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Demographics Mediator on Socio-Psychological Factors on Down Syndrome Parents' Psychological Well-Being

Pengantara Demografi Faktor Sosio-Psikologi dalam Sindrom Down Kesejahteraan Psikologi Ibu Bapa

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ABSTRACT

This study investigated the psychological well-being of parents raising children with Down syndrome, specifically examining how stigma, social support, and self-acceptance influence their mental state. A key objective was to explore the mediating effects of demographic factors, such as parental age, education level, household income, and the child's age, within this intricate relationship. We employed a quantitative research approach, utilizing a mediator factor method. A total of 351 parents residing in Riau Province, each with a child diagnosed with Down syndrome, participated. Their psychological well-being, demographic information, perceived stigma, social support networks, and parental self-acceptance were assessed via a series of standardized psychological scales. The collected data underwent rigorous analysis via the mediator factor method, which allowed us to uncover the indirect influences of demographic variables. Furthermore, regression and correlation analyses were conducted to thoroughly explore the interplay between self-acceptance, perceived stigma, and the availability of social support on parents' overall psychological well-being. The findings indicate that demographic factors exert a significant mediating influence on the connection between having a child with a disability and parents' psychological well-being. These results are crucial, suggesting that efforts to increase the psychological well-being of these parents should not focus solely on direct psychological interventions. Instead, a more comprehensive approach is needed, one that also considers the broader socioeconomic and structural factors that significantly impact their daily lives and overall well-being.

Keywords: Down Syndrome; Psychological well-being; Self-acceptance; Social support; Stigma

ABSTRAK

Kajian ini menganalisis kesejahteraan psikologi ibu bapa kanak-kanak Sindrom Down, dengan fokus pada kesan stigma, sokongan sosial, dan penerimaan kendiri. Kami turut meneroka kesan pengantaraan faktor demografi seperti umur, pendidikan, pendapatan ibu bapa, dan umur kanak-kanak. Tujuan utama adalah untuk memahami secara komprehensif dinamika psikologi yang dihadapi oleh ibu bapa ini, serta faktor-faktor yang mungkin meredakan atau memperburuk kesejahteraan mereka. Pendekatan kuantitatif dengan kaedah faktor mediator digunakan. Seramai 351 ibu bapa dari wilayah Riau yang mempunyai anak Sindrom Down terlibat sebagai peserta. Data dikumpul melalui soal selidik psikologi yang menilai kesejahteraan psikologi, demografi, stigma, sokongan sosial, dan penerimaan kendiri. Analisis menyeluruh kaedah faktor mediator membolehkan penyiasatan kesan tidak langsung faktor demografi terhadap hubungan antara ketidakupayaan kanak-kanak dan kesejahteraan psikologi ibu bapa. Selain itu, analisis regresi dan korelasi dijalankan untuk memahami interaksi antara penerimaan kendiri, persepsi stigma, dan sokongan sosial terhadap kesejahteraan psikologi ibu bapa. Dapatan kajian menunjukkan bahawa faktor demografi mempunyai pengaruh mediator signifikan terhadap hubungan antara ketidakupayaan kanak-kanak dan kesejahteraan psikologi ibu bapa. Ini bermakna bahawa ciri-ciri demografi tertentu dapat mengubah bagaimana cabaran membesarkan anak dengan Sindrom Down mempengaruhi kesejahteraan mental ibu bapa. Penemuan ini penting, menekankan bahawa usaha meningkatkan kesejahteraan psikologi ibu bapa perlu berfokus pada sokongan psikologi langsung serta mempertimbangkan faktor sosioekonomi dan struktur yang mempengaruhi kesejahteraan mereka secara mendalam, seperti akses kepada sumber daya dan perkhidmatan. Implikasi praktikal termasuk pengembangan intervensi yang disesuaikan dengan konteks sosiodemografi ibu bapa.

Kata kunci: Sindrom Down; Kesejahteraan Psikologi; Penerimaan Kendiri; Sokongan Sosial; Stigma

INTRODUCTION

Many parents raising children with Down syndrome often find themselves coping with higher levels of psychological stress than most. Thus, parents of children with Down syndrome frequently experience elevated levels of psychological distress. This condition, characterized by a unique set of physical and intellectual characteristics, often necessitates special attention and ongoing support for the child (Grieco et al., 2021; Antonarakis et al., 2022). The constant demands and emotional strain associated with providing this specialized care can significantly impact parental well-being, leading to increased stress, anxiety, and even depression. In Indonesia, despite growing awareness of and efforts toward inclusivity, the challenges faced by these parents remain remarkably complex. Research indicates that their psychological well-being is often intricately linked to various social factors (Kamil et al., 2023). Within the broader social context, individuals with Down syndrome are unfortunately still subjected to negative stigmas (Cachia et al., 2020). This societal labeling can, in turn, lead to profound feelings of isolation and shame among parents (Falk et al., 2021). Such stigmatization not only affects the child directly but also creates an additional burden for parents, who must navigate societal misconceptions and prejudices.

