

SELF-ASSESSMENT OF THE PSYCHOPHYSICAL HEALTH OF PARENTS OF CHILDREN WITH AUTISM SPECTRUM DISORDER

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Abstract: Parenting a child with autism spectrum disorder involves substantial and ongoing demands that may adversely affect parents' health and wellbeing. Parental wellbeing is essential not only for the parents themselves, but also for ensuring that the child receives adequate care and support.

The aim of this study was to examine parents' self-assessments of psychophysical health across eight SF-36 domains and to explore their associations with selected sociodemographic characteristics. Data were collected using the Croatian version of the SF-36 questionnaire based on a sample of 139 parents.

The results indicate a consistent pattern of reduced psychophysical wellbeing across multiple domains, with the most pronounced difficulties observed in vitality, mental health, and role limitations due to emotional problems. In comparison with Croatian normative data, these patterns suggest persistently lower and potentially intensified reductions in wellbeing relative to earlier Croatian findings (Benjak et al., 2009). Strong intercorrelations among health domains highlight the interconnected nature of physical and psychological wellbeing, while the absence of significant associations with sociodemographic variables point to the pervasive character of caregiving-related strain.

Overall, the results point to the persistent and potentially increasing impact of caregiving demands on parental wellbeing, highlighting the need for more systematic and accessible psychosocial support. Given the central role of parental wellbeing in shaping their child's outcomes, as well as in collaborating effectively with support systems, the findings suggest that existing forms of support may be insufficient in addressing the long-term needs of these families.

Keywords: autism spectrum disorder; parents; quality of life, SF-36; psychophysical health

INTRODUCTION

Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder that manifests in early childhood: it is characterised by persistent difficulties in social communication and interaction, as well as restricted and repetitive patterns of behaviour, interests, and activities (American Psychiatric Association, 2013; Lord et al., 2018). The aetiology of ASD is considered multifactorial, involving a complex interaction of genetic and environmental factors that may contribute to

neurobiological and functional alterations in the central nervous system (Newschaffer et al., 2007; Bujas Petković & Škrinjar Frey, 2010; Salari et al., 2022; Lord et al., 2018).

ASD occurs across all racial, ethnic, and socioeconomic groups, and it is more than three times more prevalent in boys than in girls. According to the Centre for Disease Control and Prevention (CDC, 2025), ASD is diagnosed in approximately 1 in 31 children, while global prevalence estimates range from 1-2% (Xu et al., 2018; World

Health Organization, 2023). Earlier data suggest that ASD prevalence in Croatia is among the lowest reported in Europe, which is likely attributable to cross-national differences in diagnostic practices, research methodology, awareness, and access to services, rather than true epidemiological variation (Wang et al., 2022).

Parenting children with developmental disabilities is associated with continuous emotional and organisational demands that may negatively affect parents' physical and mental health, making this issue highly relevant from a public health perspective (Milić Babić, 2012; Milić Babić & Laklija, 2013; Löw, 2021; Bonis, 2016). The disruption of parental and societal expectations of the "ideal" child, combined with the need for constant care and adaptation, often leads to increased burden and reduced quality of life (Wagner Jakab, 2008).

Parenting a child with ASD differs from parenting typically developing children in numerous ways: it is often described as particularly demanding due to the complexity and persistence of daily challenges (Friščić, 2019). Over time, sustained caregiving demands and emotional engagement may contribute to parental exhaustion and reduced family quality of life. Family quality of life varies depending on the severity of symptoms, availability of support, and utilization of coping strategies, with mothers more frequently reporting greater burden and lower life satisfaction than fathers (Sen & Yurtsever, 2007; Hayes & Watson, 2013).

Parents of children with ASD often adjust their daily lives to accommodate their child's needs, which may involve changes in professional and personal roles, most commonly among mothers who assume the primary caregiving responsibility (Blacher et al., 2005). These changes in family roles, dynamics, and emotional relationships require parents to reassess their competencies and develop adapted parenting strategies (Kosić et al., 2021).

Receiving the diagnosis represents a particularly challenging period, often characterised by difficulties in understanding information regarding the condition, intense emotional reactions, and

uncertainty about the future (DeHoff et al., 2016; Karst & Van Hecke, 2012). A lack of adequate informational and emotional support may further complicate the process of adjustment and affect overall family functioning (Kosić et al., 2021).

