American Journal of Nursing Science
2024, Vol. 13, No. 3, pp. 56-63
https://doi.org/10.11648/j.ajns.20241303.12

Case Report

Person Centred Care in Neurological Rehabilitation: A Case Study and Critical Reflection

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Abstract

Healthcare systems and organizations consider maintaining and improving the quality of their service provisions whilst also being mindful of strategies to mitigate identified gaps in their clinical services. One such approach that has found favour among healthcare teams and institutions is that of person centered care. Person centered care places emphasis on situating the individual at the core of the decision-making process, identifying, and illuminating what is of greatest importance to the concerned person. The approach fosters a belief in equal and collaborative goal setting between the person and their healthcare team, respecting the individual's needs and their preferences as people. One area where this approach can be adopted is that of neurological rehabilitation. The ethos of mutual respect and partnership between the individual and the multidisciplinary team can guide and inform the process of rehabilitation. This paper aims to deliver a critical appraisal of the application of the principles of person centered care in neurological rehabilitation. This will be referenced to a clinical scenario involving a young person with a stroke. The case will link the theory of person centered care discussing the models and frameworks realised in the clinical story. This will lead to a discussion and conclusion on the value of person centered care for people, professionals, teams, and organizations.

Keywords

Person Centered Care, Rehabilitation, Stroke

1. Introduction

This paper aims to deliver an illustration of the use of person centered care (PCC) related to the process of neurological rehabilitation. This will be demonstrated through discussing an individual clinical scenario involving the clinical journey of a young person with stroke. In this narrative, the theory of PCC will be linked to practice. Furthermore, this paper will illuminate and discuss the influence of the respective models and frameworks realised in the clinical story. The conclusion will highlight the appropriateness and values of PCC to individuals (patients/ professionals), teams and organizations.

2. The Clinical Scenario

Ms. Mary Smith (pseudonym) was a 25-year-old unmarried secretarial worker who was admitted with right sided weakness, a facial asymmetry and slurred speech. She lived alone and had no children. She described her social contacts as limited to her work colleagues. She had a pre-existing history of depression and anxiety but was not currently on any associated treatment for this. During her initial clinical evaluation, she reported a recreational drug history (cannabis/ cocaine use). On completion of her English degree, she found adapting to life as she described it 'in the real world' (work and the breakup of her once lively social circle), difficult. She re-

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Received: 17 April 2024; **Accepted:** 20 May 2024; **Published:** 19 June 2024

ported that on the night prior to her admission she had ingested cocaine several times that evening while at a work-based event with some of her colleagues. She was taken home intoxicated and on awaking the following morning found that she could not stand up. She contacted one of her sisters for help. Prior to these events, problems relating to her lifestyle had led to family confrontation and subsequent strained relationships. She was brought into the hospital via the emergency department where she was found to have a mild right facial droop, mild dysarthria, and right upper and lower limb weakness (power 2-3/5) with a mild sensory loss. Her diagnosis was that of a left lacunar infarct secondary to cocaine ingestion [6]. She was then transferred to the stroke rehabilitation unit for further multidisciplinary assessment and related therapy. Concurrent with her motor sensory deficits, she was noted to have exacerbated low mood which was impacted by her realization of substance abuse, social isolation, and familial estrangement.

Following her admission to the rehabilitation setting, she underwent a multidisciplinary assessment and met with the team on the ward to discuss both her own and the staff's aims and expectations. It was made explicit to Mary from the start that she was to be central to every step in her rehabilitative process and that the philosophy of the team was that of shared goal development and decision making. For her part, Mary stated that she wanted to be as transparent as possible and wanted to engage fully with the whole team. She was provided with the information in written form and directed to appropriate online resources/ forums discussing stroke rehabilitation (the rehabilitation unit has access to laptops/ internet for patient use). In an emotionally charged atmosphere, Mary disclosed her prior history re low mood, anxiety, and drug misuse. She discussed the impact this had on her family life – her alienation and then estrangement (she had contact with only one of four siblings and virtually little or no contact with her parents). Furthermore, she reported having no 'real' friends, just people she worked with. Accepting that her rehabilitation was likely to be long, she confided how she wanted to change her life and reconnect with her family who she saw as being essential to her rehabilitation and intended life adjustments.

She discussed the proposed rehabilitation plan, including her desire to reintegrate with her family, with her sister. Her family were subsequently contacted, and all members wanted to be involved. Her father, mother, brother and two other sisters attended and were allowed time alone with Mary to adjust to what was an emotionally challenging situation. Following this, the family attended the next multidisciplinary team meeting later that week. The plan for rehabilitation was debated between Mary, her family members, and the professional team. Her decisions regarding her rehabilitation and her plans for her future were respected, and she was informed that she (and her family) would be supported throughout this.

