievement, and self-reliance, we hypothesized that in individualistic countries, parents

carry out their responsibilities towards their children (i.e. earning money, providing food, taking care of their needs, protecting, playing, rearing them, and so on) on their own rather than with others. The African proverb "It takes a village to raise a child" does not apply in individualistic countries because the social fabric is rather loose. This may be a vulnerability factor because social support is an important resource against parental burnout [9, 24–28]. We, therefore, hypothesized that carrying all demanding parental responsibilities alone rather than sharing some of the parental tasks with relatives in the social network, would increase the risk of burning out and that parental task sharing should mediate the link between individualism at the country level and parental burnout.

Second, in line with the individualists' characteristics of autonomy, self-direction, and power, we hypothesized that in individualistic countries, parents pursue culturally consistent socialization goals for their children, particularly agency and self-directed socialization goals [29–31]. In other words, parents prepare their children to be (individualistic) people oriented to the satisfaction of their personal needs and preferences. This prepares their children to integrate into their social group, but at the same time, it means that they are also more self-oriented, more demanding, and less inclined to comply with their parent's wishes. We, therefore, expected that socialization goals oriented towards the child's agency would make parenting more taxing, and mediate the link between individualism at the country level and parental burnout.

Third, in line with the individualists' characteristics of personal achievement, stimulation and perfectionism, we hypothesized that in individualistic countries, parents are more prone to perceive a gap between the socially prescribed parental self and their actual self. Western countries, characterized by high levels of individualism, are marked by high standards in parenting [32–34], and studies have shown that these standards are internalized by parents, driving them to make constant efforts that make them more vulnerable to parental burnout [35, 36]. In line with this, we expected that self-discrepancies between socially prescribed and actual parental selves would mediate the link between individualism and parental burnout.

To test these three mediating effects, we collected data from 16,059 parents in 36 countries across the globe. For each country, we obtained the level of individualism from Hofstede's dimensions of cultural values (retrieved from <https://www.hofstede-insights.com/product/comparative-countries/>) as the most widely used indicators of cross-cultural differences [37, 38]. For each parent, we measured parental task-sharing, agency and self-directed socialization goals, parental self-discrepancies, and parental burnout. Since there is inter-individual variability in the level of individualism of parents within countries, especially in

heterogeneous cultures that tolerate deviations of in-group members from the group values [18, 39], we also assessed individualism at the individual level and introduced it as a control variable in the model.

Method

Participants

A sample of 16,059 parents, composed of 4419 fathers ($M_{\text{age}} = 42.38$, $SD_{\text{age}} = 9.83$, range 18–89) and 11,640 mothers ($M_{\text{age}} = 38.03$, $SD_{\text{age}} = 7.97$, range 18–88) from 36 countries, was drawn from the IIPB database collected between December 2017 and December 2019 (see “[Procedure](#)” below). Among the 42 countries that participated in the IIPB data collection, 36 countries were retained in the present sample because individualism at the country level was not available for Algeria, Burundi, Cameroun, Cuba, Rwanda, and Togo. Parents were eligible to participate if they had at least one child still living at home and were at least 18 years old. The sociodemographic characteristics of the pooled sample and of the sample in each country are detailed in Table 1.

Procedure

The data used in this study came from the IIPB, a large international research consortium on parental burnout set up in 2017. This aimed to include the widest possible range of countries in terms of geographical location, cultural values and socio-economic level. These countries were invited to use a common protocol which was translated into 21 different languages using translation/back-translation procedures conducted by the consortium members and coordinated by the first author [for more information about the IIPB Consortium, see 1]. The study was approved by the Institutional Review Board both at UCLouvain and in each country. Ethics approvals in each country are presented in Table S1.

The IIPB data collection was carried out between January 2018 and March 2020. To avoid (self-)selection bias, the survey was presented as a study designed to improve understanding of parental satisfaction and exhaustion around the world, rather than as a study on parental burnout. Participants who gave their informed consent were asked to complete the survey anonymously, but could withdraw at any moment without providing any justification. The presentation of the survey (i.e., paper and pencil, or online) and the data collection procedure (newspaper advertisement, word of mouth, social networks, door-to-door, etc.) differed from country to country according to local practices. The data collection procedure in each country has been summarized in Table S2.

Measures

The common IIPB protocol included several measures addressing different research questions (e.g., comparing the prevalence of parental burnout across countries; exploring parenting cultures and the model of the child around the globe; investigating the relations between maternal burnout and gender egalitarian values at both country and individual levels). Because these questions are too different to be addressed in the same article, only the measures considered in the current study are presented below. The full IIPB protocol is available on Open Science Framework (OSF) at https://osf.io/94w7u/?view_only=a6cf12803887476cb5e7f17cfb8b5ca2.

