

Original Research Article

Impact of Alzheimers Disease on Daily Functioning: An Analysis of Instrumental Activities of Daily Living Impairment and Caregiver Burden

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Abstract: Caregiver burden is a significant concern in the management of individuals with cognitive impairment and Alzheimer's disease, particularly as functional abilities decline. This study aimed to examine the relationship between Instrumental Activities of Daily Living (IADL) performance and caregiver burden among caregivers of older adults. A total of 60 caregivers participated in the study. Descriptive statistics revealed a mean IADL score of 3.10 (SD = 1.311), indicating moderate functional dependence among care recipients, and a mean Caregiver Burden Assessment (CBA) score of 52.27 (SD = 6.822), reflecting moderate to relatively high perceived burden. Pearson correlation analysis demonstrated a weak positive correlation between IADL and CBA scores ($r = .143$); however, the relationship was not statistically significant ($p = .276$). These findings suggest that functional dependence in instrumental daily activities alone may not significantly predict caregiver burden in this sample. The results highlight the multifactorial nature of caregiver burden and underscore the need to consider additional psychological, social, and contextual factors when addressing caregiver well-being. Further research with larger samples is recommended to better understand the determinants of caregiver burden.

Keywords: Caregiver Burden, Alzheimer's Disease & Dementia, Functional Dependence, Caregiver Burden Assessment (CBA), Geriatric Care.

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INTRODUCTION

Alzheimer's disease (AD) is a complex and debilitating neurodegenerative disorder that is characterized by deterioration in the ability to perform activities of daily living (ADL) in addition to loss of cognitive function and behavioral changes [Potkin, 2002] [Melrose *et al.*, 2011] [Brown *et al.*, 2011]. This decline in day-to-day functioning is increasingly recognized as a source of considerable social, health, and economic costs [Peres *et al.*, 2008] [Farias *et al.*, 2017]. Progressively impairs memory, cognition, and behavior, with profound effects on a person's ability to engage in everyday activities [Luck *et al.*, 2010] [Teng *et al.*, 2010]. As one of the most common forms of dementia, Alzheimer's disease not only compromises the individual's cognitive functions but also disrupts their ability to perform essential tasks that support independent living. Among the most affected areas are the Instrumental Activities of Daily Living (IADLs),

which encompass tasks such as managing finances, cooking, cleaning, shopping, and maintaining a household [Hesseberg *et al.*, 2013] [Marshall *et al.*, 2011]. These tasks are critical for sustaining autonomy and quality of life, yet as AD advances, individuals struggle to complete them, often requiring increasing levels of assistance from family members or caregivers [Green *et al.*, 1993] [Włodarczyk *et al.*, 2004].

Alzheimer's disease (AD) is a major public health concern worldwide due to its high prevalence and the significant impact it has on individuals, families, and societies. It is the most common form of dementia, accounting for an estimated 60-80% of all dementia cases. The prevalence of Alzheimer's disease increases significantly with age, affecting approximately 1 in 9 people aged 65 and older in the United States alone. With the global population continuing to age, the number of individuals living with Alzheimer's is expected to rise dramatically in the coming decades. According to the

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World Health Organization (WHO), around 50 million people worldwide were living with dementia in 2020, and this number is projected to triple by 2050, largely due to aging populations.

In addition to age, other factors such as genetics, family history, and lifestyle choices can influence the likelihood of developing Alzheimer's disease [Kang *et al.*, 2014]. The presence of certain genetic markers, such as the APOE $\epsilon 4$ allele, has been linked to an increased risk of developing AD, although the exact causes of the disease remain not fully understood [Hall *et al.*, 2011]. Given the rising of Alzheimer's disease, the strain on healthcare systems, families, and caregivers is becoming increasingly apparent, making it essential to understand the broader societal impact of the disease [Brodaty & Donkin, 2009].

As the prevalence of Alzheimer's disease continues to grow, understanding its effects on daily functioning—especially the impairment of Instrumental Activities of Daily Living (IADLs)—and the burden placed on caregivers is crucial [Goren *et al.*, 2016]. This understanding will inform policies, caregiving support structures, and interventions aimed at improving the quality of life for individuals living with Alzheimer's and their caregivers, who often bear the brunt of this disease's toll [Zarit *et al.*, 1980].

