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Patricia Recio, Fernando Molero, Prado Silván-Ferrero, and Encarnación Nouvilas-Pallejà

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Perceived discrimination and psychological well-being among family caregivers of children with physical disabilities: The mediational role of affiliate stigma and self-efficacy

Patricia Recio *

Fernando Molero*

Prado Silván-Ferrero *

Encarnación Nouvilas-Pallejà*

*Universidad Nacional de Educación a Distancia (UNED)

Corresponding Author: Fernando Molero; e-mail: fmolero@psi.uned.es

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Perceived discrimination and emotional distress among family caregivers of children with physical disabilities: The mediational role of affiliate stigma and self-efficacy

Abstract

The main objective of this research is to examine the consequences of perceived discrimination in family caregivers of people with physical disabilities. Through path analysis, we test the association between caregivers' perceived discrimination and their anxiety and depression and the mediating role that affiliate stigma and self-efficacy may play. We proposed a model that has not been tested previously in the literature on caregivers of people with physical disabilities. The sample includes 186 Spanish fathers (35%) or mothers (65%) raising children with physical disabilities. Descriptive statistics and Pearson's correlation coefficients were calculated and structural equation modeling (SEM) was used to examine the mediating effect. Results show that caregivers' perceived discrimination is positively associated to their affiliate or internalized stigma that in turn is harmful to their anxiety and depression. However, caregivers' self-efficacy plays a mediating role in the relation between affiliate stigma and caregivers' anxiety and depression. These results may be useful for designing interventions to improve the psychological well-being of the parents of children with physical disabilities.

Keywords: Affiliate stigma, Emotional distress, Anxiety, Depression, Self-efficacy, Physical disability, Family caregivers

Public policy relevance statement

Children with physical disabilities and their family caregivers are discriminated in different aspects of their lives. Often caregivers assume or internalize the negative stereotypes of their children's disability. This internalization receives the name of affiliate stigma and has very negative consequences for caregivers' emotional well-being. This study suggests that caregiver's self-efficacy contributes to reduce the negative effects of affiliate stigma. To maintain caregivers' emotional well-being it would be useful to design interventions aimed both, to prevent the arousing of affiliate stigma and to increase caregivers' self-esteem.

Introduction

Stigmatized individuals are those who possess (or are believed to possess) some attribute or characteristic that conveys a social identity devaluated in some specific contexts (Crocker et al., 1998, p. 505). That is what happens when someone is tagged with the label of "disabled." Once this label is assigned, a series of phenomena, such as stereotyping, separation, status loss and discrimination take place (Green et al., 2005; Link & Phelan, 2001). People with a physical disability and their family caregivers are discriminated against in different aspects of their lives (e.g., Krahe & Altwasser, 2006; Park et al., 2003). Discrimination may take the form of feelings of discomfort and anxiety during the interaction (Hebl et al., 2000) or it may be expressed through the existence of negative stereotypes about them and their families, such as the belief that "people with disabilities are different from fully human people" or that "the burden of disability is unending for the family and they are the most perfect objects of charity" (Block, 2018). In this study, we focus on perceived discrimination and affiliate stigma among family caregivers of people with physical disabilities.

As Goffman (1963) pointed out, some of the negative characteristics associated to stigmatized individuals are expanded to people associated with them (friends or close relatives). This phenomenon has received several names, such as courtesy stigma, family stigma or stigma by association. (Mitter et al. 2019). More recently, Mak and Cheung (2008) coined the concept of affiliate stigma that focus in the internalization of the stigma by the associates of stigmatized individuals. The main difference between these concepts lies in that while courtesy or associative stigma focuses on others' perceptions of the associates, affiliate stigma focuses on how the associates respond and experiences to being viewed negatively.

One of the focuses of this research is on the concept of affiliative stigma of the parents or caregivers of children with physical disabilities

The aim of this study is to explore, through path analysis, the mediating role that caregivers' affiliate stigma (internalized stigma) and self-efficacy may play in the association between perceived discrimination and the psychological or emotional distress (anxiety and depression) among the mothers and fathers of people with physical disabilities in a Spanish sample.

