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Article Review On Spontaneous Coronary Artery Dissection: A Systematic Review Of Physical And Psychological Recovery Following Discharge From Hospital

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Abstract: Spontaneous Coronary Artery Dissection (SCAD) is an emerging cause of myocardial infarction predominantly affecting woman. The reviewed study by Neubeck et al. Systematically examines the physical and psychosocial recovery of SCAD survivors post-Hospitalization. This review evaluates studies objectives, methodology, findings and implications for clinical practice.

The systematic review includes 28 studies with a total of 4167 participants highlighting the lack of tailored cardiac rehabilitation (CR) programs for SCAD patients. Key findings indicate that the SCAD survivors face challenges in determining safe physical activity levels and experience significant psychosocial distress, necessitating specialized recovery programs. Despite its strength, the study has limitations including the absence of randomized control trials and potential selection bias. This review underscores the need for further research to develop targeted rehabilitation strategies for SCAD patients.

Index Terms **- Spontaneous Coronary Artery Dissection, Physical Recovery, Psychological Recovery**

1. Introduction

Spontaneous coronary artery dissection (SCAD) is increasingly recognized as a significant cause of myocardial infarction, particularly in women under 50 years. Unlike traditional myocardial infarction caused by atherosclerosis, SCAD results from a spontaneous tear in the coronary artery wall, leading to impaired blood flow. Given its unique pathophysiology, SCAD survivors require specialized rehabilitation strategies that address both physical and psychological recovery

The study by Neubeck et al. (2022) systematically review existing literature on SCAD survivors' recovery following hospital discharge. This article review aims to evaluate the study's contributions, identify its strength and limitations, and discuss it relevance to clinical practice. The article by Neubeck et al. (2022) systematically reviews the physical and psychosocial recovery of spontaneous coronary artery dissection survivors after hospital discharge. SCAD a rare case of myocardial infarction, predominantly affects younger woman, yet its long-term impact on physical activity and mental wellbeing remains under-researched. This review aims to consolidate current knowledge and highlight gaps in rehabilitation strategies for SCAD survivors

2. Summary of the article

Neubeck et al. Conducted a systematic review to assess the physical and psychosocial recovery of SCAD survivors. The study followed PRISMA guidelines and analyzed data from Medline, Embase, CinAHL, PsychINFO, and google scholar up to November 2021. The review included both qualitative and quantitative studies, encompassing a total of 28 research articles with 4167 SCAD participants from USA, Canada and the Netherlands

A. Objectives

The study aims to:

- Assess the physical activity participation levels of SCAD survivors
- Evaluate cardiovascular risk factors and associated health conditions post-SCAD
- Analyze the psychosocial impact of SCAD, including emotional distress and quality of life

B. Methodology

- A systematic review was conducted following PRISMA guidelines
- Literature search covered Medline, Embase, CinAHL, PsychInfo, and google scholar (until November 2021)
- Inclusion criteria: Studies (qualitative or quantitative) reporting on physical recovery, cardiovascular risk factors, or psychosocial wellbeing of SCAD survivors
- 28 studies were included in the final review, comprising 4167 participants (predominantly female, 93.5%)
- Quality assessment was done using Joanna Brings Institute (JBI) tools and COREQ checklist for qualitative studies

