A Meta-Analysis Correlation: Social Support and Quality of Life

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Abstract
This meta-analysis review aimed to examine the relationship between social support (SS) and quality of life (QoL). Social support is defined as comfort, care, appreciation, or assistance available to individuals or groups, while quality of life refers to an individual's perception of their social life within the context of existing cultural and value systems, particularly in relation to personal goals, hopes, standards, and interests. The study synthesized data from a combined sample of 11,716 participants across various studies. The analysis revealed a significant effect size correlation between SS and QoL, with $r=0.550 r = 0.550 r=0.550$ (95% CI: 0.340 to 0.761), indicating a strong positive relationship. Additionally, the role of the moderator variable, country type, was analyzed, yielding a score of $p=0.002 p = 0.002 p=0.002$ (95% CI: -0.107 to 0.111), suggesting that the type of country did not significantly influence the correlation between the two variables. Publication bias was assessed and found to be insignificant, with Egger's publication bias value of $p=0.176 p = 0.176 p=0.176$. These findings highlight the substantial role of social support in enhancing quality of life. This meta-analysis underscores the importance of fostering social support systems to improve individuals' overall well-being across diverse cultural and geographical contexts.
Keywords: Meta-analysis [1], Social Support [2], Quality of Life [3].

Abstrak

Penelitian meta-analisis ini bertujuan untuk mengkaji hubungan antara dukungan sosial (Social Support/SS) dan kualitas hidup (Quality of Life/QoL). Dukungan sosial didefinisikan sebagai kenyamanan, perhatian, penghargaan, atau bantuan yang tersedia bagi individu atau kelompok, sedangkan kualitas hidup mengacu pada persepsi seseorang tentang kehidupan sosialnya dalam konteks sistem budaya dan nilai yang ada, terutama terkait dengan tujuan, harapan, standar, dan kepentingan pribadi. Penelitian ini menganalisis data dari total 11.716 partisipan yang berasal dari berbagai studi. Hasil analisis menunjukkan adanya korelasi ukuran efek yang signifikan antara SS dan QoL, dengan $r=0,550 r = 0,550 r=0,550$ (95% CI: 0,340 hingga 0,761), yang mengindikasikan hubungan positif yang kuat. Variabel moderator berupa tipe negara dianalisis dan menghasilkan nilai $p=0,002 p = 0,002 p=0,002$ (95% CI: -0,107 hingga 0,111), yang menunjukkan bahwa tipe negara tidak memiliki pengaruh signifikan terhadap korelasi kedua variabel. Bias publikasi dinilai tidak signifikan dengan nilai Egger's Publication Bias sebesar $p=0,176 p = 0,176 p=0,176$. Hasil penelitian ini menegaskan peran penting dukungan sosial dalam meningkatkan kualitas hidup. Meta-analisis ini menggarisbawahi pentingnya membangun sistem dukungan sosial untuk meningkatkan kesejahteraan individu di berbagai konteks budaya dan geografis.

Kata kunci: Meta analisis[1], Dukungan Sosial[2], Kualitas Hidup[3].

1. INTRODUCTION

The relationship between social support (SS) and quality of life (QoL) has been a central focus in psychological and sociological research. Social support, defined as the comfort, care, appreciation, or assistance available to individuals or groups (Uchino, 2004), plays a pivotal role in shaping resilience and overall well-being. Its sources often include family members, close friends, colleagues, or peers (Sarafino, 2017). Cutrona and Gardner (2004) categorize social support into four dimensions: friendship support, emotional or esteem support, informational support, and instrumental support, all of which contribute to an individual's ability to navigate life's challenges. On the other hand, QoL is a multifaceted construct that reflects an individual's perception of their life within the context of cultural and value systems, encompassing physical health, psychological state, personal independence, and social relationships (WHO, 1997; Reno, 2010).

Despite the wealth of research on these two constructs, findings on their relationship remain inconsistent, with correlation sizes ranging from medium ($r>0.3r > 0.3r>0.3$) to high ($r>0.5r > 0.5r>0.5$). This variability suggests a gap in the literature and highlights the need for a comprehensive meta-analytic approach to synthesize existing evidence. Furthermore, there is limited understanding of how contextual factors, such as country type, moderate the relationship between SS and QoL. Exploring this moderating effect is essential to uncovering potential cultural or geographical influences that may shape this relationship.

