

ISSN 2397-5628

JOURNAL OF GERIATRIC CARE AND RESEARCH



2022, Volume 9, No 1

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Correspondence

Steps to Health, Showell Circus, Wolverhampton, WV10 9TH, UK
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NLM Title Abbreviation:	J Geriatr Care Res
ISO Abbreviation:	J Geriatr Care Res
Title(s):	Journal of geriatric care and research.
Other Title(s):	JGCR
Publication Start Year:	2014
Country of Publication:	England
Publisher:	Geriatric Care and Research Organisation (GeriCaRe)
Language:	English
ISSN:	2397-5628 (Electronic) 2397-5628 (Linking)
Electronic Links:	https://independent.academia.edu/jgcr https://instituteofinsight.org/journals/jgcr/all-issues/
NLM ID:	101736616 [Serial]
OCOLC	1013748579

Indexing and archiving

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War and older adults: consequences and challenges

Nilamadhab Kar

Abstract

The catastrophic nature of war has deleterious impact on almost all individuals of the affected populations; amongst them older adults are known to be one of the most vulnerable groups. Along with the life changing economic and social adversities, the physical and mental health of the older adults are seriously impaired secondary to war. The consequences are immediate; but most continue long-term; in fact, experiences of the war have lifelong impact. In addition, people who are exposed to war in younger age continue to have health related morbidities in the old age. There are enormous needs for protection, support and care of older adults during and in post-war situations. While efforts should be taken to mitigate the devastating effect of the war on all, including the elderly people; it is important to prevent war at all costs.

Key words

Aged, Health, Mental Health, Psychological Stress, War

Introduction

War affects every body. It does not discriminate between any sides. The interconnectedness of the world today is such that the impact of war is felt thousands of miles away even by the people who are not directly related to the war. As lives change, communities become displaced, people migrate, the overall influence of a war could be seen over generations of affected people.

War is one of the greatest threats to the health and wellbeing of societies;¹ and it often continues to have impact over a life time and beyond. In fact, individual and community health are the immediate casualties of the war; and these are often catastrophic in nature for affected populations.² One of the major consequences of war is its deleterious effect on the mental health of the population; and the suffering could be intense considering the magnitude of losses. Besides lives and properties, the meaning of life is lost as well for many. Associated economic and social consequences of the war also affect communities and bring additional challenges for healthcare.³

While the trauma of war impacts everyone, it is the older adults who are one of the most vulnerable groups for the immediate and long-term consequences.⁴ Their lives are irreparably damaged, with significant loss of lives of

young generations ahead of them, their own failing health; and without any hope of returning to previous socio-economic-cultural stability, the psychological stress is catastrophic.

Additional stressors

Along with the death and destruction, there are serious abuses of people, including older adults, during the war. These include arbitrary arrest and detention, abduction and kidnapping, torture, physical injury by various means, rape, executions, and other ill-treatment in inhuman conditions.⁵ Many are confined to places without food and basic necessities. These stressors compound the problems people face during the conflicts.

Immediate concerns

People migrate away from the war zones; starting with the young and capable ones. Older people usually do not wish to leave their place, for emotional connectedness, and to protect their property;⁵ but often logistics and health related issues come in the way. Understandably, they are often the last to move from the dangerous conflict areas. During displacement, older people are at particular risk of abuse and neglect because of their mobility issues, diminished vision and chronic illnesses which make the support process more difficult.⁶ In the exile, they are socially isolated, and are often physically separated from their families, which increase their vulnerability further.⁶

There are massive concerns about the care and support of people who are displaced to different areas and countries as refugees. There are many practical issues: lack of basic necessities of life, overcrowding, separation from family members with no contact with each-other, language and sociocultural differences presenting as barriers for effective support, overstretched health systems not being able to cater to the needs of large number of the displaced people, etc.³ All these affect elderly refugees harder.

There remains a very limited health-care support system for the older adults who stay back in the war torn regions, due to direct consequences of the destructions, e.g. there are damaged health care facilities, inadequate availability of medicines and clinical supply, and fewer numbers of healthcare personnel.⁷ All these lead to a highly diminished health service, meagre support and negative health outcomes. There are massive challenges for the health-care of everybody, especially the elderly, who would have an already compromised health status. In fact,

war brings on a public health catastrophe.⁸ Ironically, these are all man-made and deliberate actions creating disastrous consequences on health and economy; which are unnecessary and preventable from the beginning.

The emotional consequences of this unfathomable misery, losing younger generation, being separated from family, not having any semblance of usual life, even without the basic necessities, lead to states of being scarred for life. Posttraumatic stress symptoms, depression, anxiety,⁴ complicated grief, death-wishes and many other manifestations are understandably common. Interestingly a metaanalysis on human induced disasters suggested that older adults were less likely to experience posttraumatic stress symptoms compared with younger adults; whereas there were no difference in anxiety and depressive symptoms.⁹ Further, there are concerns of elderly refugees about their end-of-life challenges and palliative care,¹⁰ besides the issue of dying in a different country; although the information on these areas is scarce.

Long term consequences

It is well known that the deleterious effects of the war and its socio-economic and health related consequences continue long term, even the whole life of the survivors and their generations. Many studies done on older adults who were exposed to war during their younger age support this observation. Besides, it is well established that the trauma of war leads to psychiatric disorders such as depression, anxiety, posttraumatic stress disorders, substance use, suicide, interpersonal violence, etc. Many survivors also suffer from physical disabilities from war related injuries, amputations, chronic pain and traumatic brain injuries. All these have negative impact on mental health,¹¹ and the quality of life.

Around one year after the end of the second Lebanon war, elderly people reported significantly higher levels of stress symptoms and lower levels of posttraumatic recovery.¹² Similarly, eight years after the war in former Yugoslavia, older age, various specific war experiences and more traumatic experiences after the war were associated with higher levels of both general psychological and posttraumatic stress symptoms.¹³

Early-life exposure to war: consequences in old age

A study of older adults who experienced second world war reported that the war time experience had continued to have important influence on their life in old age both in social and personal structure.¹⁴ It has also been reported that war trauma accelerates the ageing process and is associated with higher frailty in old age with greater exposure.¹⁵ Early life war experience has been reported to be associated with cardiovascular illnesses of both men and women; which is predicted by combat violence and environmental stressors and mediated by posttraumatic stress disorder.¹⁶ There are many studies on war veterans who suffer depression, anxiety, posttraumatic stress disorders and substance use.¹⁷

War exposures such as death and injury, fear of death and/or injury, and stressful living conditions are linked

with higher number of physical illnesses, chronic pain, posttraumatic stress symptoms, and poorer functioning in old age.¹⁸ Older adults, who experienced the Vietnam war as young people, had enduring psychiatric problems, which were mediated by recent comorbidities and life events. Specific risk factors for psychological distress were loss of family members, witnessing death and malevolent living conditions during the war.¹⁹ Similarly the risk of recent posttraumatic stress disorder was greater in older adults who had observed war atrocities and who reported involvement in killing/causing severe injury; the latter was significantly associated with arthritis.²⁰

In all probability, children, adolescents and young adults who are experiencing war will continue to have physical and mental health problems, which may continue their whole life, into their old age. All these suggest the magnitude of future problems and the need to stop any violence and aggression.

Need of the hour

In spite of the knowledge about the devastating impact of wars on human life, these continue to happen. It is a pity that whole world becomes a witness to the misery, and it appears that very little remedial action to repair the losses and address the needs are possible while the conflict is continuing. In these war situations, needs of the elderly people are hardly prioritised. Whereas given an opportunity, older people can support their families and communities even during war and displacement.⁶

There are international humanitarian and human rights laws, for the protection of older civilians, their safe removal and the provision of suitable accommodations for detained civilians on the basis of age, and many other support among other factors.⁵ However the ground realities could be very different, the supporting efforts appear so meagre in the face of the war. It may be highlighted that even if international charities try to help and provide support, older people often face difficulty in accessing the humanitarian aid.

There are responsibilities of governments, scientific communities, health services, humanitarian agencies and charitable organisations to work together to mitigate the impact of the war. War related both near-term and long-term health morbidity and mortality must be reported accurately.² The knowledge of catastrophic health consequences would help to gather appropriate support systems and may galvanise efforts to prevent war in the first place.

Conclusion

It is known that older adults are more vulnerable to catastrophic traumatic events; and war is one of the most devastating man-made events impacting the masses of population. In most circumstances, it is unlikely that any of the war related damages and disturbances would be sorted in their life times; and there is hardly any hope for older people to rebuild their lives following the war. The lives are not same ever again, for the affected people and definitely not for older people.

There is dearth of studies about the immediate and long-term effects of the war on older adults; however reflecting on the trauma intensity and secondary stressors associated with it, there is hardly any doubt about their multifarious impact on the elderly. They need extensive support and care, to maintain a decent, dignified life and their needs should be given adequate attention, along with others.

War has no place in a humane society. Communities should work together to eradicate war. War must become history.

Author information: Nilamadhab Kar, MD, DPM, DNB, MRCPsych, Consultant Psychiatrist, Black Country Healthcare NHS Foundation Trust; Honorary Professor, Sri Sri University; Honorary Professor of Psychiatry, University of Wolverhampton, UK, Email: n.kar@nhs.net

Correspondence: Nilamadhab Kar, Steps to Health, Showell Circus, Wolverhampton, WV10 9TH, UK. Email: n.kar@nhs.net

Competing interests: None.

Received: 7 May 2022; **Revised:** 19 May 2022; **Accepted:** 21 May 2022

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Citation: Kar N. War and older adults: consequences and challenges. *Journal of Geriatric Care and Research* 2022, 9(1): 1-3.

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Short report

Translation of Recovering Quality of Life (ReQoL) to Gujarati: for use in mental health services

Ganpat Kodarbhai Vankar, Bhaveshkumar M. Lakdawala, Nilamadhab Kar

Abstract

The Recovering Quality of Life (ReQoL) scale is a short scale for routine clinical use in mental health services. Its shorter 10-item version in English was translated and validated in Gujarati, an Indian language, spoken in the western state of Gujarat in India. The translation process involved following process: forward and back-translation, pilot-testing involving patients, review and reconciliation steps. The linguistic issues encountered during the translation process were addressed. The Gujarati version of ReQoL was considered linguistically acceptable for use in patients with mental illness. It is expected that ReQoL Gujarati version will add to QOL instruments in Gujarati language which can be used in routine clinical practice.

Key words

English, Gujarati, Language, Quality of Life, ReQoL, Translation, Validation

Introduction

There are many quality of life (QOL) scales available in Indian languages,¹⁻³ however there is a dearth of a short specific scale for use in mental health settings in Gujarati language. Recovering Quality of Life (ReQoL) scale is a brief patient-rated scale to assess the QOL of people with mental illness, aged 16 and above.⁴ It is available in two versions: a 10 and a 20-item measure.⁵ The brief 10-item ReQoL has been now translated in various Indian languages: Odia, Bengali, Hindi, Kannada, Malayalam, Marathi and Tamil. It has been pilot tested in clinical settings.⁶⁻¹² Objective of this project was to translate ReQoL to Gujarati and validate it linguistically for the clinical use in persons with mental illness.

Gujarati is a popular language used by more than 55 million people worldwide.¹³ It is spoken mostly in the state of Gujarat in India, and by Gujarati population all over the world.

Methodology

The translation from English to Gujarati was carried out by the standard procedure (Translation and Linguistic Validation Process) suggested by Oxford University

Innovation.¹⁴ The translation team included psychiatrists who are well-versed with Gujarati and English. The translators were requested to focus on conceptual equivalence, neutral wording and phraseology that incorporated cultural nuances and most importantly which can be useful in clinical settings.

Pilot-testing of the scale was done with five patients with mental illness at Parul Sewashram Hospital. Besides using the scale to rate the QOL, they were requested to reflect on the wording, their understanding of the language used in the scale, any difficulties they encountered about the meaning of the sentences. Their responses were recorded and discussed; which was then incorporated to update the translated version. Following several rounds of discussion and a consensus method the final version was accepted by the translators and researchers.

Results

The translation process was completed through various steps.

Step 1: Forward Translation

Forward translation in Gujarati was done independently by two translators without any difficulty. The phrase 'Quality of Life' is commonly understood by Gujarati speaking people.

Step 2: Forward translation Reconciliation process

Reconciliation process following forward translation of item 3 (felt unable to cope) was difficult to translate in Gujarati. The original questions considered that the individual could cope or could not. To make it more culturally congruent (where individual is passive and circumstances drive him), and to make it more understandable, it was considered to provide a specifier (*paristhiti one pahonchi valvaman*, to deal with circumstances) to make it more understandable and clear.

In the item related to physical health in the second part of the questionnaire, it was felt that the word problem or difficulty (*samasya* or *taklif*) should be added to each option. This was in the interest of clarity and did not alter the meaning of the questions.

Table 1. Sample profile for the pilot testing

Serial No	Sex	Age	Education	Diagnosis	ReQoL Score Items 1-10/ Physical health item	Comments
1	F	37	Primary (5 th)	Somatization disorder	17/3	Good questions, easy to understand
2	M	29	College (12 th)	Depression	14/0	Simple, good questionnaire
3	F	23	BSc	Depression	10/3	Item 2 asks about trusting others. What is the context?
4	F	42	BA	Depression	27/2	Easy to understand
5	M	26	BA	Generalized anxiety disorder	27/1	Is last item related to bodily illness only?