3. Discussion: Person Centered Care and Neurological (Stroke) Rehabilitation

It is offered that this scenario is reflective of PCC. It is suggested that the actions and outcome in this scenario is most clearly aligned with the person-centred frameworks as proposed by McCormack and McCance [46]. The framework's essential elements: respecting personal beliefs and values, being sympathetically present, ethical, and effective communication, family involvement, equality and shared decision making in a holistic and supportive environment, can all be cited in this vignette. This framework presents a consistent agreement with the principles of centeredness – sharing responsibility, establishing therapeutic relationships, and seeing the patient as a person – as cited by Sturgiss et al [58]. The framework presents a commitment to the vital element of personhood, developing the caring relationship while being cognisant and responsive to the person's abilities and values [8, 15]. Furthermore, this framework places emphasis on supporting people and developing strategies to encourage and maintain this [26]. The framework also promotes the focus on the hopes and desires of care recipients, that they are listened to and that their wishes are honoured [52]. Essentially, McCormack and McCance [46] framework promotes involvement with people and their families and encourages healthcare providers to recognize the value of co-design where they do things with people, rather than to or for them [56].

Rosewilliam et al [54] contend that inconsistencies are present in goal setting in the realm of person-centred care and often emanate from lack of involvement and understanding [40]. Ha and Park [29] have documented the beneficial aspects of PCC when considering goal setting and how this results in greater motivation and involvement, with a reciprocal positive effect on quality of life. PCC in stroke rehabilitation requires a partnership between the triumvirate of the person, the family, and the team [19], with the essential elements in this therapeutic partnership being collaboration and equity [25]. In essence, the focus should be that of the individual [9]. Kang et al [35] have identified collaborative goals and action plans as key facets of person-centred rehabilitation. Furthermore, Sussman et al [59] have championed how this needs to be inclusive of preferences. This scenario records Mary's and the multidisciplinary team's proposal for rehabilitation. Wildevuur and Simonse [67] have described the importance of offering information and education as part of a person-centred approach. Furthermore, Lloyd et al [42] have discussed the positive impact family can have in the person-centred approach. These elements are inherent in this narrative and can be related back to the applied framework [46]. In summary, the goals, and the means of achieving them are regarded as shared resulting in participation and greater satisfaction [53]. Ultimately, mutual respect and collaboration, a key tenet of PCC [65], is realised.

Eklund et al [17] assert the fundamental aspect of PCC as

assisting people to lead 'meaningful' lives rather than those that are 'functional'. However, Barker et al [4] have referred to restored function, maximised function and preparation for functional decline or plateauing as meaningful person-centered outcomes. Furthermore, Jesus et al [33] has highlighted moving from impairment reduction to compensating for functional loss or development/ adaptation to new capabilities or function beyond what has been lost when considering PCC in the context of rehabilitation. In this scenario, it is suggested that for Mary, meaning following her stroke was to be found in her change of lifestyle, mood adjustment, family reconciliation and her commitment to her physical rehabilitation to improve her motor sensory function.

Zill et al [70] has questioned which aspects of PCC are of greatest importance. It is suggested that in Mary's narrative, all the elements that constituted the exemplars of PCC were of consequence for her rehabilitation and her subsequent outcomes. Luker et al [43] has identified the needs and preferences of people with stroke who are undertaking a programme of rehabilitation. In Mary's case, the application of PCC principles as outlined in McCormack and McCance's [46] framework made account for this and led to her achieving her aims that were positive in terms of both meaning and function.

The extent to which PCC is achievable in the context of evidence-based medicine, serious illness and rehabilitation has been questioned [49, 28, 36]. It has been opined that biomedical orientation, high care demands, heavy workloads, resource constraint, unsupportive leadership, technical skills that are prized over relational ones and lack of training and education can be cited as detrimental to PCC in rehabilitation and other healthcare settings [50, 22]. Furthermore, Janerka et al [32] have identified that PCC interventions are variable – implementations have been successfully made at micro level (ward/ teams) but evidence at macro level (organization) and their sustainability is questionable. However, in this case scenario, the commitment to and delivery of PCC described in the relevant framework [46], is evident.

It is argued that for relationships to be successful, there must be a mutual emotional investment between the practitioner and the person in their care where experiences are shared and connections are forged [23]. Furthermore, Varughese et al [63] have advocated in favour of person centered approaches as clarifying people with stoke and their caregiver's emotional health. The case in question is a sensitive one. The story's protagonist's realization of social isolation, familial estrangement, substance misuse and significant disability at a youthful age is emotive for all the people involved in the episode - for her, her family, and the multidisciplinary team. The deleterious effects of looking after acute young stroke presentations have previously been studied [68]. In such delicate situations, nurses should be vigilant to the workings of emotional labour and emotional intelligence [34] should they endeavour to avoid the pitfalls of potential burnout and compassion fatigue [14]. Phelan et al [48] have discussed how organizations could look to integrate PCC into their establishments across all levels. However, this requires a shift in organizational cultures and processes to place people at the core of their care [2]. The opinion is offered that organizations need to embrace PCC not only for the individuals benefit, but also that of their teams given the positive healthcare provider outcomes in reducing burnout and stress and increasing job satisfaction [62].

