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Ayesha Bangash

Author details
Dr Ayesha Bangash, MRCPsych
Consultant old age psychiatrist
Correspondence:
The Dales, Calderdale Royal Hospital, Halifax, West Yorkshire, HX3 0PW
South West Yorkshire Partnership NHS Foundation Trust
Email: 520ayesha@gmail.com

Biographical summary
Ayesha Bangash became a consultant in psychiatry for older people in 2018. Since becoming a consultant, she has been working on an acute inpatient unit. Prior to taking up this post, she underwent higher psychiatry training in the West Midlands. She has a research interest in personality disorders.

Author contribution
Ayesha Bangash was involved in the conception and design of the article as well as drafting it. She has given her final approval of the version to be published. She agrees to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. This work was undertaken in the UK.

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Abstract

Despite the enormous amount of literature on medical care in older people, personality disorders in late life have been given little attention. Clinicians tend not to assign this diagnosis to older adults in view of limited research and therefore limited awareness of this topic. This article aims to promote better understanding of this subject in view of the growing population of older people and hence an expected increase in the number of personality disorder cases.

Learning objectives

By the end of the article, the reader will be able to:

- Appreciate the need for exploring this poorly understood topic.
- Develop an awareness of how personality disorders present in old age.
- Have an understanding of the recommendations for treatment including the use of non-pharmacological and pharmacological interventions.

There is limited research on personality disorders in adults aged 65 years and older mostly in the form of reviews, editorials, comments, or case reports (van Alphen 2015) owing to an assumption that certain personality disorder types fade out over the lifespan as reflected by cross-sectional comparisons of older and younger people. However, researchers tend to underestimate the presence of maladaptive traits associated with personality disorders (Gleason 2014). Personality disorders can be problematic in older people. Core features such as disturbed interpersonal relationships and emotional dysregulation can persist into old age contributing to a high disease burden including psychosocial impairment and an elevated suicide risk. Older people with personality disorders are prone to other syndromes such as anxiety, depression, somatization and substance dependence disorders (Zweig 1999). Personality disorders differ in presentation from those seen in younger adults thus it can be difficult to diagnose personality disorders in older people (Mattar 2017). For example, an older patient with borderline personality disorder would probably undergo medication non-compliance in order to self-harm rather than auto-mutilation (Khasho 2019).

Epidemiology: prevalence and course

Studies have generally been methodologically diverse thus it has been difficult to ascertain prevalence estimates of personality disorders in late life. A meta-analysis on 11 studies determined an overall prevalence rate of DSM-III-R (revised version of the 3rd edition of the Diagnostic and Statistical Manual of Mental Disorders) personality disorder diagnoses of 10% in adults over 50 years of age, compared to 21% in the under-50 age group (Abrams 1996). Rigorous research is needed to establish prevalence figures as personality disorders are expected to rise with the ageing population (Beatson 2016; Mattar 2017). Personality disorder diagnoses usually seen in late life include the dependent, obsessive-compulsive, dependent, histrionic, paranoid, schizoid and avoidant types; studies suggest that these diagnoses remain stable over the lifespan or even increase (Gleason 2014).

The sparse research on the course of personality disorders across the lifespan could explain why it is difficult to ascertain their onset. Some studies suggest that personality disorders can take four different courses through life. The first course is characterized by a personality disorder starting in early life and having a long duration. In the second course, the disorder no longer meets diagnostic criteria in older age. The third course is identified by temporary remission of symptoms in mid-adulthood, followed by a re-emergence in old age. The fourth course is identified by a disorder emerging in old age that was not evident in early life (Rosowsky 2019).

Why personality disorders are considered to be less prevalent in late life

Research suggests that older adults in prisons or forensic psychiatric hospitals may have been missed out of studies (Mordekar 2008). Unhealthy lifestyles and accidents result in shorter life expectancy (van Alphen 2015). Certain personality types may have implications for longitudinal studies; those with poor coping mechanisms are more likely to drop out of research activities. It is also possible that social, financial, and physical restrictions may have roles in the expression of personality disorders in the elderly; it would be unusual for older people to act out through activities such as sexual promiscuity or drug abuse in contrast to younger people (Coolidge 1992). Due to limited insight into their difficulties, older people with personality disorders often do not seek help (Agronin 2000). Stereotyping of older people as rigid or untreatable may cause the clinician to view pathological behaviours as normal for elderly people and lead to under-diagnosis of personality disorders (Agronin 1994). Some studies indicate that borderline personality disorders are less prevalent among older people than younger people. More research is needed before drawing conclusions about patterns of change in any personality disorder type (Oltmanns 2011).