Perception of discrimination and internalization of stigma

Perceived discrimination may be defined as the awareness of public stereotypes and discrimination experienced by members of a group. The meta-analyses of Pascoe and Smart Richman (2009) and Schmitt et al. (2014) have shown that perceived discrimination has negative effects on several aspects of the health and well-being of stigmatized individuals. Schmitt et al. (2014) found that the negative association between perceived discrimination and well-being was higher in stigmas based on sexual

orientation, mental illness or physical disability than in stigmas based in race or gender. The meta-analyses also concluded that, in general, perceived discrimination was more detrimental to negative outcomes (e. g., depression or anxiety) than to positive outcomes such as self-esteem.

Indeed, one of the most harmful effects of the perceived discrimination is that it promotes the internalization of stigma. Internalized stigma, or self-stigma consists in the individual's acceptance of stigma as a part of her or his own value system and self-concept (Herek, 2007; Herek et al., 2009). The internalization of stigma has been studied mainly in people with HIV and in people with mental illness, in both cases finding very harmful consequences on feelings of blame, anxiety or hopelessness, self-esteem and self-efficacy (Corrigan et al., 2006; Lee et al., 2002). Regarding people with physical disabilities, Molero et al. (2019) found, in a sample of Spanish people with different physical disabilities, that the relationship between perceived discrimination and self-esteem was fully mediated by internalized stigma: personal discrimination leads to the internalization of the stigma that in turn decreases the self-esteem of physically disabled people.

Affiliate stigma and emotional distress

We may assume that, in the same way that stigmatized individuals internalize the public stigma against them, family caregivers also internalize the public stigma carried by their children (for example, feeling guilty or embarrassed for their child's behavior or disability). Mak and Cheung (2008) coined the concept of *affiliate stigma* as a different construct of courtesy or associative stigma that refers specifically to the self-stigma (and corresponding psychological responses) of the parents or caregivers of

individuals belonging to stigmatised groups. Most of the research on this area has been conducted with caregivers of children with autistic spectrum disorders (ASD) or children with intellectual disabilities (ID), finding that affiliate stigma has negative effects on caregiver's stress, psychological and emotional well-being, and subjective burden (Mak & Cheung, 2008, 2012; Mitter et al., 2019; Ting et al., 2018; Werner & Shulman, 2015). Tekola et al. 2020 found, in a qualitative study with parents of children with developmental disorders (DD) in Ethiopia, that family support, acceptance and awareness about DD prevent the internalization of stigma. Green et al. (2005) found, in a set of interactive interviews with mothers of children with disabilities in the USA, that they reported feeling blamed for their children's differences and, even, for causing their children's disabilities. Mothers interviewed also report when the disability is not very evident, the children (and their parents) may be "judged as illegitimate claimants to disability status" (p. 207). Social isolation is also a consequence of the perceived stigmatization that is sometimes also associated with episodes of depression. Werner and Shulman (2015) compared the affiliate stigma among family caregivers of children with autism, intellectual disability and physical disability in Israel. The results show that affiliate stigma was higher among caregivers of children with ASD compared with caregivers of children with ID or physical disabilities. Ma and Mak (2016) found in a Chinese sample of 131 caregivers of children with physical disabilities that affiliate stigma had a significant indirect effect on psychological distress through the increase in caregivers' worries about the disability of their children.

The review of Mitter et al. (2019) showed that affiliate stigma is related to emotional distress, burden of care, social isolation, anxiety and depression of caregivers of children with autism and intellectual disabilities. Among the variables contributing to

prevent affiliate stigma, Mitter et al. (2019) pointed out self-esteem and social support (Cantwell et al., 2015; Werner & Shulman, 2013).