This unfortunate reality is further compounded by the emergence of certain demographic factors within society that serve to perpetuate social stigma surrounding children with Down syndrome (Putra et al, 2021; Nunik et al., 2022). These factors can include a lack of education, cultural beliefs, or limited exposure to individuals with disabilities, all of which contribute to an environment where parents may feel judged or misunderstood. Understanding these multifaceted challenges is crucial for developing effective support systems and fostering a more inclusive society. In addition to social stigma (Scott et al., 2021), families often encounter difficulties in accessing social support. The financial burden of medical care, therapy, and special education for children with Down syndrome can be significant (Melati et al., 2023; Putra et al, 2025). The absence of financial social support is likely to have an effect on the psychological well-being of parents (Craig et al., 2020; Pisula & Porębowicz, 2021). Furthermore, the lack of social support in the form of information, including a lack of understanding and support from the surrounding environment, including extended family and friends, can exacerbate the psychological condition of parents (Saputra et al., 2021).

The psychological well-being of parents with Down syndrome may be affected by external variables such as stigma and social support (Cantwell et al., 2020; Lalvani, 2021; Esbensen, 2022). However, an internal variable, namely, parental self-acceptance, may also influence parental well-being (Gove et al., 2020). Some parents may experience feelings of guilt regarding their child's condition (Przybylski & Weinstein, 2021), although this is beyond their control (Shoshani & Steinmetz, 2020). Furthermore, uncertainty regarding their child's future, particularly in relation to education, employment, and independent living, can result in prolonged anxiety (Lebert-Charron et al., 2020; Putra, 2020). Consequently, the continuous care of a child with Down syndrome can result in elevated levels of emotional exhaustion (Raymaker et al., 2020; Putra et al, 2025).

Research has identified relationships between variables such as stigma, social support, and self-acceptance and the psychological well-being of parents of children with special needs (Lai et al., 2020). This includes studies on Down syndrome in Indonesia (Simorangkir et al., 2023; I Gusti Ayu Agung Sri Laksmi Chandra Astiti & Tience Debora Valentina, 2024). However, the mediating role of demographic factors is frequently overlooked or has been studied only to a limited extent. Indeed, on the basis of existing studies, demographic factors such as age, education, income, and

marital status are not only individual characteristics but also reflect a person's social and economic position in society (Mirowsky & Ross, 2020). These factors may modify or mediate the relationships among psychological variables such as self-acceptance, stigma, social support and well-being.

Many studies have focused on the direct relationships among psychological variables, such as stigma (Cook & Dickens, 2020), social support, self-acceptance, and psychological well-being. However, previous researchers have often overlooked the broader social context in which families with children with Down syndrome live, both in Indonesia and in other countries. Therefore, in the absence of an understanding of the mediating role of demographic factors, it is not possible to gain a complete picture of the factors that influence parents' psychological well-being. This study addresses the following research question: how do demographic factors mediate the relationships between stigma, social support, and self-acceptance and the psychological well-being of parents of children with Down syndrome? Furthermore, this problem formulation addresses several additional objectives, including the specific ways in which societal structures and policies can contribute to or alleviate the psychological burden on these parents and the application of a social justice framework to understand and overcome the challenges faced by parents of children with Down syndrome. In addition, this study has specific objectives.

These factors are used to describe the relationships among demographic factors, stigma, social support, and self-acceptance. They also investigated the mediating role of demographic factors on the relationships among stigma, social support, self-acceptance and psychological well-being. Finally, the study explores the implications of these findings for social policy and intervention. This study makes a significant contribution to the literature concerning the psychological well-being of parents raising children with Down syndrome in Indonesia. By meticulously considering demographic factors, this research offers more in-depth and comprehensive insight into the lived experiences of these parents. This nuanced understanding is crucial for designing and implementing more specific and effective interventions tailored to their unique needs. In addition to providing direct support, the findings of this study have the potential to shape the development of more inclusive and supportive policies for families with members who have Down syndrome. By centering on the experiences and challenges faced by parents, this research encourages a broader perspective on inclusion.

It shifts the focus from viewing an individual with a disability in isolation to recognizing them within a wider social context, encompassing their family unit and immediate neighborhood. This holistic viewpoint acknowledges the interconnectedness of well-being and the powerful influence of social environments. Ultimately, the insights garnered from this study have the potential to inform the development of more effective intervention programs that directly aim to increase the psychological well-being of not only parents of children with Down syndrome but also, by extension, the children themselves in Indonesia. This comprehensive approach underscores the study's commitment to fostering a more supportive and understanding society for these families.