Individual level

Sociodemographic characteristics Participants were first asked about: their gender; their age; their educational level (number of successfully completed school years from the age of 6); their working status (in paid work or not); the family type (two-parent family; single-parent family, step-family; others (e.g. polygamous family, two same-sex parents, multigenerational family)) the number of children living in the household; the age of the youngest and the oldest child; the number of women (e.g. co-wife, grandmother, nanny, helper, etc.) living in the household/direct entourage and caring for the children on a daily basis (including the participant); the number of men (e.g. grandfather, uncle, etc.) living in the household/direct entourage and caring for the children on a daily basis; the number of hours the participant spent with the children per day (excluding nighttime hours); and the neighborhood profile (disadvantaged; average; prosperous).

Parental burnout Parental burnout was assessed with the Parental Burnout Assessment [PBA, 40], a 23-item questionnaire assessing the four core symptoms of parental burnout: emotional exhaustion (9 items) (e.g., *I feel completely run down by my role as a parent*), contrast with previous parental self (6 items) (e.g., *I tell myself I'm no longer the parent I used to be*), loss of pleasure in one's parental role (5 items) (e.g., *I don't enjoy being with my children*) and emotional distancing from one's children (3 items) (e.g., *I am no longer able to show my children that I love them*), on a 7-point frequency scale (never (0), a few times a year (1), once a month or less (2), a few times a month (3), once a week (4), a few times a week (5), every day (6)). The parental burnout score was calculated by summing the scores on the 23 items. The higher the score, the more severe the parental burnout symptoms.

Parental task-sharing Parental task-sharing was measured with 23 items specifically created for the IIPB. They were based on LeVine's conceptual framework of universal parental function [41], encompassing 6 items on

Table 1 Sociodemographic characteristics: sample size and mean age, educational level, working status, family types, number of children in the household, age of the youngest child, age of the oldest child, number of women caring for children, number of men caring for children, hours spent with children per day, neighborhood profiles (standard deviations are in parentheses)