The role of self-efficacy

General self-efficacy may be defined as the set of beliefs a person holds about their own ability to organize and execute courses of action to manage a given situation (Bandura, 1997). Several studies have shown that self-efficacy is positively associated with several aspects of psychological well-being in an ample range of stigmatized groups. In the model proposed by Watson et al. (2007) to explain the effects of internalized stigma in people with mental illness, reduced self-efficacy is one of the main effects of the internalization of stigma. Perceived discrimination and stigma are negatively related to the self-efficacy in other stigmatized groups such as gay and lesbian people (Denton et al., 2014; Tucker et al., 2014). Other studies focus in the role that self-efficacy may play in protecting individuals from the negative effects of internalized stigma. For example, Jahn et al. (2019) found that self-esteem and self-efficacy mediated the relationships between internalized stigma and recovery orientation in people with a serious mental illness. Kabiyea and Manor-Binyamini (2019) found a negative relationship between stigma and self-efficacy and a positive relationship between stigma and anxiety in parents of adolescents with developmental disabilities. The study of Li et al. (2019) is the only one we have found that focuses on the self-stigma of caregivers of children with developmental disabilities. They found that parents' self-stigma was linked to fewer prosocial behaviors and more externalizing and internalizing behaviors among children, but such links were partially alleviated by parenting self-efficacy. In the present study we consider whether caregiver's self-

efficacy contributes to reduce the effects of perceived discrimination and affiliate stigma on caregivers' anxiety and depression.

The present research

The main objective of this study is to examine the consequences of perceived discrimination in caregivers of people with physical disabilities. Through path analysis, we will test the mediating role that caregivers' internalized stigma (affiliate stigma) and self-efficacy may play in the association between perceived discrimination and emotional distress (anxiety and depression) among the mothers and fathers of children with physical disabilities in a Spanish sample. The proposed model (see Figure 1) is based on the existing literature and has not been tested previously for caregivers of people with physical disabilities.

Method

Participants

The sample includes 186 Spanish fathers (35%) or mothers (65%) raising children with physical disabilities. The inclusion criteria were being a biological parent (mother or father) of a child with physical disability. Parents' age is between 25-78 years ($M = 49,86$; $SD = 10,85$). According to the information reported by their parents, the children with physical disabilities age ranged 3-55 years ($M = 22,40$; $SD = 11,82$), 39.4% being minors and the rest adults. Most of the participants' children have an innate disability (63.7%), compared to 36.3% of cases with an acquired disability. The children of the participants, all of them with a physical disability, present a wide variety of diagnoses, the most frequent being cerebral palsy (25%), followed by muscular dystrophy (6%), spina bifida (4%), multiple sclerosis (3%), etc.

The distribution of participants' demographic characteristics may be found in Table 1.

Table 1. Participants' sociodemographic characteristics

Characteristic	Mothers % (n)	Fathers % (n)	Family % (n)
	64.5 (118)	35.5 (65)	
Education level			
None	2.5 (3)	1.6 (1)	
Primary school	22.9 (27)	29.7 (19)	
Secondary school	35.6 (42)	34.4 (22)	
University grade	39 (46)	34.4 (22)	
Employment			
Employed	55.1 (65)	75 (48)	
Unemployed	32.2 (38)	1.6 (1)	
Retired	13.6 (16)	21.9 (14)	
Child's age			
Underage (3-17 years)			39.4 (67)
Adult child (18-55 years)			60.6 (103)
Degree of disability¹			
<33% disability			4.9 (9)
33%–65% disability			41.8 (76)
>65% disability			53.3 (97)
Origin of disability			
Innate disability			63.7 (116)
Acquired disability			36.3 (66)

¹According to the Spanish administration's procedure for recognition and quantification of the degree of disability (Royal decree law 1971/1999, of December 23).

Measures

Perceived Personal Discrimination. To measure perceived discrimination, we used the Multidimensional Perceived Discrimination Scale (Molero et al., 2013). This 20-item scale measures the perception of four different types of discrimination: blatant group discrimination, subtle group discrimination, blatant personal discrimination, and subtle personal discrimination. For the purposes of this study, we took the two subscales of personal discrimination (10 items) and obtained one single perceived personal discrimination score. This has been used previously, showing good psychometric properties (Molero et al., 2019; Pérez-Garín et al., 2017).