F: Female; M: Male; BSc: Bachelor of Science; BA: Bachelor of Arts

Step 3: Back translation of reconciled version

Translators had difficulty in various items of the questionnaire. In item 1, it was difficult to understand the phrase 'to get started' (what was difficult to start?). Hence it seemed useful and appropriate to add (*rojindan kaam kaj* i.e. daily activities). Item 7 was translated as 'Whatever I did, I enjoyed it', '*hun je kam karto hato eman mane maja aavi*' rather than I enjoyed my work/activities. Other items were translated back exactly as the original.

Step 4: Pilot testing

Pilot testing was done with five bilingual patients, patients whose mother tongue was Gujarati but had learnt English as a second language. Most patients understood questions easily and completed filling up the questionnaire within five minutes.

Their responses are summarised in Table 1. One patient felt that the item 2 was without context.

Step 5: Review

After pilot testing, most patient considered the questionnaire simple and easy to understand, its brevity was appreciated. Following the review by the translators and discussion the final Gujarati version of ReQoL was considered acceptable by a consensus method.

Step 6: Proof reading

The accepted version was proof-read by a Gujarati language scholar, who observed no further changes required related to grammar and language.

Conclusion

ReQoL scale (Gujarati version) is acceptable for Gujarati speaking patients with mental illness. The process of translation was easy; the difficulties were minor reflecting the semantic and colloquial differences of two languages rather than conceptual problems. This showed the cultural/linguistic neutrality of the scale. Considering that ReQoL is a brief and easy to understand scale the Gujarati

version is expected to be an additional resource and to be used in routine clinical practice. The Gujarati version of ReQoL should be further tested on larger patient sample and validated; which will help its use in clinical studies.

Acknowledgement

The licence for translation and validation of ReQoL into Indian languages was obtained from Oxford University Innovation Ltd by Dr Nilamadhab Kar, Consultant Psychiatrist at Black Country Healthcare NHS Foundation Trust, Wolverhampton, UK. The project was coordinated in India by Quality of Life Research and Development Foundation (QoLReF) and the Institute of Insight, UK.

Authors are grateful to Dr Nilima Shah, Associate Professor of Psychiatry; Dr Minakshi Parikh, Professor of Psychiatry; and Dr Sarthak Dave, Consultant Psychiatrist for their support in translation process of the Gujarati version of the ReQoL. We also thank patients at Parul Sewashram Hospital who participated in the pilot testing.

Author information: Ganpat Kodarbhai Vankar, MD, DPM, Professor and Head, Department of Psychiatry, Parul Institute of Medical Sciences and Research, Parul University, Limda, Waghodiya, Vadodara, 391760, Gujarat, India, Email: drqkvankar@yahoo.com; Bhaveshkumar M. Lakdawala, MD, Professor and Head, Department of Psychiatry, AMC MET Medical College and Sheth LG Hospital, Maninagar, Ahmedabad, 380008, India, Email: dr_bmlakdawala@yahoo.co.in; Nilamadhab Kar, MD, DNB, DPM, MRCPsych, Consultant Psychiatrist, Black Country Healthcare NHS Foundation Trust, Wolverhampton, UK; and Honorary Professor, Sri Sri University, Cuttack, India. Email: n.kar@nhs.net

Correspondence: Dr G. K. Vankar MD, DPM, Professor of Psychiatry, Department of Psychiatry, Parul Institute of Medical Sciences and Research, Parul University, Limda, Waghodiya, Vadodara, Gujarat, India 391760, India; Email: drqkvankar@gmail.com

Competing interests: None

Received: 11 January 2022; **Revised:** 14 January 2022; **Accepted:** 16 January 2022

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Citation: Vankar GK, Lakdawala BM, Kar N. Translation of Recovering Quality of Life (ReQoL) to Gujarati: for use in mental health services. Journal of Geriatric Care and Research, 2022, 9, 1: 4-6.

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Optimizing the economy by optimal use of longevity opportunity: lesson for low- and middle-income countries

Sarvodaya Tripathy, Sujita Kumar Kar

Abstract

Healthy longevity is predicted to provide an economic advantage; nevertheless, the deterioration of an ageing population's health is expected to raise the economic burden. As a result, the effort should be made to have a healthy lifespan to boost the economy. Positive lifestyle measures, such as adequately addressing the elderly's lifestyle-related disorders, strengthening psychosocial support, extending employment (by raising the retirement age), creating opportunities for an employable ageing population, user-friendly insurance schemes and government policies may be beneficial in reviving or strengthening the economy. Compared to developed countries, employment opportunities and awareness about the rights are limited in low- and middle-income countries. Therefore, there is a need for a country-specific examination of the shortfalls in programmes, policies and job opportunities for the ageing population, to devise an appropriate action plan for supporting, not only the elderly but also the economy of the country.

Key words

Economy, Elderly, Employment, Longevity, Low- and middle-income countries

Introduction

There is an increase in life expectancy globally, leading to an increased number of aged populations world.¹ As a result, it has been anticipated that by 2050, the above 60 years population will reach beyond 2.1 billion if the current growth pattern continues.² Similarly, by 2050, it has been expected that more than two-third of the above 60 years population globally will be found in the low- and middle-income countries (LAMIC).²

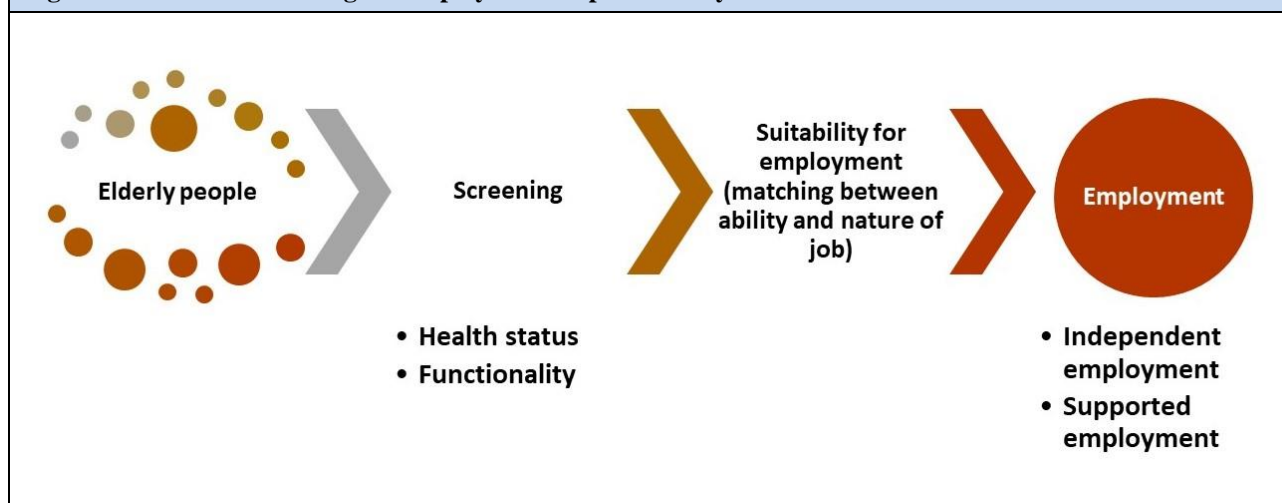
It is well known that with aging, there is an increase in the risk of compromised physiology and functioning, which ultimately affects the productivity of the individual adversely.² Common health issues in the elderly include cognitive decline, impaired immune system, mobility issues, and nutrition-related issues with their consequences.³ These changes lead to an increased need of healthcare, burden of care and financial expenditure on health ailments. In resource-scarce settings, the ageing population also faces additional challenges of getting timely attention to health care due to poor awareness,

ignorance, difficulty in consultation (due to transport-related issues, unavailability of a caregiver to take the patient to hospital), and unavailability of appropriate health facilities in close vicinity. As a result, most of the elderly live with compromised health status; and their functioning and the ability to live a productive life also remain restricted.

Many older people are self-employed and do not have recourse to job related pensions. Some do not get the retirement benefits, and in many countries old age related benefits are not available to all the elderly population or it is too meager to sustain. In these circumstances and with inadequate financial support from family many elderly are forced to work into later years despite their health challenges in the LAMIC. Therefore, it is not uncommon to see many elderly persons perceiving themselves as a burden, due to lack of productivity, increased need for support, and increased healthcare expenses. Having an employment opportunity and support to maintain a job as long as possible may effectively reduce the perception of the older adults that they are being a burden to society; rather it might actually improve their feelings of self-worth.

A policy report has mentioned the beneficial economic impact of healthy longevity (aging).⁴ Healthy longevity is expected to give an economic advantage; however, the compromised health of an ageing population is expected to increase the economic burden. Hence, the effort should be to have healthy longevity, to strengthen the economy. Positive lifestyle measures, adequately addressing the lifestyle-related disorders of the elderly, strengthening psychosocial support, extending the employment (by increasing the compulsory retirement age), creating opportunities for an employable ageing population, user-friendly insurance schemes, and government policies may be beneficial to revive or strengthen the economy.

Older adults already have years of workplace experience, savings from previous jobs in most cases, and clarity of what interests them and what they can do better. Also, their years of experience can be used to sort out many problematic issues at the workplace. Social workers and non-profit organizations should focus on the knowledge and expertise of older adults while dealing with their rights and dignity. This is important for the mental health of the older adult population that will be a considerable proportion of the general population in the near future.⁵

Figure 1: Model for assessing the employment scope in elderly

Job opportunities and awareness about the rights are scarce in the LAMIC in comparison to developed countries. As per the International Labour Organization (ILO) report, the employment opportunities for educated people are very sparse in LAMIC compared to the developed countries.^{6,7} It indicates that the developing countries struggle to provide scopes for earning to their elderly population, who are healthy and capable of leading a productive and independent life. The recent Mental Health Atlas released by World Health Organization (WHO) indicates that the policies, programmes and action plans related to mental health are not updated in all countries regularly, and there is a gross disparity in infrastructure and workforce across countries.⁸ Systemic comparison of policies and programmes related to the geriatric population across the countries is lacking, which could provide insight into the development or up-gradation of existing policies.

The LAMIC need to revise or update their policies and action plans concerning the health and employment of the elderly population to ensure the nation's growth in productivity. There should be an appropriate mechanism to screen older adults for their health status and functionality. Following assessment, the older adults should be checked for their suitability for jobs and the possibility of independent or supported employment (Figure 1). Many older adults may require supervision or some guidance to carry out certain tasks. In such situations a supervisory support may help in ensuring productivity (supported employment). Screening activities can be carried out with the help of community nurses, occupational therapists and social workers through home visits at the community level.

In the LAMIC, employment opportunities are scarce, and many young masses struggle with unemployment. Hence, there should be appropriate planning to create opportunities for the elderly without compromising the opportunities for the youth. Similarly, the safety of the elderly at the workplace needs to be evaluated

periodically as they are at high risk of accidents at the workplace. Moreover, as it may be challenging to engage older adults at the workplace for a long time, there should be enough flexibility of time and working hours. Moreover, cultural barriers may stand as a hurdle for the employment of the elderly. So, the employment of the elderly can be kept as an optional one for those who are interested, rather than making it compulsory.

It is important that LAMIC should have a country-specific evaluation of the deficits in their programmes, policies, and employment opportunities for the ageing population so that an appropriate action plan can be developed to strengthen the country's economy. Countries need to periodically assess on the retirement age and post-retirement scopes for employment, as the life expectancy is increasing in most of the countries. Similarly, it is essential to have a culturally appropriate, comprehensive screening system for evaluating older adults about their capabilities to lead an active life, and matching these to the activities where they can be most productive.

Author information: Sarvodaya Tripathy, MD, Assistant Professor, Department of Microbiology, Great Eastern Medical School, Srikakulam, Andhra Pradesh, India; Email: sarvo_trip@yahoo.co.in; Sujita Kumar Kar, MD, Additional Professor of Psychiatry, Department of Psychiatry, King George's Medical University, Lucknow-226003, U.P., India; Email: drsujita@gmail.com

Correspondence: Dr. Sujita Kumar Kar, Department of Psychiatry, King George's Medical University, Lucknow-226003, U.P., India. Email: drsujita@gmail.com

Competing interests: None

Received: 27 January 2022; **Revised:** 27 February 2022; **Accepted:** 28 February 2022

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Citation: Tripathy S, Kar SK. Optimizing the economy by optimal use of longevity opportunity: lesson for low- and middle-income countries. *Journal of Geriatric Care and Research*, 2022, 9, 1: 7-9.

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Research

Translating Recovering Quality of Life scale to Punjabi: a cultural and linguistic validation study

Sujata Sethi, Prabhmeet Singh, Devpriya Uppal, Ravi Parkash, Nilamadhab Kar

Abstract

The Recovering Quality of Life (ReQoL) scale, developed in the UK is an appropriate instrument for routine clinical use in mental health services. It has been translated to many languages in India and elsewhere. The translation and linguistic validation process of the ReQoL scale to Punjabi, an Indian language spoken in many Northern states of India, was undertaken by a team of mental health professionals at Post Graduate Institute of Medical Sciences, Rohtak, India. The standard process of translation and review was followed. A pilot study involving 10 patients with mental illness was conducted and their suggestions were incorporated in the translation process. The linguistic issues encountered during the process were addressed. The translated Punjabi version of ReQoL was considered acceptable by the patients and clinical team. It appears that ReQoL-10 in Punjabi can be used in the mental health services as an outcome instrument in psychiatric clinical practice and research.