	Sample size	Sex (% mothers)	Age	Educational level	Working status (% paid work)	Family types				Number of children in the household	Age of the youngest child	Age of the oldest child	Number of women caring for children	Number of men caring for children	Hours with children	Neighborhood profiles		
						Two parent family	Single parent family	Step-family	Other							% disadvantaged	% average	% prosperous
Argentina	177	66.67	50.35 (10.27)	11.95 (3.68)	87.6	65.0	13.6	9.6	11.9	4.83 (2.85)	14.01 (8.03)	21.66 (10.45)	2.83 (2.39)	2.40 (1.43)	7.12 (5.64)	2.3	72.9	24.9
Australia	212	51.42	44.79 (10.60)	13.17 (2.78)	56.6	69.3	17.9	7.6	5.2	1.75 (0.86)	9.73 (7.45)	14.28 (9.18)	0.99 (0.49)	0.92 (0.55)	6.49 (3.82)	5.7	74.1	20.3
Austria	185	89.19	33.81 (6.47)	13.27 (3.08)	70.8	86.5	6.5	3.8	3.2	1.58 (.82)	2.50 (3.96)	4.52 (5.69)	1.08 (0.37)	0.96 (0.39)	10.46 (4.98)	2.7	69.2	28.1
Belgium	1,681	86.38	38.49 (7.36)	16.56 (2.61)	91.0	79.2	10.7	7.9	2.1	2.10 (1.05)	5.37 (5.69)	8.88 (7.10)	1.19 (0.67)	0.98 (0.54)	5.65 (3.36)	3.2	47.4	49.4
Brazil	300	63.33	42.11 (8.84)	15.90 (4.23)	77.9	90.9	3.0	4.1	2.0	1.53 (0.75)	8.99 (7.51)	11.07 (7.93)	1.91 (0.56)	1.02 (0.48)	5.71 (4.57)	14.6	66.4	19.0
Canada	279	92.11	34.08 (6.66)	15.89 (2.80)	84.2	81.2	9.0	8.6	1.1	2.12 (0.86)	3.81 (4.79)	7.04 (5.82)	1.05 (0.69)	0.98 (0.51)	8.90 (6.70)	7.5	60.6	31.9
Chile	431	85.61	36.57 (6.56)	17.93 (3.36)	76.3	72.4	11.1	8.1	8.4	1.80 (1.33)	4.85 (5.44)	8.24 (7.33)	1.51 (0.80)	0.99 (0.57)	10.54 (7.45)	2.55	59.6	37.8
China	721	55.48	38.91 (4.18)	10.27 (2.87)	91.4	82.9	3.7	2.2	11.1	1.49 (0.59)	10.95 (3.98)	14.19 (3.29)	1.78 (0.95)	1.62 (0.86)	3.85 (2.59)	5.3	89.7	5.0
Colombia	95	74.74	–	–	84.2	63.2	23.2	4.2	9.5	1.57 (0.72)	8.32 (7.22)	12.28 (8.58)	1.57 (0.95)	0.98 (0.77)	7.59 (6.02)	3.2	63.2	33.7
Costa Rica	245	59.59	37.76 (8.02)	16.39 (4.48)	84.5	75.4	7.0	7.0	10.7	1.53 (0.70)	6.01 (6.17)	9.05 (8.31)	1.50 (0.82)	1.16 (0.71)	9.38 (6.28)	4.5	64.9	30.6
Ecuador	146	69.86	32.45 (7.51)	17.21 (3.03)	85.6	65.1	11.6	6.9	16.4	1.63 (0.74)	5.02 (4.34)	8.23 (6.68)	1.97 (1.05)	1.39 (0.89)	7.58 (4.92)	2.7	7.6	26.7
Egypt	267	56.18	47.99 (6.74)	11.30 (3.54)	1.50	79.0	12.7	0.8	7.5	3.00 (1.38)	13.96 (6.41)	23.19 (7.02)	1.34 (.98)	1.05 (1.10)	8.33 (3.51)	16.1	62.9	21.0
Finland	1,729	90.69	36.46 (6.49)	17.69 (3.40)	75.5	78.7	8.8	9.7	2.9	2.25 (1.29)	4.08 (4.15)	7.52 (5.32)	0.92 (0.38)	0.87 (0.43)	7.72 (3.72)	0.0	99.9	0.1
France	1,356	81.34	38.09 (8.39)	15.00 (2.82)	83.0	76.0	11.6	10.1	2.4	1.86 (0.85)	5.94 (5.81)	9.67 (7.64)	1.38 (1.18)	0.97 (0.69)	8.32 (5.22)	3.0	57.0	40.0
Germany	202	69.31	35.73 (7.87)	13.55 (4.86)	73.8	72.3	13.4	8.9	5.5	1.72 (0.88)	5.00 (4.88)	8.02 (6.76)	1.01 (0.49)	0.90 (0.53)	7.32 (4.15)	5.0	74.3	10.8
Iran	446	50.22	40.28 (8.70)	13.72 (3.46)	67.7	85.4	10.1	2.9	1.6	1.74 (0.76)	9.22 (7.35)	13.90 (9.17)	1.08 (0.41)	1.00 (0.31)	5.84 (3.49)	11.8	59.5	28.7
Italy	350	71.43	43.53 (8.97)	14.99 (3.93)	85.7	87.4	4.9	4.6	3.1	1.74 (0.74)	9.15 (7.48)	12.48 (8.86)	1.13 (0.52)	1.02 (0.39)	7.30 (5.21)	2.0	74.9	23.1

Table 1 (continued)