Why personality disorders present in late life

In an international Delphi study, experts on personality disorders in older adults reached a consensus on the concept of a “late-onset personality disorder”. This

concept is consistent with the ICD-11(11th revision of the International Classification of Diseases)(Rosowsky 2019). The personality pathology may have been contained or hidden by significant others in the person's life who were able to compensate for the person's difficulties and prevented the personality dysfunction from manifesting itself (Videlar 2019). A significant other can serve 3 types of functions i.e buffering, bolstering or binding. *Buffering* is where the significant other serves to run interference between the individual and others. *Bolstering* is where the significant other reinforces the adaptive traits of the individual thereby reducing the expression of maladaptive traits. *Binding* refers to the inhibition of the more maladaptive behaviours (see boxes 2, 3 and 4 for examples of bolstering, buffering and binding). Buffering, bolstering and binding can also be served by roles as well as relationships. Personality disorders can "emerge" in late life following the loss of significant supporting people, moving to a long term care placement or loss of a previously stabilizing situation such as being in employment (see boxes 3 and 4 for examples). The degree of manifestations of a personality disorder often surprises relatives who were unaware of the function served by the significant other (Segal 2006). While a person controls social interactions to avoid aversive feedback, avoidance may reinforce pathology. By repeatedly staying away from interpersonal situations, a patient with avoidant personality disorder never learns that she can cope in social situations. In this way, decades of reinforcement without disconfirming feedback function to maintain personality pathology (Morse 2004).

Clinical presentations of personality disorders in late life

The literature on the subject of how personality disorders present in later life is based on the limited studies undertaken by researchers and clinical experiences of clinicians. Longitudinal studies would provide an understanding of the course of personality disorders into late life however they have mainly focussed on younger people (Videler 2019). It may be best to study personality disorders during periods of significant transition because the enduring behavioral and affective expressions that define the individual will be amplified at such times (Oltmann 2011).

Paranoid personality disorder

A history obtained from someone who has known the patient for a long time may help to ascertain whether the patient has a paranoid personality disorder, a psychotic illness or dementia. The paranoia of a delusional disorder tends to be fixed, severe and resistant to treatment. The paranoia of schizophrenia tends to be bizarre or fragmented and often associated with hallucinations. In contrast to a dementing process, the long term course of paranoid personality disorder is usually chronic; the paranoia heightens when the individual has to change location or rely on strangers for help. On admission to long term settings, patients may file complaints against staff for holding them against their will (Agronin 1999). Paranoia also tends to become more pronounced when experiencing sensory impairment (Segal 2006).

Schizoid personality disorder

Schizoid individuals can become more eccentric, withdrawn and anxious in late life (Agronin 1999). They prefer to be alone and independent thus they struggle to adjust to hospitals or long term care settings as they feel threatened by what they deem to be constant intrusions by staff. Sharing rooms with other patients can be painful experiences for them. They thus aim to leave the hospital quickly. Schizoid individuals may value the enhanced social isolation brought about by limited mobility and resources (Agronin1994; Agronin 1999). Losing a significant other due to bereavement is not particularly stressful because the attachment to this person was probably less intense compared with other adults without the disorder. Grief over the loss of the significant other would probably be related to practical reasons such as the loss of having someone to do the housework rather than the loss of an emotional attachment (Segal 2006).

Schizotypal personality disorder

Studies suggest that people with this disorder could either remain the same or worsen in later life (Agronin1994). Social isolation related to eccentricities and odd beliefs can become more pronounced over time. They can come across as being unkempt, wearing inappropriate clothing and living in squalid conditions. They tend to experience social anxiety and can be suspicious of others. Institutionalization can be devastating for them as they have no choice but to face multiple social interactions (Segal 2006).

Antisocial/Dissocial personality disorder

A follow up study of men with antisocial personality disorder into late life showed that, although most of the subjects were no longer having frequent confrontations with the police, they continued to have poor occupational performance, social isolation and marital discord (Black 1995).

Aggressive and reckless behaviours may decrease as the person's stamina declines with age. Empathy rarely develops over time. Those who reach late life have poor social support as a result of rejection by others on account of their manipulative behaviours (Segal 2006). Disruptive behaviours can be seen in care home settings such as belligerence, assaultiveness, stealing and surreptitious substance abuse. These people often tend to leave the care home without authorization thus putting themselves in dangerous situations (Agronin 1999).

Borderline personality disorder

Long-term follow-up studies on older people with borderline personality disorders have not yet been performed (Videlar 2019). Studies in younger people show that remissions are common and recurrences are rare. Remitted patients show a slow but steady improvement in psychosocial functioning over time (McGlashan 2000; Paris 1987; Stone 2016).

