

Burnout and Sleep Quality among Caregivers at a Special Education Elementary School in Breña. 2026

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ABSTRACT:

Caregiver burnout refers to the physical and emotional exhaustion resulting from the continuous demands of caregiving, a factor that affects sleep quality, as well as caregivers' ability to recover, their daily functioning, and their overall well-being. The objective of this study was to determine the relationship between burnout and sleep quality among caregivers of children attending a special education center in Breña during the year 2026. An applied quantitative approach was used, employing a non-experimental, correlational, cross-sectional design. The Zarit Caregiver Burden Index (ZBI) and the Pittsburgh Sleep Quality Index (PSQI) were administered to 55 caregivers of children with disabilities, selected through a census-based, non-probabilistic sampling method. The results revealed a very high Spearman's Rho correlation coefficient of 0.901, indicating a significant relationship between caregiver burden and sleep quality among caregivers at a special education center ($p < 0.05$); therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. In terms of sociodemographic profile, females predominated (92.7%), primarily mothers (85.5%), aged between 36 and 45 years (70.9%). It is concluded that there is a significant relationship between caregiver burden and sleep quality among caregivers at a special elementary school; that is, the greater the

terms and conditions of the Creative CommonsAttribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).	caregiver's burden, the lower their sleep quality. This study highlights the importance of addressing caregiver burden, contributing to health promotion strategies such as educational talks and preventive campaigns on adequate rest. Keywords: Caregiver Burden, Sleep Quality, Education Special.
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1. Introduction

The World Health Organization (WHO) highlights that sleeping between 7 and 8 hours a day is essential to maintain good health, with rest being the deepest gesture of self-care we have, it allows our body to heal and our mind to organize the chaos of the day. Not sleeping negatively affects the body and mind, so it is a priority to guarantee quality of sleep (CS) (1). Likewise, the care of people with severe functional limitations generates an overload (SOB) in women and unpaid caregivers (CRES), this has an impact on physical, emotional and economic health, which requires comprehensive evaluations and psychosocial support (2).

At the international level, SOB in CRES of children with disabilities knows no borders, it is a worldwide problem. In South Africa, between 33.8% and 60% of CRES in children with Autism Spectrum Disorder (ASD) have moderate to severe SOB. In Europe, research in Spain and Turkey, the outlook is even more worrying, with 8 out of 10 CRES of children with complex neurological conditions reporting severe SOB (3-5). In North America, according to a publication by the Sleep Research Society, of the 53 million family CRES in the United States, 60% sleep less than recommended. And in South America, studies in Ecuador confirm that CR SOB is directly related to alterations in CRES rest. This confirms that it is a silent crisis that affects the health of millions of CRES in the world (6-8).

At the national level, this reality is even more evident in CRES of children with special needs, such as ASD, Down syndrome or cerebral palsy, whose care requires almost constant dedication. At the local level, in Lima, studies report that more than half of these CRES present sleep disturbances (S) and up to 76.7% experience intense SOB due to the daily demands of care

(9,10). However, a good percentage still manages to maintain an acceptable quality of life, thanks mainly to family and social support.

Several authors have addressed this problem from different contexts. Simón et al. found a moderate positive correlation between the SOB a of the CR and their CS (11); along the same lines, Ortiz-Rubio et al. reported that parents of children with ASD have higher levels of SOB and more impaired rest than other CRES (12). Likewise, Paisley et al. found that the patient's S problems have a direct impact on the CR's rest (13), while Díaz-García et al. point out that intensive care increases the physical and emotional burden of the main caregiver, also affecting their self-care (14). On the other hand, León found that mothers of children with neurodevelopmental disorders have sleep disturbances linked to economic stress and lack of social support (15). Similarly, Suárez and Beltrán, together with Cabrera-Vélez and Peñafiel-Mora, reported high levels of SOB associated with fear for the future of the family member, the burden of sharing care with other responsibilities, and the demands of prolonged parenting (16,17).

Likewise, Sanjinez reported an intense SOB predominant in CRES of people with disabilities (18); in the same sense, a considerable impact on the physical and emotional well-being of CRES of children with disabilities was evidenced (19). In addition, it was identified that the majority of CRES of children with ASD were women and mothers (20). Finally, a study with CRES in a CF showed that a significant part of them required some type of care for S problems, from mild to severe, which confirms that this problem remains constant regardless of the geographical context or the type of disability attended (21).