The impairment of IADLs marks a pivotal shift in the daily functioning of individuals with Alzheimer's, and it is often one of the first signs that the disease is significantly impacting their capacity for independence [Simard & van Reekum, 2008] [Ramsay *et al.*, 2007]. The progressive nature of these impairments means that caregivers are gradually called upon to take on more responsibility, leading to a growing burden that can be both physically and emotionally draining [Kawaharada *et al.*, 2019] [Schulz *et al.*, 2004]. Caregivers, often family members or close friends, face numerous challenges as they provide day-to-day support, from managing medications and doctor's appointments to ensuring basic needs such as meal preparation and safety are met [Gaugler *et al.*, 2000]. The strain of caregiving can result in emotional stress, financial hardship, and a decline in the caregiver's own physical health, often leading to feelings of isolation and burnout [Cohen *et al.*, 2002].

This research aims to explore the multifaceted impact of Alzheimer's disease on daily functioning, with a specific focus on the impairment of IADLs and the burden it places on caregivers. By analyzing how cognitive decline correlates with the ability to perform these critical tasks and the subsequent toll on caregivers, this study seeks to gain a comprehensive understanding of the lived experiences of individuals with Alzheimer's and those who care for them. Through this examination, we hope to underscore the pressing need for effective interventions, support systems, and resources for both

individuals affected by Alzheimer's disease and their caregivers, in order to improve quality of life and alleviate the profound challenges that arise from this devastating disease.

The disruption of IADLs represents one of the first and most visible challenges faced by individuals living with Alzheimer's disease [Potkin, 2002]. These impairments, which often begin subtly and worsen over time, create significant obstacles to maintaining daily routines and managing life's demands [Peres *et al.*, 2008]. As the disease progresses, patients require more help, eventually becoming fully dependent on others for their care [Brown *et al.*, 2011]. This transition from independence to dependence is not only difficult for the individual with Alzheimer's but also places a considerable burden on those who assume the role of caregiver [Kang *et al.*, 2014]. Caregivers—usually family members or close friends—are tasked with ensuring that the person with Alzheimer's can continue to live safely and as comfortably as possible [Brodaty & Donkin, 2009]. However, this responsibility often comes at a great personal cost, as caregiving can lead to physical, emotional, and financial strain [Goren *et al.*, 2016]. The long-term nature of caregiving, along with the emotional and psychological toll of watching a loved one gradually lose their cognitive abilities, can result in stress, anxiety, depression, and even physical health problems in caregivers themselves [Schulz *et al.*, 2004].

This research seeks to better understand the ways in which Alzheimer's disease affects daily functioning, particularly in relation to the impairment of IADLs, and the corresponding burden that caregivers experience. By investigating the relationship between cognitive decline, IADL impairment, and caregiver burden, this study aims to provide a comprehensive view of the challenges faced by both individuals living with Alzheimer's disease and those who care for them [Marshall *et al.*, 2011]. Through this analysis, we hope to highlight the need for more effective support mechanisms, intervention strategies, and resources for both patients and caregivers [Simard & van Reekum, 2008].

Addressing these needs is crucial for enhancing the quality of life for individuals with Alzheimer's and for mitigating the challenges faced by caregivers [Cohen *et al.*, 2002]. Furthermore, this research aims to underscore the importance of a more holistic approach to Alzheimer's care—one that includes not only medical and therapeutic interventions for the patients but also comprehensive support for the caregivers who play an essential role in their care [Gaugler *et al.*, 2000]. Ultimately, we hope this study will contribute to improving the lives of those impacted by Alzheimer's disease and inspire further action to address the growing caregiving burden [Zarit *et al.*, 1980].

Rationale of the Study

The rationale for this research stems from the growing recognition of Alzheimer's disease (AD) as not only a critical health issue but also as a major societal challenge. Alzheimer's disease, as the most common form of dementia, profoundly impacts individuals' cognitive abilities, memory, and daily functioning. One of the key areas affected by AD is the ability to perform Instrumental Activities of Daily Living (IADLs)—essential tasks such as managing finances, cooking, cleaning, and maintaining a household. These IADLs are critical to maintaining independence and quality of life, yet individuals with Alzheimer's disease often experience significant impairments in these areas as the disease progresses.