Non-recovered patients experience high rates of vocational impairment and physical morbidity than recovered patients. In contrast to other personality disorder types; borderlines belatedly achieve the milestones of young adulthood (Stone 2016; Zanarini 2005). Many of these people enter late life without enough social support. They often lack the skills to replace these losses and manipulative, self-destructive and disruptive behaviours can result (Agronin 1994).

The cognitive stigmata of the disorder i.e identity diffusion can be seen as an inability to formulate future plans or pursue goal-directed activities (Agronin 1994). Self-injury in earlier life is not only difficult to hide but may also elicit negative feedback, which may slowly shape these behaviours out of a person's repertoire over time (Morse 2004). Instead, there may be geriatric versions of self-harming behaviours such as anorexia or sabotage of medical treatment (Agronin 1994).

Symptoms that can persist with age are emotional instability, feelings of emptiness and dysfunctional interpersonal relationships generating chaotic environments in the home. The frequent use of somatization is often expressed in dramatic complaints of medical attention. Treatments associated with somatization can lead to prolonged admissions (Valdivieso-Jiménez 2018). Splitting is common i.e, the tendency for patients to become attached to particular team members, segregating them from others whom they believe to be less able. Patients' preferences may change abruptly which can confuse staff. They can evoke negative countertransference (feelings and behaviours evoked in the clinician by the patient) reactions. Many of them have worn out families during a lifetime of crises and poor boundaries (Agronin 1999; Segal 2006).

There have been strong suggestions of a history of childhood trauma as a precipitating event for the development of this disorder. However, not all borderline patients have a history of trauma and not all individuals with a history of trauma develop the disorder. Borderline personality disorder is also considered to be genetic (Segal 2006).

Histrionic personality disorder

People with this disorder tend to overestimate their physical attractiveness and their quest for youthfulness thus becoming reliant on cosmetic surgery and other anti-ageing techniques. They can initially come across as warm and entertaining however their self-centeredness eventually gets discovered leading to negative responses from others. They are devastated by the reduction in their sex appeal. Because seductiveness has become part of their social style for so long, they struggle to relate to others without trying to attract them. These people are thus likely to draw attention to themselves through somatic and hypochondriacal complaints rather than with their usual physical charms. Core features such as arrogance, need for admiration and limited capacity for empathy generally do not improve with age. Due to manipulating others they tend to be alienated from family members (Agronin 1999; Segal 2006).

Narcissistic personality disorder

A long term follow-up study of patients with narcissistic personality disorder showed poor social functioning over time (Plakun 1989). Research indicates that the majority do not improve in late life. In reaction to feeling powerless, there will be greater demands for admiration which are often disregarded by others. They find that needing help and support from others indicates they have a lower social class. Research suggests that some people may become more interested in therapy due their charming personalities becoming less rewarding. As their power over others declines, they may seek power through relationships with their therapist (Segal 2006). Patients can repeatedly ask questions or have demands that derail treatment (Agronin 1999).

Avoidant/Anxious personality disorder

Research suggests that people with this disorder experience shyness and social anxiety that becomes more pronounced with age (Agronin 1999). They are vulnerable to social losses as they have great difficulty in replacing relationships that are lost. They generally do not apply for supportive services due to fears of being evaluated and found wanting. Patients can demonstrate marked fearfulness which can be particularly problematic in hospitals or long term care settings (Segal 2006).

Dependent personality disorder

Problems can arise for dependent older people when their significant others die leaving them to depend on themselves. In such situations, they often turn to their children for support. Their neediness becomes burdensome leading to the children becoming overwhelmed. In contrast to other personality disorder types, these people are likely to seek out supportive services. Differentiating between those who are dependent on others due to unfortunate life circumstances and those whose dependence is excessive to the current situation is important (Agronin 1999; Segal 2006).

Obsessive-compulsive/Anankastic personality disorder

In later life, people with this disorder become more obsessive and anxious in response to losses especially those related to control and predictability (Agronin 1999). Symptoms of this disorder may be exacerbated by changes in routine and environment (such as a move to long term care) which disrupt a person's sense of control (Agronin 1994). Increased dependency on others can be stressful for these people. Their deep-rooted pattern of doing things their own way makes them resistant to change. They find it hard to be flexible when experiencing impaired physical function. They get offended when offered help which they misinterpret as not being in control of their lives (Segal 2006).

Personality disorders and mood disorders in later life

The prevalence of personality disorders in elderly people with depression can reach 24% (Courtois 2014). A personality disorder should be a differential diagnosis in an older patient with depression who fails to respond to treatment including psychotherapy. Although infrequent, suicide attempts in elderly patients with personality disorders tend to be life-threatening (Beatson 2016). When anxiety is a prominent feature in an elderly person it may be a strong pathognomonic sign for the presence of a personality disorder such as the schizotypal, dependent, avoidant, obsessive-compulsive or the schizoid type (Coolidge 2000).