Maben et al [44] has argued in favour of strategies that allow healthcare workers to reflect on the emotional aspects of their work. Informal discussions were held with Mary by appropriate members of the multidisciplinary team focusing on her aims, anxieties, hopes and fears. This went on to include her family. She particularly found the sessions with rehabilitation psychology services useful. This approach was both positive and productive. Agreement is met with the opinion of Farr and Barker [21], where the sharing of emotional experiences fostered openness, communication, and trust between all parties. The approach here is an example of a therapeutic alliance – person/ family/ practitioners and resonates with a person-centered philosophy [30].

Stans et al [57] have discussed the importance of effective communication with vulnerable people undergoing neurological rehabilitation. Furthermore, in the discourse between healthcare professionals and unwell individuals and their relatives, the latter are often subjected to disadvantage by inherent expectations and institutional habits [61]. Communication played a key role in this scenario and was reflective of a person centered approach. Early discussion around goals led to mutually agreeable aims. This form of communication led to open and respectful dialogue resulted in a relationship that was therapeutic [1]. The value placed on developing this resulted in the team working responsively with Mary on what was important to her and for her to trust in their investment [5]. This represents a further reflection of the essential instructions located in the McCormack and McCance [46] framework.

Depression and anxiety form a significant part in Mary's rehabilitation. Wijeratne and Sales [66], and Lee et al [39] have discussed the contemporary pharmacological and non-pharmacological approaches to post stroke depression. Graven et al [27] has reported that person centered care can significantly reduce depressive symptoms. Yun and Choi [69] have commented favourably on post stroke depression interventions that are person centered. Mary had a prior history of depression and anxiety for which she had been previously treated. She had good insight into this aspect of her life and treatment. The rehabilitation goal of improving mood and plan - antidepressants/ post stroke psychology referral and review/ benefits of improving motor and sensory deficits - should acknowledge the person's prior experience along with their wishes and desires [31]. The proposed options for interventions were discussed with Mary. Bamm et al [3] have stated how people need more information about post stroke rehabilitation and treatment options. This was supplied to Mary in written form and through supporting her with access to relevant appropriate internet resources. This reflects the

person-centered element of self-management [37]. A recent paper by Nkhoma et al [47] has debated self-management interventions with particular emphasis to the use of technology.

It can be suggested that this narrative has two strands to the effort to rehabilitate Mary – the neuro psychological effects of her stroke and the psychosocial consequences of her substance misuse. The impression is that in keeping with a person-centered approach, neither are viewed in isolation [10]. Person centeredness is evinced in the approach to substance misuse by shared and informed decision making [12], being open minded, flexible, and inclusive [11] and prioritizing close social networks – including family [13]. Mary's life experience was again appreciated. She had insight into her problems and took control over what she wanted. To this end she was fully supported. She asked to start an appropriate antidepressant, resigned from her work, gave up her flat, reconnected with her family, agreed to psychology service referral, and asked that she be referred to the hospital addiction/ substance misuse service.

The coda to Mary's story was that she progressed well with her rehabilitation. She declined further rehabilitation in a community-based rehabilitation facility and transfer to a young disability unit. Her wishes were debated with her and her decision to decline these services were respected. After being an inpatient for 12 weeks she was discharged from hospital to her and her family's preferred destination of her parent's house. She accepted referral to the stroke early supported discharge service and was followed up in the stroke review clinic.

This discussion has referenced goal setting, collaboration and decision making. These essential elements of a person-centred approach have a demonstrable relevance to the practice of rehabilitation. It can be argued that following this approach supports the ethos of effective and supportive multidisciplinary rehabilitation, that values people as individuals and respects their unique goals. This writer believes that throughout the approach to Mary's rehabilitation, the fundamental characteristics of the PCC framework described by McCormack and McCance [46] are demonstrable.

4. Conclusion

This paper has documented a critical evaluation of PCC related to the clinical context of neurological (stroke) rehabilitation. The clinical scenario at the heart of this document reports a true and consistent depiction of PCC as applied to neurological rehabilitation. The model of PCC referred to in this narrative [46] was appropriate to each facet of the scenario and the rehabilitative focus. The conceptual basis for PCC is illuminated throughout this discourse. Central to these concepts are that people are empowered yet supported, are allowed to think critically about their care, have the information to make informed decisions with mutual problem solving and reflection with greater capacity for participation and where choice and values are respected [71]. Through involvement, people become more motivated and committed to achieving their goals [51]. Martin – Sanz et al [45] has instructed on the role of PCC in stroke rehabilitation and asked that professionals are mindful of individual's perspectives. Readers are encouraged to remember that there exists a person behind the patient label, who has an identity with associated needs and desires and the ability to be involved in decision making. The individual's perspective and contribution, alongside that of their healthcare team members, and family, extend beyond the event or condition and should be promoted [41].