As the global population continues to age, the number of people affected by Alzheimer's disease is increasing at an alarming rate. According to the World Health Organization, the number of people living with dementia is expected to triple by 2050, making it more important than ever to understand the specific ways in which AD impacts daily life. While much has been studied about the cognitive and physical symptoms of Alzheimer's, there is a growing need to examine how these impairments translate into the loss of independence, particularly in terms of IADLs. This research will fill that gap by providing a deeper understanding of the functional challenges that individuals with Alzheimer's face and how these challenges affect their ability to lead meaningful lives.

Additionally, the impact of Alzheimer's disease extends far beyond the individual diagnosed; it places a substantial burden on caregivers. As individuals with Alzheimer's become increasingly dependent on others for assistance with daily tasks, caregivers—often family members—are thrust into roles that are physically, emotionally, and financially demanding. The caregiver burden associated with Alzheimer's disease is a critical issue that has received considerable attention in recent years, yet there is still a need for more nuanced research to explore how IADL impairment specifically contributes to caregiver strain. Understanding this relationship is essential not only for supporting caregivers but also for developing interventions that can reduce their burden and improve both their well-being and the quality of care they provide.

By examining the impact of Alzheimer's disease on IADLs and the corresponding burden on caregivers, this research aims to provide valuable insights into the challenges faced by both individuals with Alzheimer's and those who care for them. With a better understanding of these dynamics, healthcare professionals, policymakers, and support organizations can develop more targeted interventions and resources to enhance the quality of life for both individuals living with Alzheimer's and their caregivers. Ultimately, this research strives to contribute to a more comprehensive

approach to Alzheimer's care that recognizes the complex and interconnected needs of those affected by the disease.

Aim of the Study

To assess the impact of Alzheimer's disease on daily functioning: an analysis of instrumental activities of daily living impairment and caregiver burden.

OBJECTIVES OF THE STUDY

To assess the extent of impairment in IADLs among individuals with Alzheimer's disease:

This objective aims to identify and measure the specific tasks that individuals with Alzheimer's struggle to perform as the disease progresses, including activities such as managing finances, preparing meals, shopping, and maintaining personal hygiene.

To explore the relationship between cognitive decline and IADL impairment in Alzheimer's patients:

This objective seeks to understand how different stages of cognitive decline influence the ability to perform daily functional tasks and how these impairments correlate with the progression of the disease.

To analyse the level of caregiver burden associated with the impairment of IADLs in individuals with Alzheimer's disease:

This objective aims to evaluate how the difficulties in performing IADLs by patients affect caregivers' physical, emotional, and financial well-being. It will focus on the challenges caregivers face in providing daily support and how these challenges contribute to caregiver stress and burnout.

To identify the coping strategies employed by caregivers in managing the IADL impairment of Alzheimer's patients:

This objective seeks to explore the various ways caregivers adapt to the demands of caring for a loved one with Alzheimer's disease, including seeking external support, employing assistive devices, and adjusting their caregiving routines.

REVIEW OF LITERATURE

Patients with Alzheimer's disease (AD) show profound deficits in instrumental activities of daily living (IADLs), such as managing finances, medications, and food preparation, linked to hypometabolism in right-sided brain regions for executive function, visuospatial processing, attention, and working memory [Melrose *et al.*, 2011]. In mild cognitive impairment (MCI) and mild AD, subtle IADL deficits like remembering appointments or assembling records are common, associated with memory issues, processing speed, and medial temporal atrophy, while population studies

indicate IADL decline begins up to a decade before dementia diagnosis [Brown *et al.*, 2011] [Peres *et al.*, 2008] [Farias *et al.*, 2017]. Longitudinal research confirms early executive limitations in planning predict IADL independence loss and dementia risk, with MCI patients showing faster progression when IADL impaired, and subtle deficits across MCI subtypes independent of cognitive domains, detectable long before clinical onset [Luck *et al.*, 2010] [Teng *et al.*, 2010].