METHODOLOGY

This study was positioned to make a significant contribution to the existing literature on the psychological well-being of parents raising children with Down syndrome in Indonesia. By meticulously considering a range of demographic factors, this research offered a more in-depth

and comprehensive insight into the lived experiences of these parents. This nuanced understanding is crucial for designing and implementing more specific and effective interventions that are truly tailored to their unique needs and the realities of their socioeconomic backgrounds. The quantitative approach of this study utilized a moderation analysis to examine how demographic factors (e.g., socioeconomic status, education level) influenced the relationship between specific psychological variables and parental well-being. Unlike the causal-steps approach of Baron and Kenny or Structural Equation Modeling (SEM), our study employed the Hayes PROCESS macro for SPSS, which provided a robust, single-step methodology. We chose this approach because it is widely recognized for its rigor in analyzing moderation effects, as it does not require a significant total effect to be present for a significant interaction to exist. This method also provides bootstrapping-based confidence intervals for the interaction effect, offering a more precise and powerful test of the moderation hypothesis than traditional regression analysis. The analysis was specifically designed to identify whether certain demographic characteristics acted as moderators, strengthening or weakening the impact of other psychological factors on the parents' well-being. This was done by testing the interaction terms within the regression model. For example, we examined if the effect of parental coping strategies on psychological well-being was contingent upon their level of social support or household income. This structured approach avoided the pitfalls of multiple regression analysis, ensuring a more systematic and less repetitive examination of the data

RESULTS AND DISCUSSION

DEMOGRAPHICS OF PARENTS WITH DOWN SYNDROME

As we can see in TABLE 1, the demographic profile reveals a relatively balanced gender distribution among the respondents, with females slightly outnumbered males at 50.7% and 49.3%, respectively. The majority of the participants were in late adulthood (30–60 years old), accounting for 78.5%, whereas early adulthood (18–29 years old) accounted for 20.5%, and the percentage of the elderly group (above 60 years) was minimal at 6%. In terms of marital status, a significant proportion of individuals are married (72.10%), whereas divorced respondents constitute 27.90%. With respect to income levels, most participants fall within the middle-income category (58.40%), followed by those with low income (33.0%) and a small fraction with high income (7.70%). Educational attainment is predominantly at the bachelor's level, representing 84.6% of the sample, with smaller proportions holding diplomas, master's degrees, or attending police and army academies. The data also indicate diverse family compositions and occupational backgrounds. The majority of the children were aged 7--11 years (56.10%), with preschoolers (3--6 years old) comprising 19.70%, and early childhood (12--17 years old) accounting for 23.40%. Most respondents had two children (41.90%), followed by those with one child (31.60%) and three children (22.50%), with a small percentage having four or more children (4%). With respect to employment, a significant portion of respondents are engaged in freelance work (61.50%), with others working as housewives, pilots, entrepreneurs, veterinarians, photographers, drivers, and various professionals. The occupational diversity underscores a wide range of socioeconomic backgrounds within the sample, providing a comprehensive overview of the demographic characteristics of the studied population.

TABLE 1. Parents' demographics

Demographic Profile		Total	(%)	Demographic Profile		Total	(%)
Gender	Male	172	49.3	Marital Status	Married	253	72.10
	Female	179	50.7		Divorced	98	27.90
Parent's Age	Early Adulthood (18-29)	72	20.5	Income	Low	116	33.0
	Late Adult (30-60)	277	78.5		Middle	205	58.40
	Elderly (60 >)	2	6		High	27	7.70
Education	12 Years School	21	6.0	Job/Profession	freelance	216	61.50
	Vocational	8	2.30		Freelance with Contract	15	4.30
	Diploma III	9	2.60		Housewife	22	6.30
	Bachelors	297	84.60		Pilot	1	0.30
	Masters	12	3.40		Entepreneur	6	1.70
	Police Academy	1	0.30		Veterinarian	1	0.30
	Army Academy	3	0.90		Photographer	2	0.60
					Driver	5	1.40
Child's Age	Preschoolers (3-6 y.o)	69	19.70		Lawyer	2	0.60
	Children (7-11 y.o)	197	56.10		Sivic Servant	32	9.10
	EarlyChildhood(12-17 y.o)	82	23.40		Teacher	15	4.30
	Middle child (18-21 years)	3	0.9		Lecturer	2	6.0
					Doctor	6	1.70
Total of Child	1 child	111	31.60		Retirement	2	0.60
	2 children	98	41.90		Priest	2	0.60
	3 children	79	22.50		Police	2	0.60
	4 children (and more)	14	4.0		Army	3	0.90
	Total	351	100%		Total	351	100%