Ekman et al [18] has stated that health professionals need to convey actively and conscientiously to those in their care their interest in and respect for them as a person and demonstrate to them their willingness to collaborate as partners in their care from the very outset of the interaction. The clinical case detailed in this assignment has highlighted this. A mutually supportive and respectful relationship was constructed whereby a connection led to a commitment where goals were achievable [16]. This story was nonetheless emotive. The elements of drug misuse, social isolation and eventual family reconnection, depression, and disability in a person with a stroke at such an early age called for non-judgmental relationships to be formed. It also allowed staff to reflect on the emotional aspects of the case, arguably strengthening their relationships with each other and the story's main character through trust and open communication [24]. The emotive aspect of caring for young people with stroke, particularly in rehabilitation settings, is of interest and could be the focus of further academic investigation.

Krishnan et al [38] has opined on the importance of incorporating stroke survivors and their families' perspectives in programmes of rehabilitation citing this as beneficial in enhancing person centered outcomes. This case was notable in its protagonist's identification of their own aims. Choice and a degree of self-management are fundamental to person centered outcomes [20]. Arguably, the most important aspect of Ms. Smith's decisions was her recognition and need for her family to be involved in her rehabilitation. Thankfully, this goal in her person centered narrative was achieved. She required support in this and her other choices, particularly those relating to her treatment and lifestyle. Valuing, respecting, and supporting someone's unique personal preferences affords them recognition of their individuality as a human being [7], a belief that this writer feels is the cornerstone of holistic PCC and one which forms a seam throughout this narrative.

Ryan et al [55] has reported in favour of the compelling evidence for healthcare workers to pursue care that is person centered and encourages organizations to support these professionals in its development and delivery. PCC should be regarded as a cornerstone of neurological care and rehabilitation for individual people, their families, healthcare practitioners, their multidisciplinary agencies, and organizations [60]. However, partnership (individual/ family/ multidisciplinary team) and goal setting must be grounded in the person's reality for rehabilitation to be

successful [64]. In summary, the discussion that has been raised in this clinical scenario of stroke rehabilitation, has offered a representation and appreciation of how the essentials of PCC are situated in and appropriate to rehabilitation practice.

Abbreviations

PCC Person Centered Care

Author Contributions

Mark Wilkinson is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declares no conflicts of interest.

References

[1] Ahmed, A., van den Muijsenbergh, M., Hubertus, JM. and Vrijhoef, M. (2022). Person-centered care in primary care: what works for whom, how and in what circumstances? *Health and Social Care in the Community.* 30, 6, e3328-e3341.

[2] Angelini, E., Wolf, A., Wijk, H. *et al.* The impact of implementing a person-centred pain management intervention on resistance to change and organizational culture. *BMC Health Service Research.* 21, 1323 (2021). https://doi.org/10.1186/s12913-021-06819-0

[3] Bamm, EL., Rosenbam, P., Wilkins, S., Stratford, P. and Mahlberg, N. (2015). Explaining client – centered care experiences in inpatient rehabilitation settings. *Global Qualitative Nursing Research*, 1–11. https://doi.org/10.1177/2333393615582036

[4] Barker, RN., Sealey, CJ. Polley, ML., Mervin, MC. and Comans, T. (2017). Impact of a person-centred community rehabilitation service on outcomes for individuals with a neurological condition. *Disability and Rehabilitation*, 39: 11, 1136-1142, https://doi.org/10.1080/09638288.2016.1185803

[5] Burton CD, Entwistle VA, Elliott AM, Krucien, N., Porteous, T., Ryan, M. (2017). The value of different aspects of person-centred care: a series of discrete choice experiments in people with long-term conditions. *BMJ Open*; 7: e015689. https://doi.org/10.1136/bmjopen-2016-015689

[6] Cheng, YC., Ryan, KA., Qaduri, SA., Shah, J., Sparks, MJ., Wozniak, A., Stern, BJ., Phipps, MS., Cronin, CA., Magder, LS., Cole, JW. and Kittner, SJ. (2016). Cocaine use and risk of ischaemic stroke in young adults. *Stroke*. 47, 4, 918-922.

[7] Chiang, HLM., Wong, AYP. and Ho, AHY. (2022). Continuity of care advocate model (CCAM): Healthcare workers perspectives on quality stroke care at an acute stroke unit, rehabilitation centre and community rehabilitation programme in Singapore. *Qualitative Health Research*. 33, 1-2, 53-62.

