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# Does Vitamin D Have an Effect on Patients With Depression?

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Abdul Abyad

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# From the Editor



Abdulrazak Abyad (Chief Editor) Email: aabyad@cyberia.net.lb

This month we have a paper on Vitamin D and depression which aims to address the question "does vitamin D have an effect on patients with depression?" and searches the literature to provide an understanding of the previous studies regarding effect of vitamin D on patients with depression; in addition to focusing on the relationship between vitamin D deficiency and depression. Finally recommendations for the approaches to vitamin D deficiency are outlined.

A paper from Jordan discusses the use of Physical restraint patients exhibiting aggression. The issues presented in this paper underscore conclusions in that this area is one that begs for research into alternative methods of assessment, care giving, and treatment planning. It is one that requires caregivers to be educated in the attendant dangers of restraints use and alternatives to their use. A paper from Iran discusses hope and meaning of life with depression between epileptic patients and non-epileptic persons. the authors conclude that in general, epileptic patients had lower meaning of life and hope than non-epileptic participants. Also, the epileptic patients had higher scores of depression than the other group of participants. It is worthy to point out that counseling treatment and rehabilitation programs for these patients should focus on hope and meaning of life.

Another paper from Iran discusses effects of video games on social interaction among elementary school girls. They find it is it is worthy to point out that children need more time to interact with other people like family members or their friends. In addition, some social behaviors are learned in family and society atmosphere. Expending all free time with video games can isolate children and keep them away from the real world.

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# Does Vitamin D Have an Effect on Patients With Depression?

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# Abstract

**Aim:** This paper aims to address the question "does vitamin D have an effect on patients with depression?" and searches the literature to provide an understanding of the previous studies regarding effect of vitamin D on patients with depression; in addition to focusing on the relationship between vitamin D deficiency and depression. Finally recommendations for the approaches to vitamin D deficiency are outlined.

**Background:** Vitamin D is a steroid, a hormone important in cognitive function and mental health, and in addition, affects on mood health, and affects patients with depression.

**Method:** A literature search was performed in PUBMED and EBSCO with the following key words used to search the electronic databases: vitamin D, Depression, vitamin D deficiency, and relationship between vitamin D and depression. The key words were used in multiple combinations to conduct an extensive search of these databases; also a manual search of the reference lists of relevant articles was performed .

**Conclusion:** In summary the author did find an association between low level of vitamin D and depressive symptoms in addition to focusing on the impact of vitamin D on depressed patients.

**Keywords:** Vitamin D, Depression Inpatients, Vitamin D Deficiency.

## Introduction

Vitamin D is a steroid hormone that plays physiological roles in the human body. Some of these actions, include an effect on mood health (Khamba, et al., 2011), however, Vitamin D is produced in the skin by exposure to sunlight (Jorde, Sneve, Figenschau, Svartberg, & Waterloo, 2008 ; Li, et al., 2013).

Although Vitamin D plays a role in a wide range of diseases such as osteoporosis, cancer, cardiovascular diseases, and diabetes , vitamin D also plays a very important role in cognitive function and mental health (Ganji, Milone, Cody, McCarty, & Wang, 2010). In addition Ganji, et al. (2010) mentioned that Vitamin D concentrations have been low in patients with mood disorders and have been associated with cognitive function.

According to Hoang, et al. (2011) low vitamin D level has lead to neurologic disorders such as multiple sclerosis, Alzheimer's disease, Parkinsons disease, and cognitive decline. Low vitamin D leads to elevation of parathyroid hormone which is affecting patients with depression (Khamba, et al., 2011).

In particular, vitamin D has been associated with seasonal affective disorder, a condition characterized by depression-like symptoms, during the winter months because of reduced sun exposure (Jorde, et al., 2008) . Indeed vitamin D can affect mood, through the blood-brain barrier and its receptors found throughout the brain including the cortex, cerebellum and limbic system. Also it is able to stimulate serotonin which regulates depression symptoms (Khamba, et al., 2011) .

This aim of this paper is to address the question "Does vitamin D have an effect on patients with depression?" and search the literature to provide an understanding of the previous studies regarding effect of vitamin D on patients with depression; in addition to focusing on the relationship between vitamin D deficiency and depression; finally we give recommendations for the approaches to vitamin D deficiency.

# Methods

A literature search was performed in PUBMED and EBSCO with the following key words used to search the electronic databases: vitamin D, Depression, vitamin D deficiency, and relationship between vitamin D and depression. The key words were used in multiple combinations to conduct an extensive search of these databases; we also performed a manual search of the reference lists of relevant articles.

This review is based on the specific inclusion criteria established. Article inclusion criteria for the integrative research review were the following:

- **1.** Sample consisting of adolescents aged (18-65).
- **2.** Diagnosis of depression or mood disorders.
- **3.** Full paper in English language.

Based on the inclusion criteria, a total of 10 articles published were selected and formed the basis for this review. Most articles were published in nursing journals and in psychiatry journals. Because vitamin D deficiency is a multidimensional phenomenon, this section highlights some of the identified properties of vitamin D that affect patients with depression or also identified vitamin D deficiency; finally we identified that vitamin D is most commonly used on depressed patients in respect of the purpose of this paper.

# Literarture Review

Many studies were conducted to predict the effect of vitamin D on depression symptoms, on the other hand the impact of vitamin D deficiency on patients with depression. After an extensive search about the relationship between vitamin D and patients with depression, most of the studies found were quantitative studies that highlight the living experience of vitamin D deficiency. The models presented were to represent an effect of vitamin D on patients with depression.

Hoang, et al. (2011), conducted a cross-sectional study to investigate the association between serum

vitamin D levels and depression in a large database of patients from the Cooper Clinic. Results show that low vitamin D levels are associated with depressive symptoms, especially in persons with a history of depression. Moreover, Hoang, et al. (2011), suggested that the patients in primary care with a history of depression may be important to screen for vitamin D levels.

A cross-sectional study was done by Jorde, et al.(2008) to examine the cross-sectional relation between vitamin D levels and depression in overweight and obese subjects and to assess the effect of vitamin D supplementation on depressive symptoms. Jorde, et al found there is a relation between serum levels of vitamin D and symptoms of depression. In addition Stewart and Hirani (2010) reported that Depressive symptoms were associated with clinical vitamin D deficiency.

A previous review by Khamba, et al.,(2011) suggests an association between vitamin D insufficiency and deficiency and the presence of mood disorders. In addition, the authors suggested Vitamin D supplementation might also be helpful in the treatment of mood disorders.