Key words

India, Linguistic validation, Punjabi language, Quality of Life, ReQoL scale, Translation

Introduction

While there are many studies involving quality of life (QOL) scales in Punjabi for physical health related conditions,^{1,2} there are hardly any quality of life (QOL) scales available in Punjabi language for mental health conditions. There is a need for QOL scales in Punjabi for use in psychiatric practice and research to cater for the needs of Punjabi speaking people with mental illness.

Recovering Quality of Life (ReQoL) scale is a brief patient-rated scale to assess the QOL of people with mental illness, aged 16 and above, which has been developed in the UK. It is available in two versions i.e. a 10 and a 20- item measure.³ The brief 10-item ReQoL has been translated and linguistically validated in various Indian languages: Bengali, Gujarati, Hindi, Odia, Kannada, Malayalam, Marathi, and Tamil.⁴⁻¹¹

Punjabi is an Indian language spoken by the people in Punjab states of India and Pakistan and many neighboring states. It is the ninth most widely spoken language in the world and is one of the most widely spoken languages in

India. Punjabi is the third most spoken language in England and fifth most in Canada. It also has a significant presence in the United Arab Emirates, the United States, France, Australia, New Zealand, Italy and the Netherlands. There are approximately 113 million Punjabi speakers.¹²

Objectives

The objectives of this project were to translate 10-item ReQoL to Punjabi language and validate it linguistically, to provide a culturally acceptable scale for use in clinical and research settings in mental health services.

Method

The translation from English to Punjabi was carried out following the standard procedure (Translation and Linguistic Validation Process) suggested by Oxford University Innovation.¹³ The translation team included in-country investigator, co-investigators, four independent translators and a proofreader, based in India. All the members were bilingual experts reading, writing and speaking in Punjabi and English. The translators were requested to focus on conceptual equivalence, neutral wording and cultural nuances. Difference in opinions was dealt by reaching a consensus through discussion. Ten patients participated in the pilot-testing phase. All the patients in pilot were monolinguals, well versed with Punjabi.

Ethics: During the pilot phase, the project was discussed with the patients in detail. Anonymity and option to withdraw consent anytime were explained. Informed consent was taken from the patients who agreed to participate in the study.

Results

We present here the process of translation; highlight various issues encountered and how those were addressed.

Step 1: Forward translation

Forward translation into Punjabi was done independently by two translators and the only difficulty faced was translating the degrees of the severity scale. It was reported that these were too close to differentiate. The items describing the theme of 'quality of life' are commonly understood in the Punjabi speaking population.

Table 1. Sample profile for the pilot testing

Sl No	Sex	Age	Education grades	Diagnosis	ReQoL Score (Items 1-10)	ReQoL item 11 Score	Comments of the patients
1	M	45	11th	Bipolar affective disorder, in remission	14	2	Easy to understand
2	F	43	12th	Depressive disorder	15	1	Cope with what ? (item 3)
3	M	50	7th	Manic episode in remission	31	3	Short and easy
4	F	19	12th	Obsessive compulsive disorder	13	4	Brief and easy but does not cover my illness
5	M	59	8th	Depressive disorder	37	2	Easy
6	F	21	Graduate	Generalized anxiety disorder	24	3	Item 2: trust others is too broad
7	M	43	12th	Obsessive compulsive disorder with depression	16	1	Brief
8	F	27	Diploma	Post-partum depression	17	1	Item 3 needs a situation (to cope)
9	M	50	10th	Schizophrenia	11	0	Easy to understand
10	M	32	11th	Schizophrenia	14	1	Did not comment

F: Female; M: Male

Step 2: Forward translation reconciliation process

Reconciliation process following forward translation showed that literal translation of item 2 (I felt able to trust others) made it very concrete and adding word “*dujiya*” (others) reestablished the focus by making subject/patient more active in trusting “others”. For item 3 (I felt unable to cope), to bring out the essence, we needed to add a noun, “situation” (“*halatan*”) to make the meaning clear.

Step 3: Back translation of reconciled version

Translators had difficulty translating word “*aaukhiyan*” and this word was replaced by “*samasyavan*” (problems).

Step 4: Pilot testing

Pilot testing was done with 10 patients, who were recruited both from outpatient department as well as from the wards. The mother tongue of the patients was Punjabi. All the patients understood questions easily and completed the questionnaire within 7-10 minutes. Their responses are summarized in Table 1.

Step 5: Review

Most patients participating in pilot testing considered the scale brief, simple and easy to understand. Patients also felt that options for severity of problem given were too overlapping and did not help to make clear distinction. The same difficulty was also noticed by other Indian investigators.¹⁰

Following the review and discussion by the translators the final Punjabi version of ReQoL was considered acceptable by a consensus method.

Step 6: Proof reading

The accepted version was proof-read by a Punjabi language scholar, who concurred with the translation.

Discussion

Assessment of QOL constitutes an important parameter in any treatment setting including mental health. This parameter is all the more important in people with chronic illness and helps to assess the impact of treatment. This aspect however remains underassessed mainly because of the non-availability of simple and linguistically sensitive instruments. In recent years, however there have been some QOL scales both generic and disease specific ones are available in local Indian languages for clinical use and research.¹⁴⁻¹⁶

Standard procedure of translation of scales developed in elsewhere in different languages has helped to many scales being available in local languages spoken by the patients. However the translation of scales is a rigorous procedure that demands attention for cultural nuances to be tapped without diluting the conceptual depth of the scale. Translation of ReQoL-10 into Punjabi language appears to achieve this cultural acceptance, while providing a simple easy to use short scale to measure QOL in diverse patient groups with mental illnesses. In addition, it appears to be first such scale to measure QOL in mental health for Punjabi speaking patients.

Conclusion

ReQoL-10 scale (Punjabi version) is acceptable to Punjabi speaking patients with mental illness. The process

of translation was easy. Difficulties encountered were minor and reflected the semantic and colloquial differences of two languages rather than conceptual problems. As well as linguistically acceptable, the Punjabi version appears to be culturally appropriate as well. Considering that ReQoL-10 is a brief and comprehensive scale, the Punjabi version is expected to be used frequently in day-to-day clinical practice. Further validation studies for the psychometric properties of the Punjabi version may be undertaken.

Acknowledgements

We thank Dr. Isha Batra, Dr. Supriya Suthar and Dr. Shefali Singla for their help at various stages of translation. We also acknowledge the study subjects for taking part in piloting this study. The licence for translation and validation of ReQoL into Indian languages was obtained from Oxford University Innovation Ltd by Dr Nilamadhab Kar, Consultant Psychiatrist at Black Country Healthcare NHS Foundation Trust, Wolverhampton, UK. The project was coordinated in India by Quality of Life Research and Development Foundation (QoLReF) and the Institute of Insight, UK.

Author information: Sujata Sethi, MD, DNB, DPM, Professor of Psychiatry, Department of Psychiatry, Postgraduate Institute of Medical Sciences, Rohtak, India, Email: reachsujatasethi@gmail.com; Prabhmeet Singh, MBBS, Junior Resident Psychiatry, Department of Psychiatry, Pt. B.D. Sharma Postgraduate Institute of Medical Sciences, Rohtak, India, Email: singhprabhmeet18@gmail.com; Devpriya Uppal, BPT, Resident in Masters of Physiotherapy, Department of Physiotherapy, Shree Guru Gobind Singh Tricentenary University, Gurugram, India. Email: devpriya12197@gmail.com; Ravi Parkash, MBBS, MD, Senior Resident, Department of Psychiatry, Pt. B.D. Sharma Postgraduate Institute of Medical Sciences, Rohtak, India, Email: raviparkashdw@gmail.com; Nilamadhab Kar, MD, DNB, DPM, MRCPsych, Consultant Psychiatrist and College Tutor, Black Country Healthcare NHS Foundation Trust; Honorary Professor of Psychiatry, University of Wolverhampton, UK and Honorary Professor, Faculty of Contemplative and Behavioural Sciences, Sri Sri University, India; Email: n.kar@nhs.net

Correspondence: Dr. Sujata Sethi, MD, DNB, DPM, Professor of Psychiatry, Department of Psychiatry, Postgraduate Institute of Medical Sciences, Rohtak, India, Email: reachsujatasethi@gmail.com

Competing interests: None

Received: 30 March 2022; **Revised:** 7 April 2022; **Accepted:** 9 April 2022

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Citation: Sethi S, Singh P, Uppal D, Parkash R, Kar N. Translating Recovering Quality of Life scale to Punjabi: a cultural and linguistic validation study. *Journal of Geriatric Care and Research*, 2022, 9, 1: 10-12.

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Research

Translation and linguistic validation of Recovering Quality of Life (ReQoL) scale in Telugu: for use in mental health services

Ramanand Satapathy, Kalla Madhavilatha, Nimidithalli Annapurna, Supriya Satapathy, Mukkala Prajwala, Nilamadhab Kar

Abstract

Background: There is a dearth of scales in the Telugu language for assessing quality of life in persons with mental illness. **Aim:** It was intended to translate and linguistically validate Recovering Quality of Life 10 item version (ReQoL-10) in Telugu, a south Indian language; and to explore its acceptability among psychiatric patients. **Methods:** Translation of ReQoL-10 to Telugu was carried out by forward and backward translation, reconciliation, pilot testing and proofreading. Pilot testing involved psychiatric patients attending Government Hospital for Mental Care, Visakhapatnam. **Results:** The process of translation met with linguistic issues that were highlighted by the patients. These were addressed by modification based on patient's observations. A second pilot-testing was done to ensure the scale is easily comprehensible by the patients, specifically by those at a lower educational level. The participating patient population (n=20) with a mean age 33.5 ± 8.4 years, was diverse in their psychiatric diagnoses which included depression, mania, schizophrenia and obsessive compulsive disorder. **Conclusion:** ReQoL-10 in Telugu is a linguistically acceptable scale and can be used to assess the quality of life in individuals with mental illness.

Key words

English, Quality of Life, ReQoL, Telugu, Translation, Validation

Introduction

In the literature related to quality of life (QOL), there has been a debate about the meaning of the term 'quality of life'.¹ However, there is considerable agreement that QOL is a multi-dimensional concept with aspects such as physical wellbeing, material well-being, social well-being, emotional well-being, and development and activity. In 1995, Felce and Perry proposed a robust approach to define and measure QOL as an objective assessment of life conditions and subjective assessment of satisfaction, weighted according to the significance an individual places on each particular domain.²

The interest in the QOL is gaining prominence in mental health care, as an outcome measure. It can be appreciated

that many of the components of QOL reflect mental health state, psychological functioning, or areas of focus in psychiatric intervention both psychotherapeutic and psychopharmacological measures. In addition, measures of QOL in psychiatric patients may be influenced by the psychopathology, hopelessness, impaired capacity of evaluation, and lower expectation levels about recovery.

In developing countries, mental illnesses are still not given adequate attention as physical illnesses. This is due to many factors: lack of awareness, social stigma, prejudice, lower literacy rate, gender disparity, and relatively fewer health care schemes focusing on mental health. In the contemporary scenario, when the psychiatrist-patient ratio is low, there are time constraints especially in outpatients for additional evaluations such as for QOL. There is a need to have short, patient reported scales to add psychiatric evaluation.

Most of the patient population is comfortable in expressing in their mother-tongue. It is essential to adapt, translate and validate the available standardised scales to the local languages used by the patients so as to facilitate proper care and monitoring of people with mental illness.

There are many QOL scales available in Indian languages;³⁻⁵ however there is a dearth of a short specific scale for use in mental health settings in the Telugu language. Telugu is a popular language used by more than 82 million people worldwide as per the 2011 census of India.⁶ It is spoken mostly in the states of Andhra Pradesh and Telangana in India, and by the Telugu population all over the world.

Recovering Quality of Life (ReQoL) scale is a brief patient-rated scale to assess the QOL of people with mental illness, aged 16 and above.⁷ It is available in two versions: a 10 and a 20-item measure.⁸ The brief 10-item ReQoL has been now translated into various Indian languages: Bengali, Gujarati, Hindi, Kannada, Malayalam, Marathi, Odia, Punjabi, and Tamil; and has been pilot tested in clinical settings.⁹⁻¹⁷

Objective

Objective of this project was to translate ReQoL-10 to Telugu and validate it linguistically for clinical use in patients with mental illness.

Table 1. Subject details at initial pilot study

No	Sex	Age	Education	Diagnosis	ReQoL score / Physical Item	Comments
1	F	46	9 th class	Depression	19/0	Difficult to understand – “Aaswadhinchaanu”
2	M	29	12 th class	Mania (in remission)	24/4	Unable to understand – “Aaswadhinchaanu, Aashajanikam”
3	M	29	MA	Depression	25/4	None
4	F	45	8 th class	Depression	34/3	Unable to understand - “Aaswadhinchaanu, Aashajanikam, Vishwasinchagalanu”
5	F	23	12 th class	Schizophrenia	18/3	Unable to understand - “Aaswadhinchaanu, Vishwasinchagalanu”
6	M	38	BA	Schizophrenia	32/4	None
7	F	21	9 th Class	Bipolar disorder	26/4	Difficult to understand – “Aaswadhinchaanu”
8	M	35	10 th Class	Depression	7/3	Unable to understand - “Aaswadhinchaanu, Vishwasinchagalanu”
9	F	37	9 th Class	Depression	11/3	Unable to understand - “Aaswadhinchaanu, Vishwasinchagalanu”
10	F	32	MA	Obsessive-Compulsive Disorder	18/2	None

Methodology

Site: The study was conducted at Government Hospital for Mental Care, Visakhapatnam, Andhra Pradesh, India which is an exclusive hospital for psychiatric care. Constructed in 1871, it is a 400-bed teaching hospital offering postgraduate training program for MD Psychiatry for nearly 20 students per year. Apart from having general adult and deaddiction units, it has a separate forensic psychiatry, family unit, and *Manovignana* (dedicated day care and occupational therapy unit for intellectually disabled). Currently, the hospital is providing outpatient services to a minimum of 400 patients every day.