When personality changes are not due to a personality disorder

It can be difficult to ascertain whether the clinical picture is a result of an underlying personality disorder, a difficult doctor-patient relationship, neurocognitive impairment, a medical condition (see box 1) or medication (see table 2). One should also consider cultural roles, eccentricities, situation-specific behaviours and the physiological effects and environmental aspects of ageing (Zweig 1999; Mattar 2017). Frontal lobe impairment can cause personality changes. It is caused by Alzheimer's disease, frontotemporal dementia, cerebral atrophy of normal aging and strokes. Frontal-like symptoms of apathy are caused by Parkinson's disease and thyroid problems (see table 1 for personality changes caused by brain dysfunction). Space occupying lesions in the brain can lead to depression, anxiety, emotional lability, indifference and apathy. Subdural haematomas cause depression and lethargy. Brain metastases can cause depression, anxiety and paranoia. Chronic obstructive airways disease can cause irascibility and impatience. Frontotemporal dementia, mania, stroke, head injury and impulse control disorders can cause antisocial behaviours (Miner 1999).

Normal aging of the brain does not greatly alter one's personality but organic brain disease does. Personality changes can occur due to dementia-related organic changes however they can occur as a reaction to dementia itself. A dementia can also unleash underlying behavioural tendencies that the patient was able to control when well (Mordekar 2008). Thus a person can nearly meet the criteria for a personality disorder. When an individual with a personality disorder develops a dementia, the effect can be to increase the degree of the personality disorder, to decrease it or to neutralize (or cancel) it. In general, dementia induces an increase in self-centredness and a decrease in flexibility (Segal 2006).

Management

Researchers have not delved deeply into the management of late life personality disorders thus there is limited knowledge on treatment outcomes (Mattar 2017; Videler 2019).

Assessment

An assessment depends on acquiring an accurate lifetime history. This can present its own challenges when reports of patients and informants are influenced by cognitive impairment and stigma attached to socially undesirable behaviours (Abrams 2007). Clinicians can experience the difficulty in distinguishing between longstanding personality dysfunction and recent, reactive personality changes (Agronin 2000).

The personality pathology is often noticeable during an encounter with the patient. For example, people with schizotypal personality disorder can be identified by their unusual language and manner of dressing. The social impairment associated with a personality disorder can become apparent after asking the patient to describe relationships with significant others, friends and family over time. It is useful to ask if the emotional symptoms developed or worsened after specific social stressors (Balsis 2015; Segal 2006).

Personality disorder symptoms can ebb and flow over time and get exacerbated or dampened in the presence of certain people. Thus assessments in multiple contexts and across different occasions are vital. Individuals who have regular contact with the patient offer a unique perspective due to being able to shed light on lifelong patterns of behaviours. Such informants can include relatives but also teams working in care homes, wards and community mental health settings comprising of doctors, nurses, occupational therapists, social workers, support workers and health care assistants. Behavioural charts and records may provide clues to personality disorder features, especially if the same traits are seen by different professionals (Segal 2006).

Diagnostic criteria and tools

The DSM-5 (5th edition of the DSM) and the ICD-11 are used to make a diagnosis of a personality disorder.

The DSM-5 was published in 2013. It largely retains the old DSM-IV classification for personality disorders with its corresponding categories. A dimensional approach was initially recommended in view of the diagnostic heterogeneity within categories. It was approved by the DSM-5 Task Force but not by the American Psychological Association (APA) Board of Trustees who felt that it needed more study. It eventually was only included in the DSM-5 as an alternative model for personality disorders in section III “Emerging measures and models” (Oltmanns 2018).

There were problems with the ICD-10 classification of ten personality disorders in that the borderline and dissocial types were being recorded more frequently than the others. Moreover, most individuals with severe disorders met the requirements for multiple personality disorders (Reed 2019). The ICD-11 classification, which goes into effect in January 2022, addresses these issues by using a dimensional approach. Firstly, the clinician has to identify the presence of a personality disorder. The severity (mild, moderate, and severe) of the disorder can then be ascertained depending on the dysfunction in interpersonal relationships and everyday life of the patient. If deemed appropriate, one or more prominent trait qualifiers (negative affectivity, detachment, disinhibition, dissociality and anankastia) that contribute to

the expression of personality dysfunction can be identified (Bach 2018). An optional qualifier is provided for "borderline pattern" which was added to ensure continued recognition of borderline personality disorder which has been of most use and interest to clinicians (Oltmanns 2019). Determining severity and trait qualifiers could determine the intensity and focus of treatment; research is needed to explore the clinical utility of ICD-11. The estimation of severity focusses on harm to self or others (Bach 2018). Severe personality disorder may not be frequent in older people who tend to undergo diet restriction or polypharmacy rather than self-mutilation (Agronin 1994; Beatson 2016). In contrast to the DSM-5 dimensional approach, the ICD-11 dimensional trait model has not been well-researched (Oltmanns 2018).