	Sample size	Sex (% mothers)	Age	Educa-tional level	Work-ing status (% paid work)	Family types				Num-ber of children in the house-hold	Age of the youngest child	Age of the oldest child	Num-ber of women caring for chil-dren	Number of men caring for chil-dren	Hours with children	Neighborhood profiles		
						Two parent family	Single parent family	Step-family	Other							% dis-advan-taged	% aver-age	% pros-perous
Japan	500	50.00	54.36 (14.65)	14.29 (2.49)	59.6	80.1	7.4	1.2	10.8	1.56 (0.73)	21.40 (14.80)	23.22 (14.36)	1.08 (0.47)	0.92 (0.48)	4.80 (4.15)	1.6	83.0	15.4
Lebanon	201	67.16	37.44 (8.43)	16.17 (3.67)	67.7	93.6	5.0	1.0	0.5	2.18 (1.02)	6.71 (5.86)	10.52 (8.02)	1.22 (0.49)	1.00 (0.28)	7.45 (3.11)	6.5	69.7	23.9
The Netherlands	216	71.76	37.70 (8.00)	16.35 (2.33)	93.5	89.4	4.6	3.7	2.3	1.76 (0.80)	4.69 (3.70)	6.79 (0.91)	1.50 (1.04)	1.14 (0.62)	6.42 (3.00)	2.3	53.2	44.4
Pakistan	228	43.86	50.35 (10.27)	11.95 (3.68)	40.7	75.5	8.8	2.0	13.7	4.83 (2.85)	14.01 (8.03)	21.70 (10.46)	2.83 (2.39)	2.40 (1.43)	7.12 (5.64)	29.4	57.5	13.1
Peru	311	70.10	40.20 (10.70)	14.89 (4.79)	84.6	65.6	14.8	8.0	11.6	1.95 (1.05)	8.29 (7.73)	13.22 (9.98)	1.86 (1.14)	1.35 (1.05)	8.37 (5.59)	6.4	65.9	27.7
Poland	457	71.12	34.89 (6.60)	17.53 (3.51)	75.5	86.4	5.0	3.5	5.0	1.71 (0.93)	4.04 (4.50)	6.44 (5.78)	1.20 (0.84)	0.98 (0.62)	7.97 (4.83)	4.4	76.2	19.5
Portugal	407	50.37	41.85 (8.12)	14.85 (3.84)	92.8	88.8	3.3	6.3	1.8	1.66 (0.71)	8.36 (7.48)	11.14 (8.12)	0.99 (0.44)	0.88 (0.41)	4.86 (2.85)	1.2	62.9	35.9
Romania	344	62.50	37.15 (5.58)	16.78 (2.86)	90.7	91.6	3.2	2.6	2.6	1.56 (0.62)	4.42 (4.05)	7.02 (5.17)	1.43 (0.73)	1.10 (0.61)	7.32 (6.17)	2.6	26.7	70.6
Russia	364	72.25	34.43 (6.71)	14.49 (4.15)	83.5	78.3	6.6	9.1	6.0	1.72 (0.83)	4.05 (3.88)	8.02 (6.26)	1.26 (0.63)	1.04 (0.53)	7.66 (5.24)	0.6	59.9	39.6
Serbia	228	77.19	38.10 (5.70)	14.90 (5.16)	86.0	92.5	4.0	3.5	0.0	1.63 (0.69)	4.49 (4.67)	6.82 (5.63)	1.14 (0.63)	1.03 (0.53)	7.67 (4.58)	2.6	48.3	49.1
Spain	693	76.62	40.95 (8.13)	15.14 (4.11)	82.2	80.6	8.3	6.3	4.8	1.72 (0.76)	7.09 (6.89)	9.99 (8.37)	1.42 (0.94)	1.14 (0.70)	8.89 (6.44)	6.4	78.5	15.1
Sweden	796	92.96	40.66 (5.04)	15.35 (3.16)	87.3	73.2	12.2	9.3	5.3	2.15 (0.94)	6.49 (4.84)	11.17 (6.16)	1.00 (0.55)	0.98 (0.57)	6.42 (3.14)	4.8	75.1	20.1
Switzer-land	419	64.68	40.18 (6.86)	16.43 (3.58)	92.1	81.6	10.7	6.9	0.7	1.96 (0.81)	6.02 (5.53)	8.96 (6.30)	1.10 (0.54)	0.94 (0.46)	6.67 (4.15)	0.3	49.6	50.1
Thailand	393	51.65	43.04 (5.99)	3.3 (1.03)	97.2	69.8	2.1	1.3	26.9	1.82 (0.72)	9.24 (3.76)	12.49 (4.92)	1.82 (0.99)	1.48 (0.83)	5.95 (3.66)	1.0	51.6	47.4
Turkey	450	58.78	36.79 (6.51)	13.67 (3.56)	74.7	86.6	6.3	0.5	6.7	1.66 (0.64)	4.03 (3.29)	5.54 (5.93)	1.15 (0.52)	0.99 (0.42)	6.67 (3.79)	4.7	73.1	22.2
UK	271	60.15	39.15 (8.53)	15.41 (3.33)	83.4	89.3	7.4	2.6	0.7	1.72 (0.73)	6.29 (6.34)	9.32 (7.92)	1.01 (0.25)	0.95 (0.40)	6.59 (3.88)	4.4	52.1	43.5
Uruguay	297	62.96	35.10 (6.39)	12.86 (4.78)	90.0	77.8	9.8	5.4	7.1	1.63 (0.72)	3.26 (1.82)	6.13 (5.09)	1.42 (0.75)	1.06 (0.55)	11.82 (5.37)	2.7	73.1	24.2

Table 1 (continued)

