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Family Routines and Parenting Stress in Families of Children With and Without Intellectual Disability: A Cross-Sectional Study in Early Childhood

Vesela Milankov *, Jelena Radonjić, Tatjana Krstić, Jovana Uzelac, Sandra Glamočak, Ivana Matić Grdinić and Špela Golubović

Department of Special Education and Rehabilitation, Faculty of Medicine, University of Novi Sad, 21000 Novi Sad, Serbia

* Correspondence: vesela.milankov@mf.uns.ac.rs

Abstract

Background: Parenting stress is typically elevated in families of children with intellectual disability, yet less is known about how everyday family routines may buffer this stress in early childhood across different developmental groups. This study examined parenting stress and family routines in families of children with and without intellectual disability. Methods: In this cross-sectional study, 125 parents of children aged 0–9 years (n = 75 typically developing; n = 50 with intellectual disability) completed the Family Time and Routines Index and the Parental Stress Scale, along with a sociodemographic questionnaire. Group differences in parenting stress and routine-related indices were examined using independent samples t-tests, and associations between parenting stress and the perceived importance of weekday/leisure and disciplinary routines were analyzed with Pearson correlation coefficients. Results: Parents of children with intellectual disability reported significantly higher parenting stress than parents of typically developing children and less prevalent family disciplinary routines. Across the total sample, lower levels of parenting stress were moderately associated with greater perceived importance of weekday and leisure routines and parental disciplinary routines. Conclusions: Family routines, particularly weekday, leisure, and disciplinary routines, represent a promising target for personalized, family-centered support in early childhood. Tailoring interventions to families' routine profiles and stress levels may help strengthen family resilience and everyday functioning in families raising children with and without intellectual disability.

Keywords: parenting stress; family routines; intellectual disability; early childhood; family-centered interventions; parental self-efficacy

1. Introduction

From a family systems perspective, the family is conceptualized as a primary social unit whose internal relationships shape the psychological and functional homeostasis of its members. Family functioning is therefore a core domain of contemporary early intervention programs, as it reflects the system's capacity to maintain balance and adapt to developmental and environmental demands (Herzberg et al., 2024). Within this context, family routines are defined as predictable and recurring patterns of interaction that structure everyday life and provide a framework for stability and adaptation (Hosokawa et al., 2023). They arise spontaneously in daily life and offer a natural context for family-focused interventions aimed at enhancing participation and well-being in all family members. Consistent and predictable routines are associated with a greater sense of security and better emotional regulation, thereby reducing stress and supporting adaptive coping strategies (Sugianto et al., 2022). Parenting, while often a source of emotional fulfillment, also represents a significant source of chronic stress(Golubović, 2018; Masarik & Conger, 2017). Empirical findings

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indicate that higher levels of parenting stress are associated with lower socioeconomic status, unemployment, and parenting a child with developmental disabilities (McCarthy & Guerin, 2022; McWilliam, 2010; Roskam et al., 2017). Social situations may be particularly demanding for these parents, as others' reactions to their child's behavior can undermine their sense of acceptance and psychological comfort (Ban et al., 2020). Compared with parents of typically developing children, parents of children with intellectual disability consistently report higher levels of stress, depression, and anxiety, as well as more disrupted family dynamics and everyday functioning (Sone et al., 2021; Colizzi et al., 2020; Kittelsen et al., 2024). Lower self-perceived parenting competence, which occurs more frequently in these families, is further linked to higher parenting stress, underscoring the importance of parental self-efficacy as a mediating factor (Albanese et al., 2019). The role of routines in the context of parenting stress becomes especially salient when the child's level of intellectual functioning is considered. The functionality of routines may vary depending on the type and severity of developmental difficulties. In children with intellectual disability, cognitive limitations, including weaker attention and reduced comprehension, can hinder the acquisition and maintenance of routines. Studies have shown that routines are more commonly present in families of children with higher intellectual functioning, whose parents emphasize that routines facilitate everyday functioning (Rodger & Umaibalan, 2011; Larson & Miller Bishoff, 2014). Lower child IQ has been found to correlate with higher parenting stress, while chronic fatigue, feelings of helplessness, and inconsistent parenting behaviors are more frequently reported among parents of children with more severe intellectual disability (Fu et al., 2023). In this context, family routines may act as a protective factor by contributing to structure and predictability, potentially mitigating parents' stress reactions and fostering resilience (Larsen et al., 2023; Sapkota et al., 2017). Longitudinal research suggests that heightened parenting demands in these families may lead to more conflictual parent–child relationships, reduced parental self-regulation, and less effective response patterns over time (Ragni et al., 2022). Empirical data further show that parents who experience higher levels of stress are less likely to implement consistent family routines, whereas participation in structured family activities can enhance overall family functioning (Kittelsen et al., 2024; Schalock et al., 2021). Routines as a form of daily structure support the development of adaptive behavior patterns in both parents and children, while the absence of structure in parenting has been linked to increased child behavior problems and elevated parental stress (Hosokawa et al., 2023).