The present research is justified by the scarcity of

similar studies at the national level, thus being a reference for future research. Its relevance lies in addressing the SOB of the CRES of special basic educational centers (CEBE), whose physical and emotional demands affect their health and work performance. The objective of the study is to determine the relationship between SOB and CS in CRES of a CEBE of Breña, 2026.

2. Methodology

The present research was developed under a hypothetical approach, since the search for knowledge integrates the collection of information in an inductive way with the knowledge already acquired. (22). The quantitative research approach will allow a numerical analysis to identify and test the hypothesis to maintain the neutrality of the findings obtained (23). Likewise, an applied study was considered, since it is aimed at answering precise questions with the aim of providing specific answers and solutions (24). As for the research design, it was non-experimental, since it was carried out by

observing what happens naturally, without altering or modifying situations, in addition to generating hypotheses for future research (25). As a subdesign, a correlational one was chosen, since it allows both variables to be related at a specific time point (26). Regarding the cut-off, the research was cross-sectional, since the data collection was carried out in a single period, identifying relationships between both variables without establishing causality (27).

Regarding the population, this is defined as the set of people to whom the study is to be applied, who share similar characteristics for the research (28). In the present study, the population is composed of 70 CRES of children with disabilities who attend a CEBE in Breña. The sample, understood as the smallest group of people chosen for the study but which reflects the characteristics of the large group (29), the sample of this research consists of 55 CRES of children with disabilities. As for sampling, it allows the selection of the components of a sample from a

population, based on a set of procedures and criteria designed that reflect the characteristics of that population (30); it was census-based, because data were collected from the entire population (31), and non-probabilistic, because the sample was not selected at random, but based on causes related to the characteristics of the research or the researcher's purposes (32).

CRES who signed the informed consent, attended the school with their children, completed the questionnaire and agreed to participate voluntarily were included. Those who had a psychiatric history, did not wish to participate, did not exercise permanent care or had communication difficulties were excluded. Two instruments were applied, the ZCBI, with 22 items that evaluate dimensions such as quality of life (QoL), self-care, social support and economic coping, classifying the results in the absence of SOB (≤ 46), mild (47–55) and intense (≥ 56) SOB (33) and the Pittsburgh Sleep Quality Index (PSQI), with 19 items grouped into seven dimensions of the S, whose total score (0–21) classifies participants as "no sleep problems" (< 5), "deserves medical attention" (5–14) or "severe sleep problem" (> 15) (34).

Data collection was carried out with prior informed consent (10 minutes for the S questionnaire and 15 minutes for the SOB). The CS Index had a validity of 1.0 and a reliability of 0.564, while the SOB Scale of the Zarit CR reached a validity and reliability of 0.895, both verified by specialists and a pilot test. The data were processed in SPSS v.27.0, applying Spearman's normality test. This study was carried out according to the ethical principles outlined in the Declaration of Helsinki, protecting at all times the right to voluntary participation and informed consent. Likewise, the protocols established by the ethics committee were followed, taking care of each participant, respecting their rights, protecting their health and integrity, and ensuring that they felt safe and accompanied throughout the process, thus avoiding any form of harm or violation (35).

3. Results

Descriptive Analysis

Table 1. Sociodemographic and clinical factors in caregivers

		Frequency	Percentage
GENDER	Female	51	92,7%
	Male	4	7,3%
AGE	18-25 years old	4	7,3%
	26-35 years	12	21,8%
	36-45 years old	39	70,9%
CAREGIVER	Dad	5	9,1%
	Mom	47	85,5%
	Brother	0	0,0%
	Uncle	1	1,8%
	Grandfather	2	3,6%
	Grandmother	0	0,0%
	Private caregiver	0	0,0%
CLINICAL DATA	High blood pressure	3	5,5%
	Diabetes	3	5,5%
	Obesity	8	14,5%
	None	41	74,5%
SLEEP DISORDER	Yes	35	63,6%
	No	20	36,4%
NEUROLOGICAL DIAGNOSIS OF THE CHILD	Infantile cerebral palsy	4	7,3%
	Autism spectrum disorder	32	58,2%
	Neurological sequelae	7	12,7%
	Down syndrome	12	21,8%
	Total	55	100,0%