The existing DSM criteria may not help in diagnosing personality disorders in the elderly (Mattar 2017; Rosowsky 2019) as they were created with younger patients in mind. They fail to take into account normal changes associated with ageing and personality disorders presenting differently in later life. For example, borderline personality disorder criteria may be problematic for older adults. It would make sense for them to avoid abandonment as they are dependent on others for support to meet their care needs (Segal 2006; Khasho 2019). Some evidence suggests that the DSM dimensional approach is age-neutral (Videler 2019).

The Gerontological Personality disorder Scale (GPS) is a 16-item screener validated for outpatient older adults. It broadly screens for personality disorders but does not measure any personality disorder in particular (Oltmanns 2011). It is not widely used (Balsis 2015; Mattar 2017). Diagnostic tools are generally not considered suitable for older people as they are in the form of lengthy structured interviews that rely on the self-reporting of behaviors which can be overwhelming for this age group (Beatson 2016; Zagaria 2014).

Diagnosis by clinical consensus

The last step in finalizing a diagnosis is for clinicians to hold a conference to reach a diagnosis by consensus. The clinicians bring their respective data and impressions to the meeting. They should be familiar with the individual's level of functioning in different settings and over an extended period of time. This would help rule out other functional mental illnesses. Clinicians should have adequate knowledge of the latest diagnostic criteria. The diagnosis would be practical and valid from a clinical point of view. Through discussions, a case formulation could be developed to explain the dynamics underlying a patient's presentation. However, clinical consensus has not been defined in most studies. Moreover, the literature does not discuss tests of reliability (Agronin 2000).

Psychosocial interventions

In long term care settings or hospitals, older people with personality disorders can create conflicts within the staff over their care. The rules and procedures of the mental health setting, expectations for the speed of replying to nonemergency telephone calls and other limits are to be explained at the initiation of the clinician-

patient relationship. Patients should understand that rules apply to all patients and should not be deemed as a punishment but for the patients' protection (Abrams 2007).

In the case of borderline patients, it is advised to employ a coordinated team approach to prevent splitting. Clinicians should use countertransference to understand the patient and respond in ways to advance the therapeutic relationship and reduce stress. It is poor clinical practice to believe that older people's behaviours should be tolerated more than younger people's behaviours. Clinicians should adhere to boundaries to maintain the therapeutic framework in which progress can be achieved. The team should regularly review the short and long term goals to ensure consistency in their relationship with the client (Balsis 2015). Staff anger should be vented in staff meetings rather than at the patient. Otherwise, it might be reinforcing for the patient to see staff act out their inner feelings of rage. Suicidal or self-injurious behaviours should be treated with compassion but with firm limit setting. Enhancing positive traits reduces the expressions of less desirable traits and increases the probability that the individual will receive positive feedback from the environment (Agronin 1999).

Noncompliance with treatment is common in patients with antisocial personality disorders. Staff should manage this by arranging a meeting with a person of authority such as the care home manager. The antisocial type has difficulty in forming meaningful relationships with others thus it will be difficult to establish a collaborative working relationship. Instead of helping the person to develop empathy for others, it might be more useful to help the patient to think through the consequences of his/her actions and discover strategies to stay out of trouble. Clinicians may need to deviate from the warm, supportive cultures they usually provide when managing a schizoid patient. Such a patient would prefer to keep all interactions to a minimum and does not want praise or encouragement (Segal 2006).

Anankastic people prefer precise routines for scheduling treatment schedules. It can be difficult for clinicians to adjust their schedules to meet their needs. They should instead focus the energies of these patients on tasks in which they have a sense of control. Professionals may get overwhelmed by the attentional needs and dramatic expressiveness of the histrionic patient who could benefit from participation in group activities which can provide attention and constructive feedback. The maladaptive attempts of narcissistic people to cope with losses of attractiveness and physical function may include hostility and controlling behaviours. It is important to identify the losses that are devastating to the patient. Supportive interactions will help bolster their need for admiration. Paranoid individuals would benefit from a straightforward and consistent approach to management. A solicitous or challenging approach could be misinterpreted as threatening leading to hostility and accusations. Professionals may need to endure the peculiarities of individuals with schizotypal personality disorder unless they are leading to behaviours that pose a risk of danger to the patient or others. It is vital to identify losses and fears that cause avoidant behaviours. One who avoids social situations due to incontinence can be treated

with medications, exercises and protective undergarments. Health professionals can struggle to cope with the excessive questions and neediness of a dependent patient. Failure to obtain enough nurturance can lead to clinging behaviours and frequent somatic complaints. This can be overcome by scheduling brief, regular and supportive contact. Clinicians should explain limits in their ability to provide care while also conveying their willingness to help (Agronin 1999).