Kjærgaard, et al., (2012) conducted a study to compare depressive symptoms in participants with low and high serum of vitamin D and to examine whether supplementation with vitamin D would improve symptoms in those with low serum of vitamin D. The results support that Low levels of vitamin D are associated with depressive symptoms. On the other hand, Kjærgaard, et al mentioned that no effect was found with vitamin D supplementation.

Ganji, et al., (2010) reported that Women, non-Hispanic blacks, persons living below poverty, persons who did not consume supplements, persons living in South and West regions and in urban areas, persons with higher BMI, and persons with current depression had higher prevalence of vitamin D deficiency. A previous systematic review by Li, et al., (2013) found that it is helpful to clarify the efficacy of vitamin D supplementation. In addition Li, et al recommended establishing guidelines for implementation of vitamin D for depression in general practice and other relevant settings.

## Discussion

In accordance with previous studies, the author found a significant inverse association between vitamin D and depressive symptoms. On the other hand the studies Suggest Vitamin D supplementation might also be helpful in the treatment of depression symptoms; the main results that have been found are (Hoang, et al 2011; Jorde, et al. 2008; Stewart & Hirani, 2010; Khamba, et al., 2011; Kjærgaard, et al., 2012; Ganji, et al., 2010)

In addition previous studies recommended establishing guidelines for implementation of vitamin D for depression in general practice and other relevant settings (Li, et al., 2013).

# Recommendation

According to the represented studies in this review paper, the following recommendations are suggested, Firstly use of vitamin D in primary care with patients diagnosed with depression; secondly, more studies of vitamin D and their effectiveness in psychiatric patients could be considered; thirdly, more studies need to be done to understand the impact of vitamin D on Jordanian depressed patients and their families. Finally, psychiatric nurses should be educated and trained to using vitamin D supplementation in psychiatric settings.

# Conclusion

In summary the author did find an association between low level of vitamin D and depressive symptoms in addition to focusing on the impact of vitamin D on depressed patients. Although several of the reviewed studies showed that influence of vitamin D in patients with depression symptoms, in the future, research may focus on discovering useful strategies to managing and preventing depression.

### Acknowledgements

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# **Argumentative Paper: Physical Restraint**

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# Abstract

The issues presented in this paper underscore conclusions in that this area is one that begs for research into alternative methods of assessment, care giving, and treatment planning. It is one that requires caregivers to be educated in the attendant dangers of restraints use and alternatives to their use.

Alternatives that can be considered include: time out. constant observations. counseling (verbal interaction), de-escalation, medication, offering positive reinforcement for improved behavior, food and drinks, decreased stimulation, punch bags, exercise and relaxation techniques. And recently, the clinical application of interventions grounded in behavioral science and technology, which seem promising in reducing aggressive behavior, thus reducing the use of restraints.

**Key words:** Bioethics, physical restraint, mental illness, aggression, violence

## Introduction

Aggressive behavior is defined as any behavior that produces lagging cognitive skills in the domains of flexibility, frustration tolerance, and problem solving (Greene, Ablon, & Martin, 2006). Furthermore, it is cited as a significant problem that faces nurses in psychiatric hospitals (Chrzescijanski et al. 2007). In addition, it is linked with negative consequences for nurses such as stress, burnout, absenteeism, turnover and decrease of quality of care. Moreover aggressive behavior compromises nurse's safety in the workplace (Mayhew & Chappell, 2002) and increased use of physical restraint for these patients (Mohr, 2010).

On the other hand, physical restraint is defined as any manual method or physical or mechanical device, material, or equipment attached or adjacent to the resident's body that the individual cannot remove easily and which restricts freedom of movement or normal access to one's body (Allen, 2010). Heino, Korkeila, Tuohimäki, Tuori, and Lehtinen (2000) found that in 1,543 admissions to the psychiatric clinics evaluated by the retrospective study, physical restraints were applied to 32% of the patients. Mechanical restraints were used on 10% of the patients.

The unfortunate requirement of physical restraint is a part of professional nursing that nurses often find troubling. Nurses report that they prefer to use other means to manage aggressive behavior, that they are not in general comfortable with restraint use, and that the process is as painful for them as for their patients (McCain & Kornegay, 2005; Bigwood & Crowe, 2008).

Recent studies have questioned their therapeutic necessity and effect. Furthermore, many concerns have arisen about the immorality of the use of such measures, including the potential for physical and psychological injury to patients, and the violation of the patients' civil rights (Barloon, 2003). Therefore, many studies reviewed the dilemmas of using physical restraints with aggressive psychiatric patients. Many authors advocated against their use in modern psychiatric care, while others consider them as a necessary intervention to manage these aggressive behaviors.

Psychiatric nurses are often faced with legal, ethical and moral dilemmas over physical restraint with aggressive psychiatric patients. There are many questions surrounding the use of restraints among these patients such as: Should the physical restraints be used during the care of aggressive psychiatric patients? And if yes, in which situation, and based on what strategy, and procedure? Does the restraint inflict harm and contradict patient's rights of freedom, autonomy and respect? Is the physical restraint harmful? Are there any alternatives?

In my opinion, physical restraints should be eliminated as an intervention with aggressive psychiatric patients. Physical restraints may lead to many negative outcomes such as, worsen the therapeutic relationship, and may increase the occurrence of violent episodes and physical injury. Moreover, health care professionals need to develop alternative strategies to reduce or replace physical restraint, such as educational programs and cooperation from other institutes to address their responsibilities to reduce or replace physical restraint with aggressive psychiatric patients.

The purpose of this argumentative paper is to solve the conflict related to use of physical restraint during the care of aggressive patients, by answering the previously mentioned questions which are: Should physical restraints be used during the care of aggressive psychiatric patients? And if yes, in which situation, and based on what strategy, and procedure? Does the restraint inflict harm and contradict patient's rights of freedom, autonomy and respect? Is the physical restraint harmful? Are there any alternatives?

To conduct the answer of these questions, deep, and intensive search was done in many databases. The criteria of the chosen papers in this review were centered on the use of physical restraint in aggressive psychiatric patients in published papers in CINHAL database, ScienceDirect database, and PubMed database. However, no specific article handled these questions adequately, which led me to having a general literature review.

## Literature Review

Mental illnesses can affect an individual's cognitive, behavioral, emotional, and social functioning; their impact may compromise patients' ability to fully participate with the treatment team in their care (Mohr, 2010). Furthermore, Zimbardo (2007) stated that organizational realities and ecological factors raise concerns as to the pressures that health team members face and how these factors can seriously impact ethical practice.

