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Personalized citizen assistance for social participation (APIC): A promising intervention for increasing mobility, accomplishment of social activities and frequency of leisure activities in older adults having disabilities

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ABSTRACT

Background: Social participation, a determinant of health in older adults, requires innovative interventions. The personalised citizen assistance for social participation (APIC) involves weekly three-hour personalised stimulation sessions targeting significant social and leisure activities difficult to accomplish. Recently adapted for older adults, the APIC's impact on this population is unknown.
Objective: This study explored the impact of APIC on older adults with disabilities.
Methods: A mixed-method design including a pre-experimental component was used with 16 participants (11 women) aged 66–91 (79.4 ± 8.7) with disabilities, living at home. They completed functional autonomy, social participation, leisure and quality of life questionnaires, and semi-structured interviews.
Results: APIC increased older adults' functional autonomy ($p = 0.02$), accomplishment ($p < 0.01$) and satisfaction ($p = 0.02$) with social participation, and frequency of leisure practice ($p < 0.01$). Post-intervention, participants wished to modify the practice ($p < 0.01$) and frequency ($p < 0.01$) of leisure activities, and difficulties in their social environment diminished ($p = 0.03$). Their attitude toward leisure ($p = 0.04$) as well as their health ($p < 0.01$) and psychological ($p = 0.03$) quality of life improved. Older adults thought APIC helped them resume, maintain, explore and experiment with significant social activities. It also increased their psychological and physical well-being, feeling of control, connectedness, self-esteem and motivation to accomplish activities. Finally, APIC can compensate for an unavailable and crumbling social network.
Conclusion: APIC is a promising intervention that leads to new opportunities for older adults to increase community integration and enhance the social component of their lives. It can also optimise how the needs of older adults are met, including utilisation of personal and environmental resources.

1. Background

Unless effective strategies are found to address the challenges faced by an ageing global population, the growing burden of chronic disease will greatly affect the quality of life of older adults (World Health Organization, 2015). This group constitutes an important and rapidly growing proportion of the population, yet

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many of them have chronic diseases and about half live with disabilities. Chronic diseases and disabilities have substantial consequences for individuals, communities and health care systems, but can be prevented or delayed with innovative and efficacious 'Ageing well initiatives', such as social participation interventions (Rowe and Kahn, 1997; World Health Organization, 2002). Social participation can be defined as a person's involvement in activities that provide interactions with others in the community (Levasseur, Richard, Gauvin, & Raymond, 2010). Associated with many health outcomes such as mortality (Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015), morbidity (Berkman, Glass, Brissette, Seeman, 2000), hospitalization (Newall, McArthur, & Menec, 2015) and functional autonomy (Levasseur et al., 2011), social participation is modifiable, i.e. facilitated when the abilities of the person and the environment are optimized (Fougeyrollas, 2010). To foster social participation in older adults, it is important for interventions to consider their complex and changing social and functional needs, which are often only partially met when they have disabilities, especially for community and leisure activities (Levasseur et al., 2014), which are mostly associated with quality of life (Levasseur, Desrosiers, & St-Cyr Tribble, 2008).

Among 32 interventions evaluated to foster social participation in older adults (Raymond et al., 2013), only two concerned persons with disabilities, but they did not involve collaboration with community resources and were very narrow, i.e. focused on involvement in healthcare decision-making (Barnes and Bennett, 1998) or restoration of a social network (Cheung & Ngan, 2000). Based on lessons drawn from these 32 studies, social participation interventions must foster empowerment, support the development of significant relationships and activities, be personalized and last at least six months (Raymond et al., 2013). Recently adapted for older adults with disabilities (Levasseur et al., submitted), the personalized citizen assistance for social participation (APIC) is the only intervention that followed these recommendations.