The primary goal of this study is to systematically analyze the effect size of the correlation between SS and QoL using a meta-analytic approach. Meta-analysis, as defined by Retnawati et al. (2018), is a systematic and quantitative method of synthesizing data from multiple studies to derive reliable conclusions. By integrating findings from 11,716 participants across diverse studies, this research aims to provide a robust estimate of the strength of the SS-QoL relationship. Additionally, the study investigates the moderating role of country type to determine whether geographical and cultural contexts influence this correlation.

This research addresses two critical questions: (1) What is the overall effect size of the correlation between SS and QoL based on existing studies? (2) Does country type significantly moderate this relationship? The hypotheses tested in this study are: (1) social support has a significant positive correlation with quality of life, and (2) country type has a minimal or insignificant effect as a moderating variable.

This research contributes to the current landscape by synthesizing heterogeneous findings, identifying patterns, and exploring contextual influences. It fills a critical gap in understanding the dynamics of social support and quality of life, offering valuable insights for researchers, policymakers, and practitioners aiming to enhance well-being in diverse populations. By clarifying these relationships, the study also underscores the importance of building supportive social networks to promote quality of life across varying cultural and geographical settings.
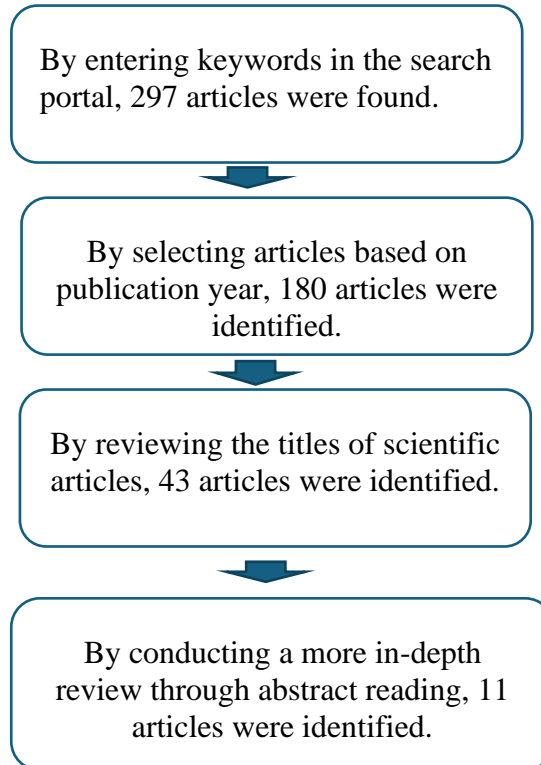
2. METHODS
2. 1. Protocol Design

This meta-analysis followed the guidelines outlined by PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) to ensure systematic and transparent reporting (Page et al., 2021). The study aimed to examine the correlation between social support and quality of life by synthesizing data from relevant studies published between 2011 and 2021. The process involved literature collection, selection based on inclusion and exclusion criteria, and analysis of statistical data.

2.2. Literature Search

The literature search was conducted using two academic search portals: Portal Garuda and ScienceDirect. Two main keywords, "Social Support" and "Quality of Life," were used in combination to broaden the scope of the search. The search strategy aimed to identify peer-reviewed articles that explored the relationship between the two variables and provided the necessary statistical data for analysis.

Figure 1
Path of Literature Search

By entering keywords in the search portal, 297 articles were found.

By selecting articles based on publication year, 180 articles were identified.

By reviewing the titles of scientific articles, 43 articles were identified.

By conducting a more in-depth review through abstract reading, 11 articles were identified.

2. 2. 1. Inclusion criteria

Studies were included in this meta-analysis if they met specific criteria to ensure relevance and reliability. First, the studies had to be published within the timeframe of 2011 to 2021, ensuring the inclusion of recent research that reflects current understanding. Second, the studies must have explicitly examined the relationship between social support and quality of life, with both variables clearly defined and measured. Finally, the selected studies were required to provide the necessary statistical data, including sample sizes and correlation coefficients, to facilitate accurate effect size calculations.

2.2.2. Exclusion criteria

Studies were excluded if they did not meet the inclusion benchmarks. Research published outside the specified timeframe of 2011 to 2021 was excluded to maintain the study's focus on contemporary findings. Additionally, studies that did not explicitly analyze the relationship

between social support and quality of life were omitted, as were studies that lacked the essential statistical information, such as sample size or correlation coefficients, required for meta-analytic calculations. These criteria ensured the reliability and relevance of the final dataset.