Patients and their families trust that professionals will practice competently and ethically. Trust is a vital component of and a basis for relationships between clinicians and patients (Mohr, 2010). These interpersonal trust relationships have moral content fidelity, to trust is morally worthy; infidelity of trust is morally blameworthy. The need for trust and reliance on trust are especially important in health care because of patients' acute vulnerability to suffering, lost opportunity, and lack of power (Goold, 2001). In so far as patients under professional care in mental health facilities die because of that care, begs us to ask whether the restraint use is consistent with the spirit of the principles set forth in professionals' codes of ethics (Mohr, 2010).

Many studies reviewed the dilemmas of using physical restraints with aggressive psychiatric patients. Many authors advocated against their use in modern psychiatric care, while others consider them as a necessary intervention to manage these aggressive behaviors.

For Physical Restraint for Aggressive Psychiatric Patients

There were many studies that addressed the use of physical restraints with aggressive psychiatric patients. These studies focused on the reasons for indications for them. Migon, Coutinho, Huf, Adams, and Allen (2008) described that there are a limited number of ways to control situations and ensure that everyone is safe when talking to an aggressive ill person. However, physical restraint in some cases is used to prevent injury and reduce patient's agitation (Kolanowski, Litaker, & Buettner, 2005).

Furthermore, psychiatric patients with aggressive behaviors are at high risk of being restrained due to the chance of harming themselves or others, and they cannot be controlled by means of verbal interventions, voluntarily medications or other interventions (Wynn, 2002). Moreover, other studies have reported preventing harm to self or others as the primary indication for physical restraint, and it is an effective way of preventing injury and reducing agitation (Fisher, 1994).

Against Physical Restraint for Aggressive Psychiatric Patients

Despite the evidence supporting the positive outcomes of the use of physical restraint with aggressive psychiatric patients, several agencies and health care quality groups recently have advised to reduce physical restraints in psychiatric hospitals and nursing homes (Valerie, 2005). Nurses should eliminate using it as an intervention in aggressive psychiatric patients because their use constitutes an infringement on patient's autonomy, worsens the therapeutic relationship, and may increase the occurrence of violent episodes and physical injury (Wynn, 2002). In addition the use of restraints poses a conflict between patient's needs and ethical rights (Sourander, Ellila, Valimaki, & Piha, 2002; Dennis & Donat , 2005; Stolker, Nijman, & Zwanikken, 2006).

Many complications include problems of elimination, aspiration pneumonia, circulatory obstruction, cardiac stress, skin breakdown, poor appetite, dehydration, decreased peripheral circulation, muscle atrophy, pressure ulcers, infections, agitation, social isolation, psychiatric morbidity, functional decline, serious injuries, depression, post traumatic stress, anxiety, delirium, and death (Valerie, 2007; Lois & Valerie, 2008). Moreover, financial implications of physical containment include costs incurred because of these staff injuries, nursing time prearranged to monitor restrained patients, and tort liability (O'Halloran & Frank, 2000).

Kennard (2006) proposed that physical restraints have been reported to be associated with many social effects in residents, such as, cognitive problems, fear, unhappiness, frustration, loss of dignity, behavioral symptoms such as increased agitation, skill loss, and from the ethical and legal view, since physical restraint could be seen as a type of battery, assault, or false imprisonment, and also constitutes a breach of the patient's freedom and autonomy. Therefore, many researchers have proposed a number of alternatives to reduce or replace the use of physical restraint with aggressive patients in psychiatric units to reduce negative consequences (Lee et al, 2001; Paterson & Leadbetter, 2004; National Institute for Mental Health in England (NIMHE), 2004; National Institute for Clinical Excellence (NICE), 2005).

# Discussion

As the author said before, physical restraints should be eliminated as an intervention with aggressive psychiatric patients. Physical restraints may lead to many negative outcomes such as, worsen the therapeutic relationship, and may increase the occurrence of violent episodes and physical injury. Moreover, health care professionals need to develop alternative strategies to reduce or replace physical restraints, such as educational programs and cooperation from other institutes to address their responsibilities to reduce or replace physical restraint with aggressive psychiatric patients. So, now I will defend arguments in the discussion part which includes two parts; ethical argument, and legal argument.

### **Ethical Argument**

The nurses face ethical dilemmas over using physical restraints with aggressive patients. They struggle with conflict between right to personal freedom and dignity, and feeling of obligation to protect others and patients. From an ethical point of view, there are many ethical principles such as autonomy, beneficence and non-maleficence that rationalizes use or not of physical restraint with aggressive psychiatric patients.

#### Autonomy

The autonomy principle represents that the patients are freed to act independently with patient's desire and capacity for self-determination (Guido, 2010). Moreover, the respect for autonomy is a reflection of this morality and in the United States, is based on the right to privacy and selfdetermination (Mohr, 2010).

Two fundamental components of autonomy are liberty, the right to selfdetermination without interference or controlling influence from others, and agency, the capacity to make decisions and intentionally act upon them (Mohr, 2010). Liberty generally requires that the patient be able to make a decision without being coerced or manipulated (Mohr, 2010).

Physical restraints are incompatible with the principle of autonomy by restricting patients or limiting their freedom in some way against their will (Mental Health Commission of Scotland, 2006). Moreover, a unilateral decision made by caregivers that a patient is unmanageable and in need of external control made on behalf of patients and against their will has the potential to become paternalistic (Mohr, 2010).

Autonomy is often under assault in clinical settings (Cheung & Yam, 2005). The authors concluded that

authoritarian attitudes toward patient behavior, violation of autonomy, and compliance become particularly significant in mental health settings because some mental health workers are not highly skilled staff, such as psychiatric nurses, who traditionally have been the direct caregivers in such settings. In the context of staffing with the least educated individuals to care for the most vulnerable, the issue of inequality raises grave concerns about giving them power over virtually all of the daily activities of such patients. When given such power, persons who may have little economic or social power may be tempted to become tyrants (Mohr, 2010). In addition, the author concluded that the relationship of psychiatric patient and nurses is one that is inherently unequal. Therefore, it is incumbent upon professional caregivers to strive to create environments that foster patients' autonomy.

The idea of compliance as an expectation from patients strengthens and underscores inequality. The expectation of compliance, as opposed to patient engagement in treatment, is the contrast of respecting individual autonomy, and the use of coercive power to achieve compliance overtly violates the principle of autonomy. From what has been discussed, it can be concluded that the evidence argues strongly against the use of restraints as a therapeutic modality. Their use can violate the principle of autonomy.

In some instances, the use of restraints is the only alternative available to staff members who are charged with patient safety. Moreover, the staff members themselves have a right to expect to be safe and to have the tools at their disposal to assure that they and their charges are protected against bodily harm. Thus, in the absence of less coercive tools, they are forced to breach patient autonomy at times when it is unavoidable.