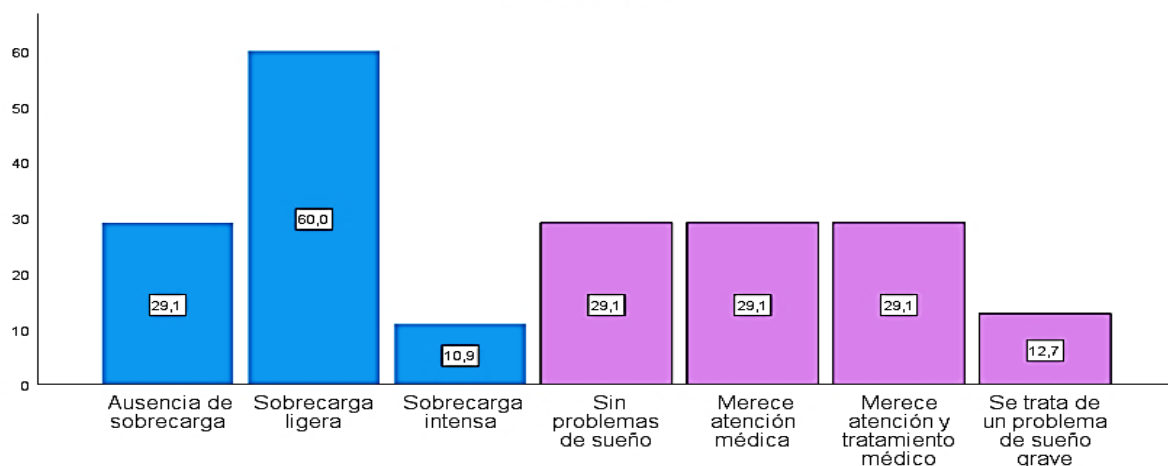
Table 1. Sociodemographic and clinical factors in data none 74.5%, obesity 14.5%, 5.5% for diabetes caregivers were found: Female gender 92.7% and hypertension. Sleep disorder yes 63.6% and no male 7.3%. Age 36-45 years 70.9%, 26-35 years 21.8% 36.4%. Neurological diagnosis of the child autism and 18-25 years 7.3%. Caregiver mother 85.5%, father spectrum disorder 58.2%, Down syndrome 21.8%, 9.1%, grandfather 3.6%, uncle 1.8% and 0.0% for neurological sequelae 12.7% and cerebral palsy 7.3%. grandmother, brother and private caregiver. Clinical

Table 2. Overload and sleep quality in caregivers

		Frequency	Percentage
Overload	No overload	16	29,1%
	Light overload	33	60,0%
	Intense overload	6	10,9%
Quality of sleep	No sleep problems	16	29,1%
	You deserve medical attention	16	29,1%
	You deserve medical attention and treatment	16	29,1%
	This is a serious sleep problem	7	12,7%

Table 2 found: in caregiver overload 60.0%, absence of burden 29.1% and intense burden 10.9%. With regard to sleep quality, 29.1% for no

sleep problems, deserves medical attention and deserves medical attention and treatment, 12.7% is a serious sleep problem.

**Figure 1. Overload and sleep quality in caregivers**

In graph 1, it was found: in the caregiver overload a slight overload 60.0%, absence of overload 29.1% and intense overload 10.9%. With regard to sleep quality, 29.1% for no sleep problems,

deserves medical attention and deserves medical attention and treatment, 12.7% is a serious sleep problem.

Table 3. To determine the relationship between overload and sleep quality in caregivers.

Correlations				
			Overload	Quality of sleep
Rho de Spearman	Overload	Correlation coefficient	1,000	,901**
		Sig. (bilateral)	.	,000
		N	55	55

	Quality of sleep	Correlation coefficient	,901**	1,000
		Sig. (bilateral)	,000	.
		N	55	55

In Table 3, $p < 0.05$, there is a relationship between sleep overload and quality in caregivers of a special basic educational center in Breña. 2026. It also has a very high positive correlation coefficient of 0.901.

Table 4. Quality of life dimension, self-care capacity, social support network, skills to cope with economic problems and loss of control over one's own life due to the overload with sleep quality in caregivers.