Caregiver burden escalates with AD progression, as patient functional loss, depressive symptoms, and basic ADL difficulties like feeding increase stress, frustration, anxiety, exhaustion, depression, social isolation, and health risks such as heart disease [Kang *et al.*, 2014] [Zarit *et al.*, 1980] [Schulz *et al.*, 2004]. Tools like the Zarit Burden Interview (ZBI) assess emotional, financial, and social strains, while studies in Japan highlight poorer health-related quality of life (HRQoL), comorbidities, and productivity loss among dementia caregivers versus non-caregivers [Kawaharada *et al.*, 2019] [Goren *et al.*, 2016]. Interventions maintaining ADLs, including personalized cognitive training with errorless learning, social support from groups or counseling, and early IADL monitoring, can alleviate burden and enhance caregiver well-being [Simard & van Reekum, 2008] [Cohen *et al.*, 2002].

Neurocognitive links show executive function and memory strongly predict IADL/ADL impairments in mild AD and MCI, with gender differences, higher disability rates in AD (88%) versus MCI (66%), and sensitivity of scales like IADLS/PSMS to change across severity; both patient- and caregiver-rated quality of life correlates with cognition and IADLs [Marshall *et al.*, 2011] [Hall *et al.*, 2011] [Hesseberg *et al.*, 2013].

METHODOLOGY

This descriptive survey study, conducted in 2024 among 60 patients diagnosed with Alzheimer's disease (both male and female, aged 50 and older) and their caregivers from the South district community of New Delhi, employed a convenience sampling technique to assess the impact of Alzheimer's on daily functioning, focusing on instrumental activities of daily living (IADL) impairment and caregiver burden. Inclusion criteria encompassed willing adult participants aged 50+ with confirmed Alzheimer's, while those unwilling to participate were excluded; informed consent was obtained after explaining objectives, ensuring confidentiality in a disturbance-free environment using simple materials like pens, pencils, erasers, and data forms. Participants voluntarily completed questionnaires in 5-7 minutes, with data collated for analysis; the Lawton-Brody IADL Scale evaluated complex independent living skills such as managing finances, shopping, meal preparation, housekeeping, laundry, telephone use, medications, and transportation to gauge functional status and early impairment in cognitive

conditions like Alzheimer's, often paired with other assessments for comprehensive health insights. Complementing this, the Zarit Caregiver Burden Interview (ZBI) measured caregivers' emotional, physical, social, and relational stress from tasks like constant care demands, identifying burnout risks and support needs to sustain their well-being amid patient decline.

ASSESSMENT TOOLS USED

1. Lawton-Brody IADL Scale

The Lawton-Brody IADL (Instrumental Activities of Daily Living) Scale was used as tool designed to assess the functional abilities of older adults, specifically in terms of their capacity to perform instrumental activities of daily living [Lawton & Brody, 1969] [Potkin, 2002]. These tasks are more complex than basic activities like bathing or dressing (which are part of Activities of Daily Living or ADLs), and they include activities necessary for independent living [Brown *et al.*, 2011]. The Lawton-Brody IADL scale evaluates the ability to perform tasks such as:

- Managing finances (e.g., paying bills, handling money)
- Shopping (e.g., purchasing groceries and other goods)
- Preparing meals (e.g., cooking and planning meals)
- Housekeeping (e.g., cleaning and maintaining the home)
- Doing laundry
- Using the telephone (e.g., making and receiving calls)
- Managing medications (e.g., following a prescribed medication regimen)
- Transportation (e.g., using public transportation or driving a car)

The scale is typically used in clinical settings and research to evaluate the functional status of individuals, especially older adults, and is particularly helpful in assessing the impact of conditions such as Alzheimer's disease, dementia, or other cognitive disorders [Teng *et al.*, 2010] [Hesseberg *et al.*, 2013]. It helps healthcare providers and caregivers understand how well a person is able to manage day-to-day activities that are critical for maintaining independence and quality of life [Marshall *et al.*, 2011].

The Lawton-Brody IADL Scale is often used in combination with other cognitive and physical assessments to provide a comprehensive picture of an individual's health and well-being [Farias *et al.*, 2017]. It is a valuable tool for identifying early signs of functional impairment, monitoring changes over time, and determining the level of assistance or care an individual may need [Peres *et al.*, 2008].

