British Journal of Applied Science & Technology
6(1): 8-14, 2015, Article no.BJAST.2015.062
ISSN: 2231-0843

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Association between Coping Behaviors, Domestic Violence and Depression in Parents of Children with Down's Syndrome

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Authors' contributions

This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/BJAST/2015/13652
Editor(s):
(1) Anonymous.
(2) Meng Ma, Anhui University, Hefei, Anhui, China And Icahn Institute for Genomics and Multiscale Biology, Icahn School of Medicine at Mount Sinai, USA.
(3) Singiresu S. Rao, Department of Mechanical and Aerospace Engineering, University of Miami, USA.
Reviewers:
(1) Anonymous, India.
(2) Charitaki Garyfalia, University of Athens, Greece.
(3) Singiresu S. Rao, Department of Mechanical and Aerospace Engineering, University of Miami, USA.
Complete Peer review History: http://www.sciencedomain.org/review-history.php?iid=764&id=5&aid=7210

Original Research Article

Received 27th August 2014
Accepted 19th November 2014
Published 15th December 2014

ABSTRACT

Aim: Analyze the prevalence of domestic violence and depression and their association with coping behaviors in a group of parents of children with Down´s Syndrome.
Study Design: No experimental, descriptive-correlational.
Sample: This study used a non probabilistic sample of 212 parents of children with Down´s Syndrome, men and women, were the average age was 43.52 years old and most of them reported to be married (66%). The averageage of the Down´s Syndrome children was 13.7 years old.
Methods: The instrument applied was composed by three scales: the depression symptoms were evaluated using the Center for Epidemiologic Studies Depression Scale (CES-D), an adapted version of the Coping Mechanisms Scale (EEC-M) for the measuring of coping strategies, and a domestic violence scale validated in Mexican population (Martínez Lanz, 2007).
Results: The largest percentage of parents reported low levels of depression symptoms and

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domestic violence (79% y 87%, respectively).The results showed that parents with the highest levels of depressive symptoms usually got a more adequate solution for the problems, also reported more religious ways of coping situations, higher inhibition of their own emotions, search of professional support for aggressive reactions, cognitive avoidance and a bigger expression and distortion of problems.

Conclusion: Highest correlations were found in emotional inhibition, aggressive behavior and difficult coping expressions depressive symptoms were strongly related with rejection of emotional decisions and aggressive behavior.

Keywords: Coping; depression; down syndrome.

1. INTRODUCTION

Down Syndrome is the most frequent cause of congenital disability and it represents 25% of all mental retard cases. This syndrome includes traits such as hypotonic muscles, different levels of mental retardation, growing retard, low stature, wide skull, macroglossia, short neck, smaller nose, unique line palm, congenital heart diseases, thin hair, short fingers, poor immunological system, ophthalmic diseases, hearing loss, congenital digestive diseases and premature ageing [1].

According to Basile [1], Down´s syndrome patients present a different way of collect and organize informationsince their mental process is slower than regular people. Their memory and perceptual functions are better than the phonological functions; they also have a way of understanding information that outpaces their ability of expression with a higher learning to read and write and a slower learning in mathematical knowledge and calculus; one of the techniques that improve the process is their imitation abilities. There is also motor skill deficits and movement limitation.

One of the most important aspects in studies of Down´s syndrome children are the parent's initial response. Whenever there is a child with a disability, the parents produced an intense depressive syndrome that includes are action behavior with a coping period, this would be subjected to the level of disability of the child, personality development, family´s adaptation before the child´s birthday, religious views, professional, and social, intellectual and socioeconomic level.

The depressive behavior of parents with Down´s syndrome children involves a deeply interpersonal psychological process [2]. According to the author, the parents experience is a step by step process: the first one is denial; this is a stage in which parents have an unfounded hope of a wrong diagnosis. The next stage is the creation of anger and guilt conducts towards their mate, their child and even to themselves, this behavioral change comes from feelings of impotency and frustration. The next step is negotiation; in this period parents are open to the need of their child to be treated. The fourth stage is a depressive syndrome characterized by a mental and physic fatigue andthe last stage refers to the partial or total acceptation of their child diagnosis.