Correlations				
				Quality of sleep
Rho de Spearman	Quality of life	Correlation coefficient	,778	
		Sig. (bilateral)	,000	
		N	55	
	Self-care capacity	Correlation coefficient	,764	
		Sig. (bilateral)	,000	
		N	55	
	Social Support Network	Correlation coefficient	-,798	
		Sig. (bilateral)	,000	
		N	55	
	Competencies to deal with economic problems	Correlation coefficient	,646	
		Sig. (bilateral)	,000	
		N	55	
	Loss of control over one's life	Correlation coefficient	,831	
		Sig. (bilateral)	,000	
		N	55	

Table 4, $p < 0.05$, shows a relationship between the dimensions of quality of life (high positive correlation coefficient 0.778), self-care capacity (high positive correlation coefficient 0.764), social support network (high negative correlation coefficient -0.798), coping skills (moderate positive correlation coefficient 0.646) and loss of control over one's own life due to overload (high positive correlation coefficient 0.831) with sleep quality in caregivers at a special basic education center in Breña. 2026.

4. Discussion

The present study aimed to determine the relationship between SOB and CS in CRES from a CEBE in Breña. 2026. An important difference in the magnitude of the association was reported, finding a significantly higher correlation ($Rho = 0.901$; $p < 0.05$) this finding goes even further than that reported by Simón et al. in Spain, who using the same ZBI methodology and the PSQI found a positive and moderate correlation ($r =$

0.494; $p < 0.001$); this difference suggests that, in the CRES population of children in a CEBE environment, physical and emotional demands tend to be more constant and demanding than in the care of other dependent populations, which would further deepen the deterioration of CR rest (11).

Regarding the sociodemographic profile, a clear predominance of the female sex (92.7%) was observed, mainly mothers (85.5%), mostly adults between 36 and 45 years old (70.9%). This finding coincides with what was reported by Torres, who in CRES of children between 3 and 12 years of age with ASD in Chorrillos found that 96% of the participants were women and 86% corresponded specifically to the mother's relationship, in a predominant age range of 36 to 46 years (20). Consistently, in Argentina, León, in his study with mothers of children and adolescents with neurodevelopmental disorders in La Plata, also found that the role of caregiver fell exclusively to the mother, with ages ranging from 36 to 53 years (15). These findings reaffirm that, regardless of the context or country where the research is developed, it is the mother who continues to assume the role of primary caregiver.

In relation to the profile of the children, it was found that ASD was the predominant condition (58.2%). Similarly, Ortiz-Rubio et al., who reported that 77% of parents of children with ASD had higher levels of SOB and worse CS, compared to caregivers with other conditions (12).

In relation to CR SOB, the results showed that most of the CR had a slight level (60.0%), while 29.1% did not show BDS and 10.9% had intense BDS. This result differs from what was found in Ecuador by Suárez and Beltrán, who reported that 91.4% of the CRES had intense BBS, linked to fear for the family member's future and the burden of sharing care with other responsibilities (16). Cabrera-Vélez and Peñafiel-Mora also found considerable levels of BBS, associated with the demands of parenting and sustained care over time (17). These differences could be due to the context, the type of disability, and the instrument used in each study, suggesting that the CR SBS

does not depend only on the child's diagnosis, but also on the socio-family factors that surround him

This study shows that CS in CRES of a CEBE is compromised in a significant proportion of the sample, since 29.1% did not present S problems, while 70.9% did show some degree of alteration, and 12.7% presented serious problems. These results coincide with Vásquez conducted in Lima by the CRES of children from a CF, where 16.3% did not present S problems, 34.9% required medical attention, 44.2% needed medical treatment and 4.7% presented severe S problems. Although the proportions are not the same, in both studies the presence of S alterations predominates, which confirms that the continuous care of children with special needs has an impact on CS (21).

Regarding the relationship between quality of life (QOL) in its SOB dimension and CS in the CEBE CRES, a high and significant positive correlation was found ($Rho=0.778$; $p=0.000$), which indicates that the greater the affectation in the CR QoL, the greater the deterioration in their CS. This result is consistent with what was presented by Paisley et al. Published in a journal called Sleep in the USA, where they explored the relationship between S problems, SOB and the type of link with CR, finding differences depending on whether they were spouses or CRES children (13),

In relation to the capacity for self-care, a high and significant positive correlation was found with CS ($Rho=0.764$; $p=0.000$), which indicates that the greater the difficulties in the CR's self-care, the greater the deterioration of their sleep. In Mexico, Díaz-García et al. corroborate these findings by identifying the factors associated with the SOB of the main informal CR in a children's rehabilitation center, highlighting that the intensive care context increases the physical and emotional burden of the CR, which supports that the deterioration of self-care is part of the overall impact of the SOB.

