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Kinesiophobia, perceived social support and pain experiences among geriatric patients

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Abstract:

Pain, fear of movement and inadequate social support adversely affect the well-being of older adults. Therefore, it is of interest to assess the kinesiophobia, perceived social support and pain experiences among 100 geriatric outpatients, with qualitative interviews conducted in 8 participants. The mean TSK and MSPSS scores were 46.46 ± 6.77 and 52.25 ± 15.06 , respectively, with 80% reporting high kinesiophobia, 58% moderate social support and a significant negative correlation between both variables ($r = -0.39$, $p = 0.01$). Three qualitative themes emerged: perceived social support, pain experiences and challenges related to mobility, caregiving, isolation and healthcare management. Thus, data shows the need for integrated geriatric care that combines pain management with psychosocial interventions to reduce kinesiophobia and improve quality of life.

Keywords: Kinesiophobia, perceived social support, pain experiences, geriatric patients, mobility, emotional stability

Background:

Aging is associated with physical decline, chronic pain and psychological difficulties that can adversely affect overall well-being [1]. Pain commonly reduces mobility and may contribute to kinesiophobia and increased dependence on social support among older adults [2]. Pain perception is influenced by interacting biological, psychological and social factors, including chronic illness, medication use, and mental health and coping strategies [3]. India has approximately 104 million adults aged ≥ 60 years, highlighting the growing need to address functional and psychosocial challenges in aging [4]. Tamil Nadu has a rapidly growing older population, with persistent musculoskeletal pain and kinesiophobia reported among elderly patients [5]. Reduced perceived social support, particularly among older women and widows, further emphasizes the need for targeted interventions [6]. Therefore, it is of interest to evaluate the relationship between kinesiophobia, perceived social support and pain experiences among geriatric patients attending a tertiary care hospital.

Materials and Methods:

An explanatory sequential mixed-methods design was adopted to assess the level of kinesiophobia, perceived social support and pain experiences among geriatric patients. The study was conducted at the National Centre for Aging, Guindy, Chennai, after ethical committee clearance and institutional approval. In the quantitative phase, 100 patients were recruited by convenience sampling. A pilot study involving 10% of the total study population was carried out to evaluate the viability and reliability of the methods and tools used for data collection. Permission was obtained from the Head of Department, National Centre for Aging, before any data were collected. Data were collected using the Tampa Scale for Kinesiophobia (TSK) and the Multidimensional Scale of Perceived Social Support (MSPSS) and analysed using SPSS. A p -value ≤ 0.05 was considered statistically significant. In the qualitative phase, eight patients were selected via purposive sampling and interviewed using a semi-structured guide. Audio-recorded interviews were transcribed verbatim and analysed thematically through

iterative reading, open coding, category refinement and theme finalisation. Trustworthiness was ensured through credibility, dependability, conformability and transferability, supported by data triangulation. The two strands were integrated narratively at the interpretation phase. Ethical approval was obtained from the Institutional Ethics Committee of Madras Medical College, Chennai. Written informed consent was obtained from every participant. Confidentiality and anonymity were preserved throughout data collection, storage and reporting; participation was voluntary and patients could withdraw at any time without consequence to their clinical care.

Results:

Among 100 geriatric patients, 30% were aged 71–75 years, a significant majority (59%) were female and 97% were married. Hindus accounted for 79% of the sample and 34% had completed high school-level education. A large proportion (41%) had a monthly income below ₹23,000; 65% lived with family and 63% were unemployed. Clinically, 40% had hypertension, 32% had heart disease and 23% had diabetes; 57% reported visual impairment. On the TSK, 80% of older adults reported a high level of kinesiophobia and 20% a low level; the mean TSK score was 46.46 ± 6.77 (68.32% of maximum). On the MSPSS, 15% had low perceived social support, 58% had medium and 27% had high; the mean MSPSS score was 52.25 ± 15.06 (62.20% of maximum) (Table 1). Pearson correlation analysis revealed a statistically significant negative fair association between kinesiophobia and perceived social support ($r = -0.39$, $p = 0.01$), indicating that as perceived social support increases; kinesiophobia decreases (Table 2). Chi-square testing identified two statistically significant associations with perceived social support: monthly household income ($\chi^2 = 10.07$, $p = 0.05$) and employment status ($\chi^2 = 14.71$, $p = 0.01$). Age, sex, marital status, religion, educational level, living situation, chronic health conditions and disabilities/impairments showed no statistically significant association with perceived social support ($p > 0.05$) (Table 3). Thematic analysis of the qualitative interviews yielded three themes and seven subthemes. Theme 1, Perceived Social Support, comprised family dynamics, caregiver burden and