Compared to parents of typically developing children, parents of children with ASD experience substantially higher levels of stress and emotional exhaustion (Hayes & Watson, 2013; Karst & Van Hecke, 2012), and, according to some studies, these levels are higher than those experienced by parents of children with other neurodevelopmental disorders (Marquis et al., 2020; Bonis, 2016). These difficulties are often associated with uncertainty, the constant need for supervision, and limited social support, which may contribute to feelings of isolation and inadequacy (Friščić, 2019).

Stress and depression have been identified as key predictors of parents' physical and mental health, as well as their overall quality of life (Cherif et al., 2020). Given their central caregiving role, parents' wellbeing is crucial for the quality of care provided to the child and for overall developmental outcomes, highlighting the importance of systematic psychosocial support and interventions aimed at preserving their health and resilience (Benjak et al., 2009; Lisak, 2013).

The SF-36 questionnaire has been widely used to assess the subjective psychophysical health of parents of children with ASD. Previous research consistently indicates poorer self-assessed health among these parents, particularly in domains related to vitality, emotional functioning, and social functioning, compared to parents of typically developing children (Garriot et al., 2014; Cherif et al., 2020). These findings suggest that parents' health is closely linked to caregiving demands, perceived stress, and available social support.

In Croatia, the SF-36 was applied in a study by Benjak et al. (2009), which also found significantly lower self-assessed health among parents of children with ASD, particularly in psychosocial domains. Previous research suggests that parents' psychophysical health is not only influenced by caregiving demands, but also by various socio-demographic factors. Characteristics such as age,

educational level, employment status, and marital status have been associated with differences in parental stress, coping capacity, and access to resources, which in turn affect health outcomes (Hayes & Watson, 2013; Bonis, 2016; Dardas & Ahmad, 2014).

In addition, factors such as family size and involvement in support services may play a protective role by enhancing social support and reducing the caregiving burden, although findings in this area remain inconsistent and context-dependent (Karst & Van Hecke, 2012; Marquis et al., 2020). These findings highlight the importance of examining sociodemographic characteristics in relation to parents' self-assessed psychophysical health.

However, despite the relevance of these findings, there is a lack of recent empirical research examining parents' self-assessed psychophysical health using this instrument in the Croatian context. Existing studies have primarily focused on broader aspects of parental burden and support needs (e.g., Wagner Jakab, 2008; Ljubešić & Šimleša, 2016; Kosić et al., 2021), leaving a gap in updated and context-specific data.

Parents of children with ASD represent one of the most vulnerable social groups (Ombla et al., 2015; Hayes & Watson, 2013) and are, therefore, in need of systematic and continuous societal support. In this context, the present study aims to examine how parents of children with ASD assess their own psychophysical health, as well as to interpret these findings within the framework of available support systems. The primary aim of this study was to examine parents' self-assessments

of their psychophysical health in the context of raising children with ASD and to explore the relationships between different health domains and parents' sociodemographic characteristics.

Specifically, the study aimed to:

(1) assess parents' psychophysical health across key domains measured by the SF-36 questionnaire;

(2) examine the interrelationships among these health domains; and

(3) analyse the associations between self-assessed psychophysical health and selected sociodemographic characteristics of parents (age, marital status, number of children, educational level, employment status, and involvement in support services).

Based on previous research, it was expected that parents of children with ASD would report lower levels of wellbeing, particularly in psychosocial domains, and that different health domains would be interrelated. Furthermore, sociodemographic characteristics were expected to show differential associations with parents' self-assessed health, reflecting the complexity of caregiving demands and available support.

METHOD

Sample

The sample consisted of 139 parents of children with ASD) living in the Republic of Croatia. Of this sample, 131 (94.2%) were mothers.