Translation process

The translation process was completed through a standardized protocol that involved various steps as described.¹⁸ The translation team included bilingual psychiatrists who are working as faculty members in the Department of Psychiatry, Government Hospital for Mental Care, Visakhapatnam, and are well versed in Telugu and English. The native language of translators is Telugu and they have studied Telugu as their first language. The translators focused on conceptual equivalence, neutral wording and phraseology that incorporated cultural nuances which are used in clinical settings.

Step 1: Forward translation:

Forward translation of ReQoL-10 to Telugu was done independently by two bilingual psychiatrists following the suggested Translation and Linguistic Validation Process.¹⁹

Step 2: Forward translation reconciliation process:

A reconciled version in Telugu was produced from the two forward translations. The comprehensibility and the ease of use in clinical setting were stressed upon during the discussion to agree on the reconciled version.

Step 3: Back translation of reconciled version:

The reconciled Telugu version was translated back to English for internal validation by bilingual psychiatrists.

Step 4: Pilot testing:

For pilot testing both outpatients attending to the centre and inpatients who were in a relatively stable mental state to engage in the study were approached and explained about the process. The patients who consented to participate and support the process by providing their feedback were recruited. Inclusion criteria for selection also included the ability to read and write in Telugu language. Initially, 10 patients were recruited who completed the ReQoL-10 scale in Telugu. Besides using the scale to rate the QOL, they were requested to reflect on the wording, their understanding, and any difficulties they encountered with the meaning of the statements. Their responses were recorded and discussed; which were then incorporated to update the translated version. Their scores for each item of the scale was recorded and scored according to the standard described procedure.^{20–22}

Participants in pilot testing

Participant details of initial pilot testing of the reconciled Telugu version are given in Table 1. The age of subjects ranged from 21 to 46 years (33.5±8.38), median of 38 years.

5: Review after pilot testing:

Upon review of the pilot testing, three words – “Aaswadhinchaanu, Aashajanikam, Vishwasinchagalanu” were reported to be difficult to understand by few subjects. These words were reviewed and substituted by their synonyms. In place of “Aaswadhinchaanu”, “*Ishtam ga chestanu*” were used. Similarly “Aashajanikam” was changed to “*Naaku asha kaligindi*” and “Vishwasinchagalanu” was replaced by “*Nammagalanu*”.

Table 2. Subject details at second pilot study following modification

No	Sex	Age	Education	Diagnosis	ReQoL score / Physical item	Comments
1	F	45	8 th class	Depression	34/3	None
2	F	23	12 th class	Schizophrenia	18/3	None
3	M	38	BA	Schizophrenia	32/4	None
4	F	21	9 th Class	Bipolar disorder	26/1	None
5	M	29	MA	Depression	25/4	None
6	M	46	8th class	Schizophrenia	24/3	None
7	F	40	8th class	Schizophrenia	19/2	None
8	M	29	12 th class	Mania (in remission)	24/4	None
9	F	46	9th class	Depression	27/2	None
10	F	46	9th class	Depression and Obsessive-Compulsive Disorder	16/0	None

The revised Telugu version was re-administered among randomly selected five of the patients in initial pilot and another five new patients attending the centre. Their details are provided in Table 2. There were 4 males and 6 females in each of the pilots conducted. Mean \pm SD score of ReQoL in 1st and second pilots were 21.4 ± 8.54 and 24.5 ± 5.77 ; and ReQoL score at clinical range (score ≤ 24) in 1st and second pilots were observed in 7 and 5 persons respectively. Similarly the physical health related ReQoL item had a mean \pm SD score were 3 ± 1.25 and 2.6 ± 1.35 in the initial and second pilot.

None of the patients in the second pilot using the revised Telugu version reported difficulty in reading or understanding the items. They mentioned that it was comprehensible, and easy to use. There were no further comments or suggestions to change. The scale required only a few minutes to complete by the patients.

Step 6: Proofreading

The accepted version was proofread by a Telugu language scholar, from the Department of Telugu, Andhra University, Visakhapatnam. It was observed that the translated version is grammatically and linguistically appropriate.

Discussion

There are many QOL instruments used in the psychiatry, however, most of them are fairly long and are difficult to use in routine clinical practice. In addition there is no QOL instrument available in Telugu specific for patients with mental illness; and only a few for physical illnesses.^{23,24}

ReQoL-10 is a short, patient-rated scale for mentally ill individuals and is well validated.²⁵ It has been already translated into many Indian languages.⁹⁻¹⁷ As Telugu is one of the major languages used by a sizeable proportion of the Indian population and worldwide, it is essential that ReQoL-10 is available for the patients using Telugu as their first language. Following the translation process, ReQoL-10 scale in Telugu was found to be satisfactory, comprehensible, easy to use and was suitable across a range of mental health conditions as the pilot sample included anxiety, mood and psychotic disorders.

There were few linguistic challenges encountered during the translation process; which were probably secondary to the educational level of the patients. For example, during initial pilot testing of Telugu version, subjects faced problems in answering a few questions as they were unable to understand a few words like “*Aaswadhinchaanu, Aashajanikam, Vishwasinchagalanu*”; which were changed; and there were no concerns regarding comprehensibility during the second pilot of the modified version. While both the versions were understandable by the patients with higher education level, the modified version was easily understood by those with lower level of education. So the second version was acceptable for all the patients and was agreed upon by the translating team.

This is the first study to linguistically validate the Telugu version of ReQoL-10 item scale in an Indian sample of psychiatric patients. The translation and validation were done using standard procedures and covered both genders, a range of age groups, educational levels, and diagnoses. Further studies involving larger samples may be undertaken to establish the psychometric properties of the scale in the psychiatric patient population speaking in Telugu.

Conclusion

In summary, study results suggest that the Telugu version of ReQoL-10 is a clinically useful instrument to measure quality of life in people with mental illness. There is a potential of the scale being used in routine clinical practice and in psychiatric research. There is a need for more studies to validate the instrument further in wider diagnostic groups and to determine the psychometric properties in this culturally different population.

Acknowledgement

Authors specifically thank the study subjects for their participation in this study. The final translated version was proofread by a Telugu language scholar: Professor A. Venkateswarlu, Department of Telugu, Andhra University, Visakhapatnam, Andhra Pradesh, India.

The license for translation and validation of ReQoL into Indian languages was obtained from Oxford University Innovation Ltd by Dr Nilamadhab Kar, Consultant

Psychiatrist at Black Country Healthcare NHS Foundation Trust, Wolverhampton, UK. The project was coordinated in India by Quality of Life Research and Development Foundation (QoLReF), India; and was supported by the Institute of Insight, UK.

Author information: Ramanand Satapathy, MD, Professor of Psychiatry, Andhra Medical College, Visakhapatnam, Andhra Pradesh, and Director, Brain Mind Behaviour Neurosciences Research Institute, Maharani-peta, Visakhapatnam, 530002, Andhra Pradesh, India. Email: drmanand@yahoo.co.in; Kalla Madhavilatha, MD, Assistant Professor, Department of Psychiatry, Andhra Medical College, Visakhapatnam, Andhra Pradesh, India. madhavilathakalla@yahoo.in; Nimidithalli Annapurna, MD, Assistant Professor, Department of Psychiatry, Andhra Medical College, Visakhapatnam, Andhra Pradesh, India. annapurna.ratnam@gmail.com; Supriya Satapathy, MD, Consultant Psychiatrist, Brain Mind Behaviour Neurosciences Research Institute, Maharani-peta, Visakhapatnam, Andhra Pradesh, India. supriyasatapathy7@gmail.com; Mukkala Prajwala, MD, Civil Assistant Surgeon, Government Hospital for Mental Care, Visakhapatnam, Andhra Pradesh, India. prajwalamukkala@gmail.com; Nilamadhab Kar, MD, DNB, DPM, MRCPsych, Consultant Psychiatrist, Black Country Healthcare NHS Foundation Trust; Honorary Professor of Psychiatry, University of Wolverhampton, UK; and Honorary Professor, Sri Sri University, India; Email: n.kar@nhs.net

Correspondence: Prof Ramanand Satapathy, MD, Director, Brain Mind Behaviour Neurosciences Research Institute, Maharani-peta, Visakhapatnam, 530002, Andhra Pradesh, India, Email: drmanand@yahoo.co.in

Competing interests: None

Received: 30 March 2022; **Revised:** 16 April 2022; **Accepted:** 18 April 2022

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Citation: Satapathy R, Madhavilatha K, Annapurna N, Satapathy S, Prajwala M, Kar N. Translation and linguistic validation of Recovering Quality of Life (ReQoL) scale in Telugu: for use in mental health services. *Journal of Geriatric Care and Research*, 2022, 9, 1: 13-17.

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Research

Late-onset obsessive-compulsive disorder without evidence of any organic cause: a case series

Satyakam Mohapatra

Abstract

Late-onset obsessive-compulsive disorder (OCD) is usually described in the context of organic aetiology. In this case series, three cases are described who developed OCD for the first time at a later age without any evidence of associated neurological disorders. These patients presented with obsessions such as like contamination and doubts; along with compulsions of repeated washing and checking; which are common in early onset OCD. All these patients responded well to pharmacotherapy. As late-onset OCD are being reported, clinicians need to be aware about this condition in elderly, its clinical presentation and treatment outcome. Systematic research involving larger sample is required to understand whether late-onset OCD is associated with unique clinical, genetic, neuropsychological and neurobiological correlates, along with any variation of the treatment response.

Key words

Aged, Late-Onset, Obsessive-Compulsive Disorder, Outcome, Treatment

Introduction

Obsessive-compulsive disorder (OCD) is the fourth most prevalent psychiatric disorder, having an onset in the second and second third decade of life. The mean age at onset of OCD is between 20 and 25 years and that only 15% of cases present after the age of 35.^{1,2} Onset of OCD after age 50 is relatively unusual, and information regarding these cases is limited to case reports. Indeed, as of yet, there is no consensus on what should be termed as "late-onset OCD" with various researchers suggesting quite distinctive ages at onset for this condition.³ Late-onset OCD is usually described in the context of organic aetiology.⁴ Structural brain lesions involving the frontal regions and basal ganglia have been most commonly reported.⁵

Traumatic brain injury, central nervous system infections, neurological disorders in the elderly, like dementia and Parkinson's disease may present with obsessive-compulsive symptoms. Late-onset OCD can be a psychiatric presentation of a neurodegenerative disorder such as frontotemporal dementia in its behavioural or

semantic variants.⁶ Few cases of late-onset OCD without any underlying organic cause have also been reported.^{7,8,9}

In this case series three cases are described who reported OCD for the first time after the age of 50 years. These cases were seen in Mental Health Institute, SCB Medical College, Cuttack, Odisha. All the patients provided written informed consent for the study.

Case history

Case- 1

A 58-year-old female patient who had well-adjusted premorbid functioning and without any past or family history of neurological and psychiatric illness presented with complaints of repetitive hand washing and cleaning, spending more time in bathing, fear of being contaminated with dirt and germs and decreased sleep of 6 months duration. On mental status examination anxious affect and contamination type of obsession i.e. repetitive intrusive thoughts that things were dirty and there was a need to clean them were elicited. She acknowledged that these thoughts were her own, repetitive, intrusive and not under her control. There was no other co-morbid psychiatric illness detected in the patient.

Physical examination of the patient did not reveal any abnormality. Laboratory investigations including haemogram, thyroid function tests, liver function tests, renal function tests were within normal limits. Considering late-onset of obsessive and compulsive symptoms non-contrast computerized tomography of the brain was done which revealed no abnormality. On the basis of history and mental status examination a diagnosis of OCD was made. The severity of symptoms was assessed by administering Yale Brown Obsessive Compulsive Scale (Y-BOCS).¹⁰ Her Y-BOCS score was 24 (maximal score 40; for the diagnosis of OCD a score of more than 16 is required).

Treatment with fluvoxamine 50 mg and clonazepam 1 mg per day was started. The dose of fluvoxamine was increased to 100 mg after 4 weeks. Her symptoms improved significantly after 8 weeks of treatment. Her Y-BOCS score decreased to 12. She was continued on the same medications; and the symptomatic improvement was maintained.

Case -2

A 66-year old female presented to the psychiatric OPD with complaints of fear of contamination, fear that her cloths and hands are soiled with faeces, repeatedly washing hands, going to toilet to check the clothes, not able to do any household work and having sleep disturbance for previous 8 months. On serial mental state examinations, she had obsessions of contamination, compulsions for checking and washing and anxious affect. There was no past history or family history of any psychiatric illness. There was no other co-morbid psychiatric illness.

The total Y-BOCS score for her symptoms was 30 (obsessions score 16 and compulsions score 14). Other routine investigations were within normal limits. She was known to suffer from type II diabetes mellitus and on treatment with oral hypoglycaemic agents. To rule out the possibility of any underlying organic cause, detailed physical examination and non-contrast computerized tomography of the brain were performed. There was no abnormality detected in these examinations.