The perceived personal discrimination items capture the extent to which the respondent believes he or she has been personally discriminated against for having a physically disabled child (e.g., “Even though people seem to accept me, deep down, I think they have some misgivings because I have a child with physical disability”). Participants used a four-point Likert scale indicating the degree to which they agreed with the statements presented. Cronbach’s alpha (.91) indicated satisfactory reliability.

Affiliate stigma. We used our Spanish version of Affiliate Stigma Scale (Mak & Cheung’s, 2008). This 19-item instrument measures the internalized stigma of caregivers of children with disabilities (e.g., “Having a family member with physical disability makes me lose face”). As a preliminary step, a Spanish version of this scale was produced by blind back-translation. Then, two experts (in methodology and in stigma) evaluated, methodologically and substantively, the items of the original scale and the final translated version. Participants used a four-point Likert scale indicating the degree to which they agreed with the items presented. In this study we found a good internal consistency, with Cronbach's alpha equal to .87.

Self-efficacy. This construct was measured using the Self-efficacy General Scale by Baessler and Schwarzer (1996) in its Spanish version (Sanjuán et al., 2000). This scale has a total of 10 items (such as item 2: “I can manage to solve difficult problems if I try hard enough”). The responses were on a four-point Likert scale ranging the degree to which they agreed with the items presented. The adaptation for the Spanish population made by Sanjuán et al. (2000) showed an internal consistency of .87, and an alpha equal to .93 in our sample.

Anxiety and Depression. The HADS (Zigmond & Snaith, 1983) is used to assess anxiety and depression symptoms. It is a 14-item self-report questionnaire; seven items

comprise the anxiety subscale (HADS-A) and seven comprise the depression subscale (HADS-D). It has demonstrated good psychometric properties and is effective in assessing anxiety and depressive symptoms in patients with various medical conditions and in the general population, according to a literature review (Bjelland et al., 2002). Responses were given on a four-point Likert scale (0-3) ranging the degree to which they agreed with the items presented. Recommended cut-off scores are ≥ 8 on each subscale for doubtful cases and ≥ 11 for definite cases, and ≥ 15 and ≥ 19 on the HADS-total, respectively (Zigmond & Snaith, 1983).

Procedure

Answers to the study were collected through an online questionnaire designed and hosted at www.qualtrics.com. Participants were recruited by undergraduate students majoring in psychology at a Spanish university (Universidad Nacional de Educación a Distancia (UNED; National Open University)). Students were required to send the link to fathers and mothers of children with physical disabilities in exchange for extra course credits, identifying the target participants and explaining the objectives of the study together with instructions for completion of the questionnaire. The research team provided them with a set of standard instructions to ensure that all participants completed the questionnaires under the same conditions (Morgan, Krueger, & King, 1998). Once the participants accessed the link, they first completed the consent form and then filled out the self-administered questionnaire (this task took approximately twenty minutes). Anonymity and confidentiality were guaranteed. The study received approval from the National University of Distance Education Ethics Committee and was performed in accordance with the ethical standards of the Declaration of Helsinki.

Data analyses

First, a preliminary analysis was carried to test multivariate normality and multivariate outliers in the sample. Multivariate normality was statistically evaluated using Mardia's (1970) multivariate kurtosis coefficient, where a critical ratio of kurtosis < 5.0 indicates multivariate normality (Bentler, 2006). Mardia's (1970) multivariate kurtosis coefficient was 11.43, indicating that there is no multivariate normality. However, these values are well below the value that $P(P + 2)$ would offer, with P being the number of observable variables that Bollen (1989) proposes as a limit value to begin to distrust the estimates based on the assumption of normal. Therefore, the maximum likelihood estimation method has been used, since, in addition, there is evidence that it works well in less than optimal conditions, such as excess kurtosis (Hoyle & Panter, 1995).