2.3 Data Analysis

A total of 11 studies met the inclusion criteria, comprising a combined sample size of 11,716 participants. Data from the selected studies were summarized, including correlation coefficients, participant demographics, and study locations. Statistical analyses were conducted using the Jamovi Project (2021) software, version 1.8. Jamovi is an open-source statistical software designed for ease of use and comprehensive data analysis. The software was employed to calculate overall effect sizes, test for heterogeneity, and evaluate the relationship between social support and quality of life. The findings were synthesized to provide a comprehensive understanding of the correlation across various contexts. The software can be accessed at https://www.jamovi.org.

3. RESULTS

The statistical testing results indicate that social support effectively influences quality of life. The effect size obtained from the random-effects model shows a large effect size of 0.550 (95% CI: 0.34 to 0.76) [Table 2]. It was also found that the studies are heterogeneous, with an inconsistency value (I^2) of 93.98%. Additionally, no publication bias was detected, with Egger's publication bias score reported at 0.176. The highest standardized effect size was observed in study number 5 by Hassanein (2021). [Table 2]

Table 1
Summary of the previous studies

No.	Researcher	N	r	Respondents	Country
1.	(Guo et al. 2021)	1.277	0.63	High School Students	China
2.	(Hirose et al. 2020)	153	0.32	Pregnant Women	Japan
3.	(Gao et al. 2022)	1402	0.45	Participants Aged 17–79 Years	Canada
4.	(Maria et al. 2020)	345	0.507	Patients with Chronic Illnesses & Their Caregivers	Italy
5.	(Hassanein et al. 2021)	88	0.747	Mothers with Special-Needs Children	Qatar
6.	(Zhu et al. 2021)	7414	0.31	University Students	China
7.	(Kang et al. 2016)	332	0.49	Elderly Aged 65 and Above	South Korea
8.	(Nuryati et al. 2017)	150	0.51	Breast Cancer Patients	Indonesia
9.	(Munikanan et al. 2017)	160	0.611	People with Schizophrenia	Malaysia
10.	(Sun et al. 2017)	205	0.466	Nursing Home Residents in Rural Areas	China
11.	(Khalil et al. 2014)	190	0.43	Hemodialysis Patients	Jordan

Table 2
Effect Size and Moderator Test Results
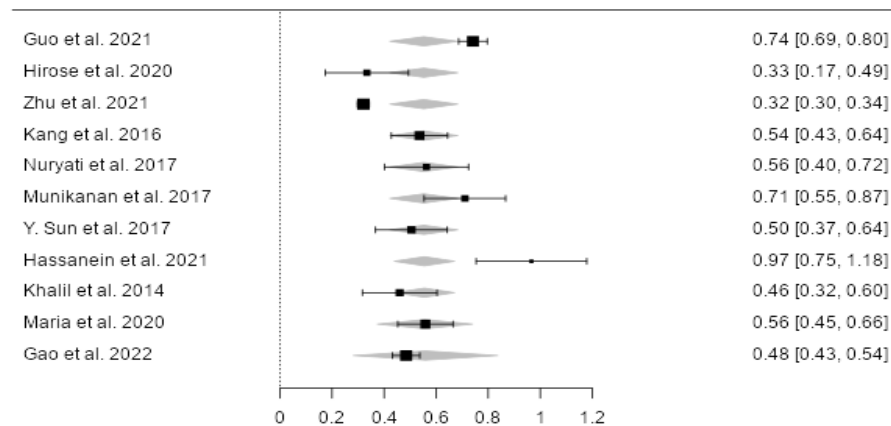
Mixed-Effects Model (k = 11)

No.	Estimate	se	Z	p	CI Lower Bound	CI Upper Bound
Intercept	0.55053	0.1076	5.12	< .001	0.340	0.761
Moderator	0.00218	0.0555	.	0.969	-0.107	0.111

Note. Tau2 Estimator: Restricted Maximum-Likelihood

The type of country was also tested as a moderator to examine its influence, categorized into four regions: Asia, the Middle East, Europe, and America. The analysis showed that the country had a moderator value of 0.002 with a large effect size of 0.550. This indicates that the country does not act as a significant moderator in the relationship between social support and quality of life.

Figure 2
Forest Plot Graph Literature Testing

Forest Plot

|	
Guo et al. 2021	0.74 [0.69, 0.80]
Hirose et al. 2020	0.33 [0.17, 0.49]
Zhu et al. 2021	0.32 [0.30, 0.34]
Kang et al. 2016	0.54 [0.43, 0.64]
Nuryati et al. 2017	0.56 [0.40, 0.72]
Munikanan et al. 2017	0.71 [0.55, 0.87]
Y. Sun et al. 2017	0.50 [0.37, 0.64]
Hassanein et al. 2021	0.97 [0.75, 1.18]
Khalil et al. 2014	0.46 [0.32, 0.60]
Maria et al. 2020	0.56 [0.45, 0.66]
Gao et al. 2022	0.48 [0.43, 0.54]

4. Discussion

Based on the review of 11 studies, it was found that social support has a significant correlation with quality of life (QoL). Social support serves as a psychological and material resource that contributes to a better quality of life (Helgeson, 2003). The correlation between social support and quality of life demonstrates a large effect size (r > 0.5). However, conceptually, social support overlaps with certain aspects of the QoL framework, particularly in the dimension of social support itself. Nuryati et al. (2017) identified that psychological factors, including spirituality, social support, and tranquility, are dominant aspects of QoL among cancer patients.