Table 1. Sociodemographic characteristics of parents of children with ASD (*N* = 139)

Sociodemographic characteristic	Category	n	%
Marital status	Married	109	78.4
	Cohabiting	13	9.4
	Divorced	11	7.9
	Widowed	2	1.4
	No partner	3	2.2
	Prefer not to say	1	0.7
Number of children in the family	One child	44	31.7
	Two children	61	43.9
	Three or more children	34	24.4
County of residence*	City of Zagreb	36	25.9
	Primorje-Gorski Kotar County	28	20.1
	Split-Dalmatia County	20	14.4
Educational attainment	Primary and vocational education	64	46
	Undergraduate degree	26	18.7
	Graduate/Postgraduate	49	35.3
Employment status	Full-time employment	66	47.5
	Part-time employment	37	26.6
	Unemployed	36	25.9
Involvement in parental support programmes	Yes	36	25.9
	No	103	74.1
Self-rated health compared to last year	Better	41	29.5
	About the same	44	31.7
	Worse	47	33.8
	Much worse	7	5.0

* The three most common counties are listed here.

The majority of participants were married (78.4%), while smaller proportions were in a cohabiting relationship (9.4%) or divorced (7.9%), with other categories being minimally represented. Families with two children were most common (43.9%), followed by those with one child (31.7%) and those with three or more children (24.4%).

Most of the participants lived in the City of Zagreb (25.9%), the Primorje-Gorski Kotar County (20.1%), and the Split-Dalmatia County (14.4%), while the remaining participants were distributed across other regions.

In terms of educational attainment, a large proportion of the parents (46%) had completed primary and/or vocational education (primary education, three-year vocational education, four- and

five-year vocational secondary education, general (grammar school) secondary education, professional studies and training; master craftsman programmes requiring at least two years of validated work experience and higher education). Additionally, 18.7% had completed an undergraduate degree, while 35.3% had completed a graduate/postgraduate degree.

Regarding employment status, 47.5% of the participants were employed full time, 26.6% were employed part time, and 25.9% were unemployed. The majority of parents (74.1%) reported that they did not participate in any parental support programmes.

With regard to self-rated health compared to the previous year, 31.7% of parents reported no change, 29.5% reported an improvement, while

33.8% reported worse health and 5.0% reported much worse health.

Instrument

Data were collected using an online questionnaire that included items on sociodemographic characteristics (gender, age, marital status, number of children, educational attainment, employment status, county of residence, and participation in parental support programmes), as well as the SF-36 Health Status Questionnaire (Ware & Sherbourne, 1992; Ware et al., 1993).

For the purpose of this study, the Croatian version of the SF-36 (Benjak et al., 2009) was used. The instrument can be used to assess subjective psychophysical health and consists of 36 items grouped into eight domains: physical functioning, role limitations due to physical problems, bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems, and mental health. Scores range from 0 to 100, with higher scores indicating better perceived health.

The SF-36 has demonstrated good validity and high internal consistency across different populations, including the Croatian population (McHorney et al., 1993; Benjak et al., 2009). Sociodemographic variables were self-reported and are presented in the section describing the sample.

Data collection

Data were collected between May and August 2023 via the online platform, Google Forms. The link to the questionnaire was distributed electronically through autism centres, associations, and online parent groups of children with ASD. In an introductory letter, participants were informed about the purpose of the study, the anonymous nature of data collection and analysis, as well as their right to withdraw from the study at any time. The research was approved by the Faculty of Teacher Education in Rijeka. In line with ethical guidelines, particular care was taken to protect the participants' privacy and minimise potential

discomfort, especially when addressing sensitive topics (Staksrud et al., 2025). As some questions touched upon potentially intimate aspects of parental experiences, personal sociodemographic data was not collected from the participants in order to minimise discomfort and ensure privacy.

Data analysis

Scores for the eight health domains were calculated using the standard SF-36 scoring procedures (Ware et al., 1993; Ware, Kosinski, & Gandek, 2000, as cited in Benjak et al., 2009). Descriptive statistics (range, means, and standard deviations) were computed to address the first research objective. The Kolmogorov-Smirnov test indicated that the distribution of scores deviated from normality in five of the eight domains. Therefore, non-parametric statistical methods were applied. Spearman's rank-order correlation coefficient was used to examine relationships among the health domains (second research objective), while the Mann-Whitney U test and the Kruskal-Wallis H test were employed to assess differences in self-rated health across sociodemographic groups (third research objective). Statistical significance was set at $p < .05$. All analyses were conducted using IBM SPSS Statistics (Version 21).