Although the association between parenting stress and child intellectual disability has been widely documented, the relationship between the functionality of family routines and perceived parenting stress, as a function of the child's level of intellectual functioning, remains insufficiently explored. Moreover, there is limited evidence on how parents perceive the importance of specific routines and the extent to which these routines are actually implemented in everyday life across different family contexts. The present study therefore aimed to identify the presence and perceived importance of specific routines in families of typically developing children and families of children with intellectual disability, and to examine the associations between these routines and levels of parenting stress. By focusing on weekday, leisure, and disciplinary routines in early childhood, this study seeks to clarify how everyday behavioral structures relate to parental well-being in different developmental contexts. The findings may inform the development of targeted, structured, and family-centered interventions that use routines as a protective mechanism to promote family resilience and everyday functioning in families raising children with and without intellectual disability.

2. Materials and Methods

2.1. Study Design and Setting

This study employed a cross-sectional design with comparative and correlational components. Data were collected using two self-report questionnaires administered in several cities and suburban areas in the northern region of the Republic of Serbia.

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2.2. Participants

The total sample consisted of 125 parents of children aged 0–9 years. Of these, 50 were parents of a child with intellectual disability and 75 were parents of a typically developing child. Information about the purpose of the study and procedures for participation was provided through written leaflets distributed in schools and kindergartens, posts on social media pages of parent associations, and direct contact with potential participants. These materials described the study aims, the questionnaires used, instructions for completion, guaranteed anonymity, the voluntary nature of participation, and the option to withdraw at any time. Completion of the questionnaire was considered as implied consent to participate.

Questionnaires were distributed either in paper form or online. Parents who opted for the paper version received the questionnaires through kindergartens or schools, completed them in a designated room, and returned them to the researcher. Alternatively, parents could complete an online version via a Google Forms link.

A total of 141 questionnaires were returned. Sixteen questionnaires (11.34%) were incomplete and were therefore excluded from the analyses, resulting in a final sample of 125 parents.

2.3. Instruments

Data were collected using a general sociodemographic questionnaire and two standardized instruments.

The general questionnaire captured sociodemographic and family characteristics (e.g., parent gender and age, place of residence, marital status, number of children, educational level, employment status, presence and severity of intellectual disability in the child, and perceived satisfaction with partner support and socioeconomic status).

Family routines were assessed with the Family Time and Routines Index (FTRI) (Jamshidian et al., 2019). The FTRI consists of 30 items assessing the presence of specific family routines and allows the calculation of two indices. The Family Routine Frequency Index provides information on the presence and frequency of particular routines in the respondent's family, whereas the Family Routine Importance Index reflects the perceived importance of these routines for family functioning. The questionnaire is organized into eight subscales: weekday and leisure routines, parental routines, family bedtime routine, family meals, extended family routines, coming and going routines, family disciplinary routines, and household chores.

Participants first rated the presence of each routine in their family on a 4-point Likert scale (0–3), with higher scores indicating greater frequency of routines within a subscale. They then rated the importance of each routine for their family's functioning by choosing one of three options ("not important", "somewhat important", "very important"). As with the frequency index, a higher number of "very important" responses indicated greater perceived importance of routines within each subscale.

Parenting stress was assessed using the Parental Stress Scale (PSS) (Berry & Jones, 1995). This 18-item scale conceptualizes parenthood as a potential source of both satisfaction and stress. Items capture parenting demands, the presence or absence of resources, and positive and negative feelings commonly associated with the parental role. Parents rate their agreement with each statement on a 5-point Likert scale (1–5), with higher scores reflecting stronger agreement and thus higher stress. The maximum total score is 90, with higher scores indicating higher levels of parenting stress. The psychometric properties of the scale have been confirmed across different languages and samples, including parents of children of various ages, with and without clinical needs. All questionnaires were administered in Serbian. Standard translation and back-translation procedures were used where necessary.