## **Beneficence and Non-maleficence**

The principle of beneficence discusses a moral obligation on psychiatric nurses to act for the benefit of their patients (Mohr, 2010). Nurses are rarely able to produce benefits without creating additional risks or incurring some costs. As a result, to act with beneficence, they must act only when the benefits warrant the risks and costs associated with a procedure or action. However, beneficence must be constrained by autonomy to prevent the rights of individuals from being subjugated to their medical needs or the medical needs of others.

A patient's ability to exercise autonomy or self determination may conflict with a clinician's ethical duty of beneficence. Psychiatric nurses want to provide the care that they believe is best for patients but must also acknowledge patient preference. This dilemma raises the interesting question of whether a nurse's primary obligation is to act for the patient's medical benefit or to promote his or her autonomous decision making.

Nevertheless, the principle of beneficence is deeply rooted in both ethics codes of professional conduct and general practice of all care giving professionals. Beneficence can be viewed on a continuum from preventing or removing harm to facilitating good or promoting a person's welfare. It is based on one human being's duty to assist another in need. Beneficence usually requires specific action on the part of the health care provider, which includes weighing all available options to facilitate maximal benefit to the patient. With respect to those actions, they should be therapeutic and promote well-being; otherwise, patients would be in no need of health care providers. They could become well on their own and heal themselves (Guido, 2010). The Child Welfare League of America (CWLA) (2004) concluded that there is little in the research literature which can inform the practice of restraints use or their therapeutic benefit with children and youth. Also, Day (2002) conducted thorough reviews concluding that the theoretical paradigms in support of restraint use are outdated. Moreover, there is very limited empirical evidence to support

the therapeutic utility of restrictive measures or research that could be used to inform practice (Day, 2002, Martin, 2002; Sailas & Fenton 2000). In addition, recent studies actually suggest that restraints can serve as positive reinforcers for aggression (Kahng, Leak, Vu & Mishler, 2008).

As there is no evidence that restraints are therapeutic of mental health professionals, it is important to ask whether they violate the principle of non-maleficence. Non-maleficence simply means "do not harm, prevent harm, remove harm, and facilitate good". To harm someone means to act in such a way as to negatively impact or to disadvantage him or her in some way (Beauchamp & Childress, 2001).

Patients can experience a range of negative consequences during and after using physical restraints such as discomfort, injury, pain, panic, fear, frustration, isolation, shame, sadness, and even death (Fish & Culshaw, 2005; Lois & Valerie, 2008; Valerie, 2007). Furthermore, Fish and Culshaw (2005) reported that physical restraint also effects on nurses who implement it; they can experience a range of negative consequences like physical injury, sadness, frustration, shock, anger and self doubt and conclude that the only way to reduce the risks associated with use of physical restraints is to stop using them.

From what has been discussed, it can be concluded that the evidence argues strongly against the use of restraints as a therapeutic modality. Their use can cause serious patient and staff injury and they have resulted in many deaths (National Executive Training Institute, 2005). The principle of beneficence to a patient is rarely absolute in maintenance of patient and staff safety, and it is unclear, based on present literature, whether any benefit (good) accrues to the patient from the use of restraints that entails anything other than safety. Instances such as imminent danger illustrate the principle of beneficence coming into conflict with the principle of autonomy in so far as beneficence is applicable to the public, as well as to the patient who comes in contact with that public. However, other than in those instances where safety is truly a legitimate concern, restraint use would seem to violate the principles of beneficence and non-maleficence.

#### Legal Argument

Physical restraint for aggressive psychiatric patients is considered a battery, because battery is considered as intentionally unpleasant contact with another person, any unwanted touching, or touch without consent (Guido, 2010). Moreover, use of physical restraint lays the foundation for false imprisonment (Cherry & Jacob, 2008).

There is no policy or any law that oversees physical restraints in Jordan. There must be an objective reason for the restraint in order to prevent harm. Moreover, the restraint must be "proportionate", that is, the need for the restraint must be sufficiently serious to justify such a serious response, and if less intrusive ways of dealing with the situation can be found, these should be preferred. This argumentative paper negates the use of physical restraint for aggressive psychiatric patients and recommends alternatives rather than using physical restraint.

#### Recommendations

The first recommendation to the Mental Health Department is that research in the area of safe alternatives to restraints is an urgent moral imperative. This imperative has been stressed in position statements and practice parameters (American Psychiatric Nurses Association, 2007; American Academy of Child and Adolescent Psychiatry, 2002). Other examples of research that is vitally needed are those which compare the use of various de-escalation techniques and differentiate the characteristics of patients with whom each type of technique is most effective. In addition to welldocumented effective best practices that reduce violent episodes and restraint use should be evaluated (Huckshorn, 2006; Lebel et al., 2004; Witte, 2008).

The second recommendation is that information about the dangers of restraint use must be discussed more widely in the professional literature and in educational programs. Well over a decade ago, Stillwell (1991) conducted a study that determined that more than half of nurses (51.8%) whom she surveyed reported having no instruction in the use of restraints and their effect on children. In that same study, only 8% reported knowing that restraint use could be dangerous.

A third recommendation is to use the tools that we already have which have proven effectiveness. The functional analysis of behavior is a tool that has been available to inform treatment planning for many years. A functional behavioral assessment or analysis is a process which seeks to identify the problem behavior a patient may exhibit to determine the function or purpose of the behavior and to develop interventions to teach acceptable alternatives to the behavior (Virtues-Ortega & Haynes, 2005). Finally, in view of the dangers associated with restraint use, these dangers must be clearly communicated and spelled out to patients and their families and to professionals.

# Conclusions

A traditional bioethics analysis of the use of physical restraint suggests that their use as part of the toolkit available to clinicians in clinical settings is a complex and multifaceted issue. It points out potential limits to the codes of ethics and the principles underpinning them in the face of what nurses may encounter in psychiatric settings. They may be inadequate to take into account dangerous situations that may result in patient and staff morbidity or mortality. The relative relevance of autonomy in instances where it must conflict with beneficence is not one that lends itself to easy solutions.

The issues presented in this paper underscore other conclusions in that this area is one that begs for research into alternative methods of assessment, care giving, and treatment planning. It is one that requires caregivers to be educated in the attendant dangers of restraint use and alternatives to their use.

Alternatives that can be considered include: time out, constant observation, counseling (verbal interaction), de-escalation, medication, offering positive reinforcement for improved behavior, food and drinks, decreased stimulation, punch bags, exercise and relaxation techniques, and recently, the clinical application of interventions grounded in behavioral science and technology, which seem promising in reducing the aggressive behavior, thus reducing the use of restraints.