[8] Chu, CH., Sorin-Peters, R., Sidani, S., De La Huerta, B., Reg., McGilton, K. (2018). An Interprofessional Communication Training Program to Improve Nurses' Ability to Communicate with Stroke Patients with Communication Disorders. *Rehabilitation Nursing*, 43(6): p E25-E34, 11/12 2018. | https://doi.org/10.1097/rnj.0000000000000041

[9] Coyne, I., Holstrom, I and Soderback, M. (2018). Centeredness in healthcare: a concept synthesis of family-centered care, person-centered care and child-centered care. *Journal of pediatric nursing*. 42, 45-56.

[10] Da Costa, DL., Corlett, SA. and Dodds, LJ. (2020). A narrative review on the consultation tools available for pharmacists in the United Kingdom: do they facilitate person-centred care? *International Journal of Pharmacy Practice*, Volume 28, Issue 4, Pages 301–311. https://doi.org/10.1111/ijpp.12587

[11] Davis, EL., Ingram, I., Deane, FP., Buckingham, M., Breeze, D., Degan, and Kelly, PJ. (2023) A Qualitative Study Exploring the Benefits and Challenges of Implementing Client Centred Care (CCC) in an Alcohol and Other Drug Treatment Service. *Journal of Dual Diagnosis*, 19: 1, 49-59, https://doi.org/10.1080/15504263.2022.2159603

[12] De Graff, L., Janessen, M., Roelofs, T. and Luijkx, K. (2021). Substance use and misuse of older adults living in residential care facilities: A scoping Review from a person-centered approach. *Ageing & Society*, 1-27. https://doi.org/10.1017/so14468x21001215

[13] Dekkers, A., De Ruysscher, C. and Vanderplasschen, W. (2020). Perspectives of cocaine users on addiction recovery: a qualitative study following a CRA + vouchers programme. *Drugs: Education, Prevention and Policy*, 27: 4, 282-296, https://doi.org/10.1080/09687637.2019.1687647

[14] Delgado, C., Upton, D., Ranse, K., Furness, T. and Foster, K. (2017). Nurses' resilience and emotional labour of nursing work: An integrative review of empirical literature. *International Journal of Nursing Studies.* 70, May, 71-88.

[15] Ehrlich, C., Kendall, E. and Catalaro, T. (2015). Striking a balance: The critical importance of sense making and values-congruent partnerships between general practitioners and patients following stroke. *Family Medicine and Community Health*. 3, 4, 23-31(9).

[16] Egan, M., Rudman, DL. And Daly, S. (2022). Exemplary post-discharge stroke rehabilitation programmes: A multiple case study. *Clinical Rehabilitation*, December 21. https://doi.org/10.1177/02692155221144891

[17] Eklund, JH., Holstrom, IK., Kumlin, T., Kaminsky, E., Skoglund, K., Hoglander, J., Sundler, AJ., Conden, E. and Meranius, MS. (2019). ''Same or different?'' A review of reviews of person-centered and patient-centered care. *Patient Education and Counselling*. 102(1), 3-11.

[18] Ekman, N., Moons, P., Taft, C., Bostrom, E. and Fors, A. (2022). Observable indicators of person-centered care: an interview study with patients, relatives and professionals. *BMJ Open*; 12: e059308. https://doi.org/10.1136/bmjopen-2021-059308

[19] Elven, M., Holmstrom, I., Prakert, M. and Edelbring, S. (2022). Person-centerdness in clinical reasoning of interprofessional stroke teams. *International Conference on Communication in Healthcare.* Glasgow, Scotland, 5-9 September 2022. Abstract Book, 125-126.

[20] Elf, M., Klockar, E., Kylen, M., von Koch, L., Ytterberg, C., Wallin, L., Finch, T., Gustavsson, C. and Jones, F. (2022). Tailoring and evaluating an intervention to support self-management after stroke: Protocol for a multi-case, mixed methods comparison study. *JMIRResProtoc*; 11(5): e37672. https://doi.org/10.2196/37672

[21] Farr, M. and Barker, R. (2017). Can staff be supported to deliver compassionate care through implementing Schwartz Rounds in community mental health services? *Qualitative Health Research*. 27, 11, 1652-1663.

[22] Fernandes, JB., Vareta, D., Fernandes, S., Almeida, AS., Peças, D., Ferreira, N. and Roldão, L. (2022). Rehabilitation Workforce Challenges to Implement Person-Centered Care. *International Journal of Environmental Research and Public Health*; 19(6): 3199. https://doi.org/10.3390/ijerph19063199

[23] Flanagan, E., Chadwick, R., Goodrich, J., Ford, C. and Wickens, R. (2020). Reflection for all healthcare staff: A natural evaluation of Schwartz Rounds. *Journal of Interprofessional Care*. 34, 1, 140-142.