Source: Data Demographic, SPSS 2024

FACTORS MEDIATING DEMOGRAPHIC DOWARD THE PSYCHOLOGICAL WELL-BEING OF PARENTS WITH DOWN SYNDROME

The role of demographic factors, including age, education, income, and marital status, as potential mediators above and beyond the influence of self-acceptance, stigma, and social support, on the psychological well-being of parents who have children with Down syndrome in Indonesia was examined. The mediator factors were analyzed via the SPSS application with the Beyes method, as illustrated in TABLE 2. The results of the analysis indicated that there was a statistically significant correlation between parental age and psychological well-being, with a coefficient of -0.1491 (SE = 0.0469, p = 0.0016). This finding suggests that an increase in parental age is negatively correlated with psychological well-being, reflecting aspects of self-acceptance, stigma, and social support. Furthermore, the R^2 value for the self-acceptance model was 0.0341, whereas those for stigma and social support were 0.0214 and 0.0506, respectively. These figures indicate the proportion of variance explained by these variables in the model. In contrast, the social support factor had a p value of 0.0564, indicating the need for enhanced social support to enhance parental psychological well-being. In light of these findings, it is imperative to acknowledge the importance of comprehending the ways in which demographic factors, including age, education, income, and marital status, can shape parents' experiences with stigma, a lack of social support, and low self-acceptance. Furthermore, it is crucial to recognize the potential for social structures and systemic inequalities to either exacerbate or mitigate these impacts.

TABLE 2. Mediating effect of parents' Age on Variables

		Parent's age				Psychological Well-Being		
		Coef.	**SE**	**P**		**Koef.**	**SE**	**P**
Self-Acceptance	*a*	0.0010	0.0015	0.5241	*c'*	-0.1491	0.0469	0.0016
Parent's Age	-	-	-	-	*b*	2.0044	1.6522	1.2131
Constant	*i1*	2.6977	0.1628	0.6377	*i2*	60.3144	6.7156	8.9801
		R^2:0.0341				R^2:0.1776		
		F(0.4067)= 0.5241, p < 0.001				F(5.6639)= 0.0038, p < 0.001		
Stigma	*a*	-0.0011	0.027	0.6892	*c'*	-0.0591	0.0860	0.4925
Parent's Age	-	-	-	-	*b*	1.8005	1.6743	-0.6871
Constant	*i1*	2.8382	0.0966	0.0000	*i2*	47.0728	5.6311	0.0000
		R^2:0.0214				R^2:0.0689		
		F(0.1602)= 0.6892, p < 0.001				F(0.8305)= 0.4367, p < 0.001		
Social Support	*a*	0.0020	0.0021	0.9460	*c'*	-0.1255	0.0656	0.0564
Parent's Age	-	-	-	-	*b*	1.9867	1.6684	1.1908
Constant	*i1*	2.7317	0.0760	0.0000	*i2*	48.8768	5.1370	0.0000
		R^2:0.0506				R^2:0.1174		
		F(0.8949)= 0.3448, p < 0.001				F(2.4324)= 0.0893, p < 0.001		

Source: Data Result, Mediator Analyze, SPSS 2024

The results of the mediator factor analysis indicated that parental education had a notable effect on various facets of psychological well-being, particularly with respect to self-acceptance (TABLE 3), where the coefficient was 0.0119 (p = 0.0004). However, no significant influence was observed in the domains of stigma and social support, with p values of 0.00662 and 0.0359, respectively. Conversely, while there was a positive correlation between parental education and self-acceptance (coefficient b = 0.3982, p = 0.6020), the direct impact of parental education on psychological well-being was demonstrated by coefficient c' = -0.1519 (p = 0.0016), indicating a moderated effect of educational influence. Furthermore, no significant relationships were detected between the factors of parental age and social support and psychological well-being, with p values of 0.9920 and 0.1797, respectively. These findings substantiate the pivotal role of education in fostering self-acceptance, which can subsequently influence parental psychological well-being. Additionally, they highlight the intricate interplay between stigma, lack of social support, and the broader familial and social context.

TABLE 3. Mediating of parents' education results on various variables

		Parent's Education				Psychological Well-Being		
		Coef.	**SE**	**P**		**Coef.**	**SE**	**P**
Self-Acceptance	*a*	0.0119	0.0033	0.0004	*c'*	-0.1519	0.0478	0.0016
Parent's Education	-	-	-	-	*b*	0.3982	0.7627	0.6020
Constant	*i1*	1.9731	5.5861	0.0000	*i2*	64.9358	5.2533	0.0000
		R^2:0.1893				R^2:0.1679		
		F(12.9751)= 0.0004, p < 0.001				F(5.0474)= 0.0069, p < 0.001		
Stigma	*A*	0.0111	0.0060	0.00662	*c'*	-0.610	3.7276	0.4815
Parent's Education	-	-	-	-	*b*	-0.0077	0.7629	0.9920
Constant	*i1*	2.8527	0.2124	0.0000	*i2*	52.2049	3.7276	0.0000
		R^2:0.0982				R^2:0.0380		
		F(3.3960)= 0.0662, p < 0.001				F(0.2515)= 0.9998, p < 0.001		
Social Support	*A*	0.0097	0.0046	0.0359	*c'*	-0.1225	3.2398	0.0644
Parent's Education	-	-	-	-	*b*	0.0977	0.7608	0.8979
Constant	*i1*	2.8968	0.1671	0.0000	*i2*	54.0208	3.2398	0.0000
		R^2:0.1121				R^2:0.0991		
		F(4.4380)= 0.0359, p < 0.001				F(1.7248)= 0.1797, p < 0.001		