When these interventions are applied, the following considerations should be taken into account. Respect the dignity of the patient, and constant evaluation of the patient once the restraint is initiated. Objective documentation that supports the need for these measures and those alternatives were considered.

The question that remains is what can be applied in Jordan?

1. Increase the awareness of staff, knowledge, and training of physical restraints by educating the staff of, what are the other alternatives that can be used first, when to apply them, how to apply them in an appropriate manner to cause least harm for both staff and patients. This must be a mandatory course in the orientation. In addition, it should be tested at least once a year.

2. Staff should be trained on how to apply alternatives and to recognize early warning signs to avoid escalation and crisis. The protocol provides a clear structure for the four phases of early recognition: First are the introduction of the method to the patient(s) and an explanation of what is expected of the patient and the nurse. Second, the nurse, patient, and members of the patient's social network are asked to list the main warning signs for the patient in question and to describe these within the early detection plan (which is a relapse prevention plan based on early signs). Third, patients learn to monitor their behavior to recognize early warning signs. Fourth, preventive actions are outlined, and the patient is encouraged to carry out these actions when early warning signs are detected (Fluttert et al., 2008).

**3.** Objective documentation of the incidents should be reported, for both legal and ethical consideration, and for identification and therapeutic purposes.

**4.** For design purposes, it is necessary to create wards with sufficient single-bed rooms for patients to reduce patients being overcrowded and stimulated. However, patients who are at high risk of committing self-harm are excluded.

Finally, it is also one that demands open communication between families and caregivers to meet the best interests of patients. Moreover, the best practice is the one that supports the patients safely, with high quality to improve the patient's quality of life and quality of care, without interference with the other rights, which mainly follow fixed applicable policy and standards of care.

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# Comparing hope and meaning of life with depression between epileptic patients and non-epileptic persons

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# Abstract

**Background:** Hope and meaning of life are two key important elements of well-being and mental health in people. These components, when people are faced with mental and physical illness are playing vital roles in improving health and challenging problems in life.

**Goal:** This study investigated the comparison of hope and meaning of life with depression between epileptic and non-epileptic persons.

**Method:** The research method was causal-comparative. 100 persons were selected targeted from the Association of Epilepsy

in Golestan province in north -east Iran and 100 participants were selected from non-epileptic persons in 2013. All participants were matched in age, education, and economic social situation. For gathering data we used four questionnaires including; Demographic Questionnaire, Adult Hope Scale (AHS), Meaning of Life Questionnaire (MLQ) and Beck Depression Inventory (BDI).

**Results:** Data were analyzed with Pearson correlation and t-student test. The results indicated that there was a significant difference between hope, meaning of life and depression between epileptic and non-epileptic participants. **Conclusion:** In general, epileptic patients had lower meaning of life and hope than non-epileptic participants. Also, the epileptic patients had higher scores of depression than the other group of participants. It is worthy to point out that counseling treatment and rehabilitation programs for these patients should focus on hope and meaning of life.

**Key words:** hope, meaning of life, depression, epileptic, non-epileptic.

# Introduction

Epilepsy is chronic neurological illness and it is estimated that nearly 45 million people around the world are suffering this disorder. Epilepsy is an abrupt seizure of the central neurological system. This illness appears with disturbance of consciousness. Epilepsy is an abrupt, temporary and repeat disorder and people who suffer this illness cannot control or predict the disorder (1).

Several studies have revealed that patients with epilepsy had lower level of quality of life than general populations. Also, they faced many psycho-social problems and experienced stigma, vulnerability and shame (2).

There is more evidence that has indicated that patients with epilepsy are dealing with depression and anxiety. People who suffered depression had low activity, lack of interested in living, problems of concentration, thinking about death and have suicidal ideation. Thapar et al (2009) indicated the relation between epilepsy and depression or mood disorders in patients. Depression in patients depends on several factors, but some studies point out that depression has a strong relationship with meaningless and goalessness in life (3). For example, Ratti & Rastogi, (2007) indicated that having meaning and aim in life, especially when a person is faced with problems is a positive and strong prediction of well-being. Meaning of life stems from the very famous psychotherapy approach logo-therapy. Victor Frankle was creator of logotherapy and point out that meaning of life and achieve to aim and meaning is an important duty of a person in her/his life (2). Debatsa, Van der lubb & Wezeman (1993 in Steger 2006) cited that meaning of life facilitates positive feelings of people and could be used to relieve depressive feelings, despair, aimlessness and hopelessness in life. Meaning of life could create hope in life (4). Snyder et al (2011) cited that HOPE could create two beliefs in a person including ability to determine the goal and the decision to move toward the goal. People with special needs or disability usually experience limitations in their life (5). They deal with low self esteem; low problem solving skills, lack of coping strategies with stress, defect of social and relationship skills. Some of these defects root in society and the view of people toward epileptic persons and others, and related to attitude of patients toward themselves. High levels of Hope, meaning of life and low level of depression are key components of high quality of life in patients (1). This research attempted to answer the basic question "is there any significant difference between hope, meaning of life and depression scores among epileptic patients and non-epileptic persons?

#### Participants and research plan:

The research method was causalcomparative. The society of research was epileptic patients enrolled in Association of epilepsy in Gorgan capital of Golestan province in the north-east of Iran. 100 of them were selected by targeted sampling from the aforementioned Association and 100 non-epileptic persons were elected from the normal population in Gorgan in 2013. All participants were matched in age, education, married status, and socio-economic status. The inclusion criteria of the research were:

**A:** All participants were 20 years old and above

**B**: no physical and psychiatric record except the diagnosis of epilepsy (for epileptic Group)

**C:** no dependency of addiction **D:** filling out the forms with informed consent.

Exclusion criteria included; **A:** Addiction or dependency on drug or substance, **B:** Idea physical or psychological

**B:** Had physical or psychological disorders C: they were illiterate or low- level education (under Diploma).

#### Measurement:

For gathering data we used four questionnaires including; Demographic questionnaire, Adult Hope scale (AHS), meaning of life questionnaire (MLQ) and Beck Depression Inventory (BDI). Demographic Questionnaire acquired information about age, education, married status, and socio-economic status.

Adult Hope Scale (AHS) was created by Sndyer et al (1991). The questionnaire was self-report and assessed the hope trait in persons. This questionnaire has two subscales including; having solution and willing to achieve solution. The questionnaire has 12 items and scored with a Likert scale (6). This questionnaire was translated to Persian by Riyahi in 2006 and the validity of test was reported by Cronbach's Alpha 0/73 (7).