Other authors have made a distinction in the stages of acceptance: León [3] suggests a mourning period, followed by an adjustment stage and ending in the acceptance of their child disability; according to this theory all the stages are dependent of the child´s ability to adapt.

León [3] also explains that most parents live a financial related stress and an overprotecting behavior directed to their children, this conditioned them to diminish social and recreational activities. This type of behavior could impact in the child´s relationship with siblings as well, because of the constant attention he/her receives.

Cohen [4] establishes that parents of children with chronic diseases could be in a higher risk than others to suffer depression and marital conflict as a consequence of the constant attention.

Pineda, Gutiérrez and Díaz [5] report the presence of physical punishment as a disciplinary used method, domestic violence and verbal abuse. This could compromise the child´s wellbeing. These authors also explain high rate unemployment in parents of Down´s syndrome patients with an increasing risk of presenting affective or mental diseases such as substance abuse, consequence of the constant medical consultations associating comorbility with infections and heart diseases.

Another form of violence found in these families is the conceal rejection to the child´s diagnosis and the tendency to ignore him/her no matter how much progress they show [5]. According to Barlet [6] during the diagnosis test the parents present an emotional shock and several feeling of anxiety, frustration and guilt.

1.1 Objective

The aim of this research was to analyze the prevalence of domestic violence and depression and their association with coping behaviors in a group of parents of children with Down´s Syndrome.

2. MATERIALS AND METHODS

2.1 Participants

This study used a non-probabilistic sample of 212 parents of children with Down´s Syndrome, men and women. 66% reported to be married, 11.3% single, 8.5% free union, 6.1% separated, 4.7% divorced and 2.4% widow. The age range of parents was 20 to 70 years old, with an average age of 43.52 years old (SD=11.34); subjects with Down´s syndrome´s age were 1 to 41years old (M= 13.70, SD=7.89).

2.2 Research Tools

One of the goals of this research was to create an instrument capable of being applied to parents of children with Down´s Syndrome and it was conformated by the following scales:

a) The Center for Epidemiologic Studies Depression Scale (CES-D) [7]. This scale has 20 items which detect depressive symptoms and their duration, evaluates positive and negative effects, interpersonal relationships and somatization. It is a Likert scale with four optional answers from zero days to five or more than five days per week. It was adapted to Mexican population by Mariño, Medina-Mora, Chaparro & González-Forteza [8] and applied to different population samples in Mexico and the statistical reliability is α= 0.80.

b) A domestic violence scale was adjusted to evaluate family violence. This scale has 13 items that identify violence symptoms in different areas: verbal, physical and humiliation. This is also a Likert scale with four optional answers from never happened to always happened. A pilot study was realized before the aplication started and this instrument showed a statistical reliability of α= 0.83.

c) An adapted version of the Coping Mechanisms Scale (EEC-M) for the measuring of coping strategies was applied. This instrument has 69 items [9,10], and 12 dimensions:

1. *Problem solving:* This is the strategy used to analyze a sequence of events and find the right time to make an intervention.
2. *Search of social support:* This refers to friends, families and other groups that could gave emotional support and information to face problems.
3. *Waiting:* This is a cognitive-behavioral strategy regarding a situation will solve itself.
4. *Religion:* Praying is considered a strategy that leads to efficient own solutions.
5. *Avoid emotional reactions:* This refers to hide emotional reactions whenever they emerge.
6. *Search for professional support:* Looking for professional information and alternative plan of action to reach a solution.
7. *Aggressive behavior:* An impulsive anger reaction against themselves or others trying to reduce the emotional challenge presented.
8. *Avoid cognitive reactions:* Implement strategies in order to neutralize negative or disturbing thoughts.
9. *Positive reevaluation.* Try to learn from the difficult situation and identify positive aspects.
10. *Expression of coping difficulties:* Expressing the coping difficulties and the emotional problems that come with it.
11. *Denial.*The absence of acceptation and a distorted view of the problem.
12. *Autonomy:* Respond to the problem looking to independent and non supporting solving.