Sample size	Sex (% mothers)	Age	Educational level	Working status (% paid work)	Family types			Num-ber of children in the house-hold	Age of the youngest child	Age of the oldest child	Num-ber of women caring for chil-dren	Num-ber of men caring for chil-dren	Hours with children	Neighborhood profiles			
					Two parent family	Single parent family	Step-family							Other	% dis-advan-taged	% aver-age	% pros-perous
USA	69.08	38.18 (9.03)	15.40 (3.52)	76.3	72.3	16.5	5.7	5.5	1.93 (1.01)	6.43 (5.71)	10.53 (7.42)	1.12 (0.79)	0.93 (0.72)	7.61 (5.14)	9.5	68.8	21.7
Vietnam	54.79	36.92 (7.52)	14.16 (4.19)	95.7	77.7	2.0	0.4	20.0	1.73 (1.01)	5.12 (5.07)	8.12 (7.41)	1.47 (0.82)	1.20 (0.71)	4.60 (2.85)	5.4	72.9	24.9
Pooled sample	72.48	39.22 (8.74)	15.02 (4.30)	80.6	79.57	8.79	6.08	5.6	1.91 (1.04)	6.81 (7.00)	10.33 (8.29)	1.27 (0.84)	1.05 (0.66)	7.15 (4.82)	4.3	67.4	28.3

task-sharing regarding basic needs (e.g. *Being present during the child(ren)'s meals*), 5 items on task-sharing regarding material subsistence (e.g. *Earning money to pay for food*), and 11 items on task-sharing regarding childrearing (e.g. *Teaching children what is and is not allowed*). The items were briefly introduced as follows: “*Being a parent encompasses a set of tasks and responsibilities. These can be shared among several adults who raise the child(ren) together. For the following tasks and responsibilities, indicate whether you take care of it on your own or together with someone else (e.g. the other parent, grandparents, relatives, brothers and sisters, people you trust in your community, ...).*” Parents answered the items on a 5-point-scale (me exclusively (0), mainly me (1), half me and half someone else (2), mainly someone else (3), someone else exclusively (4)). The parental task-sharing score was obtained by summing the scores on the 23 items. The higher the score, the more the parent shared his/her parental tasks and responsibilities.

Agency and self-directed socialization goals Agency socialization goals were measured with the 12 items of the agency and self-direction subscales of the Goals and Values in Adulthood Questionnaire [GVAQ, 42]. A list of long-term goals and values that can be transmitted to child(ren) by parents was provided (e.g. *Thinking for yourself: having your own views even if they differ from those of the others*). Parents were asked to indicate how important they felt it was for their child(ren) to acquire or have each of these values as adults. Parents answered the items on a 6-point-scale (not important (0), somewhat important (1), important (2), very important (3), extremely important (4), the most important (5)). The agency score was obtained by averaging the scores on the 12 items. The higher the score, the more pronounced the agency and self-directed socialization goals.

Parental self-discrepancies The discrepancy between parental selves was measured using a variation of the S-DS [43]. In the current study, the respondents were first invited to freely name five characteristics that the society in which they were raising their child(ren) considered that an ideal parent should possess (*Indicate in the following boxes five features that an ideal mother/father should have in the view of the society in which you live*). Second, they evaluated the actual/socially prescribed discrepancy through the following item: *As a parent, do you behave the way society expects you to?*, rated on a scale from 0 to 100% ranging from “I don’t behave in this way at all” to “I behave exactly in this way” so that higher scores reflected *lower* parental self-discrepancies.

Individualism Individualism at the individual level was assessed with the 11 independence items (e.g. *I try to do what is best for me, regardless of how that might affect others*) of the Singelis Self-Construal Scale [44]. Parents answered on a 6-point-scale (strongly disagree (1), disagree

(2), somewhat disagree (3), neither agree nor disagree (4), somewhat agree (5), agree (6), strongly agree (7)). The individualism score at the individual level was obtained by averaging the scores on the 11 items so that higher scores reflected higher individualism.

Country level

Individualism Individualism at the country level was retrieved from Hofstede's work [45]. Individualism scores ranged between 0 and 100 (retrieved from <https://www.hofstede-insights.com/product/compare-countries/>). In the present sample, Individualism scores ranged between 8 (Ecuador) and 91 (USA). They are displayed in Table 2 for the 36 countries.

Statistical analyses

Stata17 [46] was used to perform the statistical analyses. The full syntax and dataset are available on OSF at https://osf.io/h5fdx/?view_only=7947a23e5e2b4dd8b5a503064b758e22. Preliminary analyses were conducted to test the validity of the measures (i.e., measurement invariance across languages), normality, and correlations between all variables. Details about the preliminary analyses are provided in the supplemental material.

For the main analyses, we estimated a structural path model in which individualism at the country level predicted parental burnout both directly and indirectly through the three mediators, i.e. parental task-sharing, agency socialization goals and parental self-discrepancies, and the control variable, i.e. individualism at the individual level. The model also controlled for the relation between individualism at the country level and individualism at the individual level, as well as for covariances between the three mediators, and between the three mediators and the control variable, i.e. individualism at the individual level. The maximum likelihood method of estimation was used to estimate the model, with the option `mlmv` so that we used all the information available without listwise deletion. We then tested the direct, indirect and total effects of individualism at the country level on parental burnout. Since the specific effects of the three mediators were confounded in the indirect effect coefficient, we tested the equality of coefficients to identify if some mediators played a more important role in the model. Finally, we compared the total effect of individualism at the country level on parental burnout through each of the significant mediation processes by multiplying the coefficient of the path between individualism at the country level and the mediator, by the coefficient of the path between the mediator and parental burnout, plus the coefficient of the direct link between individualism at the country level and parental burnout (Table 3).