RESULTS

Parents' self-assessments of psychophysical health

Table 2 presents descriptive statistics for each SF-36 health domain calculated based on data collected in the present study, including minimum and maximum values, as well as means and standard deviations. In addition, median values with interquartile ranges (Q1 – Q3) are reported to facilitate comparison with previously published data. For comparative purposes, corresponding results from Croatian normative data (Maslić Seršić & Vuletić, 2006) and from Benjak (2010), including data from parents of children with ASD and parents of typically developing children, are also presented.

Table 2. Descriptive statistics for the eight domains of the SF-36 health survey based on data collected in the present study in comparison to Croatian normative data (Maslić Seršić & Vuletić, 2006) and Benjak (2010)

Domain	N	Min-Max	Present study (M ± SD)	Normative data* (M ± SD)	Present study Median (Q1 – Q3)	Benjak ASD	Benjak Typical
Physical functioning	139	1-100	72.3 ± 27.1	69.1 ± 30.0	80.0 (55.0 – 95.0)	80.0 (55.0 – 95.0)	80.0 (65.0 – 95.0)
Role limitations -physical	139	1-100	50.5 ± 41.9	61.5 ± 44.8	50.0 (0 – 100)	75.0 (12.5 – 100)	100.0 (75 – 100)
Bodily pain	139	10-100	61.2 ± 21.9	64.6 ± 30.5	57.5 (45.0 – 77.5)	66.7 (0 – 100)	100.0 (66.7 – 100)
General health	139	5-100	52.3 ± 20.2	54.8 ± 22.6	52.0 (35.0 – 67.0)	55.6 (44.4 – 66.7)	77.8 (55.6 – 77.8)
Vitality	139	1-100	38.7 ± 19.3	53.2 ± 22.7	40.0 (25.0 – 55.0)	52.0 (44.0 – 68.0)	72.0 (60.0 – 80.0)
Social functioning	139	1-100	54.7 ± 24.6	73.8 ± 27.8	50.0 (37.5 – 75.0)	50.0 (30.0 – 60.0)	60.0 (50.0 – 65.0)
Role limitations -emotional	139	1-100	38.6 ± 43.2	68.6 ± 43.7	33.3 (0 – 100)	66.7 (44.4 – 88.9)	77.8 (66.7 – 88.9)
Mental health	139	16-96	52.3 ± 18.7	61.9 ± 21.4	52.0 (40.0 – 64.0)	57.0 (40.0 – 67.0)	67.0 (57.0 – 77.0)

*Croatian normative data (Maslić Seršić & Vuletić, 2006)

The results presented in Table 2 indicate that parents in the present study reported less favourable psychophysical health across several SF-36 domains compared to the Croatian normative data (Maslić Seršić & Vuletić, 2006). More specifically, parents in the present study show notably lower scores in vitality ($M = 38.7$ vs. 53.2), social functioning ($M = 54.7$ vs. 73.8), and role limitations due to emotional problems ($M = 38.6$ vs. 68.6), indicating reduced wellbeing in key psychosocial domains. This interpretation should be considered in the context of the comparison sample - the Croatian normative data sample was based on a large population of 9,070 adults, whereas the present sample consisted almost entirely of mothers (94.2%) of children with ASD. Thus, the observed differences may reflect not only deviations from values observed in the general adult population, but also specific psychosocial demands associated with maternal caregiving in this population.

The most pronounced deviations from the Croatian normative values were observed in vitality, social functioning, and role limitations due to emotional problems, indicating that caregiving burden is most strongly reflected in emotional strain, reduced energy, and limitations in everyday psychosocial functioning; although impairments are also evident in domains related to physical

role functioning (Maslić Seršić & Vuletić, 2006; Benjak et al., 2009).

Compared to the findings reported by Benjak (2010), median scores in the present sample of parents of children with ASD reveal notably lower values in several domains. The most pronounced differences are observed in role limitations due to emotional problems (33.3 vs. 66.7), representing an approximately two-fold reduction in median scores in the present sample, as well as in role limitations due to physical problems (50.0 vs. 75.0) and vitality (40.0 vs. 52.0), indicating a substantially greater burden in both physical and emotional role functioning compared to previous findings.