Calculation of Mahalanobis's distance revealed four multivariate outliers in the sample that were removed. Eleven participants were excluded from the final sample due to missing data (more than three items missing from at least one of the subscales). Therefore, the sample size for correlation and structural equation modeling analysis was 171.

Descriptive statistics and Pearson's correlation coefficients were applied to establish the relationships among the variables measured. Next, we used structural equation modeling with maximum likelihood estimation to test the relationships among the study variables using the AMOS25 analysis software (Arbuckle, 2006). We used various indices to assess model fit (Kline, 2011). χ^2/df and Root Mean Square Error of Approximation (RMSEA) was used as absolute fit indexes. $\chi^2/df < 3$ indicates

acceptable fit and $\chi^2 / df < 2$ indicates excellent fit. Values of RMSEA below .05 indicate a close fit, from .05 to .08 a fair fit, from .08 to .10 a mediocre fit, and above .10 an unacceptable fit (Hu & Bentler, 1999). As incremental fit indexes, Normed Fit Index (NFI) and Comparative Fit Index (CFI) were used. Both CFI and NFI are bound between 0 and 1 and values between .90 and .95 indicate an acceptable model fit, with values greater than .95 indicating a close model fit (Hu & Bentler, 1999).

We performed mediation analyses using the bias-corrected bootstrapping method recommended by Cheung and Lau (2008). When testing the mediation effect, bootstrapping was conducted with 10000 iterations and the bias-corrected confidence interval was set at 95%. If the 95% confidence interval does not include 0, then the mediation effect is considered statistically significant at the level of $\alpha = 0.05$ (Shrout & Bolger, 2002).

Results

Descriptive analyses and correlations

No differences were found in the variables studied according to the gender of the child or their age (two groups). Degree of disability was analyzed (see Table 1) according to the Spanish administration's procedure for recognition and quantification of the degree of disability (Royal decree law 1971/1999, of December 23). There were only 9 cases with a recognized disability of the child <33%, so they were eliminated from this analysis. No significant differences were found according to the degree of disability in perceived personal discrimination ($F_{1,161} = 3.809$, $p = .053$) or in affiliate stigma ($F_{1,161} = 1707$, $p = .193$) nor in the rest of the relevant variables research ($p > .05$).

We calculated the descriptive statistics and Pearson's correlation coefficients for all five variables. Bivariate Pearson correlation analysis showed that all variables were significantly correlated (see Table 2). The pattern of correlations showed that the correlation between perceived personal discrimination and affiliate stigma was high and positive, and that both constructs were negatively related to self-efficacy, and to symptoms of anxiety and depression. As expected, the correlation between symptoms of anxiety and depression was high.

Table 2.

Means (M), Standard Deviations (SD) and Pearson correlation coefficients between the variables in the study (n=171).

	<i>M</i>	<i>SD</i>	2	3	4	5
1. Perceived personal discrimination	1.72	.63	.53**	-.17*	.40**	.40**
2. Affiliate stigma	1.39	.30		-.35**	.56**	.61**
3. Self-efficacy	2.94	.59			-.41**	-.58**
4. Anxiety	1.74	.60				.74**
5. Depression	2.30	.55				

Notes. Scores range from 1 to 4.

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

Model testing

The model was a close fit to the observed data: $\chi^2 = 4.81$; $\chi^2/df = 1.60$; CFI = 0.99; NFI = 0.98; RMSEA = 0.06. The results of the tested model tests are presented in Figure 1.

The standardized coefficients of all paths of the model were significant.