Results

The results of the mediation model are presented in Fig. 1. They confirmed our hypotheses about the mediation processes. As expected, when individualism at the individual level was controlled for, individualism at the country level predicted lower parental task-sharing, higher agency socialization goals and higher parental self-discrepancies. In turn, low parental task-sharing, high agency socialization goals and high parental self-discrepancies predicted higher parental burnout.

As shown in Fig. 1, the standardized estimate of the direct effect of individualism at the country level on parental burnout was 0.19, $z = 21.66$, $p < 0.000$. The indirect effect was 0.05, $z = 16.12$, $p < 0.000$, and the total effect was 0.24, $z = 27.01$, $p < 0.000$. We can deduce that 79% (0.19/0.24) of the effect of individualism at the country level on parental burnout was direct after controlling for the three mediators and individualism at the individual level, whereas 21% (0.05/0.24) of the effect was indirect through the three mediators. In other words, after controlling for the three mediators and individualism at the individual level, the majority of the effect of individualism at the country level on parental burnout was direct. There was a sizeable but smaller percentage of the effect that was indirect. Overall, the mediation model explained 7% of the variance in parental burnout.

With regard to the equality of coefficients between the three mediators and parental burnout, we found a higher effect of parental self-discrepancy compared to parental task-sharing, $\chi^2(1) = 106.65$, $p < 0.000$, or agency socialization goals, $\chi^2(1) = 518.04$, $p < 0.000$, as well as a higher effect of parental task-sharing compared to agency socialization goals, $\chi^2(1) = 191.87$, $p < 0.000$.

In sum, the results of the direct, indirect and total effects, as well as the tests of the equality of coefficients, suggest a hierarchy in the contribution of mediators: the total effect of individualism at the country level on parental burnout was highest through the mediation effect of parental self-discrepancies ($-0.11^* - 0.22 + 0.19 = 0.214$), then through the mediation effect of parental task-sharing ($-0.12^* - 0.11 + 0.19 = 0.203$), and finally through the mediation effect of agency socialization goals ($0.11^* \cdot 0.05 + 0.19 = 0.195$).

Discussion

The objective of the current study was to investigate the mechanisms by which individualism leads to an increased risk of burnout among parents. We, therefore, studied three

Table 2 Individualism score (at country level), mean level of parental burnout, parental task sharing, agency socialization goals, parental self-discrepancy, and individualism score (at individual level) for each country (standard deviations are in parentheses)