2. Zarit Caregiver Burden Interview (ZBI)

The Zarit Caregiver Burden Interview (ZBI) was used as tool used to measure the level of burden or stress experienced by caregivers who are looking after individuals with chronic illnesses or disabilities, like Alzheimer's disease [Zarit *et al.*, 1980] [Kang *et al.*, 2014]. The scale helps assess how much caregiving is affecting the caregiver's emotional, physical, and social well-being [Schulz *et al.*, 2004]. In simpler terms, the ZBI helps understand the impact of caregiving on a person's life [Brodsky & Donkin, 2009].

It includes questions that look at how the caregiver feels about their role, such as:

- How much stress or frustration they feel from caregiving.
- How much time and energy caregiving demands.

- The emotional and physical toll of providing care.
- How caregiving affects their personal relationships, social life, and work.

By using the ZBI, healthcare providers can get a clearer picture of the challenges faced by caregivers and determine what kind of support or resources they might need to ease their burden [Kawaharada *et al.*, 2019] [Goren *et al.*, 2016]. It's a valuable tool for recognizing when caregivers are at risk of burnout, so they can receive the help they need to continue providing care without compromising their own health and well-being [Cohen *et al.*, 2002].

DATA ANALYSIS AND RESULT

Descriptive Statistics			
	Mean	Std. Deviation	N
IADL SCORE	3.10	1.311	60
CBA SCORE	52.27	6.822	60

The descriptive statistics indicate that the mean IADL (Instrumental Activities of Daily Living) score of the sample was 3.10 (SD = 1.311) based on 60 participants, suggesting a moderate level of functional dependence among care recipients with some variability across individuals. The CBA (Caregiver Burden Assessment) score showed a mean of 52.27 (SD = 6.822)

for the same sample size (N = 60), reflecting a moderate to relatively high level of perceived caregiver burden, with noticeable variation in burden levels among caregivers. Overall, the findings suggest variability in both functional ability and caregiver burden within the study population.

Correlations			
		IADL SCORE	CBA SCORE
IADL SCORE	Pearson Correlation	1	.143
	Sig. (2-tailed)		.276
	N	60	60
CBA SCORE	Pearson Correlation	.143	1
	Sig. (2-tailed)	.276	
	N	60	60

The Pearson correlation analysis examined the relationship between IADL scores and CBA scores among 60 participants. The results revealed a weak positive correlation between IADL score and caregiver burden ($r = .143$). However, this association was not statistically significant ($p = .276, p > .05$). This indicates that although there is a slight tendency for caregiver

burden to increase as IADL scores increase, the relationship is very weak and could have occurred by chance. Therefore, in this sample, the level of functional dependence in instrumental activities of daily living does not show a significant relationship with caregiver burden.