She was started with sertraline 50 mg; and the dose was increased to 100 mg after 8 weeks. She improved gradually with 100 mg of sertraline; and her total Y-BOCS score dropped to 14 after 4 months of treatment.

Case -3

A 64-year-old woman presented with a 5-year history of slowness of daily activities, taking a very long time cooking different dishes, repetitive checking the items in kitchen, also checking the gas stove and locks of the house. There is impairment in daily activities due to these checking activities. On mental status examination obsessions of pathological doubts were elicited. There was no abnormality detected on physical examination which involved detailed neurological examinations and routine laboratory investigations. Brain imaging could not be done in this case. The total Y-BOCS score was 28. She was started with fluoxetine 20 mg and dose was increased to 60 mg. Her condition improved over 3 months of treatment.

Discussion

While a great amount of attention has been paid to juvenile and adult-onset OCD, there is a dearth of studies on patients presenting with OCD for the first time in the later years of life. Late-onset OCD have been reported being associated with organic aetiologies, e.g. Lewy body dementia,¹¹ arachnoid cyst,¹² Huntington's Disease,¹³ amongst others. However some studies do report absence of any neurological disorders, even in the very late-onset OCD.^{7,9,14} These case reports described in this article add to the literature that some of the late-onset OCD might not be associated with any contributing neurological illnesses. However, as late-onset OCD has been reported to usually present with organic aetiologies, it can be emphasized that every case should be investigated properly to rule out any contributing physical illnesses. Organic disease, primarily

neurodegenerative diseases and cerebrovascular injury, must be ruled out as the principal aetiology. However, as exemplified in the reported cases here, some cases may present without any obvious neurological illnesses.

Studies have reported that late-onset OCD is more likely to occur in females, to be associated with a personal history of subclinical obsessive-compulsive symptoms and to be linked with a major traumatic event occurring around midlife.¹⁵ In all the patients in this series, there were no family history of OCD or there were no major traumatic life event.

Differences in age of onset may be associated with phenotypical differences in disease severity, comorbidity, and treatment response across patients. Though no significant difference in the clinical presentation between early-onset and late-onset OCD have been observed in some studies;¹¹ but a few have reported some unique observations such as genital self-mutilation¹⁴ and memory obsession¹⁶ in late-onset OCD. Atypical clinical manifestations e.g. fluctuation level of insight during the course of illness has also been reported in a late-onset case with arachnoid cyst.¹² Another systematic review described that in comparison with adult-onset, late-onset OCD was significantly associated with collecting compulsions, less-aggressive obsessions; and in comparison with juvenile-onset, late-onset OCD was significantly associated with less-aggressive obsessions, sexual obsessions, and repeating compulsions.¹⁷

Previous reports suggested that cases of late-onset OCD without organicity may have fairly good response to treatment.⁷ Some cases of late-onset OCD starting after the age of 50 years with underlying dementia with Lewy Bodies did not respond well to treatment.¹¹ All the patients in this case series responded well to pharmacotherapy. In late-onset OCD therapeutic management should be individualized for each case, with the use of drugs having lower side effect profile, along with psychotherapy.

Conclusion

In this case series, onset of OCD was observed after late 50s; where there was no obvious organic aetiology; and all the patients responded well to pharmacotherapy. More studies are required to find out any difference between the clinical presentations in cases of late-onset OCD with and without underlying organic pathology. Increasing awareness of the disorder in the elderly may help clinicians for better identification and treatment of this disabling condition. Further systematic research is required to explore whether late-onset OCD is associated with any unique clinical, genetic, neuropsychological and neurobiological correlates. In addition treatment response and challenges of OCD in old age may also be explored.

Acknowledgement

Author wishes to thank all the patients and their family members for participation in the study. The support from Mental Health Institute, Cuttack in conducting the study is also acknowledged.

Author information: Satyakam Mohapatra, MD, Assistant Professor, Department of Psychiatry, SCB Medical college, Cuttack, Odisha, India, Email satyakgm@gmail.com

Correspondence: Satyakam Mohapatra, MD, Assistant Professor, Department of Psychiatry, SCB Medical college, Cuttack, Odisha, India, Email satyakgm@gmail.com

Competing interests: None

Received: 7 May 2022; **Revised:** 10 May 2022; **Accepted:** 11 May 2022

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Citation: Mohapatra S. Late-onset obsessive-compulsive disorder without evidence of any organic cause: a case series. *Journal of Geriatric Care and Research*, 2022, 9, 1: 18-20.

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Research

Onset and progression of scleritis in an older adult following COVID-19 vaccination: a case report

Shreyan Kar, Subhabrata Parida, Julie Sathia

Abstract

Background: Scleritis is known to be associated with infectious and non-infectious conditions, mostly autoimmune disorders and a proportion are idiopathic. **Case history:** A 70 year old Indian male, with no history of autoimmune disorders developed scleritis two days after receiving COVID-19 vaccine. The presentation included both nodular and diffuse scleritis which affected different parts of the sclera and progressed despite steroid and immunosuppressant treatment. Patient developed scleral thinning within few months. **Conclusions:** In the absence of autoimmune and viral markers, this case highlights the possibility of association of scleritis with the vaccine. While the association needs to be explored, cases of scleritis and other ocular reactions following vaccines should be followed up long term for the outcomes.

Key words

Autoimmune Disease, Collagen Vascular Disease, COVID-19, Scleritis, Vaccine

Introduction

There have been reports of episcleritis and scleritis following the Oxford University/AstraZeneca COVID-19 vaccine (Covishield) numbers of which have gone up in recent reports.¹ Episcleritis has also been reported as a COVID-19 manifestation.² We are presenting a case of scleritis which developed two days after a COVID-19 AstraZeneca vaccine and its progression over the following months.

Case History

Presentation

Two days after receiving the Oxford University/AstraZeneca vaccine, a 70-year-old Indian male developed redness in their right eye. It was initially diffuse and a local ophthalmologist considered it to be viral conjunctivitis. Within days, there was further redness and swelling which was specific to the sclera; and there was no involvement of conjunctiva. The scleritis, which was initially diffuse, later became nodular. After around 8 days he developed an intermittent sharp pain in the eye which continued for a few hours at a time, most often occurring early in the morning. The redness and

swelling of the sclera persisted (Figure 1). He was diagnosed to have scleritis at a tertiary level medical college hospital. As time went on, the scleritis affected various parts of his right eye. He did not report any problems in his vision.

History

This gentleman has had hypertension for around 14 years and was on telmisartan 40 mg per day. He had no other regular medications. There was no history of diabetes, tuberculosis, hypothyroidism, rheumatic arthritis or any musculoskeletal symptoms other than intermittent sciatica. He had a history of varicella, occurring 1 year ago and hepatitis, occurring 50 years ago. There was no history of visual blurring, fever, rash, ear discharge, sinusitis, cough, paraesthesia, weight loss, haematuria or decreased urination. There was no specific ocular history of bleeding, or recent surgery or trauma in the eye; and there was no impairment of vision. There was no history of contact with patients suffering from COVID-19 or any other infections. Family history of autoimmune conditions was absent.

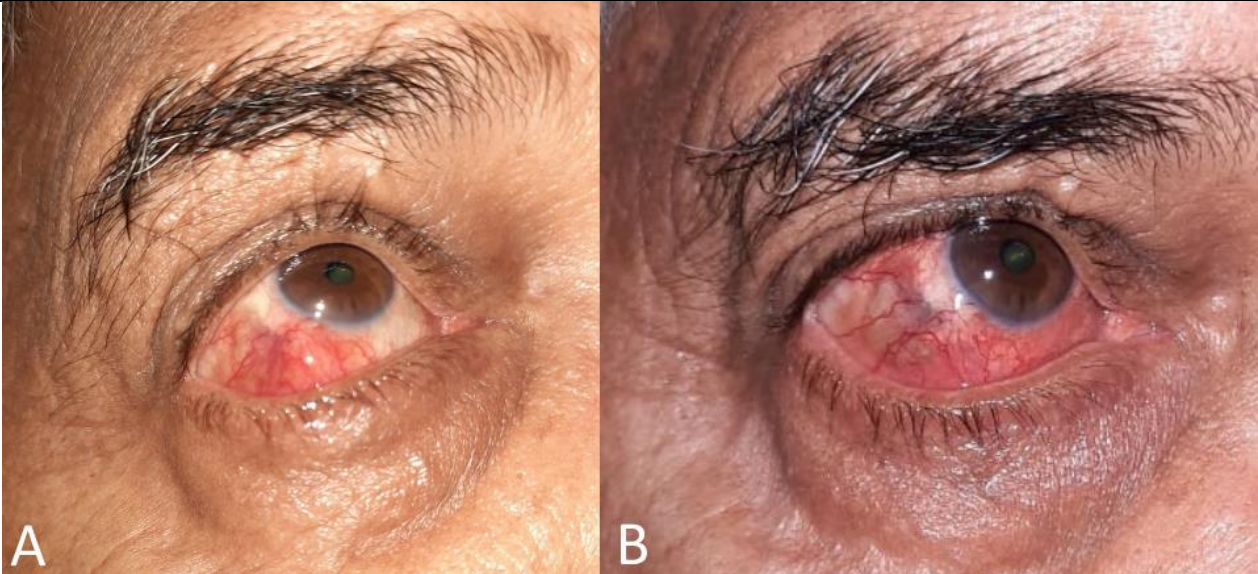
Examination

His vision, intraocular pressure and fundus were normal. The sclera was tender. The presentation of scleritis kept changing; it was noted to be diffuse at the beginning and at a different point in time, it was considered nodular. There was no evidence of other organ involvement or any evidence of systemic vasculitis.

Investigation

His full blood count was generally within normal ranges, except white blood cell count being $12.4 \times 10^9/L$ and erythrocyte sedimentation rate 27mm/h. Liver function tests, urea and creatinine were normal and c-reactive protein was 6.5 mg/L. There were no abnormalities detected in his urine. The chest and head X-rays were normal. His Mantoux tuberculin skin test, VDRL test and rheumatoid factor screening were negative. The human leukocyte antigen (HLA) B27, anti-neutrophil cytoplasmic antibodies (ANCA) profile, ANCA-IFA, hepatitis C virus (HCV) antibody, hepatitis B surface antigen (HBsAg) were negative/non-reactive and his antinuclear antibodies (ANA) was weak positive (1:100; with biological reference interval being negative). Later ANCA, serine proteinase 3 (PR-3) antibodies, anti-myeloperoxidase (MPO) antibodies were negative.

Figure 1 Progression of scleritis at different periods



(A) Nodule upon a diffuse scleritis (47th day); (B) Diffuse scleritis with development of thinning of the sclera (63rd day)

Figure 2 Migrating scleritis and progressing scleral thinning



(A) Scleritis in the medial side, thinning of the sclera in the earlier lateral side (79th day); (B) Bluish discoloration of the sclera (124th day); (C) Thinning of the sclera on the lateral side (163rd day); (D) Persisting scleral thinning (277th day)

His COVID-19 antigen test was negative before scleritis. He did not have any COVID-19 related symptoms during the course of this eye condition and did not have a COVID-19 test during this period.

There were few limitations in the investigations. Scleral biopsy or excision biopsy of the nodule were not conducted which could have helped the diagnostic process. Photographs of lesions under a slit lamp or ultrasound biomicroscopy to verify the reduction of scleral thickness were not available.

Treatment

He was initially prescribed flurbiprofen and gatifloxacin, with chloramphenicol and polymyxin-B ointment. After around 4-5 days, it was considered as viral conjunctivitis, and moxifloxacin and tear drops (carboxymethylcellulose) were prescribed. Later, the redness continued along with intermittent pain. He was prescribed indomethacin, rabeprazole, moxifloxacin, loteprednol and piroxicam.

Considering the persisting scleritis, collagen vascular disease was suspected, and prednisolone drops and oral tabs were started. Following investigations as mentioned above, azathioprine was added to prednisolone. However, the redness and pain in the eye continued. The intensity of the inflammation fluctuated over the weeks, and the early morning excruciating pain continued. Scleral nodules and areas affected shifted, mostly from lateral to medial side.

As the investigations were nonspecific, antiviral treatment (aciclovir) was given for 10 days on a trial basis; considering that a proportion of scleritis cases are known to be infectious and associated with herpetic infections. However, there was no perceptible improvement in the course of the illness. A cyclophosphamide injection was considered but was not given because of the patient's concern of toxicity. The azathioprine dose was increased to 175 mg per day and the symptoms gradually improved, and pain subsided.

Course

He gradually developed discolouration of sclera due to diffuse thinning of anterior sclera. During the course of the disease, he did not develop uveitis, choroiditis or posterior scleritis.

No association with any systemic disease could be found for him. Secondary to steroid therapy, his weight increased slightly. He developed steroid induced hyperglycaemia and was started on antidiabetic medication. His blood pressure increased as well, necessitating adjustment to the antihypertensive medications. Later he developed neutropenia and azathioprine was discontinued; however after around three weeks as the blood counts improved, it was restarted and continued at a lower dose (75 mg). During this period of discontinuation of azathioprine, there was no change in scleritis, pain or discomfort.

Outcome

Gradually the thinning of the sclera spread over larger areas (Figure 2); however there was no perforation. There was still occasional eye pain that required analgesics. He reported a feeling of thickness and discomfort in the right eye lid. There were some complaints of blurry vision later; refractive error suggested changes in the right eye: 0.5D spherical, 1.75D cylindrical, axis 30°. Around nine months after the onset, the regular medications that he was taking included azathioprine 75 mg and nepafenac eye drops; with prednisolone which was being tapered down with a goal to be stopped.