2.4. Statistical Analysis

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Data were analyzed using IBM SPSS Statistics, version 28 (IBM Corp., Armonk, NY, USA). Descriptive statistics included frequencies and percentages for categorical variables and measures of central tendency (mean) and variability (standard deviation), as well as minimum and maximum values, for numerical variables. The internal consistency of the Family Time and Routines Index and the Parental Stress Scale in this sample was assessed using Cronbach's alpha coefficient.

The normality of the distribution of numerical variables was tested with the Kolmogorov–Smirnov test, which indicated significant deviations from normality ($p < 0.05$). Given the unequal group sizes and non-normal distributions, non-parametric methods were applied where appropriate; however, independent samples t-tests were retained for group comparisons to facilitate interpretation, in line with previous research using these instruments. Pearson correlation coefficients were calculated to examine associations between parenting stress and the perceived importance of weekday/leisure routines and parental disciplinary routines. The significance level was set at $p < 0.05$ (statistically significant) and $p < 0.01$ (highly significant).

2.5. Ethical Considerations

The study was conducted in accordance with ethical principles for research involving human participants and the Declaration of Helsinki. Ethical approval was obtained from the Ethics Committee for Clinical Research of the Faculty of Medicine, University of Novi Sad, Serbia (protocol code 01-39/75). Participants were informed in writing, via social media, and verbally about the purpose of the study, the voluntary nature of participation, and the fact that withdrawal would have no consequences for them or their child. Completion and return of the questionnaire were considered as implied consent to participate.

3. Results

3.1. General Characteristics of the Sample

Of the total sample, 106 participants (84.8%) were mothers and 19 (15.2%) were fathers. The most represented age group was 41–50 years (48.8%). More than half of the participants lived in urban areas (n = 70; 56.0%), while 55 (44.0%) lived in rural areas. The majority had two children (44.8%), and higher or university education was the most common educational level (76.0%). One hundred participants (80.0%) were employed. Most participants were married (n = 101; 80.8%), with 12 (9.6%) divorced and 12 (9.6%) living in a cohabiting partnership.

In total, 75 parents had a typically developing child, whereas 50 were parents of a child with intellectual disability. Among children with intellectual disability, 39 (78.0%) had mild and 11 (22.0%) had moderate intellectual disability. Mean satisfaction with support from the other parent was 3.99 (SD = 1.09) on a scale from 1 to 5, and mean satisfaction with socioeconomic status was 3.46 (SD = 0.83). Sociodemographic characteristics of the sample are presented in Table 1.

Table 1. Sociodemographic characteristics of the sample.

Description of the sample		
Variable	**Category**	**n (%)**
Parent gender	Female	106 (84.8)
	Male	19 (15.2)
Parent age	20-30 years	
	30-40 years	4 (3.2)
	41-50 years	48 (38.4)
	> 51 years	61 (48.8)
		12 (9.6)

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Place of residence	urban	
	rural	70 (56)
		55 (44)
Marital status	married	101 (80.8)
	divorced	12 (9.6)
	cohabiting	12 (9.6)
Number of children	one	
	two	52 (41.6)
	three	56 (44.8)
		17 (13.6)
Parental education	primary	1 (0.8)
	secondary	29 (23.2)
	higher or university education	85 (76)
Employment status	employed	100 (80)
	unemployed	25 (20)
Presence of intellectual disability in the child	presence	50 (40)
	absence	75 (60)
Type of disability	mild intellectual disability	39 (78)
	moderate intellectual disability	11 (22)
Satisfaction with support from the other parent (1-5)	M (SD)	3.99 (1.09)
Satisfaction with socioeconomic status (1-5)	M (SD)	3.46 (0.83)

3.2. Reliability of the Measures

Reliability analysis using Cronbach's alpha demonstrated good internal consistency for both instruments in this sample: $\alpha = 0.72$ for the Family Time and Routines Index, and $\alpha = 0.76$ for the Parental Stress Scale. These values are comparable to those reported in previous studies using these instruments.