The adaptation of this instrument included the reduction of items from 69 to 45. This is a Likert scale with four optional answers from never happened to always happened. A pilot study was realized before the research started, that showed a statistical reliability of α= 0.81.

2.3 Procedure

Early contact was made with one school, four civil associations and four CAMP´s located in Estado de México and Distrito Federal, which allowed the application of the instruments within facilities. To this propose, a meeting was made with parents, to whom the purpose of this research was explained and requested volunteers. The simple was composed by the ones that accepted to take the self-applied instrument.

3. RESULTS

The depressive and domestic violence scales were analyzed. The results reported a higher number of parents with low levels of depressive symptoms and domestic violence as can be seen displayed graphically in Fig. 1.

A descriptive analysis was made to determine the statistic average of coping dimensions Fig. 2. In this analysis it is assumed that higher punctuations were located in problem solving, and positive reevaluation. It is relevant that even when the higher dimensions of this item are located slightly above the statistic average, the lower dimensions were avoid emotional reactions, aggressive behavior and autonomy.

t Student test were made to determine different coping dimensions considering depression and domestic violence levels. The results Table 1 showed that parents who reported higher levels of domestic violence, also showed statistical significance in waiting, aggressive behavior, avoid cognitive reactions, expression of coping difficulties, denial and autonomy in comparison with parents that reported lower levels of domestic violence.

The results in Table 2 showed that parents who reported higher levels of depressive symptoms also showed statistical significances in problem solving, religion, avoid emotional reaction as, aggressive behavior, avoid cognitive reactions, expression of coping difficulties, denial and autonomy responses in comparison with parents that reported lower levels of depressive symptoms.