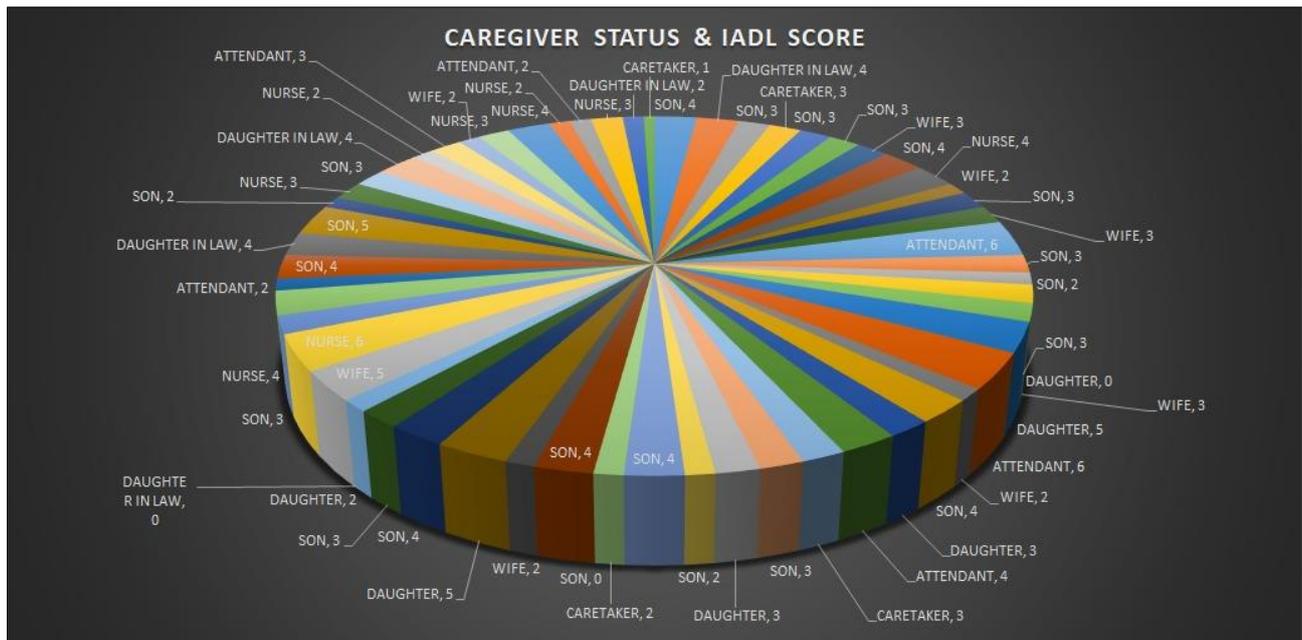


Figure 3: Caregiver Status & IADL Score

The figure 3 titled “Caregiver Status & IADL Score” presents the range of Instrumental Activities of Daily Living (IADL) scores across different caregiver relationships. Sons reported IADL scores ranging from 2 to 5, while daughters demonstrated a broader range from 0 to 5, indicating variability in patient functional dependence within these groups. Daughters-in-law showed scores between 0 and 4. Among spouses, wives had IADL scores ranging from 2 to 6, reflecting moderate to higher levels of assistance required. Professional caregivers, including nurses and attendants, both reported scores between 2 and 6, suggesting that they are involved in caring for individuals with varying levels of functional impairment. Caretakers showed a narrower range of 2 to 3, indicating comparatively less variability in IADL scores within this group. Overall, the table highlights differences in functional dependency levels of care recipients across both family and professional caregiver categories.

DISCUSSION

This study explored the relationship between functional impairments in Alzheimer's disease, as measured by Instrumental Activities of Daily Living (IADL), and the burden experienced by caregivers, as assessed through the Caregiver Burden Assessment (CBA) score [Zarit *et al.*, 1980] [Kang *et al.*, 2014]. The findings contribute to the growing body of literature examining the complexities of caregiving in neurodegenerative conditions [Brodaty & Donkin, 2009] [Schulz *et al.*, 2004].

Functional Decline in IADLs

The mean IADL score among participants was 3.10 (SD = 1.31), indicating moderate impairment in performing complex daily tasks such as managing

finances, cooking, shopping, or handling medications [Lawton & Brody, 1969] [Teng *et al.*, 2010]. This decline in IADLs aligns with the known progression of Alzheimer's disease, where executive functions and memory deteriorate over time, directly impacting autonomy and independence [Marshall *et al.*, 2011] [Melrose *et al.*, 2011]. The presence of assistive devices (canes, walkers) among many participants also reflects the co-occurrence of physical limitations, further complicating daily functioning [Hesseberg *et al.*, 2013]. Functional dependence in such activities marks a crucial turning point in the patient's care needs, often resulting in increased caregiver involvement [Peres *et al.*, 2008] [Farias *et al.*, 2017].

Caregiver Burden

The mean caregiver burden score (CBA) was 52.27 (SD = 6.82), which suggests a moderate to high level of stress experienced by caregivers [Zarit *et al.*, 1980] [Kawaharada *et al.*, 2019]. Caregivers included sons, daughters, spouses, and hired attendants, with varying capacities to cope with the demands of long-term care [Goren *et al.*, 2016]. Despite the moderate level of patient impairment, caregiver burden was not directly proportional, as shown by the weak and statistically non-significant correlation ($r = 0.143$, $p = 0.276$) between IADL and CBA scores [Kang *et al.*, 2014]. This indicates that factors beyond the patient's functional status likely influence caregiver stress, such as emotional strain, behavioral disturbances in patients, financial pressures, and lack of support services [Schulz *et al.*, 2004] [Cohen *et al.*, 2002].