Conclusions

Scleritis is associated with infectious and non-infectious conditions, with a proportion of them being idiopathic. Infectious scleritis is linked to viruses, bacteria, fungi, and parasites in 4% to 10% of all cases, whereas almost half are associated with an autoimmune condition.³ COVID-19 has presented with ocular manifestations, with some reports indicating conjunctivitis being the sole presentation.⁴ Ocular reactions after the vaccine have been reported as well.¹

In this case, scleritis which started after two days of receiving COVID vaccine, persisted for months, fluctuated in the intensity and there was scleral thinning. To our knowledge, there is no report of persistent scleritis and scleral thinning in the literature following a COVID vaccine. The investigations conducted relating to collagen vascular disease and other viral markers were negative. In the absence of any specific association following investigations, the probable cause is not definitive; however, a link to vaccine cannot be ruled out as there have been some reports of scleritis after COVID vaccination.¹

The proposed mechanisms of ocular inflammation following COVID-19 vaccine have been the molecular mimicry of the vaccine components with ocular tissues, antigen-specific cell and antibody-mediated hypersensitivity reactions to viral antigens and adjuvants present in the vaccines;^{5,6} in addition to vaccine-induced antibody-dependent enhancement of pre-existing inflammatory eye diseases.⁷ With the currently available information, although it is difficult to consider specific causal relationship with the vaccine; it is better to be vigilant about the emerging evidence.

Acknowledgement

Authors wish to thank the patient for providing informed consent for the case report. GeriCaRe (Geriatric Care and Research Organisation), India supported the process of follow up of the patient, coordinating with the clinicians involved in the care of the patient in various departments in SCB Medical College, Cuttack and KIMS, Bhubaneswar. Quality of Life Research and Development Foundation (QoLReF) and The Institute of Insight, UK supported the project.

Author information: Shreyan Kar, MBChB, University of Birmingham Medical School, Birmingham, UK, <https://orcid.org/0000-0001-7482-1977>; Email: kar.shreyan@gmail.com; Subhabrata Parida, MS, Professor of Ophthalmology, Regional Institute of Ophthalmology, SCB Medical College, Cuttack, 753003, India, Email: subhabrataparida@yahoo.co.uk; Julie Sathia, MRCOphth, Ophthalmologist, Community Eyecare, UK; Email: juliesathia@hotmail.com

Correspondence: Shreyan Kar, MBChB, University of Birmingham Medical School, Birmingham, UK, Email: kar.shreyan@gmail.com

Competing interests: None

Received: 28 May 2022; **Revised:** 14 June 2022; **Accepted:** 15 June 2022

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Citation: Kar S, Parida S, Sathia J. Onset and progression of scleritis in an older adult following COVID-19 vaccination: a case report. *Journal of Geriatric Care and Research*, 2022, 9, 1: 21-24..

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Research

Impact of early neuro-imaging in the process of dementia diagnosis in Wolverhampton memory assessment service: an evaluation

Kuljit Mandair, Aparna Prasanna

Abstract

Background: Nationally, there has been a rapid rise in the number of referrals as well as an increase in demand to provide a timely diagnosis of dementia. **Aims:** The aim of this service evaluation was to study the impact of early access to neuroimaging for patients referred to the Memory Assessment Service (MAS) in order to avoid delays to diagnosis and management. **Methods:** An early neuroimaging care pathway was introduced where patients were referred for neuroimaging at the point of referral to MAS following senior clinical overview; this was compared to the current care pathway (where scan requests are considered following an initial nursing assessment) and with those patients who had a previous scan. **Results:** Patients who had scans requested at triage or who had scans prior to referral had faster diagnosis rates compared to those who did not. **Conclusions:** Implementing a new pathway whereby clinicians can either have access to prior neuroimaging or refer appropriate patients for scans at referral, has shown to expedite the timeline from referral to dementia diagnosis and therefore has shown to reduce waiting time to diagnosis and management.

Key words

CT Scan, Dementia, Diagnosis, Memory, MRI Scan, Neuro-imaging

Introduction

As part of the Prime Minister's Challenge on dementia 2020, the aspirational goal in England is for patients to be offered an initial assessment within 6 weeks of being referred by a General Practitioner (GP) and that no one should wait months for a diagnosis.¹ There is a need to address any obstacles to a dementia diagnosis as a delay in diagnosis could have adverse implications for both the patient and their families. A delay in interventions is associated with an earlier decline in functioning.² It may also lead to poorly managed behavioural and psychological symptoms of dementia (BPSD), which may lead to increased patient and carer distress, accelerated cognitive decline, inappropriate antipsychotic prescribing, and earlier admission to residential care.²

There has been a rapid rise in the number of referrals as well as an increase in demand to provide a timely diagnosis to an ageing population. It is projected that there will be an additional 7.5 million people aged 65 years and over in the UK in 50 years' time and there has been a rapid demographic growth in the population aged over 85 who have a prevalence of dementia of around 30%.³ For some patients who require neuroimaging to establish a diagnosis subtype, delays in receiving appointments for brain scans can be an important and relevant factor causing a delay to diagnosis.

The Wolverhampton Memory Assessment Service (MAS) is a nurse-led service which accepts referrals from both primary care (e.g. GPs) and secondary care (e.g. geriatricians, neurologists) referrers within the Black Country region in the West Midlands. The service receives approximately 80-100 referrals each month. It is supported by a multidisciplinary team of psychiatrists, psychologists and occupational therapists. It is not a requirement for referrers to request brain scans for the patient prior to referral to MAS.⁴ Neuroimaging scans are routinely offered locally at two local radiology units that are separate to the memory service.

Neuro-imaging guidance

Clinical guidelines for neuroimaging in NICE dementia guidance were followed in requesting of brain scans in the MAS. The NICE dementia guidance suggests offering structural imaging to rule out reversible causes of cognitive decline and to assist with subtyping of the diagnosis (unless the dementia is well established and the subtype is clear). Specialist imaging is only considered if it would help to diagnose a dementia subtype and knowing more about the dementia subtype would change the management plan.⁵

The decision to refer a patient for neuroimaging should be a clinical decision and should take into account patient preference and patient tolerability. It is also worth noting that if a scan is requested in a case where the diagnosis is clear including the subtype or where they may be no clinical purpose in establishing the accurate subtype, this may delay the diagnosis for the patient and cause delays for other patients in the service for whom a scan might be considered a more essential part of a clinical work up.⁵

There are cases where patients almost always require neuroimaging, for example: any patient presenting with a history of seizures, signs and symptoms of a raised intracranial pressure, acute or rapid onset of symptoms, any other focal neurological symptoms or signs that are not explained by medical history and a non-amnesic pattern of cognitive defects.⁶

When considering which type of scan to request for a dementia diagnosis, for example whether to request a computerised tomography (CT) scan or magnetic resonance imaging (MRI) scan; it is worth noting that most reversible causes of dementia that show up on brain imaging will be satisfactorily demonstrated on a CT scan; and unless there is a very atypical history the preferred option is a CT scan.⁶ CT scans also have the added advantage of lower costs in many centres. However, the radiation exposure associated with CT scans has a less favourable risk/benefit ratio in younger patients especially those who have mild symptoms in whom repeated imaging might be required.⁶ Therefore to summarise, CT is a suitable option for older adults particularly those with a clear-cut presentation and is the preferred option for frailer, agitated, claustrophobic and less able to tolerate the longer imaging protocols.⁶

MRI is contraindicated for patients who have a pace maker or metallic implants. The only major subtype of dementia in which MRI is shown to be superior to CT is vascular dementia. This is due to the fact that cortical and subcortical ischaemic lesions are better demonstrated on MRI and some vascular pathologies such as micro-bleeds cannot be seen on CT scans. Therefore, if the dementia subtype is uncertain and vascular dementia subtype is suspected, MRI is the preferred modality.⁶

Objectives

The objective of this service evaluation was to study whether requesting neuroimaging for appropriate patients by psychiatrists at an earlier stage in the pathway led to an earlier diagnosis when compared to the current process which is to consider requesting neuroimaging following the initial nursing assessment.

Methodology

All referrals into the Wolverhampton MAS are usually triaged on a daily basis by a nurse. Once the referral is accepted, the MAS nurse will also check if the patient has had a brain scan within the lifetime of the cognitive symptoms and if so, the scan is sourced. An initial telephone contact is made with the patient and the carer with the patient's permission, and a nursing assessment is arranged. This usually takes up to 6 weeks. Once the nursing assessment is complete, the clinical history is discussed with the psychiatrist, at which point, a clinical decision is made as to whether the patient requires a brain scan for diagnosis or not.

If a scan is requested, the approximate waiting time for a neuroimaging appointment in the local radiology service is 12 weeks. Once the results of all investigations are

received, the patient is given the diagnosis in the outpatient clinic of either a nurse or a psychiatrist.

We identified that there was a delay to diagnosis at the point where patients were initially waiting for 6 weeks for a nursing assessment and then a further 12 weeks for a neuroimaging scan appointment. In order to reduce this delay, a new neuroimaging pathway was introduced where patients were referred for neuroimaging at the point of triage, following senior clinical overview to identify whether a brain scan would be appropriate or not.

The sample population was split into 3 groups; group 1 represented the patients who had neuroimaging requests made after initial nursing assessments; group 2 represented patients who were referred with recent scans already available or scans requested by a doctor outside psychiatry such as a GP at referral; and group 3 represented patients who had scans requested at referral triage by a psychiatrist. Group 1 and 2 represent the usual care pathway at Wolverhampton MAS and group 3 represented the new early pathway. A retrospective sample of three groups of newly referred patients were selected, (sequentially referred from 1st June – 31st August in 2021), each sample consisting of 15 newly referred patients. Majority of the patients in all three groups were referrals from June and July 2021 as the sampling was done sequentially until each group had 15 patients each.

All 45 participants continued to receive their care as usual in the MAS pathway, including care and diagnosis by their usual clinicians such as nurses, clinical psychologists, occupational therapists and psychiatrists.

The exclusion criteria were as follows: patients who did not attend scan appointment, patients who had been re-referred within 12 months of discharge from MAS, patients who were referred for BPSD and patients who declined to have a scan.

In January 2022, a specifically designed questionnaire was used to collect data from electronic health records. The following information was collected: age, gender, comorbidities, date of referral to MAS, date scan requested, who requested the scan, date of scan, type of scan, date diagnosis given, diagnosis subtype and whether the diagnosis was given in a psychiatric outpatient clinic or a nurse-led clinic. The data was collected by two doctors working within the service but not directly involved in providing care.

From the data, the demographic breakdown and rates of diagnosis in each group was calculated. We were able to calculate the time frame (number of days) between the date of initial referral to the date of diagnosis given; and in group 3, the time frame from the date of initial referral to the date of the scan taking place. This calculation included working days only, holidays and weekends were excluded. The end date was also included.

The care pathway evaluation received approval from the Trust Clinical Audit and Effectiveness Committee. As there was no randomisation in the usual care pathway this project was deemed to be a Quality Improvement activity.

Table 1: Demographic data for each group of patients

Variables	Categories	Group 1 n (%)	Group 2 n (%)	Group 3 n (%)
Gender	Female	8 (53%)	10 (67%)	9 (60%)
	Male	7 (47%)	5 (33%)	6 (40%)
Age Range (years)	50-59	1 (7%)	0 (0%)	0 (0%)
	60-69	0 (0%)	3 (20%)	3 (22%)
	70-79	3 (20%)	3 (20%)	5 (35%)
	80-89	8 (53%)	5 (33%)	7 (43%)
	90+	3 (20%)	4 (27%)	0 (0%)

Table 2: Medical co-morbidities of the patients

Co-morbidities	Group 1 n (%)	Group 2 n (%)	Group 3 n (%)
Hypertension	6 (40%)	7 (46%)	10 (66%)
Cardio-vascular disease	3 (20%)	9 (60%)	4 (26%)
Lung disease	2 (13%)	1 (7%)	3 (20%)
Chronic kidney disease	3 (20%)	5 (33%)	2 (13%)
Thyroid disease	3 (20%)	2 (13%)	3 (20%)
Osteoarthritis	4 (26%)	5 (33%)	6 (40%)
Bowel disease	1 (7%)	3 (20%)	1 (7%)
Oesophageal disease	0 (0%)	1 (7%)	0 (0%)
Stroke	0 (0%)	1 (7%)	0 (0%)
Diabetes	2 (13%)	5 (33%)	3 (20%)
Epilepsy	0 (0%)	1 (7%)	0 (0%)
Cancer	2 (13%)	1 (7%)	0 (0%)

Results

Demographics

The demographic figures for the overall sample of 45 patients, starting with age range were: 44.4% were between the ages of 80-89, 24.4% were between the ages of 70-79, 15.6% were between the ages of 60-69 and 2.2% were between the ages of 50-59. The sample consisted of more female (60%) patients than male (40%) patients.

For the whole sample (n=45), 53% of the patients had MRI scans requested or completed, 40% of the patients had CT scans requested or completed; and it was unclear in 7% of the cases as to which type of scan was requested or which type of scan the patient had.