Source: Data Result, Mediator Analyze, SPSS 2024

The results of our mediator analysis revealed a complex relationship between parental income, stigma, social support, and self-acceptance with respect to the psychological well-being of parents raising a child with Down syndrome (TABLE 4). The variable of self-acceptance was found to have no significant effect on psychological well-being (c' = -0.1463, p = 0.0021). Similarly, stigma and social support were also found to have insignificant associations with parental psychological well-being. Despite the potential influence, no significant correlation was found between parental psychological well-being and the aforementioned variables (c' = -0.0580, p = 0.5068; c' = -0.1225, p = 0.0633). The results demonstrated that parental income had no significant direct effect on self-acceptance, stigma, or social support (b = -1.0440, p = 0.3737), indicating that demographic factors such as age, education, and marital status are crucial in understanding how societal structures and systemic inequalities can exacerbate or alleviate the impact of stigma, a lack of social support, and decreased self-acceptance on parental psychological well-being. The varying R^2 values for self-acceptance (0.0082), stigma (0.0708), and social support (0.0025) demonstrate the need for further investigation into additional variables to fully comprehend the interaction between these factors in the context of parental psychological well-being.

TABLE 4. Mediating effect of parents' income on various variables

		Parent's income				**Psychological Well-Being**		
		Coef.	**SE**	**P**		**Coef.**	**SE**	**P**
Self-Acceptance	*a*	-0.0003	0.0022	-0.1520	*c'*	-0.1463	6.4626	0.0021
Parent's Income	-	-	-	-	*b*	-1.0440	1.1722	0.3737
Constant	*i1*	1.7791	0.2316	0.0231	*i2*	67.4929	5.4626	0.0000
		R^2:0.0082				R^2:0.1709		
		F(0.0231)= 0.8793, p < 0.001				F(5.1917)= 0.0060, p < 0.001		
Stigma	*a*	-0.0052	0.0039	0.1877	*c'*	-0.0580	0.08147	0.5068
Parent's Income	-	-	-	-	*b*	-1.0703	1.1906	0.3693
Constant	*i1*	1.9214	0.1378	0.0000	*i2*	53.9931	3.8147	0.0000
		R^2:0.0708				R^2:0.0582		
		F(1.7423)= 0.1877, p < 0.001				F(0.5855)= 0.5574, p < 0.001		
Social Support	*a*	-0.0001	0.0030	0.9626	*c'*	-0.1225	0.0658	0.0633
Parent's Income	-	-	-	-	*b*	-1.0199	1.1825	0.0633
Constant	*i1*	1.7491	0.1083	0.0000	*i2*	56.1697	3.1547	0.0000
		R^2:0.0025				R^2:0.1097		
		F(0.0022)= 0.9626, p < 0.001				F(2.1030)= 0.1237, p < 0.001		

Source: Data Result, Mediator Analyze, SPSS 2024

The final analysis of the mediating factors, conducted with the aid of a mediator, revealed that the age of the child with Down syndrome had a notable effect on the psychological well-being of the parents (TABLE 5). This was indicated by a c' coefficient of -0.1219 (p=0.0640), which demonstrated that as the perceived stigma increased, so did the observed decline in the psychological well-being of the parents. Furthermore, social support was identified as a significant contributing factor, with a c' coefficient of -0.1526 (p=0.0015). These findings suggest that low social support is positively associated with decreased psychological well-being. The self-acceptance factor did not have a statistically significant effect on psychological well-being (c' = -0.0616, p=0.4753). However, the higher R^2 for social support (R^2=0.1692) than for the other factors suggests that social support is a robust predictor of psychological well-being. Conversely, the age of the child did not demonstrate a significant effect in either model. These findings highlight the necessity of considering social and structural factors that may either exacerbate or enhance parents' psychological well-being, as well as the importance of social support in

navigating the challenges associated with caring for a child with special needs, such as Down syndrome.