Interpretation and Implications

The weak correlation suggests that functional decline is only one aspect of the caregiving experience [Brodaty & Donkin, 2009]. For example, some

caregivers may experience high burden despite minimal patient dependence, possibly due to emotional attachment, anxiety, or lack of preparedness [Zarit *et al.*, 1980]. Conversely, trained or well-supported caregivers might manage high-dependency patients with less perceived stress [Gaugler *et al.*, 2000]. These findings are consistent with previous literature emphasizing the multifactorial nature of caregiver burden [Kang *et al.*, 2014] [Goren *et al.*, 2016]. Interventions targeting only functional independence may not sufficiently address caregiver stress unless they are combined with psychological support, education, and respite care services [Simard & van Reekum, 2008] [Cohen *et al.*, 2002].

Limitations of the Study

This study faced several limitations that should be considered when interpreting the results. The small sample size of only 60 participants may limit the generalizability of the findings, as a larger sample would enhance the statistical power and reliability of the results. The cross-sectional design captured data at a single point in time, restricting the ability to assess changes in IADL functioning or caregiver burden over the progression of Alzheimer's disease. The analysis focused solely on the relationship between IADL scores and caregiver burden, excluding other potentially influential variables such as behavioral symptoms, patient comorbidities, socioeconomic status, duration of caregiving, and caregiver mental health. Additionally, the reliance on self-reported measures for both IADL functioning and caregiver burden introduces the possibility of reporting bias, stemming from the subjective perceptions of caregivers or assessors.

Recommendations

To build on this research, more studies with larger sample sizes are needed to improve generalizability and statistical robustness. For better results, more reliable and validated scales should be utilized to minimize measurement errors and enhance accuracy. Further investigations incorporating these enhancements, along with diverse populations, would provide deeper insights into the dynamics of IADL impairment and caregiver burden in Alzheimer's disease.

Future Implications

This study sheds light on how Alzheimer's disease affects daily functioning and the challenges faced by caregivers, highlighting the need for more holistic and personalized care approaches for both patients and their support networks. Moving forward, future research should explore not just the physical decline in patients but also the emotional and social pressures on caregivers, integrating longitudinal designs to track progression over time. There's also a real opportunity for healthcare providers and policymakers to develop better support systems that are easier to access and more tailored to individual needs, with technology such as assistive devices playing a bigger role in helping patients maintain

independence and easing the workload on caregivers. Ultimately, increasing awareness and education around the complexities of caregiving will be key, enabling future efforts to better improve the quality of life for people living with Alzheimer's and the loved ones who care for them.

CONCLUSION

The present study aimed to evaluate the impact of Alzheimer's disease on daily functioning, specifically through the lens of instrumental activities of daily living (IADLs) and its association with caregiver burden, using data collected from 60 individuals diagnosed with Alzheimer's disease and their respective caregivers. The descriptive analysis revealed a moderate level of impairment in IADLs among participants (Mean = 3.10), reflecting a notable decline in the ability to perform complex daily tasks independently, while the caregiver burden scores (Mean = 52.27) suggest a moderate to high level of burden, emphasizing the emotional, physical, and practical challenges caregivers face. However, the correlation analysis indicated a weak and statistically non-significant relationship ($r = 0.143$, $p = 0.276$) between IADL impairment and caregiver burden, suggesting that while functional decline is an important factor, it may not be the sole determinant of caregiver stress, with other contributing elements—such as behavioral symptoms of the patient, duration of caregiving, type of caregiver (family member vs. hired help), and emotional support systems—likely playing a more influential role. In conclusion, the findings underscore the complex, multifactorial nature of caregiving in Alzheimer's disease, where comprehensive support addressing not only functional impairment but also emotional and psychological aspects is essential, and future research should explore these broader dimensions through qualitative methods or longitudinal designs to better capture caregiver experiences over time.

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