Co-morbidities

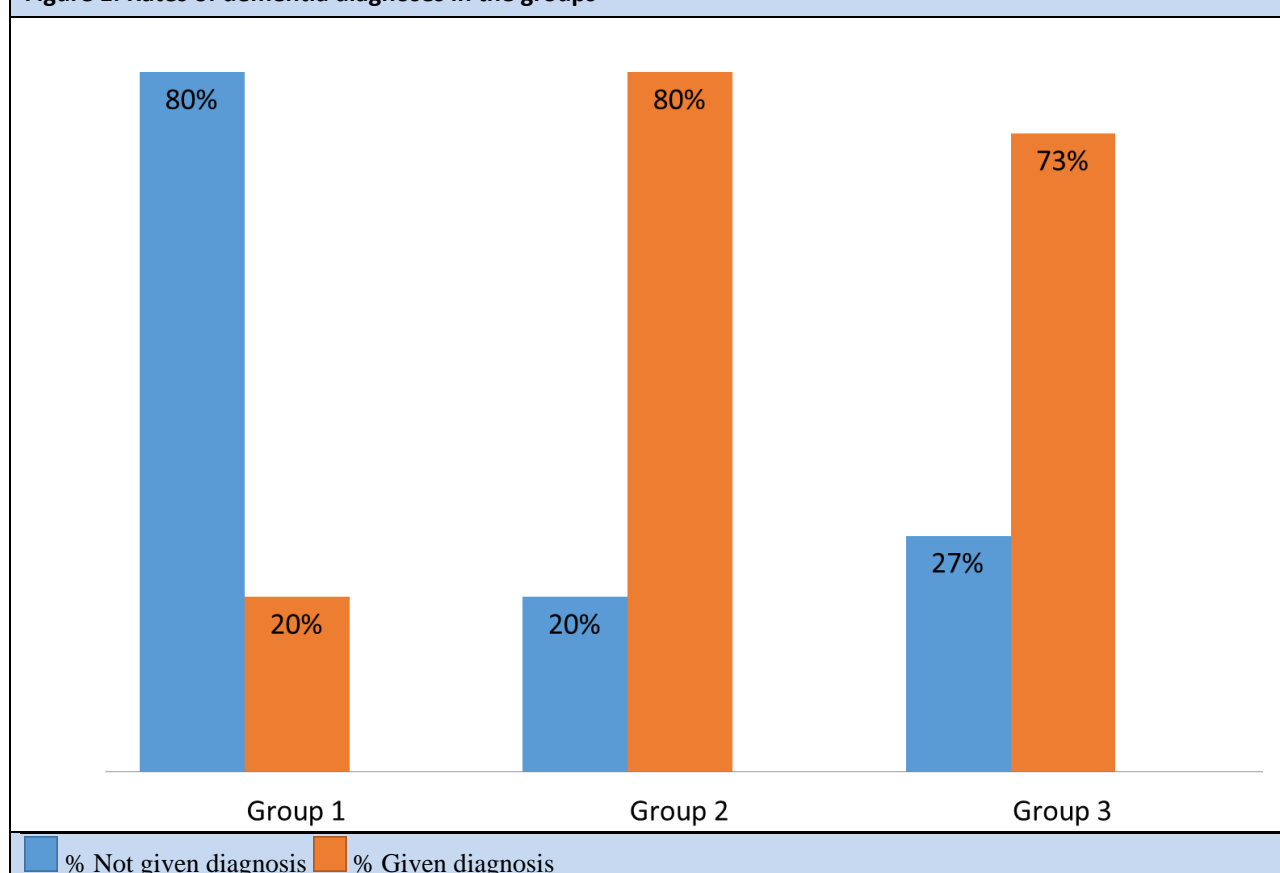
Medical co-morbidities of the patients in each group are presented in Table 2. Patients in all the three groups had more than one co-morbidity. The patients were chosen consecutively in a retrospective evaluation, hence unlikely that any one group would have differed from the others in their co-morbidities. However due to the small sample size we did not draw any conclusions. The most common co-morbidity in group 1 is hypertension followed by osteoarthritis; in group 2 it is cardiovascular

disease followed by hypertension and in group 3 it is hypertension followed by osteoarthritis.

Group 1

In group 1 (total n=15); 60% (n=9) had a MRI scan requested, 33% (n=5) had a CT scan requested and it was not clear in 7% (n=1) of the patients as to which type of scan was requested. Most (93%, n=14) of the scans were requested by the psychiatrists and it was not clear in 7% (n=1), however it was most likely by a psychiatrist.

In group 1; 47% (n=7) had still not had a scan when the data was collected in January 2022 despite being referred to the MAS between 1st June till 31st August 2021. Most patients in group 1 were from June and July 2021 as sampling was done sequentially. More than half (53%) of the patients in Group 1 did have a scan; however, only three patients were given a diagnosis. One patient was given a diagnosis without the results of the scan and the other two patients were marked as urgent referrals from their GP and therefore their nursing assessment took place within two weeks as opposed to it usually happening within 6 weeks. Most (80%, n=12) patients had not been given a diagnosis in group 1, despite 53% having scans by the time of this study. This was due to factors such as scans becoming available much later in the pathway, and unavailability of timely clinic appointments, although these were getting scheduled.

Figure 1: Rates of dementia diagnoses in the groups

Group 2

In group 2 (total n=15), all patients had a scan either prior to the referral (73%, n=11) or requested by the time of referral (27%, n= 4). More than half (53% n=8) of the patients had a recent scan prior to referral (as part of a recent hospital admission); 7% (n=1) had a scan requested by a geriatrician at the point of referral; 20% (n=3) had a scan requested by their GP; and in 20% (n=3) it was unclear as to who requested the scan, however the scan was available at initial referral. Most (80%, n=12) of the patients in group 2 were given a diagnosis, and 20% (n=3) were not given a diagnosis. More than half (58.3%, n=7) were given a diagnosis of mixed dementia; 25% (n=3) had vascular dementia; 8.3% (n=1) alcohol related dementia, and 8.3% (n=1) were given a diagnosis of dementia due to Parkinson's disease. In group 2; most (75%, n=9) were given the dementia diagnosis in a clinic by nurses compared with (25%, n=3) in a clinic by psychiatrists.

The average number of days in group 2 between referral to diagnosis was 82 days. The reasons some patients were not given a diagnosis were appointment cancellation by the patients or some were awaiting appointments.

Group 3

In group 3 (total n=15); 73% (n=11) had an MRI brain scan requested and 27% (n=4) had a CT brain scan requested. 67% (n=10) were given a diagnosis of dementia and 33% (n=5) were not given a diagnosis.

Most (70%, n=7) were given a diagnosis of Alzheimer's dementia and 30% (n=3) were given a diagnosis of mixed dementia. Most patients in this group (80%, n=8) received the diagnosis in a psychiatrist's clinic compared with 20% (n=2) who received the diagnosis in a nurse's clinic. To summarise, in group 3, all 15 (100%) patients had undergone a brain scan and 67% (n=10) had been given a diagnosis.

The average number of days from referral to MAS to the date of the scan taking place was 74 days (2.4 months). The average number of days between referral to MAS to date of diagnosis given was 102 days (3.4 months). The reasons for which some patients were not given a diagnosis were cancellation of appointment by the patient or awaiting appointments. There was an average of 28 days from the date of the scan taking place to the date of diagnosis given in clinic.

Figure 1 depicts the proportion of diagnosis given in January 2022 for all 3 groups who were referred to MAS between 1st June – 31st August 2021. To summarise the results, in group 1; 53% (n=8) had a scan and in group 2 and 3 all 100% patients had a scan. In group 2; the average number of days between referral to MAS to date of diagnosis given was 82 days (2.6 months) and in group 3, the average length of time was 102 days (3.4 months). The shorter time duration in group 2 compared to group 3 could be explained by the fact that the scans were already available for some patients or were requested at an earlier stage.

There appears to be a considerable advantage in terms of time to diagnosis for patients who either have a previous brain scan within the lifetime of their cognitive symptoms, or who have the opportunity to have a brain scan earlier in the pathway, allowing for all investigations to be completed without undue delays.

Discussion

Implementing a pathway whereby clinicians can either have access to prior neuroimaging or refer appropriate patients for scans at referral, reduces waiting time to a diagnosis; and therefore facilitates treatment and management within a timely manner. Good quality early diagnosis prompts interventions and provision of early information on the illness and support available for both the patient and their carers.⁷ This can reduce carers' burden and provide carers with increased support from appropriate services as well as reducing the risks of patients ending up on crisis pathways. A timely diagnosis can reduce the number and length of avoidable hospital admissions for patients.² It may also allow for sub-typing the diagnosis which informs better prescribing decisions.

The benefits of a timely diagnosis are that it allows the patient and family to plan for the future while the person may still have the capacity to make decisions. It allows the ability to have a care plan and access to evidence-based treatment at the earliest opportunity. This can improve the long-term outcomes of patients, their families and carers.² A timely diagnosis reduces uncertainty and fosters autonomy and helps to promote the wellbeing and overall health of the carer, as well as their ability to care for the patient which can delay the need for costly residential care.²

Services also need to consider the rationale behind neuro-imaging requests for dementia diagnosis, particularly if the patient has had a previous scan within the lifetime of cognitive symptoms and whether the diagnosis can be made from clinical history.

Limitations

The limitations of this service evaluation are that the overall sample size of patients was quite small. However the sample size was sufficient to show the differences brought about by implementing the new pathway compared to the current process. The data collection was reliant on the standard of documentation in the patient health records, this was not always clear; however, a standard questionnaire was used to collect the data and the same two clinicians collected and analysed all of the data.

The requirement for a change to earlier requests for brain scans was precipitated by the lengthy (up to 12 weeks) waiting times in the local radiology services. This could be a modifiable factor and it has to be recognised that this could be addressed from an organisational and contracting perspective.

Conclusion

With a growing ageing population, there is recognition of the challenges faced by existing services in being able to effectively meet the need for a timely diagnosis and management of dementia. Using resources appropriately, in providing for an agile and streamlined service, benefits patient care with quicker response to referrals, and the offer of treatment and support that is forthcoming with an early diagnosis. There is a need to implement an integrated dementia care pathway that is both responsive and accessible to all patients. We believe that our work can form the basis for offering early neuroimaging where clinically appropriate, as one step in providing such a care pathway. By providing an alternative approach for requesting scans earlier, this evaluation has demonstrated that the timeline from referral to dementia diagnosis can be expedited.

Author information: Kuljit Mandair, MBBS, MRCPsych, IBLM (International Board Lifestyle Medicine), Specialty Trainee in Older Adult Psychiatry, Brooklands Health Centre, Wolverhampton WV1 2ND, UK; Email: kuljit.mandair2@nhs.net; Aparna Prasanna, MBBS, MRCPsych, Certificate in Palliative Care, Consultant Psychiatrist, Black Country Healthcare NHS Foundation Trust, Brooklands Health Centre, Wolverhampton WV1 2ND, UK; Email: aparnaprasanna@nhs.net

Correspondence: Kuljit Mandair, Brooklands Health Centre, Brooklands Parade, WV1 2ND. Email: kuljit.mandair2@nhs.net

Competing interests: None

Received: 17 May 2022; **Revised:** 16 June 2022; **Accepted:** 17 June 2022

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Citation: Mandair K, Prasanna A.. Impact of early neuro-imaging in the process of dementia diagnosis in Wolverhampton memory assessment service: an evaluation. *Journal of Geriatric Care and Research*, 2022, 9, 1: 25-30.

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Manuscript Preparation

Instructions for authors

Introduction

The *Journal of Geriatric Care and Research (JGCR)* (ISSN 2397-5628) is the official publication of Geriatric Care and Research Organisation (GeriCaRe).

Aims and scope

JGCR publishes articles from all fields relevant to old age, with an objective of encouraging evidence based practice in the care of elderly and to share information about good practice.

It is a multidisciplinary, peer-reviewed, scholarly journal covering diverse areas such as geriatric medicine, psychiatry, neurology, nursing care, end of life care, public health and related fields like gerontology, sociology, psychology, culture and law along with Allied Health Sciences like occupational therapy and physiotherapy, etc. Examples of broad areas covered by the journal are: Care and intervention for various specific conditions, disorders or disabilities, standards of care, examples of good practice, end-of-life care, elder abuse and its prevention, legal aspects relevant to old age and support; cultural and ethical issues associated with care, etc. Its readership includes not only the professionals in these fields but also older persons and their caregivers.

Besides regular issues, theme based special issues focusing one aspect of care are also published periodically.

Editorial process

The *JGCR* follows in principle the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals by the International Committee of Medical Journal Editors (ICMJE) and the Committee on Publication Ethics (COPE).

Contributions for *JGCR* are accepted for publication on the condition that their substance (whole or part) has not been published or submitted for publication elsewhere, including internet. If there are other papers from same database, then the authors must send all details of previous or simultaneous submissions.

All submitted articles are peer reviewed. At the first step, the articles are assessed by the editorial board for its suitability for the formal review.

If found suitable, the manuscripts undergo a double-blind peer review. The suggestions received from reviewers are conveyed to the corresponding author. When appropriate, the author is requested to provide a point by point response to reviewers' comments and submit a revised version of the manuscript.

Manuscripts accepted for publication are copy-edited to improve readability and to ensure conformity with *JGCR* style.

Authorship

Authorship credit should be based only on substantial contribution to:

- Conception and design, or analysis and interpretation of data
- Drafting the article or revising it critically for important intellectual content, and
- Final approval of the version to be published

All these conditions must be met. Participation solely in the collection of data or the acquisition of funding does not justify authorship. In addition, the corresponding author must ensure that there is no one else who fulfils the criteria but has not been included as an author.