isolation and loneliness; participants emphasised the central role of family members in offering emotional comfort and help with daily tasks, while many simultaneously experienced powerlessness and guilt at being dependent on spouses or children. Theme 2, Pain Experiences, comprised nature of pain and pain management strategies; pain frequently affected the knees, back, hips and joints and management strategies ranged from prescription drugs and herbal medicines to hot compresses, balms, massages and electrotherapy, with avoidance of movement frequently driven by fear of falls and increased pain. Theme 3, Challenges Faced by Geriatric Patients, comprised mobility challenges and healthcare management; persistent pain, weakness and balance issues made walking, climbing stairs and travelling to medical institutions difficult and participants stressed the importance of adhering to regular routines, dietary changes and prescribed medications to retain independence.

Table 1: Distribution of kinesiophobia and perceived social support levels among geriatric patients (N = 100).

Variable	Category	n	%
Kinesiophobia (TSK)	Low	20	20
	High	80	80
Perceived social support (MSPSS)	Low	15	15
	Medium	58	58
	High	27	27

Table 2: Correlation between kinesiophobia and perceived social support among geriatric patients (N = 100).

Variables	Mean ± SD	Pearson r (p-value)	Interpretation
Kinesiophobia vs MSPSS	46.46 ± 6.77 vs 52.25 ± 15.06	r = -0.39 (p = 0.01)*	Significant negative fair correlation

*Statistically significant at p ≤ 0.05; NS, not significant.

Table 3: Association between level of perceived social support and sociodemographic variables (N = 100)

Variable	Category	Low/Moderate n (%)	High n (%)	χ² (p-value)
Age	60–65 years	15 (57.69)	11 (42.31)	4.89 (0.18) NS
	66–70 years	20 (83.33)	4 (16.67)	
	71–75 years	22 (73.33)	8 (26.67)	
	76–80 years	16 (80.00)	4 (20.00)	
Sex	Male	31 (75.61)	10 (24.39)	0.24 (0.62) NS
	Female	42 (71.19)	17 (28.81)	
Marital status	Married	71 (73.20)	26 (26.80)	3.44 (0.32) NS
	Single	1 (100.00)	0 (0.00)	
	Divorced	1 (100.00)	0 (0.00)	
	Widow	0 (0.00)	1 (100.00)	
Religion	Hindu	59 (74.68)	20 (25.32)	0.66 (0.71) NS
	Christian	9 (64.29)	5 (35.71)	
	Muslim	5 (71.43)	2 (28.57)	
Educational level	No formal education	13 (86.67)	2 (13.33)	2.03 (0.57) NS
	Primary level	18 (66.67)	9 (33.33)	
	High school	25 (73.53)	9 (26.47)	
	Higher secondary	17 (70.83)	7 (29.17)	
Monthly household income	₹11,837–17,755	30 (83.33)	6 (16.67)	10.07 (0.05)*
	₹17,756–23,673	32 (78.05)	9 (21.95)	
	₹23,674–47,347	9 (50.00)	9 (50.00)	
	₹47,348 and above	2 (40.00)	3 (60.00)	
Living situation	Alone	18 (78.26)	5 (21.74)	3.80 (0.28) NS
	With family	44 (67.69)	21 (32.31)	
	With friends	6 (100.00)	0 (0.00)	
	In a care facility	5 (83.33)	1 (16.67)	
Employment status	Full time	1 (16.67)	5 (83.33)	14.71 (0.01)*
	Part time	11 (91.67)	1 (8.33)	
	Unemployed	44 (69.84)	19 (30.16)	
	Pensioner	17 (89.47)	2 (10.53)	
Chronic health condition	Diabetes	12 (52.17)	11 (47.83)	7.59 (0.07) NS
	Hypertension	32 (80.00)	8 (20.00)	
	Heart disease	26 (81.25)	6 (18.75)	
	Others	3 (60.00)	2 (40.00)	
Disability/impairment	Visual impairment	38 (66.67)	19 (33.33)	7.34 (0.07) NS
	Hearing impairment	24 (92.31)	2 (7.69)	
	Mobility impairment	10 (62.50)	6 (37.50)	
	Cognitive impairment	1 (100.00)	0 (0.00)	