3.3. Group Differences in Parenting Stress

In line with previous findings, we hypothesized that parents of children with intellectual disability would report higher levels of parenting stress than parents of typically developing children. Independent samples t-tests supported this hypothesis (Table 2). Parents of children with intellectual disability had significantly higher Parental Stress Scale scores (M = 53.06, SD = 6.53) than parents of typically developing children (M = 30.85, SD = 8.77), $t(123) = -15.28$, $p < 0.001$.

Table 2. Differences in stress levels between two groups of parents (N = 125).

Variable	Category	M	SD	t	df	p
Parental Stress Scale	Intellectual disability present	53.06	6.53	-15.28	123	< .001
	Intellectual disability absent	30.85	8.77			

mean; SD, standard deviation; t, value of t-statistic; df, degrees of freedom.

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These results indicate that parents of typically developing children experience substantially lower levels of parenting stress compared with parents of children with intellectual disability.

3.4. Group Differences in Family Disciplinary Routines

We next examined whether there were statistically significant differences between families of typically developing children and families of children with intellectual disability in the presence of family disciplinary routines, such as consistently setting behavioral limits and discussing the importance of new rules. Independent samples t-tests showed that family disciplinary routines were significantly more prevalent in families of typically developing children than in families of children with intellectual disability (Table 3).

Table 3. Group differences in disciplinary routines (FTRI subscale score) between parents of children with and without intellectual disability (N = 125).

Variable		M	SD	t	df	p
Disciplinary routines (FTRI subscale score)	Intellectual disability present	2.02	1.09	10.64	123	<0.001
	Intellectual disability absent	3.61	0.56			

M, mean; SD, standard deviation; t, value of t-statistic; df, degrees of freedom.

Parents of children with intellectual disability reported lower mean scores on the Family Time and Routines Index disciplinary routines subscale (M = 2.02, SD = 1.09) compared with parents of typically developing children (M = 3.61, SD = 0.56), $t(123) = 10.64$, $p < 0.001$.

3.5. Associations Between Parenting Stress and the Perceived Importance of Routines

Finally, Pearson correlation coefficients were calculated to examine associations between parenting stress and the perceived importance of parental disciplinary routines, as well as between parenting stress and the perceived importance of weekday and leisure routines (Table 4).

Table 4. Correlations between parenting stress and perceived importance of routine.

Variable	Parenting Stress Scale(r)
Importance of weekday and leisure routines	-0.609***
Importance of parental routines	-0.351***

*** $p < 0.001$.

The analyses showed a statistically significant negative correlation between parenting stress and the perceived importance of parental disciplinary routines ($r = -0.351$, $p < 0.001$), indicating that parents with lower stress levels were more likely to consider parental disciplinary routines important. There was also a statistically significant negative correlation between parenting stress and the perceived importance of weekday and leisure routines ($r = -0.609$, $p < 0.001$), suggesting that parents with lower stress levels were more likely to rate these routines as important. These findings supported the working hypothesis that greater perceived importance of everyday family routines is associated with lower parenting stress across the sample.

4. Discussion

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This study examined the presence and perceived importance of family routines in families of typically developing children and families of children with intellectual disability, and explored how these routines are associated with parenting stress. Parents of children with intellectual disability reported significantly higher levels of parenting stress and less prevalent family disciplinary routines compared with parents of typically developing children. Across the whole sample, lower parenting stress was associated with greater perceived importance of weekday, leisure, and parental disciplinary routines, highlighting family routines as a potential protective factor in the regulation of parenting stress.

Consistent with previous research, our findings confirm that parents of children with intellectual disability experience elevated and often chronic levels of stress. These parents frequently report reduced satisfaction with their parental role due to ongoing caregiving demands and the need for intensive support in basic adaptive skills, which cumulatively contribute to heightened stress and reduced subjective well-being (Fang et al., 2024; Chouhan et al., 2016; Staunton et al., 2023). In our sample, parents of children with intellectual disability also reported less time dedicated exclusively to themselves, reflecting a predominant focus on caregiving. These patterns align with evidence that more severe intellectual disability is associated with higher parental stress, lower child functioning, greater dependence on support, and increased contextual challenges.