Group authorship is permitted, but in this case individual authors will not be cited personally.

If a professional medical writer was used for manuscript preparation, their name and contact details must be given in the acknowledgement and any conflicts of interest must be disclosed.

The corresponding author must sign the contributors form on behalf of all the authors, once a manuscript has been accepted. This author must take responsibility for keeping all other named authors informed of the paper's progress.

Unless otherwise stated corresponding author will be considered as the guarantor of the article. However one or more authors/contributors can be guarantor. The guarantor accepts full responsibility for the work and/or the conduct of the study, had access to the data, and controlled the decision to publish.

Declaration of competing interest

All submissions to the *JGCR* (including editorials and letters to the Editor) require a declaration of competing interest. This should list fees and grants from, employment by, consultancy for, shared ownership in, or any close relationship with, at any time over the preceding three years, an organisation whose interests may be affected by the publication of the paper.

Ethics approval of research

The *JGCR* expects authors to follow the [World Association's Declaration of Helsinki](#) and base their article on researches conducted in a way that is morally and ethically acceptable. The research protocol must have been approved by a locally appointed ethics committee or institutional review board.

Every research article must include a statement that the investigators obtained ethical approval for the study (or an explanation of why ethical approval was not needed) in the methods section of the manuscript with the name and location of the approving ethics committee(s).

Patient consent and confidentiality

A statement regarding informed consent must be included in the methodology. Studies involving humans must have written informed consent from the patients. Where the individual is not able to give informed consent for lack of mental capacity, it should be obtained from a relative (ideally next of kin), legal representative or other authorised person. If the patient is dead, the authors should seek permission from a relative (ideally next of kin), legal representative (usually next of kin) or other authorised person as a matter of medical ethics. If consent cannot be obtained, the head of medical team/hospital or legal team of the authors' institute must take responsibility that exhaustive attempts have been made to contact the family and that the paper has been sufficiently anonymised not to cause harm to the patient's family. Anonymisation means that neither the patient nor anyone could identify the patient with certainty. Such anonymisation might, at an extreme, involve making the authors of the article anonymous.

The authors should check the specific laws in their country. Contributors should be aware of the risk of complaint by individuals in respect of breach of confidentiality and defamation; and must archive the signed informed consent form.

The process used to assess the subject's capacity to give informed consent and safeguards included in the study design for protection of human subjects should be mentioned.

Publication Ethics

Authors should consider all ethical issues relevant to publication. This includes (but not restricted to) avoiding multiple submission, plagiarism and manipulation of figures/data. Any concerns in this regard must be brought

to the attention of the Editor and these will be investigated by procedures recommended by the Committee on Publication Ethics (COPE). If conclusive evidence of misconduct is found, the *JGCR* undertakes to publish a correction or retraction of article as necessary.

Clinical trial registration

All clinical trials must be registered in a public trials registry. This is a requirement for publications of the trials.

Qualitative research

The *JGCR* welcomes submissions of reports of qualitative research relevant to the scope of the care of elderly.

Article submission

Manuscripts for publication are submitted via email <jgcr.gericare@gmail.com>.

The *JGCR* is not responsible for statements made by authors. Material in the *JGCR* does not necessarily reflect the views of the Editors or of GeriCaRe.

Type of manuscripts

Research article

The research article should normally be between 3000 and 4000 words in length (excluding references, tables and figure legends). Only the essential references should be given, preferably not more than 25 beyond those describing statistical procedures, psychometric instruments and diagnostic guidelines used in the study. Authors are encouraged to present key data within smaller tables in the appropriate places in the running text. This applies also to review articles and short reports.

A structured abstract not normally exceeding 150 words should be given at the beginning of the article, incorporating the following headings: **Background, Aims, Method, Results, and Conclusions.**

Key words: Up to six key words should be provided. Please use Medical Subject Headings ([MeSH](#)) as key words.

Article should have **Introduction, Method, Results and Discussion** sections. Authors may use relevant subheadings under these sections. Introductions should normally be no more than one paragraph; longer ones may be allowed for new and unusual subjects. The Discussion should always include limitations of the paper to ensure balance. A paragraph of practical implications of the observations is encouraged.

Short report

Short reports (brief communications) are based on original research, observational or evaluation studies, clinical audits etc. These are structured as research

articles and require an unstructured abstract of one paragraph, not exceeding 100 words; and key words. The report should not exceed 1500 words (excluding references, tables and figure legends) and contain no more than one figure or table and up to 10 essential references beyond those describing statistical procedures, psychometric instruments and diagnostic guidelines used in the study.

Case report

Case reports and series require up to 100 word abstract, and the length should not exceed 1000 words (excluding references, tables and figure legends). The written informed consent of the individuals must be obtained and submitted with the manuscript. Please refer to patient consent and confidentiality paragraph for further detail. In general, case studies are published in the *JGCR* only if the authors can present evidence that the case report is of fundamental significance and it is unlikely that the scientific value of the communication could be achieved using any other methodology.

Review

Systematic and narrative review articles should be structured in the same way as research article, but the length of these may vary considerably, as will the number of references. It requires a structured abstract like that of research articles.

Short review

These articles focus on highly topical issues based on evidence. Professional perspectives, viewpoints, commentary and opinion are included here. It can also include clinical review relevant to the practitioners. These articles are usually more broad-based than editorials. They can include tables and figures. Usual length is around 1500 words (excluding references) with an unstructured abstract up to 100 words.

Editorial

Editorials require an unstructured summary of one paragraph, not exceeding 50 words. Editorials should not exceed 1000 words and may contain no more than one figure or table and up to 10 essential references.

Letters to the Editor

Letters may be submitted either as responses to published articles, to inform about particular situation or raise pertinent issues, as expert opinion or as general letters to the Editor. Letters may be up to 400 words in length with a maximum of 5 references.

Insight

These articles include variety of topics which may reflect an individual perception, involvement or contribution to geriatric care. It can include good practice examples, inspirational experiences and highlight neglected areas. Essays in descriptive prose can be submitted on any topic related to geriatric care. These are usually written by a single author but a second author may be included occasionally. The length of the articles may vary considerably depending upon the topic and may be up to

2000 words excluding references. An unstructured summary of around 100 words is preferred but not mandatory. Use of subheadings is encouraged.

First person account

In first person accounts *JGCR* publishes experiences of older persons or their care providers about the care and concerns of the elderly, that can be considered significant and provide learning points for others.

Columns

These comprise a range of materials considered to be of interest to readers of the *JGCR*. This section includes reviews on book, film or web resources as short articles up to 400 words. Some other examples include News regarding developments that can influence the care of elderly, poems, paintings, photographs, quotations, information about important internet links, etc. These articles are published individually or as fillers at the end of other articles where space allows.

Preparation of Manuscripts

Prepare article in Word, A4 size page, with 1 inch margin, double spaced throughout.

Article information page

1. Type of manuscript:
2. Title of the article: Brief and relevant
3. Running title / key words / subject area
4. Name of the authors: (underline Last name)
5. Details of authors: academic degrees, professional position, institutional affiliations, professional address, email
6. Corresponding author: name, address, phone, fax, e-mail and ORCID
7. Contributions of each author:
8. Word count for abstract:
9. Word count for the text (excluding references):
10. Number of photographs/images (to be provided separately in high quality JPEG files):
11. Acknowledgement:
12. Competing interests:
13. Funding
14. Suggested Reviewers Up to 3, (not from authors' institution). Name, Position, Institution and Email

No identifiable details beyond this page.

Article Text pages

The article text pages do not contain any identifiable information, for a blind review. It should contain: Title of the article, Abstract and Key words (depending upon the article type) and the Text of the article. Please refer to article types for detail information. As a general rule, please have an Introduction and Conclusion subheadings whenever possible along with other required subheadings.

References

Authors are responsible for checking all references for accuracy and relevance in advance of submission. All references should be given in superscripted number in the order they appear in the text. Place superscript reference number after commas and full stops, unless the superscript is attached to authors name or title of book/database. At the end of the article the full list of references should follow the [ICMJE style](#). If there are more than six authors, the first six should be named, followed by 'et al'.

Example of journal articles:

The authors' names are followed by the full title of the article; the journal title abbreviated according to the PubMed; the year of publication; the volume number; (issue number in bracket); and the first and last page numbers:

1. Singh SP, Singh V, Kar N, Chan K. Efficacy of antidepressants in treating the negative symptoms of chronic schizophrenia: meta-analysis. *Br J Psychiatry*. 2010; 197(3): 174-9.

References to books should give the names of any editors, place of publication, editor, and year. Examples are shown below.

2. Murray PR, Rosenthal KS, Kobayashi GS, Pfaller MA. *Medical microbiology*. 4th ed. St. Louis: Mosby; 2002.

3. Meltzer PS, Kallioniemi A, Trent JM. Chromosome alterations in human solid tumors. In: Vogelstein B, Kinzler KW, editors. *The genetic basis of human cancer*. New York: McGraw-Hill; 2002. p. 93-113.

4. Foley KM, Gelband H, editors. *Improving palliative care for cancer* [Internet]. Washington: National Academy Press; 2001 [cited 2002 Jul 9]. Available from: <http://www.nap.edu/books/0309074029/html/>.

5. Cancer-Pain.org [Internet]. New York: Association of Cancer Online Resources, Inc.; c2000-01 [updated 2002 May 16; cited 2002 Jul 9]. Available from: <http://www.cancer-pain.org/>.

Personal communications need written authorisation (email is acceptable); they should not be included in the reference list. Unpublished doctoral theses may be cited (please state department or faculty, university and degree). No other citation of unpublished work, including unpublished conference presentations, is permissible. Further information about the references can be availed from http://www.nlm.nih.gov/bsd/uniform_requirements.html

Tables

Tables should be numbered and have an appropriate heading. The tables should be mentioned in the text such as Table 1 and the desired position in the manuscript should be indicated. Information in tables must not be duplicated in the text. The heading of the table, together with any footnotes or comments, should be self-explanatory. The table should be placed at the end of the

manuscript after references, each in a separate page. Authors must obtain written permission from the original publisher if they intend to use tables from other sources, and due acknowledgement should be made in a footnote to the table.

Figures

Figures must be of high quality and provided in JPEG files separately. They should be clearly numbered and include an explanatory legend. Legends can be provided at the end of the article after the references. All figures should be mentioned in the text (such as Fig 1) and the desired position of the figure in the manuscript should be indicated. Authors must obtain written permission from the original publisher if they intend to use figures from other sources, and due acknowledgement should be made in the legend.

For ease of formatting please use the available article template.

Abbreviations, units and footnotes

All abbreviations must be spelt out on first usage and only widely recognized abbreviations will be permitted. Abbreviations usage should be consistent throughout the article. Use abbreviations sparingly; consider using one if it is repeated more than three times.

The generic names of drugs should be used.

Generally, SI units should be used; where they are not, the SI equivalent should be included in parentheses.

Footnotes are not allowed, except table footnotes.

Statistics

Methods of statistical analysis should be described in language that is comprehensible to most readers. Raw data for the studies may be asked at any time up to 5 years after publication of research in the *JGCR* and the authors are suggested to keep these safe.

Proofs

A proof will be sent to the corresponding author of an article which should be sent back within 7 days.

Copyright

Copyright of all the published papers is retained by the authors.

Contributors form

On acceptance of the paper for publication, all authors should submit a contributor's form to the Geriatric Care and Research Organisation (GeriCaRe) regarding adherence to publication ethics.

Article Processing Fee

There is no submission, processing or publication fee at present for papers published in the *JGCR*.

Open access

All papers published in the *JGCR* are freely available for the readers.



GeriCaRe

GeriCaRe (Geriatric Care and Research Organisation) is involved in the care of the elderly and research in various aspects relevant to old age with an overarching aim of improving the quality of life of older adults. It endeavours to provide evidence based information for caregivers, elderly and the health care professionals about age related issues and to support life-long-learning through educational programmes for professionals and carers..

For its activities, GeriCaRe has received the Vayoshreshtha Samman, an Indian National Award in 2016 as the 'Best Institution for Research in the Field of Ageing' by the President of India.

Sharing knowledgebase and making the research evidence utilisable in the community is a key focus of GeriCaRe. It conducts and supports various research and development projects in various disciplines including health, psychology, sociology and other allied fields.

It prepares and distributes public education materials. Journal of Geriatric Care and Research (JGCR) is one of its flagship endeavours. The JGCR is free to readers and authors and is distributed worldwide.

Donate

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You can sponsor any of the activities, e.g. Health Camps, Health Care Initiatives, Journal of Geriatric Care and Research, or Research and Development Projects.

If you are a business organisation, you can support GeriCaRe as one of your corporate social responsibility (CSR) activities. Considering the wide ranging issues that GeriCaRe addresses you will be able find many reasons to support.

GeriCaRe ensures that all the contributions are best utilized for the cause they are donated for.

As a token of appreciation of your donation, GeriCaRe will send you the e-copies of JGCR. If requested it will also provide the donors an annual review of health with action plans for a chosen older adult, if the clinical details are shared.

Preferably, please consider setting up a direct debit at least yearly (or more frequently if you wish) which will help GeriCaRe in planning its activities; however onetime payments are also welcome. For payment instructions or further information on donation, please contact org.gericare@gmail.com or jgcr.gericare@gmail.com.



Geriatric Care and Research Organisation (GeriCaRe)

Journal of Geriatric Care and Research
2022, Volume 9, No 1