The meaning of life Questionnaire (MLQ): this questionnaire is made from Victor Frankel theory. It has 50 items and scoring from 1 to 7 (completely disagree to completely agree) and assessing by Likert scale. Ghavahi Jahan in 2008 reported validity of test by Cronbach's Alpha 0/91 in Iran (7).

**Beck Depression inventory (BDI):** 

The Beck Depression Inventory (BDI, BDI-1A, BDI-II), created by Dr. Aaron T. Beck, is a 21question multiple-choice self-report inventory, and one of the most widely used instruments for measuring the severity of depression. Its development marked a shift among health care professionals, who had until then viewed depression from a psychodynamic perspective, instead of it being rooted in the patient's own thoughts. There are three versions of the BDI - the original BDI, first published in 1961 and later revised in 1978 as the BDI-1A, and the BDI-II, published in 1996(8,9). In Iran Tashakori and Mehyar (1993) reported the validity of this inventory by Cronbach's alpha 0/73(7).

# Procedure, statistical methods and code of ethics:

All of the questionnaires were answered by participants' independently and they were filled out and informed consent was obtained. The data gathered from the research were analyzed by Descriptive statistical methods including; Mean, Standard deviation, and percent frequency. Also, inferential statistical methods like; Pearson correlation, t -student test for independent group were implemented for research.

# Results

Table 1 indicates the result of mean difference test between epileptic and non-epileptic participants by t-student test in hope questionnaire. As shown in Table 1 there is significant difference between the two groups (t=6.60, P<0/01, df=198).

Table 1: Mean, SD and P-value of epileptic (Group1, n=100) and non-epileptic (Group 2, n=100) participants by t-student test in hope questionnaire

group	Mean±SD	df	<i>P</i> value	t
Epileptic	23.19± <b>4.58</b>	198	0.01	6.60**
Non-epileptic	30.6±3.17			

\*\*P<0/01 Abbreviations: SD, Standard Deviation; df, Degree of freedom; t, Student's t - test

Table 2 shows the result of mean difference test between epileptic and non-epileptic participants by t-student test in the meaning of life questionnaire. As shown in Table 2 there is significant difference between the two groups (t=2.89, P<0/01, df =198).

Table 2: Mean, SD and P-value of epileptic (Group1, n=100) and non-epileptic (Group2, n=100) participants by t-student test in the meaning of life questionnaire

group	Mean±SD	df	Р	t
			value	
Epileptic	192.3±27.95	198	0.01	2.89**
Non-epileptic	203.75±27.87			

\*\*P<0/01 Abbreviations: SD, Standard Deviation; df, Degree of freedom; t, Student's t - test

Table 3 demonstrates result of mean difference test between epileptic and non-epileptic participants by t-student test in the Beck Depression inventory questionnaire. As shown in Table 3 there is a significant difference between the two groups (t=4.33, P<0/01, df =198).

Table 3: Mean, SD and P-value of epileptic (Group1, n=100) and non-epileptic (Group2, n=100) participants by t-student test in Beck Depression Inventory

group	Mean±SD	df	P value	t
Epileptic	24 <b>±13.21</b>	198	0.01	4.3**
Non-epileptic	16.41±11.64			

\*\*P<0/01 Abbreviations: SD, Standard Deviation; df, Degree of freedom; t, Student's t - test

Table 4 (next page) exhibits the Spearman's correlation between Hope, Meaning of life, and Depression in Epileptic participants in study. As Table 4 shows there was negative correlation between hope and meaning of life scores with depression. In other words, with increasing hope and meaning of life scores, depression declined.

 Table 4: Spearman's coefficient correlation between Hope, Meaning of life, and Depression in Epileptic participants in study

	М	SD	Норе	Meaning of life	Depression
1-Hope	23.19	4.58			8 <del>7993300</del>
2-Meaning of life	192.33	27.95	0/03		
3-Depression	24	13.21	-0/50*	* -0/57**	

<sup>\*\*</sup>P <u>≤</u> 0.001

Table 5 indicates the Spearman's correlation between Hope, Meaning of life, and Depression in non-Epileptic participants in the study. As Table 5 shows there was negative correlation between hope and meaning of life scores with depression. In other words, with increasing hope and meaning of life scores, depression declined. On the contrary, there was positive correlation between Hope and meaning of life scores. It means that increasing hope increased the meaning of life as well.

# Table 5: Spearman's coefficient correlation between Hope, Meaning of life, and Depression in non-Epileptic participants in study

	М	SD	Норе	Meaning of life	Depression
1-Hope	30.6	3.17			
2-Meaning of life	203.75	27.78	0/34**		
3-Depression	16.41	11.64	-0/51**	-0/53**	

\*\*P <u>≤</u> 0.001

# Discussion

The purpose of this study was comparing Hope, and meaning of life, with depression between epileptic and non-epileptic persons. The results indicated a significant difference between epileptic and nonepileptic persons in hope, meaning of life and depression scores. Epileptic patients in this research had higher scores in depression and lower level of hope and meaning of life than the other group. This finding was consistent with earlier research like, Banks, Singleton, & Kohn-wood. They revealed that the increasing levels of hope have a direct relationship with up down scores or levels of depression (10). Also,

Zahiroldin and Ghoreshi showed that 51.6% of epileptic patients had depression (11). In addition, Feldman and Snyder (2005) pointed out that having hopeful thoughts including, goal in life and having solution in life are the part of meaning of life. In other words, increasing hope in life could be decreasing the levels of anxiety and depression in persons (12). In conclusion it is worthy to point out that the kind of attitude and point of view that people have and their life plays a key role in their mental health and the meaning of life. Epileptic patients have experienced a negative view of themselves. Also the stigma of the illness and the view society has these patients giving up

the hopeless and meaningfulness in their life. Every day they face social problems, joblessness and isolation from society. Psychological interventions and cultural awareness about the reality of epilepsy can be helpful.

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# Effects of video games on social interaction among elementary school girls

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# Abstract

Video games were created by PONG in 1972. Since then, all of the video games have been popular in the world. The effect of these games on children and adolescents is in shadow. Some of scientists have explained that these games are useful for children and some of them are against them. Without any argument, they greatly affect the world of children.

**Goal:** This study investigated the comparison of effect of video games on social interaction among elementary school girls in Iran.

Method: The research method was causal-comparative. One hundred and twenty elementary school girls' aged 10 - 12 years old were selected by targeting a sample from the Karaj City in Iran by 2013. Sixty students regularly used video games in their free time and sixty other students could not access the computer or café nets. All participants were matched in age, education, and economic social situation. For gathering data we used the four questionnaires including Demographic Questionnaire, Social Skills Rating Scale (SSRS).