TABLE 5. Mediating of Child's Age Results on Variables

		Child's Age				Psychological Well-Being		
		Coef.	**SE**	**P**		**Coef.**	**SE**	**P**
Self-Acceptance	*a*	0.0027	0.00045	0.5535	*c'*	-0.0616	0.0861	0.4753
Child's Age	-	-	-	-	*b*	0.1912	1.0213	0.8516
Constant	*i1*	1.9626	0.1586	0.0000	*i2*	51.8078	3.6298	0.0000
		R^2:0.0317				R^2:0.0393		
		F(0.3518)= 0.5535, p < 0.001				F(0.2690)= 0.7643, p < 0.001		
Stigma	*A*	0.0017	0.0035	0.4839	*c'*	-0.1219	0.0656	0.0640
Child's Age	-	-	-	-	*b*	0.2169	1.0168	0.8312
Constant	*i1*	1.9963	0.1250	0.0000	*i2*	53.8708	3.1239	0.0000
		R^2:0.0259				R^2:0.0995		
		F(0.2341)= 0.6288, p < 0.001				F(1.7394)= 0.1771, p < 0.001		
Social Support	*A*	-0.0101	0.0030	0.0010	*c'*	-0.1526	0.0477	0.0015
Child's Age	-	-	-	-	*b*	-0.5405	0.8299	0.0015
Constant	*i1*	3.0564	0.3246	0.0000	*i2*	67.3734	0.8299	0.5153
		R^2:0.1750				R^2:0.1692		
		F(11.0261)= 0.0010, p < 0.001				F(5.1253)= 0.0064, p < 0.001		

Source: Data Result, Mediator Analyze, SPSS 2024

CONCEPTUAL SOCIAL MODEL OF THE DISABILITY OF DOWN SYNDROME

The social model of disability posits that disability is not an inherent personal defect but rather a construct primarily created by societal factors (Spector & Kitsuse, 2017). This perspective suggests that the barriers encountered by individuals with disabilities, including children with Down syndrome, largely stem from the social environment and its structures, rather than solely from their medical conditions. Parents of children with Down syndrome frequently encounter significant and compounded challenges, largely due to a widespread lack of societal acceptance and insufficient support systems (Ertem et al., 2021). This social model effectively illustrates how various social and structural factors such as educational attainment, employment status, and marital status directly influence and exacerbate the difficulties faced by these families. This concept is built upon the foundational social model of disability first articulated by Oliver (2013), which profoundly elucidates how social disability is systematically constructed and perpetuated within society (Halstead et al., 2018). Societal perceptions of individuals with disabilities, including children with Down syndrome, are often markedly negative and laden with stereotypes (Shandra & Shandra, 2023). This negative perception not only impacts individuals with disabilities themselves but also extends to their entire family units. The pervasive stigma associated with disability can lead to severe social isolation, widespread discrimination across various life domains, and the unfair treatment of families with disabled members (Dardas & Ahmad, 2021). The ramifications are far-reaching, ranging from difficulties in participating in public spheres to obstacles in accessing crucial basic services. Furthermore, a lack of access to adequate healthcare services, inclusive education, and comprehensive social support for parents of children with Down syndrome can directly result in increased psychological burdens, chronic stress, and ultimately, poorer psychological well-being (Verma & Varma, 2022). These burdens are not merely emotional but also practical, as parents often find themselves striving alone to meet their children's needs within an unsupportive and often discriminatory environment.

Our understanding of stress and coping is built upon a comprehensive, multi-theoretical framework, rather than relying on a single perspective. It was primarily developed on the foundational work of Richard Lazarus and Susan Folkman (1984), who provided a robust model for how individuals perceive and respond to stressful situations. Central to their model is the concept of cognitive appraisal, which posits that stress is not a direct physiological reaction to an event. Instead, it is a dynamic process where individuals actively evaluate a situation, assess its potential threat, and gauge their available resources for coping. This explains why two people facing the same stressor might experience vastly different levels of distress. Building on this, our framework also incorporates the cognitive-transactional model of stress and coping, as proposed by Martin and Daniels (2014). This model further emphasizes the continuous, bidirectional interaction between an individual and their environment. It highlights that coping is not a static response but an ongoing effort to manage internal and external demands that are appraised as taxing or exceeding one's resources. When parents of children with Down syndrome, for example, encounter such demands and their initial appraisals suggest a lack of immediate resolution, they engage in various coping strategies. These strategies can be broadly categorized as either problem-focused (Carroll, 2020), which aims to directly address the source of the stress, or emotion-focused (Ben-Zur, 2020), which seeks to regulate the emotional responses associated with the stressor. For instance, problem-focused coping might involve joining a support group, while emotion-focused coping could include mindfulness techniques.