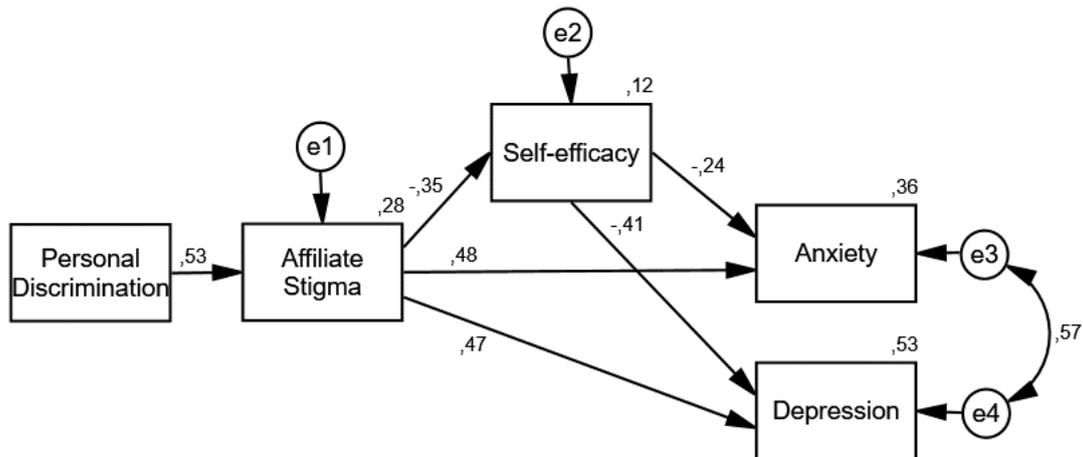


Figure 1. Standardized path coefficients among variables. All path coefficients are statistically significant.

As expected, the results showed that perceived personal discrimination predicts affiliative stigma ($\beta = .53, p = .000$). Affiliative stigma, meanwhile, predicted anxious ($\beta = .48, p = .000$) and depressive symptoms ($\beta = .47, p = .000$). We found a significant and negative association between affiliative stigma and self-efficacy ($\beta = -.35, p = .000$), which in turn, was negatively related to anxiety ($\beta = -.24, p = .000$), and depression ($\beta = -.41, p = .000$).

Mediation analysis

According to the model tested in Figure 1, there are five possible mediations: two with the affiliative stigma as mediator, two with self-efficacy as mediator, and two in which both, affiliative stigma and self-efficacy work as mediators together (see Table 3). Previous to the mediation analyses performed using the bias-corrected bootstrapping method, we checked the mediation requirements, as suggested by Holmbeck (1997). First, we assessed the direct effect, which tests the effects of the predictor variable on the outcome variable, with all indirect paths set to zero. Second, we assessed the direct

effects of the predictor on the mediator and the direct effects of the mediator on outcomes. All path coefficients were significant. Third, we assessed the reduction in the strength of the direct path from the predictor to outcomes in the presence of mediator to determine whether the direct path decreased (partial mediation) or vanished completely (fully mediation). We used the option *define new estimations* in the AMOS software to specify each of the indirect effects tested.

Table 3. Results of mediational analysis

Mediational analyses	Direct β without mediator	Direct β with mediator	Standard Indirect β	Beta Indirect β [CI]	Standard error	Mediation type
PPD \rightarrow AS \rightarrow A	.40***	.05	.23***	1.45 [.95 – 2.02]	.04	Full mediation
PPD \rightarrow AS \rightarrow D	.42***	.07	.21***	1.28 [.81 - 1.78]	.05	Full mediation
AS \rightarrow SE \rightarrow A	.50***	.39**	.11***	1.32 [.60 - 2.25]	.04	Partial mediation
AS \rightarrow SE \rightarrow D	.54***	.36	.18***	2.11 [1.28 - 3.19]	.04	Partial mediation
PPD \rightarrow AS \rightarrow SE \rightarrow A	.40***	.05	.06***	.41 [.18 - .78]	.04	Full Mediation
PPD \rightarrow AS \rightarrow SE \rightarrow D	.42***	.07	.11***	.66 [.35 – 1.09]	.04	Full mediation

Note: PPD = Perceived Personal Discrimination, AS = Affiliate Stigma, A = Anxiety, D = Depression, SE = Self-efficacy, CI = Confidence Interval.