**Results:** Data were analyzed with t-student test. The resulted indicated a significant difference between social interaction between the two groups of girls. The girls who had not accessed video games acquired a higher level of social interaction scores than girls who expend their time with video games. **Conclusion:** In conclusion it is worthy to point out that children need more time to interact with other people like family members or their friends. In addition, some social behaviors are learned in family and society atmosphere. Expending all free time with video games can isolate children and keep them away from the real world.

**Key words:** video games, social interaction, & elementary school girls

# Introduction

Video games started with the "pong" game in 1972 and since then have grown into a huge industry and have created new soft and hard ware. At the end of the 1970s, video games were brought into homes and many children and adolescents spent more time with them. Soon, video games changed to one of excitement entertainment among people in the twentieth century and a part of modern culture in most parts of the world. As of 2014, there are eight generations of video game consoles (1).

After the popularity worldwide of the video games, psychologists and educational experts started to study the positive and negative sides of these games. Surprisingly the rate of research that revealed the negative effects of video games on children and adolescents was more than positive aspects. Research literature is full of the harmful impacts of video games on users like; increasing aggressive thoughts, feelings, and behaviors among children and youths (2). Playing violent video games is raising arguments with teachers and involves students in physical fights (3) and increasing aggressive behavior verbally and physically (4), and decreasing prosaic behavior (5).

On the other hand, there is research evidence found that the video games depend on contents as prosocial activities and may promote prosocial behavior (6).

As pointed out by Greitmyer and Osswald 'playing a prosocial (relative to a neutral) video games increases helping behavior' (Greitmyer and Osswald, 2010, p.211).

All explanations of negative and positive effects of video games stem from western countries researchers so, in the present study we begin by analyzing and reviewing the results of previous research into the impacts of video games on social interaction. We attempt to establish the same findings in Iran as a Middle East country. Surprisingly, it has revealed that Iranian researchers like other authors are interested in pointing out the harmful effects of video games on users e.g. Doran, 2002; Ahmadi, 1998 (7 & 8). They found that video games grow aggressive behaviors in children and adolescents and reduce social interaction.

However, there was little research found that addressed the impact of video games on social interaction in Iran.

Next, we discuss our main hypothesis in the present study. Do the video games affect on social interaction among elementary school girls regardless of the content of them? In our research, we examine hours students are spending on playing video games.

# Method

Participants and research plan: The research method was causalcomparative. One hundred and twenty girl students were randomly selected for research in Karaj, Capital of Alborz province, Iran. Sixty of them, group A, 4th, 5th, and 6th grade students, spent an average 3 to 4 hours a day playing video games and sixty of group B, 4th, 5th, and 6th grade students, had no access to video games or had not computers or other technology in home or café nets. The age of participants ranged from 10 to 12 years (M= 10.08). The questionnaires were completed by two female interviewers.

#### Measurement:

For gathering data we used the four questionnaires including: Demographic questionnaire, Social Skills Rating System (SSRS). Demographic Questionnaire acquired the information about age, education, married status, and social-economic status.

# Social Skills Rating System (SSRS)

The Social Skills Rating System (SSRS) created by Gresham & Elliott in 1990 (9). SSRS is a normreferenced assessment tool that focuses on social behavior in preschool, elementary, and secondary students.

The SRSS administration phase has separate questionnaire booklets for teachers, parents and the student, all based on the student's current educational level (i.e. preschool, elementary, or secondary). Administration time for the SRSS depends upon the number of rating scales used, and the number of respondents selected for reporting. According to the manual, a SRSS rating form typically can be complete in 15-25 minutes; respondents are required to have at minimum grade three reading level. Scoring generally takes approximately 5 minutes per questionnaire booklet. Each questionnaire contains 34 to 57 items that assess the individual's social behavior. Each item uses a 3-point scale (i.e. 0 = Never, 1 = Sometimes, 2 = Very Often) to describe the individual's typical behavior. Raw scores from each form are transferred to subscale scores, and can be converted into scale scores, percentile scores, behavior levels, standard scores, and percentiles (10). An analysis of internal consistency yielded average coefficient alpha reliabilities (across all forms and educational levels) of .90 for the Social Skills scale conducted by Diperna and Volpe (2005), the SSRC self-rating form demonstrated "adequate internal consistency" when it was validated using a sample of 185 students (11). In Iran SSRS Shahimm (2002) translated this questionnaire into Persian and reported reliability by Cronbach's Alpha .81 for the SSRC (12). In the present research, we used the student and parents forms.

# Procedure, statistical methods, and code of ethics:

Participants answered all of the questionnaires independently under supervision of interviewers and their parents filled out the informed consent.

When participants were selected, interviewers were told the aim of the study to them and their parents and asked the parents to report the hours that children spent on video games. Interviewers examined the average time that students spent playing video games for four weeks (one month). After four weeks, interviewers completed the questionnaires by interviewing the participants.

The data gathered from the research was analyzed by Descriptive statistical methods including; Mean, Standard deviation, and percent frequency. In addition, inferential statistical methods like, t -student for independent group were implemented for research.

# Results

Table 1 indicates the result of mean difference test between social skills rating scale student form. As shown in Table 1 there is significant difference between the two groups of participants (t=7.02, P<0/05, df=118).

Table 2 showed the result of mean difference test between video games player (Group A) and non-video games players (Group B) by t-student test in the social skills rating scale form parents. As shown in Table 2 there is significant difference between the two groups (t=7.62, P<0/05, df =118).

# Discussion

The present research shows that playing video games for 4 hours a day decreases social interaction in students. This finding is consistent with Doran (2002) and Ahmadi (1998) research (7&8). They found that playing video games reduced social interaction among students. However, Greitmyer and Ossswald (2010) revealed that exposure to video games with prosocial behavior is positively related to increases in different kinds of prosocial behavior (6).

Moreover, the present study indicates that parents report that their children are not interested in meeting their friends or relatives. They are preferred to spend their time in front of video games.

We also sought to find out if the family environment or atmosphere is playing a key role in students' spending a long time playing video games; for example, most of these students were single children. They had no siblings. Their parents were full-time employees and had no control or supervision on the students.

In addition, parents not only had no control on contents of video games but also, they prefer that their Child spent more time with video games rather than playing with their friends or meeting them. As noted above, we assessed only the short- term effects of playing video games without any study on contents. The previous researchers found that media effects on people very strongly (13). People are influenced by exposure to media contents of either prosocial or aggressive behavior.