Some researchers feel that cognitive behavioural therapy (CBT) and dialectical behavioural therapy (DBT) may be useful in older people. CBT, for example, could be used to identify patient strengths and using them to effect positive change. However, there is no consensus view around psychological treatment at this stage due to limited research (including controlled studies) in older people (Balsis 2015; Mattar 2017). The first trial of schema therapy (multiple baseline case series design) for borderline personality disorder in older adults is currently being conducted (Khasho 2019).

Pharmacological interventions

Pharmacological treatments can be used for those with little motivation to change and self-reflect or having risky behaviours (Balsis 2015). The prescriber must take time to discuss the purpose of medications in an open manner. The judicious use of the fewest agents is preferred and the use of prn medications should be discouraged; such schedules often play into maladaptive needs for dependency and control (Agronin 1999).

Impairment of cognitive/perceptual organization

Cognitive/perceptual impairment can lead to discomfort in social interactions and misunderstanding or suspicion of others' motivations. Such psychotic-like symptoms can be seen in personality disorders such as the schizotypal type and are similar to those seen in schizophrenia. Studies have shown impaired brain dopaminergic activity in both types of conditions. Antipsychotics, by reducing dopaminergic activity, help improve psychotic-like symptoms (Zagaria 2014, Siever 1991).

Impulsivity and aggression

The personality disorders present with impulsivity and aggression in various ways. Antisocial individuals tend to steal or tell lies. Borderline individuals can get involved in substance misuse. Impulsivity and aggression can be due to impaired serotonergic and noradrenergic systems that mediate behavioural inhibition. Lithium, which enhances serotonergic activity, can help reduce aggression. Selective Serotonin Reuptake Inhibitors (SSRIs) can reduce impulsive behaviours (Zagaria 2014). Antidepressants, by enhancing noradrenergic activity, can reduce impulsivity and aggression. Antiadrenergic agents like propranolol can improve aggressive behaviours (Siever 1991).

Affective instability

Hyper-responsiveness of the noradrenergic system, in contrast to the reduced responsiveness seen in the more classical affective disorders, may cause affective instability in borderline individuals. Mood stabilizers such as lithium and carbamazepine, may be able to steady catecholamine activity thus stabilizing mood (Siever 1991, Zagaria 2014).

Anxiety and inhibition

In some personality disorders such the avoidant/anxious type, the anxious individual interprets environmental events as threatening. When this person acts, it is often in the direction of avoidance of or withdrawal from the environment. The underlying cause is not clear however research suggests that other anxiety disorders may be linked to impaired noradrenergic and gamma-aminobutyric acid (GABA)-minergic activity (Siever 1991). Agents mediating GABA activity such as pregabalin and benzodiazepines can be used. Benzodiazepines are used with caution due to their addiction potential. SSRIs, by enhancing noradrenergic activity, can also be used.

Conclusions

With the rise in the elderly population, there will be greater numbers of people struggling with personality disorders, resulting in an increased burden of the disorder in health services (Beatson 2016). The situation is not entirely grim; a number of older people with personality disorders can show more effective coping than their younger counterparts, indicating that experience and wisdom acquired with age may result in healthier coping responses in spite of potentially greater exposure to losses and stressors (Coolidge 2000). Temperaments that shape personality disorders are unlikely to be dramatically changed however the expressions can sometimes be reformed in ways that are less troubling for patients and families (Segal 2006). The timely identification of these patients is urgently needed so that they can receive the support needed to alleviate their suffering in later life.

Boxes and tables (no desired position for any box or table in the manuscript)

Box 1

Medical conditions that cause personality changes

- Pernicious anaemia
- Head trauma
- Environmental toxicants (lead, cadmium, mercury, ethanol)
- Brain tumours and space occupying lesions in the brain
- Dementia
- Cerebrovascular events
- Huntington's disease
- Epilepsy
- Systemic lupus erythematosus
- Endocrine problems (hypothyroidism, hypoadrenocorticism, hyperadrenocorticism)
- Infections (meningitis, encephalitis)
- Poorly controlled chronic obstructive airways disease