In both studies, parents of children with ASD consistently reported less favourable outcomes than parents of typically developing children, particularly in domains reflecting emotional and social functioning. Taken together, these findings suggest a persistent pattern over time, as well as a potential intensification of psychosocial burden among parents in the present study. However, given the absence of a directly matched control group in the present study and differences in study design, sample composition, and reporting format, these comparisons should be interpreted

with caution. Nevertheless, the results consistently point to heightened psychosocial vulnerability and highlight the need for targeted and accessible psychosocial support for parents of children with ASD.

Intercorrelations among psychophysical health domains

Spearman's correlations among the domains of psychophysical health are presented in Table 3: these values are used to determine the bidirectional relationships between domains.

Table 3. Spearman's correlations between psychophysical health domains

	1	2	3	4	5	6	7	8
1								
2	.421**							
3	.515**	.577**						
4	.278**	.445**	.536**					
5	.227**	.365**	.414**	.480**				
6	.238**	.485**	.508**	.509**	.655**			
7	.267**	.557**	.473**	.422**	.539**	.640**		
8	.248**	.382**	.404**	.536**	.806**	.672**	.628**	

Note. Values represent Spearman's rho coefficients; ** $p < .01$.

1 = Physical functioning; 2 = Role limitations due to physical problems; 3 = Bodily pain; 4 = General health; 5 = Vitality; 6 = Social functioning; 7 = Role limitations due to emotional problems; 8 = Mental health.

Statistically significant correlations were observed among all domains ($p < .005$), indicating a consistent pattern of association between different aspects of self-assessed health. Higher correlations were observed between vitality and mental health ($\rho = .806$), vitality and social functioning ($\rho = .655$), and social functioning and mental health ($\rho = .672$). Moderate correlations were found among physical health domains, including role limitations due to physical problems and bodily pain ($\rho = .577$), as well as bodily pain and general health perceptions ($\rho = .536$). Lower, yet statistically significant correlations were observed between physical functioning and other domains ($\rho = .227-.515$).

Sociodemographic and contextual variables

Non-parametric statistical tests were applied to examine differences in psychophysical health across sociodemographic and contextual variables. The Mann-Whitney U test indicated no statistically significant differences between male and female participants across all SF-36 domains (all $p > .50$; e.g., for Physical functioning $U = 498.50$, $z = -0.23$, $p = .817$). Similarly, no statistically significant differences were found with regard

to participation in parental support programmes. Domain-specific results were as follows: physical functioning ($U = 1833.50$, $z = -0.10$, $p = .921$), role limitations due to physical problems ($U = 1804.00$, $z = -0.25$, $p = .803$), role limitations due to emotional problems ($U = 1505.00$, $z = -1.81$, $p = .070$), bodily pain ($U = 1667.50$, $z = -0.91$, $p = .365$), mental health ($U = 1509.00$, $z = -1.66$, $p = .096$), vitality ($U = 1559.50$, $z = -1.42$, $p = .155$), social functioning ($U = 1575.50$, $z = -1.36$, $p = .175$), and general health ($U = 1731.50$, $z = -0.59$, $p = .555$). Although some trends were observed, particularly in role limitations due to emotional problems and mental health, these did not reach statistical significance ($\alpha = .05$).

The Kruskal-Wallis test revealed no statistically significant differences in the SF-36 domains across levels of educational attainment. The results indicate that no statistically significant differences were found between the groups in most of the examined health domains: physical functioning ($\chi^2(2) = 0.80$, $p = .669$); role limitations due to physical problems ($\chi^2(2) = 0.09$, $p = .958$); role limitations due to emotional problems ($\chi^2(2) = 2.51$, $p = .286$); bodily pain ($\chi^2(2) = 1.83$, $p = .400$); mental health ($\chi^2(2) = 1.01$, $p = .605$); vital-

ity and energy ($\chi^2(2) = 1.95, p = .378$); and general health perception ($\chi^2(2) = 1.46, p = .482$). In the domain of social functioning, a marginal level of statistical significance was observed ($\chi^2(2) = 5.61, p = .060$). Participants with undergraduate education had the highest mean ranks (MR = 86.27), compared to those with primary and/or vocational education (MR = 64.63) and those with graduate and postgraduate education (MR = 68.39).