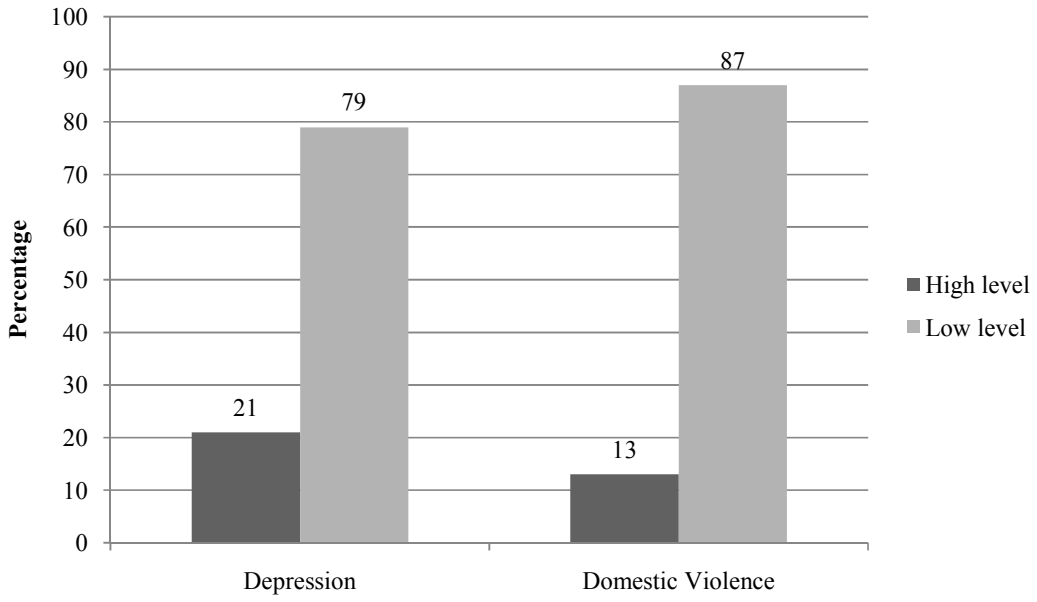

Fig. 1. Participants distribution by depressive and domestic violence levels

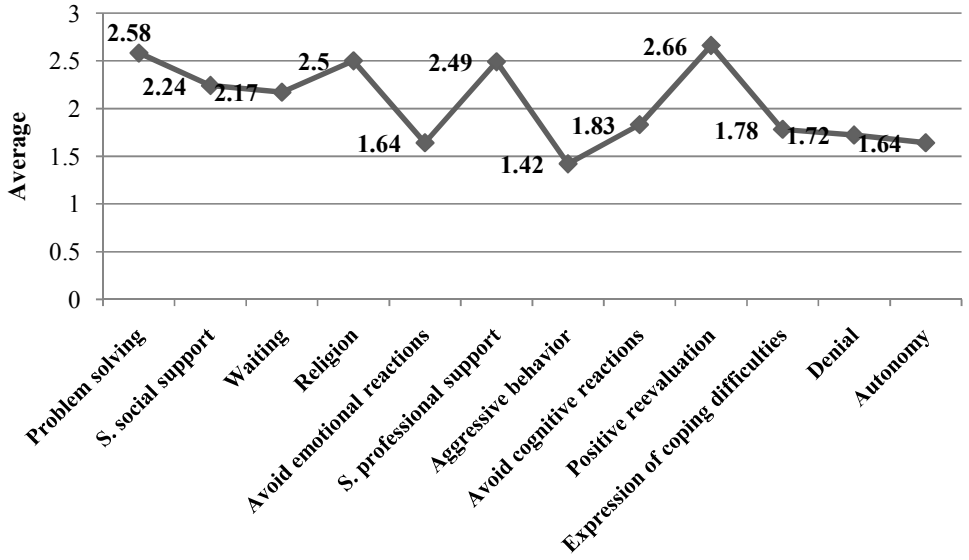

Fig. 2. Dimensions in coping mechanisms scale

Table 1. Differences in coping dimensions compared with domestic violence levels

	Lower domestic violence		Higher domestic violence		*t*
	M	***SD***	***M***	***SD***	
Problem solving	2.58	0.96	2.54	0.58	0.81
Search of social support	2.25	0.89	2.17	0.81	0.40
Waiting	2.12	0.85	2.48	0.74	-2.06*
Religion	2.48	1.68	2.61	1.10	-0.52
Avoid emotional reactions	1.55	0.53	2.29	0.67	-6.52**
Search for profesional support	2.47	0.92	2.63	0.63	-0.87
Aggressive behavior	1.33	0.44	1.95	0.59	-6.35**
Avoid cognitive reactions	1.76	0.69	2.28	0.55	-3.72**
Positive reevaluation	2.65	1.05	2.77	0.66	-0.56
Expression of coping difficulties	1.70	0.67	2.30	0.67	-4.33**
Denial	1.66	0.66	2.09	0.73	-3.18**
Autonomy	1.58	0.83	2.02	0.87	-2.55*

*Note. (*p=.05, **p=.001)*

A Pearson correlation was used to determine the relation between coping dimensions with depressive symptoms and domestic violence Table 3; in this analysis it is assumed that higher levels of depressive symptoms had higher punctuations in problem solving, religion, avoid emotional reactions, search for professional support, aggressive behavior, and avoid cognitive reactions and solution searching without help as well. It is important to consider that higher correlations were avoiding emotional reactions, aggressive behavior and expression of coping difficulties.

The results in domestic violence and the relation with coping dimensions showed significant statistic correlations in the aggressive behavior and avoid emotional and cognitive reactions, expression of coping difficulties, denial and autonomy dimension were the highest on domestic violence context, while the correlation between avoid emotional reactions, aggressive behavior and expression of coping difficulties dimensions were higher in parent´s depressive symptoms Table 3.