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

The direct effect between perceived personal discrimination and anxiety symptoms was $\beta = -.40$. This direct effect dropped to $\beta = -.01$, which was no longer significant, when affiliate stigma was introduced as a mediator. The bootstrapping results revealed that the mediator effect of affiliate stigma gave rise to significant

indirect relationships ($\beta = .23$). The same applies to the relationship between perceived individual discrimination and symptoms of depression. This direct effect is $\beta = .42$, but, when affiliative stigma was introduced as a mediator, the direct effect dropped to $\beta = .07$, with an indirect effect of $\beta = .21$. This decrease in direct effects, which were no longer significant, indicated total mediating effects.

In our model, self-efficacy mediates the relationship between affiliate stigma and anxiety symptoms and between affiliate stigma and depression symptoms. In the first case, when self-efficacy was introduced as a mediator, the direct effect decreased from $.50$ to $.39$, and in the second case from $.54$ to $.36$. This decrease in direct effect, while remaining statistically significant, indicates a partial mediating effect. Self-efficacy was a significant partial mediator on the relationship between self-esteem and anxiety symptoms, with an indirect effect of $\beta = .11$, and between self-esteem and depression symptoms, with an indirect effect of $\beta = .18$.

Considering affiliative stigma and self-efficacy work as mediators together, the results are similar to those found considering the data on the affiliative stigma as mediator. The direct effect between perceived personal discrimination and anxiety symptoms was $\beta = -.40$, that dropped to $\beta = -.01$, which was no longer significant, when both variables was introduced as a mediator. The indirect effect was $\beta = .06$. Similarly, the direct effect between perceived personal discrimination and depression symptoms was $\beta = .42$, which dropped to $\beta = .07$ when we included the mediating variables, with an indirect effect of $\beta = .11$.

Discussion

From birth, people with disability experience discrimination and stigma in various aspects of their daily lives, and a part of this stigma is transferred to their family caregivers. This phenomenon has received several names, such as courtesy stigma, family stigma, stigma by association, and affiliate stigma (Mak & Cheung, 2008). However, the effects of affiliate stigma on the well-being of the caregivers have hitherto scarcely been studied. In this study, we investigate this issue in a sample of parents of children with physical disabilities in Spain. Our hypothesis is that caregivers' perceived discrimination because of their child disability will facilitate the emergence of affiliate stigma, which in turn will influence negatively caregivers' emotional distress (anxiety and depression). We also hypothesize that caregiver's self-efficacy plays a mediational role in the association between perceived discrimination and affiliate stigma. The proposed model is shown in Figure 1, and it presents a good fit to the data.

According to our prediction, perceived discrimination shows a positive relationship to caregivers' affiliate stigma. The association between perceived discrimination and internalization of stigma has been found in stigmatized individuals belonging to several groups (Corrigan et al., 2006; Lee et al., 2002; Molero et al., 2019). However, it is the first time that this relationship has been addressed, not in the stigmatized individuals, but in their family caregivers. As predicted in the model, results show that affiliate stigma is positively associated with caregiver's anxiety and depression. That is, when the caregiver internalizes the discrimination present in society against their child's disability, and feels guilty or embarrassed by their child's condition, it is more likely that caregiver's anxiety and depression will increase. The review of Mitter et al. (2019) showed that affiliate stigma was related to emotional distress, burden of care, social isolation, anxiety and depression among caregivers of

children with autism and intellectual disabilities. In this study we found similar results in a sample of caregivers of children with physical disabilities. Negative effects of caregiver's perceived discrimination are entirely mediated by affiliate stigma. This means that an important issue regarding caregivers' psychological and emotional distress, together with the public discrimination or rejection present in the society, is the internalization or justification of such rejection, which occurs when the affiliative stigma is high.