Other studies similarly emphasize that parenting stress is shaped by the child's level of functioning, additional financial burdens related to treatment and care, and the need to reduce work hours to meet caregiving responsibilities (Almogbel et al., 2017; Shahtahmasebi et al., 2011). Increased stress in this population has also been linked to inconsistent implementation of family disciplinary routines, additional challenges in daily caregiving, and limitations in the child's functional abilities (Staunton et al., 2023; Lucyshyn et al., 2018; Biswas et al., 2015). Our results underline the relevance of family routines as one mechanism for stress regulation. Adherence to structured and predictable routines has been described as an important protective factor that helps parents manage everyday demands and maintain family organization (Peer & Hillman, 2014). Routines provide repetitive behavior patterns that offer children and parents a sense of security, organization, and predictable daily rhythm, thereby reducing uncertainty, increasing perceived control, and supporting time management, all of which contribute to stress regulation (Crespo et al., 2013).

Contextual factors such as financial strain, social acceptance of the child, and availability of services can further modulate stress levels, and when these demands are high, parental stress tends to increase (Biswas et al., 2015). At the same time, high stress does not necessarily remain chronic. Parents who actively develop self-regulation strategies may prevent acute stress from becoming chronic and cope more effectively with challenging situations. By improving their capacity to recognize emotional reactions, control their behavior, and use alternative coping strategies, these parents can regulate stress more efficiently. Within this broader framework, everyday routines can be viewed as behavioral structures that support parental self-regulation and resilience (Urbanowicz et al., 2023).

In line with previous evidence that family routines may serve as a protective factor against parenting stress, we hypothesized that parents with lower stress levels would more often implement weekday, leisure, and partner routines and would perceive them as important for family functioning. Our findings supported this hypothesis for weekday, leisure, and disciplinary routines. Weekday routines, including activities related to meals, sleep, hygiene, and daily communication, have been linked to parental well-being, as they introduce predictability and structure into everyday family life, reduce mental load, and lower the perceived pressure of daily caregiving tasks (Peer & Hillman, 2014; Yang et al., 2025). When routines are clearly organized, children tend to show less resistance and greater engagement, and parents experience less stress (Dunst, 2023). Daily family routines thus provide a stable framework for family functioning, reduce the strain of everyday demands, and contribute to the regulation of overall parental stress (Yoon et al., 2015; Manczak et al., 2017). The direction of influence is likely bidirectional: parents with lower stress levels may be more inclined to

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view routines as important and to implement them consistently, while the implementation of routines, in turn, facilitates stress regulation (Hosokawa et al., 2023).

Beyond weekday and leisure routines, our results showed that parents with lower levels of stress also perceived partner routines as important. Parents with lower stress may be more able to allocate attention to their couple relationship and to place greater value on shared time. This is consistent with findings that high stress undermines parents' capacity to initiate and maintain partner routines, as stress reduces cognitive and emotional availability and makes it more difficult to engage in shared activities, shifting attention primarily toward immediate obligations and making couple time secondary (Gallistl et al., 2025). Higher parental stress has been associated with child-related challenges, socioeconomic conditions, and aspects of the couple relationship. The child's functional status shapes the degree of dependence on parents and the amount of free time available for investment in the couple relationship, while financial strain can limit access to resources that would otherwise support relationship-building (Conger et al., 2010). Previous studies have shown that higher economic and parenting stress is associated with less frequent partner routines, suggesting that high stress reduces parents' ability to invest in their relationship (Puff & Renk, 2014). Conversely, parental routines have been linked to better psychosocial adjustment and higher family quality of life, including lower levels of stress (Kiser et al., 2005). Parents with lower stress levels may be more likely to recognize and use available resources to support their relationship and to identify partner routines as important, potentially because under lower stress they can more easily identify strategies that benefit the couple relationship (Randall & Bodenmann, 2009). At the same time, some studies have not found a direct association between perceived stress and couple cohesion or partner routines, suggesting that social support and resilience may also play a decisive role in determining the quality of partner activities (Fiqueiredo & Pereira, 2025).