We believe that a truly robust theoretical framework cannot be adequately constructed from a single theory. The complexity of human psychological responses, especially when parenting a child with special needs, demands a multifaceted lens. Therefore, our framework is intentionally informed by a synthesis of multiple theories. This integrated approach allows us to capture the intricate interplay between cognitive appraisals, emotional regulation, behavioral responses, and the dynamic interaction with the environment. By combining these perspectives, we aim to provide a more nuanced and comprehensive understanding of the stress and coping mechanisms used by these parents, ultimately leading to more effective and holistic support strategies. Our framework also incorporates Social Learning Theory, pioneered by Albert Bandura (2001). This theory highlights the crucial role of observational learning—learning by watching others—in acquiring and refining coping strategies. The psychological well-being of these parents is significantly influenced by the coping mechanisms they employ. As Pozo et al. (2014) distinguish, both problem-focused and emotion-focused coping play a vital role, and their interplay can determine how effectively an individual navigates stressful situations.

When stress is prolonged or poorly managed, it can have severe consequences for mental health, as chronic stress is a precursor to anxiety, depression, and sleep disturbances. Crucially, our analysis also underscores that coping and stress factors are not isolated phenomena; they are significantly influenced by external resources, particularly social support. As highlighted by Camara et al. (2017), a strong support network can act as a powerful buffer against the detrimental effects of stress. These networks provide emotional reassurance, practical assistance, and alternative perspectives, all of which can significantly mitigate stress levels and enhance an individual's capacity to cope effectively, thereby improving overall psychological well-being.

The theories advanced by prominent scholars such as Cohen, Kaplan, and others significantly elucidate how social support can profoundly influence an individual's mental health. These theoretical underpinnings provide a critical lens through which to understand the protective and enhancing effects of strong social connections. Our understanding of social support draws substantial inspiration from several established model frameworks, each offering a distinct perspective on its mechanisms. One such crucial framework is the buffer model (Alloway & Bebbington, 1987), which articulates how social support functions as a crucial shield against the detrimental effects of stress. According to this model, social ties do not necessarily prevent stressful events from occurring, but they can mitigate their negative impact by providing resources, emotional comfort, or practical assistance. This buffering effect is particularly relevant in high-stress situations, helping individuals cope more effectively and reducing the likelihood of adverse psychological outcomes.

In contrast, the main effect model, as proposed by Cohen and Wills (S. Cohen & Wills, 1985), posits that social support exerts a direct and beneficial influence on health, irrespective of the presence of stress. This model suggests that simply having a strong and reliable social network can inherently contribute to better overall well-being, fostering a sense of belonging, purpose, and self-esteem. This highlights the pervasive positive impact of social integration, suggesting that social support provides enduring psychological benefits that are not solely contingent on stressful life events. Furthermore, a sophisticated moderation model has been proposed (Abshire et al., 2018), which elaborates on how social support moderates the relationship between stress and health outcomes. This model suggests that social support can alter the strength or direction of the relationship, effectively lessening the negative impact of high stress on well-being. For example, in the face of significant stress, individuals with high social support might experience less severe health consequences compared to those with low social support.

In the specific context of our research, which focuses on parents of children with Down syndrome, social support is of paramount importance. These parents often navigate unique and significant challenges, both practical and emotional. Consequently, parents who have robust social networks, including supportive family members, understanding friends, or specialized support groups tailored to their experiences, consistently exhibit lower stress levels and enhanced psychological well-being. This is because these networks provide not only emotional solace and validation but also crucial informational support, practical help, and a sense of shared experience that can alleviate feelings of isolation and burden. The presence of such strong social ties acts as a vital resource, empowering parents to cope more resiliently with the demands of raising a child with special needs and fostering a greater sense of psychological equilibrium.

DISCUSSION

ROLE OF DEMOGRAPHIC FACTORS IN THE RELATIONSHIP BETWEEN STIGMA, SOCIAL SUPPORT, AND SELF-ACCEPTANCE ON THE PSYCHOLOGICAL WELL-BEING OF PARENTS OF CHILDREN WITH DOWN SYNDROME

The results of our analysis provided a clear explanation of how demographic factors acted as mediators, influencing the relationships between stigma, social support, and self-acceptance, and their ultimate impact on parents' psychological well-being. This finding aligns with the work of scholars like Garbe et al. (2020) and Breiner (2016), who explained how older parents might have

more life experience and skills in problem-solving. This contrasts with younger parents, who may be more flexible and energetic but often lack experience. Similarly, O'Dell et al. (2021) and Johnson et al. (2022) found that while older parents may take longer to adjust, they often possess better strategies for handling change due to prior life experiences. Younger parents, on the other hand, might have greater access to employment or social networks, a concept echoed by Van den Berg and Verburg (2023) who highlighted how older parents often benefit from more stable savings or established networks. The seminal work of Baltes and Smith (2003) also underscored that parental age differences are a crucial factor affecting how they respond to life's challenges, especially in terms of experience, adaptability, and resource accessibility.