Ma and Mak (2016) found that social support reduces the negative effects of affiliate stigma on psychological distress of caregivers of children with physical disabilities. In the present study, we found that caregivers' self-efficacy plays a partial effect of mediation between caregivers' affiliate stigma and their anxiety and depression, so self-efficacy may be also considered as a relevant variable regarding to the emotional distress of caregivers of children with physical disabilities.

In sum, our results show that caregivers' feelings of being discriminated against because of the disability of their child may lead to the enhancement of affiliate stigma (that include feelings of inferiority and embarrassment because of their child's disability) and this stigma is very harmful for the emotional distress of the caregivers (Mitter et al., 2019). In addition, we have found that caregivers feelings of self-efficacy are able to prevent some of the harmful effects of affiliate stigma.

Limitations

This study contains some limitations that need to be taken into consideration. On the one hand, the study only included parents who had the motivation and time to participate in the study. On the other hand, although supervised by the research team, the

participants were recruited by undergraduate students in exchange for extra course practical credits. Longitudinal studies should be conducted to further explore the role of affiliate stigma and self-efficacy over time.

In future research it will be important to investigate other psychosocial, cultural and socio-demographics variables that could be determinants of affiliative stigma. Some of them, have been pointed out by different authors. For example, paying attention to the influence of cultural patterns and context (Chiu et al., 2013); analysing the differences in affiliative stigma according to the type of disability (Mak & Cheung, 2008) or examining gender differences in the experience of affiliative stigma and their impact on the well-being of mothers and fathers (Banga & Ghosh, 2016).

Practical implications

The current study has several practical implications for psychosocial interventions to increase family caregivers' well-being. Hohlfeld, Hartyand and Engel (2017), in their revision of parenting interventions and self-efficacy, assert that the interventions have focused on the provision of knowledge (parent support) or techniques (parent-mediated intervention). The result of the present study clearly shows the role that self-efficacy can play in reducing the impact of affiliative stigma on caregivers' anxiety and depression. Self-efficacy interventions may be based on an increase in mastery experience (personal experience), vicarious experience, and giving direct information to the participant about their self-efficacy capacity (social persuasion) (Bandura, 1987). In the affiliate stigma context, it involves learning effective strategies to cope with the internalization of stigma and discrimination. Mastery experience aims to teach effective coping strategies adapted for caregivers of children with disabilities.

Furthermore, through vicarious experience, showing situations successfully resolved by other similar caregivers (video examples), participants can learn useful strategies they can apply in their own situation. The intervention in self-efficacy training may, at the same time, have an additional effect, because parents solving their problems may become a source of vicarious learning for their children. In this way, a double gain is achieved in the interventions' process. As some studies show, parenting programs may also indirectly promote positive outcomes for the children (Coleman & Karraker, 2003).

As far as we know, there is not, until moment, specifics programs directed to reduce stigma by association and its consequences. The design of a pilot program could be one of the proposals for subsequent work in this research line. Some of the research conducted in this field may help us to design a program of intervention for families with a disability member (Banga & Ghosh, 2017, Chiu, Yang, Wong, Li & Li, 2012; Mak & Cheung, 2008). Interventions programs should be implemented within a policy framework in order to: 1) make the families aware of how determining could be for their psychological health and lives to have a disabled family member ; 2) make public policies that support families, to improve their financial and social resources; 3) change attitudes through anti-stigma campaigns and, 4) facilitate therapy and support for parents to learn effective strategies to cope with stigma, including the improvement of parent's self-efficacy.

Conclusions

Assuming that social attitudes to disability are difficult to change in the short term (Scior, 2016), in future research and intervention it would be important to consider a set of variables that may prevent the emergence of affiliate stigma. Some of these

variables such as social support and self-esteem have been considered in several studies. In the present study, we have found the important role of caregiver's self-efficacy. Taking care of a children with a physical disability is very hard at the physical, psychological, economic and social levels. For this reason, more research on variables that may contribute to make this task easier is a matter of the utmost importance for social scientists and for society in general. Indeed, caregivers' well-being has important consequences for the behaviors and well-being of the people they are taking care of (Wieland & Baker, 2010).

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