In general, playing video games brings out prosocial or aggressive behaviors based on contents. This has led to the suggestion that children should be prevented from viewing things such as, criminal actions or physical violence. As pointed out by Greitmeyer and Osswald there is clearly a need for prosocial video games for children (6).

However, educational video games have been extensively used in Iran to teach kinds of skills including; English language, exam programming, and mathematics and so on. However, as the previous research suggested video games with prosocial content is highly needed in educational settings (6).

To sum up, playing video games, needs planning and supervision of parents, So, we need to convince the parents the need to create other

Table 1: Mean, SD and P-value of video games player (Group A, n=60) and non-video games players (Group B, n=60) participants by t-student test in SSRS student form

Groups	Mean±SD	df	P value	t
video games player	61.63±12.70	118	0.05	7.02"
non-video games players	76.73±9.46			

\*\*P<0/05 Abbreviations: SD, Standard Deviation; df, Degree of freedom; t, Student's t - test

Table 2: Mean, SD and P-value of video games player (Group A, n=60) and non-video games players (Group B, n=60) participants by t-student test in SSRS parents form

group	Mean±SD df		P value	t	
video games player	62±609	118	0.05	7.62*	
non-video games players	74±5.9				

\*\*P<0/05 Abbreviations: SD, Standard Deviation; df, Degree of freedom; t, Student's t - test

aspects of free time for children like, meeting friends, outdoors activities, reading books, and visiting relatives and so on

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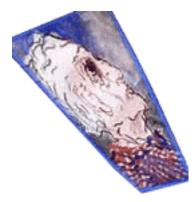
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# **CME QUIZ**



"I'd like to return to work..."

Emmanuelle is a 70 year old, recently retired solicitor who presents with fatigue and depressed mood. He has no associated features of depression.

He dates the onset of his symptoms from a minor CVA two months before which presented as mild right hemiparesis. A CT scan at the time showed an ischemic stroke in the territory of the left middle cerebral artery. He was commenced on aspirin and his right hemiparesis resolved completely after 2 days. He has had no recurrence.

Emmanuelle has hypertension, which is well controlled on an ACE inhibitor. He lives with his wife, who is in good health. He has three daughters who live close by and visits frequently with his grandchildren. He has been a smoker 20-30 /day in the past, but gave up 10 years ago when he developed hypertension. He drinks 20 grams of alcohol per day as red wine.

# **Question 1**

Which of the following statements do you consider are true?

- A. Depression affects up to 25% of the community-dwelling elderly.
- B. The prevalence of depression is higher in nursing home residents.
- C. Subsyndromal depressions in the elderly are associated with increased risk of physical disability.
- D. Subsyndromal depressions in the elderly are typically long lasting.
- E. Depression in older individuals is often missed by health care providers

(all answers are on opposite page)

## **Question 2**

Emmanuelle is brought in by his wife and one of his daughters four months later. They say that his illness has now progressed. There have been times when his depression has been marked by periods of agitation and anxiety, when he sits, wringing his hands and ruminating over his perceived troubles, and other times, as now, when he is composed, but sits for long periods without moving.

He complains of marked sleep disturbance with early morning wakening and diurnal mood shifts. He has lost a considerable amount of weight in the last four months.

## Which of the following statements do you consider are true?

- A. Sleep disturbance is a useful Indicator of depression in old age.
- B. Decline in appetite is a useful Indicator of depression in old age.
- C. Anxiety is a useful indicator of depression in old age.
- D. Depression is less likely to become chronic in old age.
- E. Biological symptoms of depression in the elderly tend to get worse over time.

## **Question 3**

Emmanuelle is described by his wife and children as a dynamic man and an excellent manager and organiser. He has been a successful senior partner in his own law firm for 35 years and has been a past president of the Law Society of NSW. His family say his life is now chaotic, and that he is unable to organise even the most straight forward of his financial affairs.

On examination it is clear that Emmanuelle has no insight into his disability. He says "I'd like to return to my work with Law Society". On examination he has marked motor retardation. He is seen by a community geriatrician who orders an MRI scan of the brain.

## Which of the following statements do you consider are true?

- A. Depression in the elderly is associated with vascular lesion of the prefrontal areas of the brain.
- B. Depression in the elderly is often associated with impairment of executive functions.
- C. Functional disability is a predictor of depression in the elderly.
- D. Late-onset depression is often associated with cognitive impairment.
- E. Cognitive impairment that is reversed by antidepressant treatment is predictive of irreversible dementia.

# Answers and feedback

### Question 1

All options are True Feedback

While recent studies report a 1% to 2% prevalence of major depression and a 2% prevalence of dysthymia among community-dwelling elderly, much higher rates (13%-27%) in this age group are observed for subsyndromal depressions (Depression that does not meet Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, criteria for major depression or dysthymia).

In medically ill elderly and nursing home residents, the prevalence of such symptom levels may be as high as 50%.

Subsyndromal depressions are levels of depressive symptoms that are associated with increased risk of major depression, physical disability, medical illness, and high use of health services.

The course of subsyndromal depressions is variable, but in the context of severe physical disability, from stroke, for example, the depressive symptoms can persist for extended periods.

Typically, depressive symptoms of older individuals are missed by health care providers (14).

## **Question 2**

Options A-C are true; D and E are False Feedback

An important clue to recognition of depression in the elderly is a complaint of persistent sleep disturbance; sleep disturbances are relatively common in older people and have been found to be significantly associated with depression in community-residing elderly (14).

Important biological symptoms of depression in old age are decline in appetite and weight loss; regular variation of mood over day (especially worse in early morning); constipation; physical and mental slowing not accountable by other disorders; and suicidal thoughts (7).

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Biological symptoms tend to attenuate over time, so it is important to ask about symptoms at onset (7).

# Question 3

All options are True

# Feedback

Geriatric depression is often comorbid with vascular disorders and is accompanied by lesions in the basal ganglia and prefrontal areas of the brain (14).

The clinical profile of depression in patients with vascular disease is often characterised by motor retardation, lack of insight, and impairment of executive functions. This clinical appearance suggests that dysfunction of frontal brain systems is a possible contributing factor in depression in late life (14).

Functional disability itself predicts the development of depression and, conversely, depressive symptoms are a risk factor for the onset or progression of disability (14).

Late-onset depression is often associated with a variety of brain abnormalities, such as ventriculomegaly and whitematter hyperintensities, and with cognitive impairments (14).

Late-life depression with cognitive impairment that is reversed by antidepressant treatment more often than not is a predictor of the development of an irreversible dementia, such as Alzheimer disease or vascular dementia.

From: Depression, Michael Kidd, Chris Cooper, medi+WORLD International

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