	Individualism score (at country level)	Parental burnout	Parental task sharing	Agency socialization goals	Parental self-discrepancy	Individualism score (at individual level)
Argentina	46	20.50 (20.85)	59.44 (14.94)	4.56 (0.75)	57.98 (25.85)	5.06 (0.86)
Australia	90	24.57 (25.07)	58.10 (14.90)	4.59 (0.82)	69.67 (22.17)	4.98 (0.69)
Austria	55	21.58 (19.41)	60.03 (9.68)	4.79 (0.61)	56.38 (21.02)	4.70 (0.74)
Belgium	75	36.77 (31.13)	57.79 (13.93)	4.73 (0.71)	59.04 (20.75)	4.72 (0.75)
Brazil	38	16.02 (19.34)	61.62 (15.42)	–	68.27 (27.51)	4.78 (0.75)
Canada	80	32.82 (29.48)	56.51 (15.12)	4.49 (0.69)	64.08 (20.27)	4.85 (0.76)
Chile	23	28.99 (25.70)	59.72 (11.48)	4.93 (0.68)	55.91 (24.99)	5.27 (0.67)
China	20	10.83 (17.95)	61.79 (12.45)	4.00 (0.98)	70.64 (19.44)	4.48 (0.75)
Colombia	13	17.95 (19.71)	52.91 (13.61)	4.90 (0.79)	65.38 (25.55)	5.34 (0.65)
Costa Rica	15	24.34 (25.21)	64.73 (10.89)	5.27 (0.62)	59.21 (27.98)	5.46 (0.65)
Ecuador	8	19.47 (19.97)	60.23 (12.01)	4.92 (0.88)	57.58 (26.66)	5.43 (0.81)
Egypt	25	33.43 (24.00)	61.81 (10.02)	4.32 (0.89)	82.45 (15.65)	–
Finland	63	31.96 (27.38)	58.59 (11.39)	4.73 (0.66)	63.03 (21.90)	4.68 (0.68)
France	71	29.24 (28.23)	53.24 (19.25)	4.49 (0.72)	56.27 (23.65)	4.79 (0.70)
Germany	67	25.06 (21.71)	57.99 (13.90)	4.82 (0.72)	57.50 (26.22)	4.63 (0.67)
Iran	41	15.49 (21.06)	57.78 (15.01)	5.03 (0.85)	81.68 (19.83)	5.16 (0.78)
Italy	76	16.08 (17.03)	62.29 (10.65)	4.73 (0.79)	54.60 (26.37)	4.60 (0.70)
Japan	46	12.76 (22.63)	63.78 (14.51)	3.54 (0.92)	56.04 (23.79)	4.51 (0.64)
Lebanon	40	19.47 (26.71)	67.11 (6.79)	4.45 (1.08)	81.91 (16.29)	5.22 (0.60)
Pakistan	14	17.70 (14.78)	55.69 (15.03)	3.77 (0.87)	3.37 (1.29)	3.90 (0.86)
Peru	16	18.43 (18.31)	59.90 (14.87)	4.38 (0.91)	70.97 (24.83)	4.80 (0.86)
Poland	60	39.41 (30.46)	63.24 (30.46)	4.71 (0.76)	59.06 (23.79)	4.76 (0.68)
Portugal	27	17.06 (20.70)	62.53 (9.27)	–	66.23 (28.19)	4.92 (0.62)
Romania	30	22.26 (25.72)	64.39 (9.71)	4.84 (0.90)	60.93 (25.87)	4.74 (0.67)
Russia	39	26.93 (29.32)	59.58 (11.01)	4.28 (0.85)	55.18 (26.77)	4.60 (0.68)
Serbia	25	18.90 (18.97)	61.11 (12.46)	3.88 (0.59)	65.54 (25.45)	4.94 (0.65)
Spain	51	22.64 (25.28)	60.23 (12.84)	4.85 (0.74)	62.83 (32.16)	4.62 (0.57)
Sweden	71	20.26 (21.97)	55.35 (17.28)	4.36 (0.67)	59.99 (23.69)	4.76 (0.72)
Switzerland	68	31.80 (28.05)	60.14 (11.88)	4.57 (0.70)	56.55 (23.05)	4.75 (0.76)
Thailand	20	5.74 (9.17)	62.15 (11.19)	4.69 (0.88)	80.71 (13.34)	4.92 (0.64)
The Netherlands	80	19.17 (21.35)	60.35 (17.61)	4.52 (0.66)	64.22 (21.42)	4.90 (0.67)
Turkey	37	12.1 (13.87)	60.55 (15.04)	5.24 (0.78)	78.56 (21.27)	5.23 (0.74)
UK	89	28.01 (24.68)	61.30 (10.88)	4.48 (0.74)	60.90 (21.49)	4.66 (0.70)
Uruguay	36	12.03 (13.62)	63.86 (9.71)	4.59 (0.82)	78.56 (16.10)	4.87 (0.94)
USA	89	32.41 (32.92)	56.02 (16.85)	4.70 (0.89)	64.88 (24.78)	5.00 (0.83)
Vietnam	20	12.16 (16.40)	63.22 (9.72)	3.02 (0.99)	67.39 (27.09)	3.57 (0.81)
Pooled sample	–	24.61 (26.35)	59.30 (14.03)	4.55 (0.89)	63.48 (25.04)	4.78 (0.79)

Data about agency socialization goals were not collected in Brazil and Portugal. Data about individualism (in the individual level) were not collected in Egypt

mediators of the relationship between individualism measured at the country level and parental burnout measured at the individual level. The results confirm that the three mediators under consideration are all involved.

The first and most important mediator was parental self-discrepancy. Parents from individualistic countries are more prone to perceive a gap between the socially prescribed

parental self and their actual self. In turn, parents who perceive such a gap are at higher risk of burning out. The standards of parenting that prevail in Western societies seem to be internalized by parents and foster a sense of underachievement in their role as parents [36, 47]. Our results suggest that the expectations of Western societies may be so demanding that some parents might feel that they are never doing

79% of the effect of country-level individualism on parenting burnout is mediated by other mechanisms that were not measured here. We will return to this point in our discussion of future directions below.