No statistically significant differences were found with regard to employment status: physical functioning ($\chi^2(2) = 0.77, p = .680$); role limitations due to physical problems ($\chi^2(2) = 1.35, p = .510$); role limitations due to emotional problems ($\chi^2(2) = 0.80, p = .671$); bodily pain ($\chi^2(2) = 0.36, p = .835$); mental health ($\chi^2(2) = 0.92, p = .632$); vitality ($\chi^2(2) = 0.42, p = .809$); social functioning ($\chi^2(2) = 2.06, p = .357$); and general health ($\chi^2(2) = 0.90, p = .639$).

Chi-square tests showed that distributions differed significantly across counties (City of Zagreb, Primorje-Gorski Kotar County, and Split-Dalmatia County) only in the domain of physical functioning ($\chi^2(360, N = 139) = 429.04, p = .007$). No significant differences were observed in other domains: role limitations due to physical problems ($\chi^2(72, N = 139) = 70.88, p = .515$); bodily pain ($\chi^2(270, N = 139) = 201.39, p = .999$); mental health ($\chi^2(360, N = 139) = 294.25, p = .995$); vitality ($\chi^2(306, N = 139) = 269.17, p = .936$); social functioning ($\chi^2(144, N = 139) = 157.93, p = .202$); general health ($\chi^2(522, N = 139) = 449.14, p = .991$); and role limitations due to emotional problems ($\chi^2(54, N = 139) = 54.83, p = .443$). These results should be interpreted with caution due to the presence of cells with expected frequencies below 5, which may reduce the reliability of the chi-square approximation. The highest mean rank for physical functioning was observed in Primorje-Gorski Kotar County (91.63), followed by Split-Dalmatia County (70.95) and the City of Zagreb (62.65).

Chi-square analysis also revealed statistically significant differences across marital status in two domains: social functioning ($\chi^2(40, N = 139) = 66.73, p = .005$) and role limitations due to emotional problems ($\chi^2(15, N = 139) = 30.80,$

$p = .009$). No significant differences were found in other domains. Similar to the county comparisons, these results should be interpreted cautiously due to low expected frequencies in some cells. The highest mean rank in social functioning was observed among participants in cohabiting relationships (77.42), while divorced participants showed the lowest values (57.14). For role limitations due to emotional problems, the highest mean rank was observed among widowed participants (94.50), and the lowest among divorced participants (64.05).

Spearman correlations between age and SF-36 domains were low and did not show statistical significance (pairwise $N = 134$): physical functioning ($r_s = -.03, p = .729$), role limitations due to physical problems ($r_s = -.02, p = .796$), role limitations due to emotional problems ($r_s = -.06, p = .486$), bodily pain ($r_s = -.00, p = .979$), mental health ($r_s = -.17, p = .051$), vitality ($r_s = -.09, p = .322$), social functioning ($r_s = -.05, p = .544$), and general health ($r_s = .06, p = .475$). A slight negative trend was observed for mental health, although it did not reach statistical significance.

Similarly, correlations between the number of children and SF-36 domains were low and did not achieve statistical significance ($N = 139$): physical functioning ($r_s = -.11, p = .201$), role limitations due to physical problems ($r_s = .04, p = .644$), role limitations due to emotional problems ($r_s = .03, p = .737$), bodily pain ($r_s = -.02, p = .850$), mental health ($r_s = .09, p = .271$), vitality ($r_s = .13, p = .131$), social functioning ($r_s = .09, p = .316$), and general health ($r_s = .11, p = .198$).

Overall, the results indicate a consistent pattern of associations among the health domains, while most sociodemographic variables showed no statistically significant associations.

DISCUSSION

The aim of the present study was to examine parents' self-assessments of psychophysical health in the context of raising children with ASD, as well as to explore the relationships among different health domains and their associations with sociodemographic characteristics.

With regard to the first research objective, the comparison with Croatian normative data (Maslić Seršić & Vuletić, 2006) and the study by Benjak et al. (2009) provides an important contextual framework for interpreting the present findings. Although direct statistical comparison is limited by differences in sample structure and study design, the overall pattern suggests that parents of children with ASD continue to experience reduced wellbeing across multiple health domains. The most pronounced deviations from Croatian normative values were observed in vitality, social functioning, and role limitations due to emotional problems, indicating that caregiving burden is most strongly reflected in emotional strain, reduced energy, and limitations in everyday psychosocial functioning; although impairments are also evident in domains related to physical role functioning (Maslić Seršić & Vuletić, 2006; Benjak et al., 2009).