Table 1 Personality changes caused by brain dysfunction

Part of the brain affected	Personality changes
Dorsolateral frontal cortex impairment	Apathy, dulled affect and lack of spontaneity
Orbitomedial frontal dysfunction	Behavioural disinhibition, emotional lability and indifference to social decorum
Temporal and parietal lobe dysfunction	Memory problems hence paranoia toward others due to not recalling information given
Chronic temporal lobe dysfunction	Emotional instability, epileptic phenomena and aggression
Basal ganglia dysfunction	Impulsivity, obsessive compulsive disorder, cravings and loss of control in addictions
Dysfunction of the thalamus and hypothalamus	Disinhibition, apathy, carelessness, emotional lability and violent outbursts
Left hemisphere dysfunction	Fearfulness and depression
Destruction of myelin and resultant decrease in conduction velocity occurring in multiple sclerosis, AIDS (acquired immune deficiency syndrome), brain trauma, alcoholism and, to some extent, normal aging	Irritability, depression and apathy
Dysfunction of pathways connecting the basal ganglia, striatum, thalamus and cortex	Loss of control in addictions

Table 2 Medications causing personality changes

Medication	Personality changes
Bronchodilators such as albuterol, levetiracetam, statins, steroids	Anxiety
Carbamazepine, lamotrigine, levetiracetam, topiramate, statins	Irritability
Levetiracetam, topiramate, valproate, statins	Low mood
Steroids, baclofen, levothyroxine, medications containing levodopa and all antidepressants	Mania-like features

Box 2 Bolstering, buffering and binding

Bolstering

A significant other bolstering or augmenting the adaptive traits of the individual with a personality disorder thus reducing the expression of maladaptive traits.

For example, a wife offering her husband with avoidant personality disorder encouragement and support in order to attend family events. Following her death, his personality disorder becomes apparent to the surprise of his nieces and nephews.

Buffering

A significant other buffering or running interference between the individual with the personality disorder and the rest of the world.

For example, a husband instructs his wife with dependent personality disorder in the day to day running of the house. Following his death, the wife turns to her elderly sister for support. Her neediness becomes burdensome and overwhelms the sister.

Binding

The significant others inhibits the maladaptive behaviours of the individual with the personality disorder.

For example, a husband of a wife with borderline personality disorder knows when she is about to have an anger outburst. He is able to prevent them by talking to her about her favourite film or food. Following their divorce after many years of marriage, the wife's relatives take her to the GP for advice due to struggling to cope with her rages.

Box 3 A personality disorder presenting for the first time in late life

Ms X, a 67 year old lady, was referred to the community mental health team by her GP for an assessment of her mental health. She was seen by a psychiatrist in the presence of Ms Y, her daughter. Ms X lived alone. Ms Y would visit her four times a week.

Ms Y was struggling to cope with her mother's presentation over the past year. Ms X had become irritable. She would have arguments with Ms Y over trivial issues during which she would throw crockery against the wall. She would phone her daughter numerous times during the day, accusing her of not being concerned about her welfare. However, at times, she would suddenly change her view and tell her what a wonderful daughter she was. Ms Y's job would occasionally take her away from home on long business trips. However, she frequently had to cancel them due to Ms X telling her that she felt unwell and needed her to stay with her. The behaviours were deemed to be attention-seeking in nature due to Ms Y discovering that her mother was actually in good health. Ms X would frequently ask the GP for opiates to relieve back pain which Ms Y did not think were needed. Attempts made by Ms Y to challenge her mother about her behaviours or reduce the frequency of visits would be met with hostility and threats of self-harm.

The psychiatrist, on further interviewing, discovered that her problems had developed following retirement. She had worked as a nurse from a young age with enthusiasm and passion. Following retirement, she had been devastated, saying that that she did not know what to do with herself. Ms Y confirmed that there had been no concerns over her mother's behaviours prior to retirement. On being asked about her childhood history, Ms X said that she had been raised by a single mother and had never known her father. She had loved her mother but had never felt able to discuss any worries with her.

The psychiatrist gave Ms X a diagnosis of borderline personality disorder. He explained how her job had helped in bolstering (potentiating and reinforcing) the more adaptive behaviours thereby reducing the expression of maladaptive traits. The personality disorder had become apparent following retirement as her job was no longer supporting her in bringing out her best. He discussed her case with the multi-disciplinary team. Since her job had helped in containing the personality disorder for so long, the team suggested working in a different capacity such as teaching nursing students. Ms X eventually went back to nursing part-time. On the days she was not working as a nurse, she volunteered in a charity shop. Six months later, Ms Y reported that her mother was more settled and that their relationship had improved.