[24] Goodrich, J. (2016). What makes a compassionate relationship between caregiver and patient? Findings from the 'anniversary' Schwartz Rounds. *Journal of Compassionate Health Care.* 3, 8. https://doi.org/10.1186/s40639-016-0026-7

[25] Gordon, C., Ellis-Hill, C., Dewar, B. and Watkins, C. (2022). Knowing-in-action that centres humanising relationships on stroke units: An appreciative action research study. *Brain Impairment*, 23(1), 60-75. https://doi.org/10.1017/Brimp.2021.34

[26] Granström, E., Wannheden, C., Brommels, M., Hvitfeldt, H. and Nystrom, ME. (2020). Digital tools as promoters for person-centered care practices in chronic care? Healthcare professionals' experiences from rheumatology care. *BMC Health Service Research*, 20, 1108. https://doi.org/10.1186/s12913-020-05945-5

[27] Graven, C., Brock, K., Hill, KD., Cutton, S. and Joubert, L. (2016). An integrated approach focusing on participation goals aiming to reduce depressive symptoms. *Stroke*; 47: 2820-2827.

[28] Giusti, A., Nkhoma, K., Petrus, R., Peterson, I., Gwyther, L., Farrant, L., Venkatapuram, S. and Harding, R. (2020). The empirical evidence underpinning the concept and practice of person-centred care for serious illness: a systematic review. *BMJ Global Health*, 5: e003330.

[29] Ha, Y. and Park, M (2023). Effects of Stroke Rehabilitation Using Gait Robot-Assisted Training and Person-Centered Goal Setting: A Single Blinded Pilot Study. *Healthcare*, *11*, 588. https://doi.org/10.3390/healthcare11040588

[30] Hamovitch, EK., Choy-Brown, M. and Stanhope, V. (2018). Person-Centered Care and the Therapeutic Alliance. *Community Mental Health Journal.* 54, 951–958. https://doi.org/10.1007/s10597-018-0295-z

[31] Haydon, G., Browne, G. and van der Riet, P. (2018). Narrative inquiry as a research methodology exploring person centered care in nursing. *Collegian*. 25(1), 125-129.

[32] Janerka, C., Leslie, GD. And Gill, FJ. (2023). Development of person-centered care in acute hospital settings: A meta-narrative review. *International Journal of Nursing Studies*. 40, April 23. https://doi.org/10.1016/jijnurstu.2023.104465

[33] Jesus TS, Bright F, Kayes N, Cott, CA (2016). Person-centred rehabilitation: what exactly does it mean? Protocol for a scoping review with thematic analysis towards framing the concept and practice of person-centred rehabilitation. *BMJ Open*; 6: e011959. https://doi.org/10.1136/bmjopen-2016-011959

[34] Kamassi, A., Boulahlib, L., Abd Manaf, N. and Omar, A. (2020), "Emotional labour strategies and employee performance: the role of emotional intelligence", *Management Research Review*, Vol. 43 No. 2, pp. 133-149. https://doi.org/10.1108/MRR-03-2019-0097

[35] Kang, E., Kim, MY., Lipsey, KM. and Foster, ER. (2022). Person-centered goal setting: a systematic review of intervention components and level of active engagement in rehabilitation goal-setting interventions. *Archives of Physical Medicine and rehabilitation*. 103(1), 121-10. E3.

[36] Kayes, N. and Papadimitriou, C. (2023). Reflecting on the challenges and opportunities for the practice of person centered care. *Clinical Rehabilitation*. 1-15. https://doi.org/10.1177/02692155231 152970

[37] Kidd, L., Lawrence, M., Booth, J. *et al.* Development and evaluation of a nurse-led, tailored stroke self-management intervention. *BMC Health Service Research.* 15, 359(2015). https://doi.org/10.1186/s12913-015-1021-y

[38] Krishnan, S., Pappadis, MR., Weller, SC., Stearnes, M., Kumar, A., Ottenbacher, KJ. and Reistetter, TA. (2017). Needs of Stroke Survivors as Perceived by Their Caregivers: A Scoping Review. *American Journal of Physical Medicine and Rehabilitation.* Jul; 96(7): 487-505. PMID: 28628537; PMCID: PMC5493392. https://doi.org/10.1097/PHM.0000000000000717

[39] Lee, Y., Chen, B., Fong, MWM., Lee, JM., Nicol, G., Lenze, EJ., Connor, LT., Baum, C. and Wong, AWK. (2021). Effectiveness of non-pharmacological interventions for treating post-stroke depressive symptoms: Systematic review and meta-analysis of randomized controlled trials. *Topics in Stroke Rehabilitation.* 28: 4, 289-320, https://doi.org/10.1080/10749357.2020.1803583

[40] Lindblom, S., Flink, M., Elf, M., Laska, A., Von Koch, L. and Yetterberg, C. (2018). Person-centered transitions for people with stroke – are we doing enough? – a Swedish example. *International Journal of Stroke*. 13, 18-18.