Figure 3
Funnel Plot Graph Testing Publication Bias
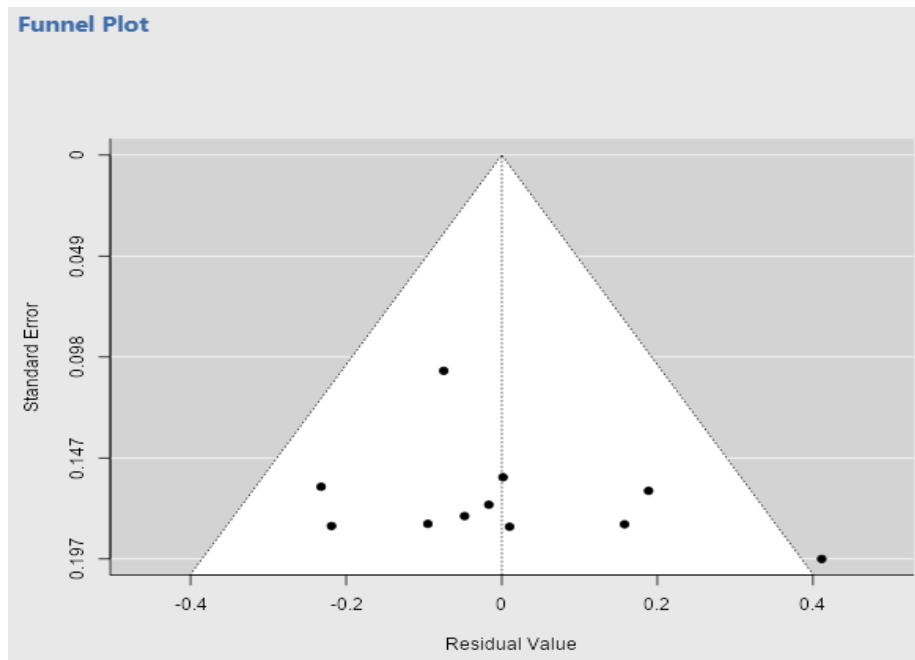
The sources of social support were not uniformly defined across studies. Structural components of social support include family members, close friends, and significant others (Nurullah, 2021). Family support may come from parents, siblings, children, and spouses, while significant others may include romantic partners, coworkers, neighbors, spiritual advisors, healthcare professionals, or peer groups. These sources of support vary depending on an individual's age, marital status, health conditions, and sociocultural context (Krokavcova et al., 2008).

The wide confidence intervals observed indicate heterogeneity in effect sizes, likely due to differences in measurement tools and population characteristics. Six different tools were used to measure social support, with the Multidimensional Scale of Perceived Social Support (MSPSS) being the most commonly used in six studies. For QoL, nine measurement tools were employed, with the 12-item Short Form Health Survey (SF-12) and the World Health Organization Quality of Life (WHOQOL) scale being the most frequently utilized, each appearing in two studies.

The sample characteristics in the studies reviewed varied widely, including high school students, college students, pregnant women, mothers of children with special needs, older adults aged 65 years and above, residents of rural nursing homes, breast cancer patients, individuals with schizophrenia, those with chronic illnesses and their caregivers, as well as dialysis patients. College students represented the largest sample group, with 7,414 participants in Study 6, while the smallest sample group was found in Study 5, consisting of mothers of children with special needs (see Table 1).

Social support enhances individuals' well-being or quality of life by providing assistance, encouragement, acceptance, and care through the presence of reliable others (Johnson & Johnson, 1991). This highlights the vital role social support plays in fostering a better quality of life across diverse populations and contexts.

An important implication of this meta-analysis study is the substantial effect size observed in the correlation between social support and quality of life, supporting the direct effect model of social support on quality of life. The correlation between these two variables was not influenced by the country as a moderating variable. However, a limitation of this study is the high heterogeneity, which reflects variations in measurement tools and sample characteristics across the included studies.

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