Box 4 A personality disorder re-emerging in later life

Ms B was raised by her father, her mother having died in childbirth. The family moved house several times during her childhood in view of his job in the army. Ms B regularly took part in school plays as she was good at singing and acting. She married Mr B at age 19. By her late teens, she was already working in films and theatre productions. Mr B often found her preoccupied with fantasies of stardom. She would expect others to recognize her for being a world-famous actress who had worked in the highest-grossing movies. Mr B discovered that things were not as glamourous as they seemed. Film directors were reluctant to give Ms B roles due to her "difficult" nature. She required excessive admiration from others and would consider herself to be better than several actors hence her refusal to work with them. She took little interest in her marriage, telling Mr B that she had more important things to do. At times, she would tell him that he was envious of her good fortune and higher social status. During her 30s, he took her to the GP as there was something not quite right about her and asked if there was any help she could receive. The GP felt that she had a narcissistic personality and suggested that he refer her to a psychiatrist for further assessments. She refused, saying that she doubted whether any psychiatrist would be qualified enough to assess her.

A frustrated Mr B decided to help Ms B by becoming her film agent and serving the purpose of buffering (becoming a go-between) to minimize her contacts with others. During her 40s and 60s, she had supporting roles in two television series that ran for several years. They gave her a sense of fulfilment and the relationship with her husband improved. During her late 60s, osteoarthritis severely affected her mobility and Mr B had to provide assistance in her daily self-care. At the age of 69, she was admitted to a residential care home as Mr B, due to developing heart problems, was no longer able to care for her. The care home staff struggled to care for Ms B. She demanded to be seen only by senior staff members and would get angry if she felt that they were giving other residents more attention than she was receiving. She found fault with all aspects of her care and would file complaints about the staff on a daily basis. She said that the staff should suffer from arthritis in order to understand her situation and thus provide better care.

Ms B's GP had retired and her new GP referred her to the community mental health team (CMHT) in order that the care home team receive support in managing her care. He informed the CMHT psychiatrist that his retired colleague had suggested further assessments for a narcissistic personality. The psychiatrist assessed Ms B and took a collateral history from Mr B. He diagnosed her with a narcissistic personality disorder. He felt that Mr B's buffering role and acting in long-running television shows had helped to convert the dysfunctional behaviours into less maladaptive traits during midlife. The CMHT psychiatrist and care coordinator encouraged participation in music therapy and activities involving play-acting. They suggested that the staff members spend time with Ms B, discussing her acting experiences and also watching her television roles with her. Such activities enabled her to feel admired and valued. Ms B became more settled over time and her relationship with the care home team improved.

MCQs

Select the single best option for each question stem

1. **Regarding the ICD-11 diagnostic criteria for personality disorders, which of the following are true?**

a. The ICD-11 classification goes into effect in January 2021.
b. The estimation of severity of a personality disorder does not focus on harm to self or others.
c. The ICD-11 uses a dimensional approach.
d. The severity (mild and severe) of the personality disorder can be ascertained.
e. An optional qualifier is not provided for “borderline pattern”.

2. **Regarding the DSM-5 diagnostic criteria for personality disorders, which of the following are true?**

a. Those with obsessive-compulsive personality disorder are able to focus on both work and leisure activities.
b. Those with dependent personality disorders are able to make decisions for themselves without depending on others.
c. Those with paranoid personality disorders perceive attacks on their reputations that are not apparent to others.
d. People with avoidant personality disorders are able to manage social situations without worrying over whether they will be criticized.
e. People with borderline personality disorder do not have feelings of emptiness.

3. **Regarding medical conditions causing personality disorders, which of the following are true?**

a. Antisocial behaviours cannot be a consequence of strokes.
b. Space occupying lesions in the brain cannot cause emotional lability.
c. Thalamic disorders do not affect personality.
d. Subdural haematomas can cause lethargy.
e. Thyroid disease cannot affect personality.

4 **Regarding the management of late life personality disorders, which of the following are true?**

a. Negative affectivity, detachment, inhibition, dissociality and anankastia are used by the ICD-11 to describe personality dysfunction.
b. Clinicians holding a conference to reach a diagnosis by consensus would be helpful.
c. A coordinated team approach would not help in managing patients with personality disorders.

d. Assessing a patient in multiple contexts would not be helpful in diagnosing a patient with personality disorder.
e. Personality pathology cannot be identified from a patient's appearance.

5. Regarding the presentation of personality disorders in late life, which of the following are true?

a. When anxiety is a prominent feature in an elderly person it may be a pathognomonic feature of an antisocial personality disorder.
b. People with avoidant personality disorders experience social anxiety.
c. People with narcissistic personality disorders are able to handle losses in physical function
d. People with paranoid personality disorders are generally happy to accept help from health professionals.
e. People with schizoid personality disorders prefer to be less isolated in old age.

Answers: 1)c 2)c 3)d 4)b 5)b

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