4. DISCUSSION

According to the literature, Down Syndrome is the most common cause of mental disability [1]; although nowadays there are some data to determine its causes, the scientists are still doing

Table 2. Differences in coping dimensions compared with depressive symptoms levels

	Lower depressive symptoms		Higher depressive symptoms		*t*
	M	***SD***	***M***	***SD***	
Problem solving	2.49	0.99	2.89	0.50	-2.51*
Search of social support	2.20	0.90	2.36	0.76	-1.03
Waiting	2.15	0.91	2.30	0.71	-1.15
Religion	2.39	1.17	2.88	1.01	-2.51*
Avoid emotional reactions	1.50	0.53	2.21	0.55	-7.70**
Search for profesional support	2.44	0.94	2.67	0.66	-1.55
Aggressive behavior	1.31	0.43	1.83	0.52	-6.58*
Avoid cognitive reactions	1.71	0.66	2.29	0.63	-5.17*
Positive reevaluation	2.63	1.09	2.80	0.61	-0.98
Expression of coping difficulties	1.66	0.67	2.24	0.59	-5.15*
Denial	1.63	0.68	2.03	0.63	-3.46**
Autonomy	1.55	0.82	1.95	0.88	-2.79*

*Note. (*p=.05, **p=.001)*

Table 3. Correlations between coping, depressive symptoms and domestic violence dimensions

	Depressive symptoms	Domestic violence
Problem solving	.161*	.065
Search of social support	.116	.010
Waiting	.087	.105
Religion	.173*	.071
Avoid emotional reactions	.525**	.463**
Search for profesional support	.149*	.106
Aggressive behavior	.478**	.449**
Avoid cognitive reactions	.335**	.284**
Positive reevaluation	.073	.070
Expression of coping difficulties	.422**	.409**
Denial	.223**	.288**
Autonomy	.143*	.169*

*Note. (*p=.05, **p=.001)*

research to obtain relevant information to help the one affected to integrated on social context, but also is being evaluated the way in which the family context is disturbed as well.

One of the evaluated aspects is the *coping*, which means the kind of answer the family have (specially the parents) to the notice of their son having Down Syndrome. Some authors like Salgado de la Teja, K [2] and León, MR [3] suggest that there are several phases to assimilate the new, from denial to acceptance, through different stages according to the proposal of each of the authors.

In the present study were initially analyzed the scores of parents with Down Syndrome children in each of the areas of coping. They obtained higher scores in the *positive reevaluation* dimension, which means the parents who were tested showed more strategies learning difficulties, trying to identify the positive aspects. They also scored low on the dimension of aggressive reaction, which refers to the impulsive expression of anger. It is important to note that in this case, the objective was not to identify the parents stage of assimilation, since the study sample had children of different ages which indicates that each parent had different moments of assimilation.

According to Cohen MS, [4], Barlet X, [6] and Pineda et al. [5], the parents with children with chronic diseases (Down Syndrome for example), present more risk of depression because some factors as the constant care and the responsibility involves a constant stress and conflict. This agrees with the results of the present study, which indicates that depressive symptomatology was associated with emotional

avoidance and aggressive reaction; parents who showed more depressive symptoms showed more activation of resources to hide or inhibit their own emotions, but also may present more impulsively angry reactions.

In the same way, the results showed that emotional avoidance and aggressive reaction were dimensions more associated with domestic violence. These findings are consistent with previous studies Cohen, MS [4] in which it is indicated that parents who are in constant stress by the child´s health, produces a tendency to react more violent than parents with healthy children. Also, Pineda et al. [5] reported that parents of children with Down syndrome reported the use of physical punishment as a discipline strategy; these authors suggest that the non-acceptance by any of the parents is another form of domestic violence.

5. CONCLUSION

The present research shows important elements to consider the treatment of families with a member with Down syndrome.Given strategies for better social adaptation focused on the person with this syndrome is not enough; it is also necessary to consider the family and provide them with tools for a functional behavior.

Further research in different populationsis suggested, analyzing the effect of other variables related with this problem.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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