[41] Lindsay, PM., Gierman, N., Harris, JE., Arthur, G., Teed, ME., Mountain, A., Gubitz, G., Smith, EE., Dowlatshahi, D., de Jong, A. and Botly, LCP. (2020). People with lived experience at the centre of Canadian stroke best practice recommendations: A model for guideline Developers. *Journal of Patient Experience.* Vol. 7(6), 951-956.

[42] Lloyd, H., Wheat, H., Horrell, J., Sugavanam, T., Fosh, B., Valderas, JM. And Close, J. (2018). Patient-reported measures for person-centered coordinated care: a based compendium for supporting policy development and implementation. *Journal of Medical Internet Research*. 20(2), e54, 2018.

[43] Luker, J., Murray, C., Lynch, E., Bernhardsson, S., Shannon, M. and Bernhardt, J. (2017). Carers' experiences, needs, and preferences during inpatient stroke rehabilitation: A systematic review of qualitative studies. *Archives of Physical Medicine and Rehabilitation*. 98, 9, 1852-1862.

[44] Maben, J., Taylor, C., Reynolds, E., McCarthy, I. and Leamy, M (2021). Realist evaluation of Schwartz rounds® for enhancing the delivery of compassionate healthcare: understanding how they work, for whom, and in what contexts. *BMC Health Service Research.* 21, 709. https://doi.org/10.1186/s12913-021-06483-4

[45] Martin- Sanz, MB., Salazar-de-la-Guerra, RM., Cuenca-Zaldiar, JN., Salcedo-Perez-Juana, M., Garcia-Bravo, C. and Palacios-Cena, D. (2022). Person-centred care study using in-depth interviews. *Annals of Medicine.* 54: 1, 21672180, https://doi.org/10.1080/07853890.2022.2105393

[46] McCormack, B. and McCance, T. Eds. (2016). *Person-Centered Practice in Nursing and Health Care. Theory and Practice.* Second Edition. Wiley Blackwell.

[47] Nkhoma, KB., Cook, A., Giusti, A., Farrant, L., Petrus, R., Peterson, I., Gwyther, L., Venkatapuram, S. and Harding, R. (2022). A systematic review of impact of person-centered interventions for serious illness in terms of outcomes and costs. *BMJ Open*. 12: e054386. https://doi.org/10.1136/bmjopen-2021-054386

[48] Phelan, A., McCormack, B., Dewing, J., Brown, D., Cardiff, S., Cook, NF., Dickson, C., Kmetec, S., Lorber, M., Magowan, R., McCance, T., Skovdahl, K., Štiglic, G. and van Lieshou, F. (2020). Review of developments in person-centred healthcare. *International Practice Development Journal*, 10, Article 3. https://doi.org/10.19043/ipdj.10Suppl2.003

[49] Price, AI., Djulbegovic, B., Biswas, R. and Chatterjee, P. (2015). Evidence-based medicine meets person centered care: a collaborative perspective on the relationship. *Journal of Evaluation in Clinical Practice.* 21, 6, 1047-1051.

[50] Prior, SJ., Mather, CA. and Campbell, SJ. (2023). Redesigning Rural Acute Stroke Care: A Person-Centered Approach. *International Journal of Environmental Research and Public Health*; 20(2): 1581. https://doi.org/10.3390/ijerph20021581

[51] Rafsten, L. and Sunnerhagen, KS. (2022) Patient-centered goal setting in very early supported discharge with continued rehabilitation after stroke, *Disability and Rehabilitation*. https://doi.org/10.1080/09638288.2022.2141357

[52] Parse, RR (2019). Nurses and person centered care. *Nursing Science Quarterly*. 32, 4, 265.

[53] Rice, DB., McIntyre, A., Mirkowski, M., Janzen, S., Viana, R., Britt, E. and Teasell, R. (2017). Patient-centered goal setting in a hospital-based outpatient stroke rehabilitation center. *Pm&r*, 9(9), 856-865.

[54] Rosewilliam, S., Sintler, C., Pandyan, AD., Skelton, J. and Roskell, CA. (2016). Is the practice of goal-setting for patients in acute stroke care patient-centered and what factors influence this? A qualitative study. *Clinical Rehabilitation*. 30(5), 508-519.

[55] Ryan, T., Harrison, M., Gardiner, C. and Jones, A. (2017). Challenges in building interpersonal care in organized hospital stroke units. The perspectives of stroke survivors, family caregivers and the multidisciplinary team. *Journal of Advanced Nursing*. 73, 10, 2351-2360.