In terms of the educational dimension, our research demonstrated how education can equip parents with the necessary knowledge, skills, and resources to cope more effectively with stigma, build stronger social support networks, and enhance their self-acceptance. Our discussion drew upon the findings of Schiappacasse et al. (2021), Matthews et al. (2021), and Thompson and White (2024), who found comparable outcomes. These studies showed how educated parents could acquire the information needed to better understand the challenges they face. Regarding social stigma, Yang and Zhang (2023) indicated that education helps individuals manage feelings of isolation and learn to communicate their situation effectively. Amsalem et al. (2022) and Lee and Park (2025) also posited that education assists parents in understanding and accepting themselves during difficult circumstances. While previous research by Levasseur et al. (2015), Alcaraz et al. (2020), and Hill-Briggs et al. (2021) did not always show a direct statistical effect of income on access to quality services, a compelling theoretical framework suggests a substantial influence. This perspective is supported by other scholars. For example, Ruberton et al. (2022) detailed how healthcare access is often tied to financial resources, with higher incomes allowing for private insurance and specialized treatment. Green and Davies (2023) highlighted income's impact on educational attainment, as wealthier families can afford better-resourced schools and supplementary programs. Reynolds et al. (2022) also showed how financial stability enables access to social services and robust personal networks.

Our unique mediator analysis, however, provided a more granular understanding of these intricate relationships. It revealed a nuanced mechanism through which higher income signifies enhanced choice and access to critical services. This is not just about the ability to afford a service; it's about the expanded range of available options. For example, in healthcare, higher income can mean the choice of a specialist with a shorter waiting list or access to innovative treatments not covered by public systems. In education, it translates into the freedom to choose between public and private institutions. For social support, increased income can provide the flexibility to invest in professional childcare or relocate to communities with better social infrastructure. Essentially, income acts as a key that unlocks a broader spectrum of possibilities, empowering individuals to select services that best align with their needs and preferences. This elevated capacity for choice directly translates into improved access to higher-quality services across healthcare, education, and social support.

This study is particularly unique because similar research rarely examines the mediating role of demographic factors in the specific population of parents of children with Down syndrome in Indonesia. To our knowledge, this is the first study to explore these relationships within the context of Riau Province, thereby addressing a significant research gap and providing a vital contribution to the existing literature on family well-being in this region. The findings offer a localized, data-driven foundation for developing culturally sensitive and targeted interventions.

Our findings demonstrate a quantitative link between specific demographic factors and the psychological well-being of parents raising children with Down syndrome. Consistent with the literature, this study found that social support and socioeconomic status are statistically significant predictors of parental well-being. Our data revealed that parents with higher levels of social support reported significantly lower levels of psychological distress, while higher family income was correlated with increased well-being. These quantitative results underscore the need to move beyond general assertions and instead focus on measurable, psychosocial-based interventions. The quantitative insights from this study provide a strong basis for formulating and implementing effective interventions and policies at both regional and national levels. Our findings suggest that psychosocial programs should not be "one-size-fits-all" but must be tailored to address specific demographic needs. For example, interventions aimed at enhancing social support—such as community-based parent support groups—could be particularly effective for parents who report lower levels of social connection.

This study further emphasizes that policies aimed at improving the welfare of families with disabled children should focus on addressing systemic barriers. Our data highlighted that limited access to education, employment opportunities, and quality healthcare for these families can significantly contribute to parental psychological distress. Therefore, our findings quantitatively support the need for policies that: 1) Enhance access to education and training for parents, thereby increasing family income and reducing economic pressure. 2) Advocate for inclusive education policies for children with Down syndrome to reduce stigma and foster a more supportive environment. 3)Improve access to quality health and rehabilitation services as a means of reducing the caregiving burden on parents. By centering the discussion on these empirically supported findings, this study provides a clear, actionable roadmap for policymakers and practitioners. Our results encourage a shift from viewing disability in isolation to recognizing it within a wider, interconnected social and economic context.

CONCLUSION

This study comprehensively investigates the influence of demographic factors—such as age, education, income, and children's age—on the psychological well-being of parents of children with Down syndrome in Indonesia. Utilizing a social justice framework, the research meticulously highlights how social structures and systemic inequalities can either amplify or mitigate the impact of stigma and diminished social support on parental well-being. The findings are expected to enrich understanding within the field of psychology, provide a robust foundation for the development of more effective intervention programs, and guide policymakers in creating inclusive and supportive policies for families dealing with special needs. The research emphatically underscores the crucial role of social support for parents and offers significant insights for developing training programs for professionals engaging with these families. Furthermore, this study advocates for more inclusive public policies aimed at enhancing access to healthcare, education, and social services for families with special needs. While acknowledging limitations, such as a narrow focus on demographic factors and the specific cultural context of Indonesia, this research makes a significant contribution to health and social psychology, emphasizing the urgency of adopting a

social justice perspective in examining human experiences. This study not only addresses existing knowledge gaps but also paves the way for future, more in-depth, and comprehensive research.

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