The APIC involves a non-professional attendant who provides weekly three-hour stimulation sessions over a six-month period targeting significant social and leisure activities that are otherwise difficult for the older adult to accomplish. Complementing and extending professional healthcare services, this intervention has been shown to increase accomplishment of and satisfaction with social and leisure activities in adults (Lefebvre et al., 2013) or older adults (Levert et al., in preparation) with traumatic brain injury. The APIC helped them engage in constructive reflection about their lives and improve their well-being. Only recently adapted (Levasseur et al., submitted) for older adults, the APIC's impact on this population is unknown. This study thus aimed to explore the impact of APIC in older adults with disabilities.

2. Methods

2.1. Study design and participants

A mixed-method concurrent triangulation design (Creswell, 2003) including a pre-experimental component [pre-test (T_0), post-test (T_1)] and an exploratory qualitative study was used with a theoretical sample of 16 older adults with disabilities living at home. This sample size allowed detection of a standardized difference of 0.75 or greater between two means according to paired bilateral *t* tests based on a significance level of 5% and power of 80% (Machin, Campbell, Tan, & Tan, 2009). This size also favoured deep exploration and data saturation. Eligibility criteria were: (1) moderate to severe loss of autonomy [score ≥15 on the Functional Autonomy Measurement System (SMAF (Hébert, Carrier, & Bilodeau, 1988))], (2) normal cognitive functions [score on the phone version of the Mini-Mental State Examination (ALFI-MMSE (Roccaforte, Burke, Bayer, & Wengel, 1992)) ≥17/22], (3) live in a conventional or residential home for independent or semi-independent seniors, and (4) be able to communicate orally. Participants were recruited using a list from a previous study and from people attending a day hospital and day centre at a Health and Social Services Centre (HSSC) in Quebec (Canada). The Research Ethics Committee of the University Institute of Geriatrics of Sherbrooke HSSC approved the study (MP-22-2014-383).

2.2. Data collection procedures

All participants who were eligible, until the predetermined sample size ($n = 16 + 3$, anticipating possible attrition) was reached, signed an informed consent form and were met individually at home by a research assistant (JLB) specially trained to administer the questionnaires and conduct qualitative interviews. At T_0, one socio-demographic and four main outcome questionnaires were administered, taking approximately 90–120 minutes. After T_0 and based on their interests and preferences, participants were paired as soon as possible with an attendant to begin the intervention, which was recorded in a weekly diary (D) of activities completed by each attendant. Following the six-month intervention period (T_1), participants answered the same main outcome questionnaires and, about one month later, had a face-to-face semi-directed interview lasting about 60 min. Data were also collected to explore feasibility of the intervention (Levasseur et al., submitted). All interviews were digitally audiotaped, transcribed and verified with respect to the wording used by participants. After the first interviews, two authors (JLB and ML) discussed and adjusted the questions for subsequent interviews.

2.3. Intervention

The APIC gave older adults personalized stimulation by an attendant for three hours per week over a six-month period between November 2013 and September 2014. Eleven attendants (10 women) were non-professionals hired and paid for the project, who had experience with older adults, mostly as volunteers. For the intervention, attendants had two days' training, including on ageing, loss of autonomy, community resources and personalized communication approach (Lefebvre, 2010), helping older adults target goals for significant social and leisure activities that were difficult to accomplish and encouraged empowerment, gradual mobilization of personal and environmental resources, and community integration. Attendants were supervised by a management and partnership committee (MPC), including the research assistant, healthcare professionals (occupational therapists and recreologist), manager, and researchers as well as representatives of community organizations, attendants and older adults. Attendants met about once a month and the MPC once every four months; all meetings were digitally audiotaped.

2.4. Outcome variables and tools

Data were collected through four questionnaires and semi-structured interviews. First, the SMAF (Hébert et al., 1988) includes five domains of **functional autonomy** and has good psychometric properties. Second, the Assessment of Life Habits (Life-H) is a questionnaire assessing **social participation** and, more specifically, accomplishment in daily and social activities, satisfaction (Noreau et al., 2004), importance and personalized satisfaction (Roy-Bouthot et al., 2011). The Life-H presents high overall intraclass correlation coefficients for test-retest (0.95) and interrater (0.89) reliability (Noreau et al., 2004). Third, the Leisure Profile is a questionnaire measuring involvement in **leisure**