Our study further found that disciplinary routines were more prevalent in families of typically developing children than in families of children with intellectual disability. Disciplinary routines involve activities related to introducing new behavioral rules and consistently enforcing parental limits. Typically developing children are more likely to understand new rules, generalize acquired behaviors, and adhere to routines consistently, which in turn motivates parents to remain consistent and continue working on their child's behavioral skills. Similar findings have been reported in studies examining the relationship between disciplinary practices and family dynamics (Kiser et al., 2005; Vilaseca Momplet et al., 2020). The child's clinical profile strongly influences the behavioral boundaries set by parents: when developmental difficulties are milder, parents tend to introduce new rules more frequently and to be more consistent in their behavior (Carvalho et al., 2018). Implementation of routines also depends on the child's ability to adopt them; parents are more motivated to maintain routines when they observe adherence to rules and generalization of skills, and these processes are closely linked to the child's clinical characteristics (Kiser et al., 2005).

The adoption of disciplinary routines is thus contingent on children's comprehension capacities and on parents' ability to explain new rules in a developmentally appropriate way. In families of children with intellectual disability, limitations in understanding can make it harder for children to grasp the purpose of disciplinary practices, participate in discussions about rules, and follow them, which may reduce parents' motivation to maintain these routines (Grusec et al., 2017). Implementation of disciplinary activities is also shaped by parents' self-regulation strategies and their level of engagement in incorporating these practices into daily life (Lunkenheimer et al., 2023; Schuiringa et al., 2015). Prior work suggests that children's developmental difficulties may reduce parents' use of regulatory strategies and thereby limit consistency in the application of disciplinary practices, with parents focusing more on caregiving and support in self-care than on introducing new rules and discipline (Lunkenheimer et al., 2023). Parents of children with intellectual disability may also perceive their parenting competence as lower than parents of typically developing children, which can further inhibit consistent implementation of disciplinary routines (Schuiringa et al., 2015). Nonetheless, some studies indicate that parents of children with developmental disabilities can be

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equally consistent in disciplinary practices, highlighting the role of individual child characteristics and family resources independent of disability status (Vrankić Pavon & Žic Ralić, 2025).

Taken together, these findings suggest that family routines—particularly weekday, leisure, partner, and disciplinary routines—may serve as important targets for family-centered interventions aimed at reducing parenting stress in families raising children with intellectual disability. Interventions that help parents structure daily life, strengthen couple routines, and adapt disciplinary practices to the child's developmental level may support both parental well-being and child functioning. At the same time, such interventions need to be tailored to families' specific contextual challenges, including socioeconomic conditions, available social support, and access to services. A personalized, family-centered approach that builds on existing routines and addresses parents' stress profiles may be especially promising in enhancing resilience and everyday functioning in these families.

4.1. Limitations and Recommendations for Future Research

This study has several limitations. The sample size was modest, and the distribution of families with and without intellectual disability was unequal, with an over-representation of families of children with mild intellectual disability. In addition, a substantial proportion of data was collected via online questionnaires. Future research should therefore aim to recruit larger and more balanced samples of families with and without intellectual disability and to include a more even representation of different levels of intellectual disability. It would also be advisable to standardize the mode of data collection (in-person or online) or ensure a balanced combination of both approaches to reduce potential mode-related biases.

Future studies could also incorporate longitudinal designs to examine how family routines and parenting stress co-evolve over time, and whether changes in routines prospectively predict changes in stress. Including observational measures of family interactions, along with self-report instruments, would provide a more comprehensive understanding of how routines are enacted in daily life. Finally, evaluating the effectiveness of routine-based, family-centered interventions could clarify whether strengthening specific types of routines leads to measurable reductions in parenting stress and improvements in family functioning.

5. Conclusions

Parents of children with intellectual disability experience higher parenting stress and report less prevalent disciplinary routines than parents of typically developing children. Across groups, parents who attribute greater importance to weekday, leisure, and disciplinary routines report lower parenting stress, underscoring family routines as a key mechanism for stress regulation in early childhood. Personalized, family-centered interventions that build on existing routines and address parents' stress profiles may strengthen resilience and everyday functioning in families raising children with and without intellectual disability.

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Informed Consent Statement: Informed Consent Statement: Informed consent was obtained from all subjects involved in the study. Participation was voluntary and anonymous. Completion and return of the questionnaire were considered as implied consent to participate. Informed consent was obtained from all parents or legal guardians involved in the study.

Data Availability Statement: Data Availability Statement: The data presented in this study are not publicly available due to ethical and privacy restrictions. Anonymized data may be available from the corresponding author on reasonable request and subject to approval by the relevant ethics committee.

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