It is important to note that the Croatian normative data were established on a large population-based sample of 9,070 adults (Maslić Seršić & Vuletić, 2006), whereas the present sample consisted predominantly of mothers (94.2%) of children with ASD. This distinction should be taken into account when interpreting the magnitude of the observed deviations, yet, it highlights the specific relevance of the present findings for understanding the health of caregiving parents, particularly mothers, who have been consistently identified as a more vulnerable group in the context of parenting children with developmental difficulties (Bonis, 2016; Milić Babić, 2012; Ombla et al., 2015).

When compared to the findings reported by Benjak et al. (2009), the present results suggest that the difficulties previously documented among Croatian parents of children with ASD have not diminished over time. Earlier findings showed poorer self-perceived health across all domains, except physical functioning, in comparison to parents of typically developing children (Benjak et al., 2009). In the present study, lower median values were observed in several domains, with the most pronounced differences being observed in the context of role limitations due to emotional

problems (33.3 vs. 66.7), representing an approximately two-fold reduction in median scores, as well as in role limitations due to physical problems and vitality. These findings indicate both the persistence and potential intensification of caregiving burden. Importantly, this pattern should not be interpreted as being limited to psychosocial domains alone, as both the present findings and earlier Croatian results indicate a broader profile of reduced wellbeing, with impairments observed across multiple domains, including both emotional and physical role functioning (Benjak et al., 2009).

This interpretation is consistent with international literature, which consistently shows that parents of children with ASD report lower quality of life, higher levels of stress, and reduced wellbeing compared to parents of typically developing children (e.g. Hayes & Watson, 2013; Karst & Van Hecke, 2012; Vasilopoulou & Nisbet, 2016; Dardas & Ahmad, 2014; Garriot et al., 2014). In particular, reduced vitality, poorer mental health, and limitations in emotional and social functioning are among the most frequently reported difficulties (Cherif et al., 2020; Turnage & Conner, 2022). These findings are commonly interpreted within the framework of increased caregiving burden, chronic stress, and reduced opportunities for recovery associated with raising a child with complex developmental needs (Bonis, 2016; Marquis et al., 2020; Sánchez-Amate & de la Rosa, 2024).

The observed pattern suggests that, although physical functioning appears relatively less affected compared to psychosocial domains, the burden of caregiving extends beyond emotional and social aspects and is also reflected in limitations in physical role functioning. This aligns with the conceptualisation of caregiver burden as a multidimensional construct encompassing emotional, social, and functional limitations, rather than being confined to a single domain of health (Karst & Van Hecke, 2012). The discrepancy between relatively preserved physical functioning and reduced psychosocial wellbeing may reflect the necessity for parents to maintain physical capacity in order to meet daily caregiving demands, while

experiencing cumulative emotional strain and fatigue. Studies have emphasised the role of chronic stress, emotional demands, and limited opportunities for recovery in shaping parental wellbeing (Hayes & Watson, 2013; Bonis, 2016; Marquis et al., 2020), while others have highlighted the importance of social support and family-centred services for parents of children with developmental difficulties (Milić Babić & Laklija, 2013; Lisak, 2013; Ljubešić & Šimleša, 2016). However, these interpretations should be considered with caution, as the present study did not directly assess stress or related mechanisms.

Taken together, these findings indicate that caregiving burden in parents of children with ASD is multidimensional, affecting both physical and psychosocial aspects of health, with the most pronounced impact observed in domains related to emotional functioning, vitality, and social participation. Reduced parental wellbeing may have implications not only for the parents themselves, but also for family functioning, the quality of collaborations between parents and professionals, and the sustainability of care provided to the child (Karst & Van Hecke, 2012; Chong & Kua, 2016). In this context, psychosocial support for parents should not be understood as an additional or optional service, but as an integral component of a broader preventive and developmental framework. Strengthening emotional support, coping resources, and opportunities for recovery may help preserve parental psychophysical health, reduce chronic burden and burnout risk, and indirectly contribute to more favourable developmental outcomes for children with ASD (Hayes & Watson, 2013; Vasilopoulou & Nisbet, 2016).