Discussion:

This study found that 80% of older adults experienced a high level of kinesiophobia, with a mean TSK score representing 68.32% of the maximum. The high prevalence in our cohort is consistent with a descriptive relationship-seeking study of 302 older adults in which 92.7% experienced high levels of kinesiophobia, identifying frailty and chronic pain as central correlates [7]. A cross-sectional study of elderly patients with chronic obstructive pulmonary disease similarly reported high kinesiophobia levels and identified disease severity, dyspnoea

and self-efficacy as influencing factors [8]. A structural equation modelling study among knee arthroplasty patients further showed that pain catastrophising, self-efficacy and social support jointly shape kinesiophobia through cognitive-behavioural pathways [9, 10]. Perceived social support was moderate for 58% of the cohort, low for 15% and high for only 27%. A study of 517 older participants reported that perceived social support explained 11.7–22.1% of the variance in quality of life, suggesting that improvements in social support and life satisfaction may meaningfully enhance well-being among older adults [11]. Among elderly patients with chronic pain, social support and cognitive functioning have been shown to operate as protective resources, buffering the impact of arthritis pain on psychological adjustment [13]. The Pearson correlation in this study revealed a statistically significant negative fair association between kinesiophobia and perceived social support ($r = -0.39$, $p = 0.01$), aligning with evidence that pain-specific social support reduces kinesiophobia partly through diminished self-perceived burden in patients with rheumatoid arthritis [12] and that combined kinesiophobia and social support strongly predict quality of life after total hip arthroplasty [2]. Monthly household income and employment status were the only socio-demographic variables significantly associated with perceived social support, with full-time employed and higher-income older adults reporting greater support. This pattern resonates with evidence that physical activity, kinesiophobia and fear of falling are tightly interlinked in older adults with chronic pain and that economic and occupational engagement may protect against social isolation [6]. Qualitative findings echo this: participants described family-centred caregiving alongside guilt at perceived dependence, fear of falls driving movement avoidance and difficulty in accessing healthcare. A qualitative study of elderly hip-fracture patients with kinesiophobia reported similar barriers to early rehabilitation and support needs that included reassurance, supervised mobility and family involvement [7]. Identifying relationships between kinesiophobia, functional level, mobility and pain after surgery further confirms the clinical importance of integrated assessment [8]. Studies on chronic low back pain with osteoporosis [10] and on post-percutaneous coronary intervention patients [11] both document kinesiophobia impact on limits of stability and functional balance, while pain-coping strategies among older adults with chronic pain have been shown to improve perceived social support and acceptance of pain [12]. Taken together, the quantitative and qualitative findings offer a holistic understanding of how chronic pain, fear of movement and social support interact to shape geriatric well-being. Limitations include the single-centre setting, convenience sampling and

modest sample size, which constrain generalizability. Multi-centre longitudinal studies with culturally tailored psychosocial interventions are warranted to test causal pathways between social support provision and kinesiophobia trajectories in Indian older adults.

Conclusion:

We show the complex interaction between kinesiophobia, perceptions of social support and pain experiences among senior patients. Increased movement anxiety can drive reduced mobility, functional decline and physical inactivity, while low social support can worsen pain perception and mobility issues. The findings highlight the need for a comprehensive geriatric nursing strategy that integrates pain management with psychological reassurance and family-inclusive social support, ultimately enhancing functional independence and quality of life in older adults.

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