In the relationship between the social support network and the SC in CRES of a CEBE, a high and significant negative correlation was found

between the social support network and the SC ($Rho=-0.798$; $p=0.000$). This result indicates that, the greater the caregiver's perception of social support, the less the impact on their CS; that is, having a family and social support network cushions the negative impact of the CR's role, reducing the perceived burden and favoring rest. Similarly, in Ecuador, Cabrera-Vélez and Peñafiel-Mora pointed out that the experience of upbringing and care in children with disabilities is linked to family and psychosocial dimensions that influence the CR's well-being (21).

Regarding the relationship between the competencies to cope with economic problems and SC in the CRES of a CEBE, a moderate and significant positive correlation was evidenced between this dimension and the SC ($Rho=0.646$; $p=0.000$), due to the fact that the care of children with neurodevelopmental disorders involves not only emotional and physical demands, but also a considerable financial burden that increases the wear and tear of the CR. This finding is consistent with what was reported in Argentina by León, who warns that parental SOB in mothers of children with neurodevelopmental disorders is strongly conditioned by high financial demands, where 100% of the cases analyzed presented an altered CS due to chronic stress factors, including the high economic costs of care and the lack of social support (15).

Regarding the loss of control over one's own life, the highest correlation of all the dimensions analyzed with CS was found ($Rho=0.831$; $p=0.000$), evidencing that the greater the feeling of having lost control over one's own life, the worse the quality of sleep. This result coincides with Ale-Llerena's study of SOB and CS in CRES relatives of dependent children with physical and mental disabilities, in which she found that the burden of care has an important impact on the life of the CR, which is compatible with the loss of control observed in the present study.

5. Conclusions

This research revealed that CR SOB is strongly associated with CS ($Rho=0.901$; $p<0.05$), a magnitude of association that even exceeded that reported in other international contexts,

evidencing the particular demand imposed by care in special education settings.

This study confirms that the maternal figure continues to be the main caregiver, with an almost absolute predominance of women and an age concentration between 36 and 45 years, evidencing that motherhood and caring for a child with a disability are intertwined in a single life experience marked by sustained wear and tear. In addition, ASD was positioned as the predominant condition among the children cared for, which coincides with previous research that indicates a greater burden of care associated with this condition compared to other diagnoses.

Six out of ten caregivers had some degree of SOB, a figure that, although worrying, qualifies the findings of previous studies with much higher levels of intense SOB, suggesting that the specialized educational context could constitute a moderating factor compared to other care realities.

It was evidenced that a considerable percentage of caregivers presented alterations in CS, which reaffirms that sustained care of children with special needs has a direct impact on the caregiver's rest and well-being.

It was established that the greater the deterioration in the quality of life of the CR, the greater the deterioration of their rest, configuring a circle where physical and emotional exhaustion feeds back into the poor CS and vice versa.

The CR's self-care capacity emerged as a key factor, its decrease is significantly associated with worse rest, the longer one's own well-being is postponed to care for the child, the worse sleep is done.

The social support network was revealed as a true protective factor, since the greater the perception of family and social support, the lower the sleep deterioration, which confirms that no one should care alone and that social accompaniment cushions the weight of care.

The economic difficulties associated with caregiving were also significantly associated with poorer rest, evidencing that the caregiver's burden is not only emotional or physical, but also

financial, and that subsistence stress translates into sleepless nights.

The loss of control over one's own life was the dimension with the greatest association with CS, a finding that places personal autonomy as the most sensitive element of CR well-being, and that invites us to rethink care not only as a task towards the other, but as a space that must also preserve identity and rest.

Finally, this research is one of the first approaches

at the national level to the study of CR SOB and its relationship with SC in special education, becoming a reference for future research. The physical and emotional exhaustion of CR is not a side effect, but a real consequence that compromises their health. Therefore, it is urgent to implement accompaniment programs that recognize their rest as part of their well-being, because taking good care also means taking care of those who care for them.

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