In relation to the second research objective, the results revealed a consistent pattern of intercorrelations among all domains of psychophysical health, indicating that different aspects of wellbeing are closely interconnected. Particularly strong associations were observed among vitality, mental health, and social functioning, suggesting that emotional and social dimensions play a central role in the overall health of parents.

This pattern supports the conceptualisation of health as a multidimensional construct, in line

with the biopsychosocial model, which emphasises the interdependence of physical and psychological processes. In the context of parenting a child with ASD, prolonged caregiving demands, emotional involvement, and daily stressors may contribute to reduced vitality, which in turn is associated with psychological wellbeing and social functioning. Although stress was not directly measured in the present study, the observed pattern is consistent with previous findings identifying stress and depression as key predictors of parental health outcomes (Cherif et al., 2020).

Furthermore, the associations observed among physical health domains suggest a coherent pattern of physical health experiences. At the same time, the relationship between physical and psychosocial domains may reflect the cumulative impact of long-term caregiving, where physical strain and emotional burden co-occur.

With regard to the third research objective, no statistically significant associations were found between self-assessed psychophysical health and the examined sociodemographic characteristics. This finding may indicate that caregiving demands represent a pervasive source of strain that is not strongly differentiated by age, marital status, number of children, educational level, employment status, or involvement in support services.

However, this result should be interpreted cautiously, as previous studies have reported mixed findings regarding the role of sociodemographic variables (Hayes & Watson, 2013; Bonis, 2016; Dardas & Ahmad, 2014). It is possible that the effects of these variables are context-dependent or mediated by other factors, such as social support, coping strategies, or access to services.

Methodological limitations and directions for future research

Several limitations of this study should be acknowledged. First, the use of self-report measures may have influenced the results, as subjective assessments can differ from objective indicators of health. In addition, the cross-sectional design limits the possibility of drawing causal conclusions.

Second, the sample was predominantly composed of mothers, with only a small number of fathers participating in the study. Although mothers are more frequently the primary caregivers, future research should aim to include a greater number of fathers in order to obtain a more comprehensive understanding of parental experiences and psychophysical health. Third, although variability in subjective health assessments was observed, it was not explained by the examined sociodemographic variables. Future studies should, therefore, explore additional factors that may account for these differences, such as coping strategies, social support, and individual psychological characteristics. Fourth, the absence of data on the child's sex and age may have constrained the precision of the findings' interpretation; accordingly, future studies should incorporate these variables to facilitate a more nuanced and comprehensive analysis.

Future research should also consider the role of coping strategies and personal resources in shaping caregivers' wellbeing. Previous research has shown that adaptive coping strategies, such as seeking social support and professional help, are associated with better quality of life, whereas maladaptive strategies may contribute to increased emotional burden (Sánchez-Amate & de la Rosa, 2024).

Finally, future research should consider combining subjective assessments with objective health indicators (e.g., physiological measures of stress), as well as applying longitudinal designs to better understand changes in psychophysical health over time.

CONCLUSION

The findings of the present study indicate that parents of children with ASD experience reduced wellbeing, particularly in psychosocial domains, including emotional functioning, energy levels, and everyday social participation, while physical functioning appears relatively less affected. When compared to earlier Croatian findings using the same instrument, the results suggest that psycho-

social wellbeing in this population has not improved and may be even lower in some domains. Significant positive intercorrelations among all SF-36 domains further indicate an interconnected structure of physical and psychosocial aspects of health, while the absence of statistically significant differences across sociodemographic variables suggests that reduced wellbeing may represent a relatively pervasive experience in this population, rather than being limited to specific subgroups.

These findings highlight the potential long-term impact of caregiving demands and point to the importance of recognising parental wellbeing as a critical component of support systems for children with ASD. Reduced parental wellbeing, particularly in the domains of emotional wellbeing, vitality, and social functioning, may not only affect the parents themselves, but may also influence child outcomes, the quality of collaborations between parents and professionals, and the broader functioning of educational and support systems. Therefore, the present results underscore the need for more systematic and accessible psychosocial support for parents, with the aim of preserving their psychophysical health, preventing chronic burden and burnout, and indirectly supporting the developmental outcomes of children with ASD.

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