C. Key Findings

1. Physical activity and cardiac rehabilitation (CR):

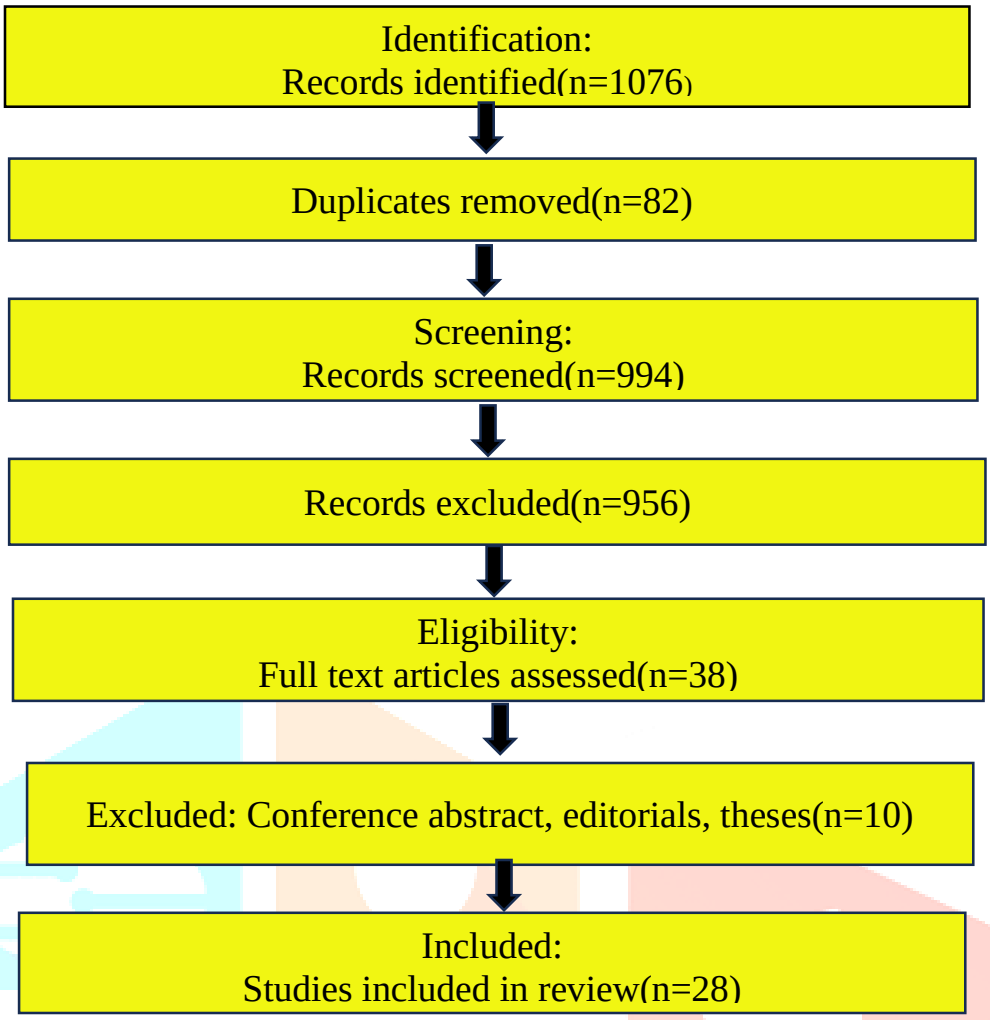
   Limited evidence exists on cardiorespiratory fitness improvement post -SCAD

   - Limited evidences exist on cardiorespiratory fitness improvement post -SCAD
   - Survivors lack guidance on safe physical activity levels, leading to fear and reduced participation

2. Cardiovascular risk factors:
   - Many SCAD survivors have traditional risk factors like hypertension, hyperlipidemia and obesity
   - Persistent chest pain post –SCAD is common
3. Psychological impact:
   - High levels of anxiety, depression, and PTSD were reported
   - SCAD survivors experience psychosocial distress due to fear of recurrence and lack of tailored rehabilitation programme
   - Family involvement in recovery was highlighted as important
4. Gaps identified
   - No randomized controlled trials (RCTs) on SCAD rehabilitation
   - Lack of standardized rehabilitation protocols for SCAD patients
   - The need for psychological support interventions alongside physical rehabilitation

D. Conclusion

The authors emphasize the urgent need for developing specific physical and psychological recovery programs for SCAD survivors. Future studies should test intervention effectiveness through randomized controlled trials



PRISMA flow chart of study selection

3. **Critical analysis**

A. Strength of the article

- Comprehensive review: the study systematically analyzes 28 studies and highlights critical gaps in SCAD recovery
- Inclusion of psychosocial aspects: unlike most cardiac rehabilitation research, this review integrates psychological well-being as an essential aspect of post-SCAD care
- Quality assessment: The authors used validated tools (JBI and COREQ) to assess study quality and improve credibility
- Identifies research gaps: The study effectively outlines areas for future research, particularly the need for SCAD specific rehabilitation and RCTS

B. Limitations of the article

- Lack of RCTs in the included studies: Since none of the 28 studies were randomized controlled trials (RCTs) the findings relay on observational data with potential biases
- Heterogeneity in study designs: The included studies varied significantly in methodology, population, and outcome measures, making it difficult to generalize conclusions
- Limited global representations: Most participants were from USA, Canada and Netherlands, limiting applicability to diverse populations

4. **Implications for nursing practice**

- Developing SCAD specific rehabilitation protocols: Nurses should advocate for tailored cardiac rehabilitation (CR) that address both physical and psychological recovery
- Enhancing patient education: Nurses should educate SCAD survivors on safe physical activity guidelines, reducing fear and promoting gradual integration in to exercise
- Proving emotional support: Given the high psychosocial distress reported, nursing interventions should incorporate mental health screening and counselling referrals

- Encouraging family involvement: Family centered care models should be encouraged, as social support is vital for SCAD survivors

5. Conclusion

The article by Neubeck et al. provides an essential contribution to understanding the physical and psychological challenges faces by SCAD survivors. The review highlights critical gaps in rehabilitation strategies and calls for more research to develop evidence-based interventions. For nursing professionals, the finding emphasizes the need for holistic patient care, integrating physical rehabilitation, mental health support and family involvement to improve post -SCAD recovery outcome

6. References

Neubeck L. McHale S.,Ross M., MacGillivray S., Galbraith M., Hanson, Spontaneous Coronary Arter Dissection : A systematic review of physical and psychological recovery following discharge from hospital. European Journal of Cardiovascular Nursing, 2022;21(7), 665-677