Furthermore, the estimation of the percentage of variance explained in parenting burnout showed that 7% could be attributed to the variables considered in the model. Parental burnout results from multiple factors originating from the social and cultural context on the one hand [about 1/4 of the variance, see 1], and from inter-individual differences on the other hand [about 3/4 of the variance, see 1]. Consideration of other mediating mechanisms could help increase the proportion of variance explained at the societal level. A better understanding of these mechanisms is essential if we are to prevent parental burnout in individualistic societies, where it is reaching worrying levels of prevalence [1]. These levels have further increased during the pandemic [53]. It is not in the interest of Western societies for parents to burn out, given their responsibilities for optimal child development, the need to balance work and parenting responsibilities, the risks to the physical and mental health of burnt-out parents [54], and the risk of increased neglect and violence towards their children [2, 9].

The mechanisms that we have detected in this study provide indications of how to prevent parental burnout at the societal level. In particular, they suggest first that the high standards associated with ideal parenting should be questioned in terms of their relevance and their impact on parents and their children. Second, our results should lead us to reconsider the social support available to parents. Solidarity between parents, and more generally between adults, is important to ensure that childrearing is the responsibility of the social group or community, and not of the parent alone. Consider extending the concept of co-parenting to include the involvement of the other parent, but also of other caregivers available in the child's environment, could help us to carry the debate forward. Third, our results point to potential derives that may be taken by the rearing of children as it prevails in individualistic societies. Childrearing in this context may lead children to be narcissistic [55, 56], and exclusively focused on the satisfaction of their needs without regard for those of others. The dangers of such tendencies for democratic societies have recently been raised with regard to ego inflation [57] and mixed attitudes toward collective concerns like environmental protection in both Europe and the United States [58, 59] for example.

Limitations and future directions

In this study, we tested mediators of the link between country-level individualism and parental burnout. Nevertheless, the higher prevalence of parental burnout in individualistic countries should not hide its prevalence in collectivistic

countries too. Mechanisms specific to these cultures should also be explored and tested. It is the researchers from these cultures who must develop hypotheses about the mediators at work. We hope that our study will stimulate researchers to do so to move away from exclusively WEIRD (i.e., western, educated, industrialized, rich, democratic) knowledge about parenting.

With regard to the cultural roots of parental burnout in individualistic countries, our study is far from having identified and estimated all the relevant mechanisms. New studies will have to be devoted to these still unexplored mechanisms; some of the possible candidates are briefly outlined below.

As suggested by our results on parental task-sharing, social support is probably a mediator in the relationship between individualism at the country level and parental burnout. One limitation of the current study is that we only measured social support with regard to parenting task-sharing. Glazer [60] showed that social support, in a broader sense, varies across cultures. In particular, in the job domain, people from Western countries are more likely to perceive support from their supervisor but less likely to perceive support from their coworkers. Similarly, we would expect that Western parents perceive less social support from those in their social circle (i.e., the other parent, the grand-parents, neighbors or friends), despite the fact that this is an important resource for coping with stress [61, 62]. Its protective effect against parenting stress [63], parental exhaustion [64], and parental burnout [9, 24–28] have now been largely demonstrated. Its effects are potent [9, 65] and it is therefore a very strong mediation candidate.

Another potential mediator that has not been measured here is children's externalizing behavior. By virtue of agency and self-directedness amongst other factors, the prevalence of externalizing behaviors is higher in Western countries than in Asian countries [66] and they have been associated with increased parenting stress and exhaustion (see [67] for a meta-analysis). They are thus a likely and possibly potent mediator between individualism and parental burnout.

A third possible mediator is parenting role restriction, i.e., the perceived loss of freedom associated with one's parental role. Parenting role restriction is probably higher in individualistic countries because of individualistic parents' focus on their own desires on the one hand, and the sacrifices needed to raise a child, which stands in the way of parents' self-realization, on the other hand. The fact that parenting role restriction has been shown to be strongly associated with parental burnout [12] as well as to be associated with parental regrets in Western countries [68] makes it a very likely candidate mediator.

As the above-mentioned examples show, there are many other candidate mediators and these should ideally be tested in multiple and sequential mediation models. It is likely that agency and self-directedness goals reduce the strength of

discipline, thus increasing externalizing behaviors, which may in turn eventually increase parental burnout. Future studies that go deeper into the complex mediating pathways between individualism and parental burnout are thus needed, and it is our hope that the current study will stimulate such research efforts. These are crucially needed to determine the best targets to prevent parental burnout.

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Availability of data and material The full protocol, database, and syn-taxes are available on OSF https://osf.io/94w7u/?view_only=a6cf12803887476cb5e7f17c6b8b5ca2.

Declarations

Conflict of interest The authors declare no competing financial interests or funding source that could have influenced the data collection, analysis or conclusions. MM and IR have now founded a training institute that delivers training on parental burnout to professionals. The institute did not participate in the funding of this study nor did it influence the process, the results or their interpretation in any manner.

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