[56] Santana, MJ., Manalili, K., Jolley, RJ., Zelinsky, S., Quan, H. and Lu, M. (2018). How to practice person centered care: A conceptual framework. *Health Expectations*. 21, 2, 429-440.

[57] Stans, SEA., Dalemans, RJP., de Witte, LP., Smeets, H. and Beurskens, AJ. (2017) The role of the physical environment in conversations between people who are communication vulnerable and health-care professionals: a scoping review, *Disability and Rehabilitation*, 39: 25, 2594-2605, https://doi.org/10.1080/09638288.2016.1239769

[58] Sturgiss, EA., Peart, A., Richard, L., Ball, L., Hunik, L., Chai, TL., Lau, S., Vadasz, D., Russel, G. and Stewart, M. (2022). Who has been at the centre of what? A scoping review of the conceptualisation of 'centeredness' in healthcare. *BMJ Open*. e059400. https://doi.org/10.1136/bmjopen-2021-059400

[59] Sussman, T., Lawrence, J., Earn, A., Wilkie, M., Hunter, P. and Kaasalainen, S. (2022). Chart based data as a resource for tracking and improving a person-centered palliative approach in long term care. *Journal of Clinical Nursing*. 12 October 2022. https://doi.org/10.1111/jocn.16558

[60] Tistad, M., Wallin, L. and Carlström, E. (2022). A comparison of three organisational levels in one health care region in Sweden implementing person-centred care: coupled, decoupled or recoupled in a complex organisation. *BMC Health Service Research.* 22, 196. https://doi.org/10.1186/s12913-022-07548-8

[61] Uhre, Jannie. 2018. "The Dialogic Construction of Patient Involvement in Patient-Centred Neurorehabilitation". *Qualitative Research in Medicine and Healthcare*. 2(3). https://doi.org/10.4081/qrmh.2018.7792

[62] Van Diepen, C., Fors, A., Ekman, I. and Hensing, G. (2020). Association between person-centered care and healthcare providers' job satisfaction and work-related health: A scoping review. *BMJ Open.* 10: e042658. https://doi.org/10.1136/bmjopen-2020-042658

[63] Varughese, T., Monteil, TC., Engebretson, J., Savitz, SI., Sharrief, A. and Beauchamp, JES. (2022). A person-centered approach understanding stroke survivor and family caregiver emotional health. *Journal of Neuroscience Nursing*. 54(2), 68-73, April. https://doi.org/10.1097/JNN.0000000000000640

[64] Walder, K. and Molineux, M. (2020). Listening to the client voice – A constructionist grounded theory study of the experiences of client – centered practice after stroke. *Australian Occupational Therapy Journal.* 67, 2, 100-109.

[65] Wallengren, C., Billing, H., Bjorkman, I., Ekman, I., Feldthusen, C., Kjellberg, IL. And Lundberg, M. (2022). Person-centered care content in medicine, occupational therapy, nursing, and physiotherapy education programmes. *BMC Medical Education*. 22(1), 492.

[66] Wijeratne, T. and Sales, C. (2021). Understanding Why Post-Stroke Depression May Be the Norm Rather Than the Exception: The Anatomical and Neuroinflammatory Correlates of Post-Stroke Depression. *Journal of Clinical Medicine*. 10(8): 1674. https://doi.org/10.3390/jcm10081674

[67] Wildevuur, SE. and Simonse, LWL. (2015). Information and communication technology-enabled person-centered care for the ‘’big five’’ chronic conditions: a scoping review. *Journal of Medical Internet Research*. 17(3), e77, 2015.

[68] Wilkinson, M., Cox, N., Witham, G. and Haigh, C. (2022). Hyperacute stroke and the specialist nursing impact: exploring the cause and context of secondary traumatic stress – a qualitative inquiry. *Journal of Research in Nursing*. 27, 4, 343-354.

[69] Yun, DW. And Choi, JS. (2019). Person-centered rehabilitation and care outcomes: A systematic literature review. *International Journal of Nursing Studies*. 93, May, 74-83.

[70] Zill JM, Scholl I, Härter M, Dirmaier J (2015) Which Dimensions of Patient-Centeredness Matter? - Results of a Web-Based Expert Delphi Survey. *PLoS ONE* 10(11): e0141978. https://doi.org/10.1371/journal.pone.0141978

[71] Zoffmann, V., Hornsten, A., Storbaekken, S., Graue, M., Rasmussen, B., Wahl, A. and Kirkevold, M. (2016). Translating person-centered care into practice: A comparative analysis of motivational interviewing, illness-interrogation support, and guided self-determination. *Patient Education and Counseling*. 99, 3, 400-407.