



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING
Faculty of Engineering

SESSION 2020/2021 SEMESTER 2

UHLB2122

ACADEMIC COMMUNICATION SKILLS

SECTION 33

ACADEMIC PAPER WRITING:

VITAMIN D SUPPLEMENTATION IS BENEFICIAL FOR ADULTS

GROUP 7

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Vitamin D is practically a hormone that forwards the absorption of calcium in the body though it is categorized as a vitamin. In the past few years, vitamin D has been growing interest among the public. However, they doubt its role and refrain from taking a supplement which contributes to vitamin D deficiency issues among people. New Zealand's Ministry of Health (MOH) states that 5% of New Zealanders are vitamin D deficient and a further 27% fall below the recommended blood level of vitamin D. There is a spreading awareness that vitamin D sufficiency may act as a requirement for better health. However, not everyone is aware of how huge the impact of vitamin D is on the human body. There are more positive effects of vitamin D than negative effects towards the human body. Thus, everyone should maintain adequate vitamin D levels because it plays an imperative role in the immune system, mental health and bone health.

First, vitamin D supplements will boost the immune system. The vitamin helps strengthen and regulate the immune system by clearing bacteria. Brown (2020) mentioned in his studies that a professor named Adrian Martineau from The School of Medicine and Dentistry, Queen Mary University of London and his team had performed 25 clinical trials involving 11,000 patients from 14 countries. The raw data from the analysis found a small benefit from taking daily or weekly vitamin D supplements to reduce the risk of respiratory infections, asthma attacks and bronchitis. Although the efficacy of vitamin D towards the immune system has not been established, it is crucial to intake vitamin D with minor effects to boost the body's immune system and avoid respiratory infections. "The best explanation for this latitudinal variation is strengthening of the immune system, especially in winter, which can then help prevent viral infections from giving rise to MS" (Grant & Holick, 2005, p.96). This point added to why vitamin D is contributing to the health of the human's immune system which helps defend our body against infection and diseases. On a daily basis, doctors have been suggesting to parents to take care of their children's immune system. Consuming vitamin D is a next step for the growing up adults to build up their immune system.

Next, the consumption of vitamin D3 is highly effective in preventing impact on emotional health such as mood disorders. Scientifically proven, humans' mood changes with the

season, where anxiety and depression happen more often specifically during the winter season. In countries with winter, there is less exposure to sunlight to the people's skin causing them to receive less amount of vitamin D. In the extreme cases, these people can be diagnosed with a disorder called seasonal affective disorder (SAD). Murphy and Wagner (2008) suggest that the deficiency of vitamin D has been linked with seasonal affective disorder (SAD) which results in individuals to experience inappropriate feelings of worthlessness and guilt. Hence, a human being may feel like losing a small amount of quality in their life when being diagnosed with any diseases. They lose their interest in any activities joined. In addition, someone with SAD may also experience symptoms of depression that includes overwhelming feelings of sadness, insomnia, loss of appetite, forgetfulness and other symptoms of anxiety. Therefore, the benefits of vitamin D are not limited to only physical health but it also helps with an adult's mental health. "The results show that vitamin D supplementation is effective in improving mood, with 80% of the intervention group noting an improvement in perceived mood between day one and day 30 of vitamin D supplementation" (Murphy & Wagner, 2008). It seems to indicate that vitamin D supplements have had positive impacts on the interpersonal wellbeing of individuals as it resulted in enjoyment of their everyday activities.

Besides that, vitamin D is crucial in the regulation of calcium and phosphate in the human body. This has been shown by research carried out on adults and children. Murphy and Wagner (2008) in their research on maintaining adequate vitamin D levels found that it reduces the risk from rheumatoid arthritis and multiple sclerosis (p.1). Rheumatoid arthritis is defined as "a chronic and growing illness that causes inflammation, swelling and pain at the joints and can affect other body organs" (Mayo Clinic, 2021, para.1) whereas bone sclerosis is the unusual growth in density and hardening of bone (Biology Online, 2021). Arthritis and sclerosis can both cause permanent damage to the body as they are chronic and deform the bone structure in the human body. In addition to the development of rheumatoid arthritis and bone sclerosis from vitamin D deficiency, research has also shown that vitamin D deficiency reduces bone density and can cause rickets, especially affecting the younger generation (Brown, 2020). Rickets is the softening and weakening of bones in kids due to the less intake of vitamin D which is vital in assisting the human body to absorb nutrients such as calcium and phosphorus from food (Mayo

Clinic, 2021). The research on maintaining adequate vitamin D levels and effects of vitamin D on bone density seem to indicate that vitamin D has an influence on human's bone health and that a lack of vitamin D results in development of bone-related diseases. It is important to highlight these points as bone-related diseases can affect an individual's life greatly in terms of their strength and mobility. Adults who are at a later stage of life are more susceptible to this effect as it reduces their quality of life by limiting the activities they can take part in due to bone diseases such as sclerosis and arthritis. Hence, as vitamin D supplementation aids in balancing the calcium and phosphate in human bones, proved by the researches carried out and statistics, individuals should try their best to incorporate this practice into their daily diet. The minor changes can result in major differences that help keep an individual or adult healthy by preventing the chances of occurrence of arthritis, sclerosis and rickets in the human body.

Admittedly some adults who are healthy and believe that they are not exposed to diseases need not to take vitamin D supplementation. These adults do not see the importance of supplementation and the benefit it brings to themselves both physically and mentally. They are comfortable with their current health status and perceive supplementations in general as products consumed by only the weak and those who are visibly sick. Experts too have shared that most people have sufficient levels of vitamin D already and do not require additional supplementations. However, it has been proven that the statement by experts is wrong and regards it as invalid. A study on vitamin D inadequacy performed on adults in the UK found that around 20% of its civilians were lacking in terms of the required healthy levels of vitamin D in their body (Crowe et al., 2019, p.10). These adults have not been aware of the vitamin D levels in their own body which could be subject to how often they have signed up for medical checkups. This has resulted in a huge disparity between the perceived own health of individuals and the reality. The reason for this mismatch between the belief of adults and the result of the study could be due to the obviousness of the symptoms of vitamin D deficiency itself in the early stages. Most people show no symptoms and even if they do, the symptoms are unclear ones such as exhaustion and spasms (Moncrieff et al., 2018). These symptoms make it harder for one to even acknowledge they are showing symptoms in the first place. What more convinces one to suspect that they are vitamin D deficient. Vitamin D deficiencies only show clear symptoms in

the later stages or after a prolonged period via bone diseases such as rickets and arthritis. It will be too late for adults to act upon their vitamin D deficiency only then as the time for recovery will be longer and will require more effort from the individual in their journey to gain back their bone health. Therefore, even if adults are healthy, the intake of vitamin D supplements should be practiced to prevent the risk of being vitamin D deficient.

Moreover, numerous individuals believe that supplements are not that effective on improving health and even bad for them. A result of an investigation involving 450,000 people shows that multivitamins did not reduce risk for heart disease or cancer. This is not true because it has been scientifically proven that supplements are effective, such as vitamin D, in cardiovascular health and cell growth. Autier and Gandini (2007) states that a meta-analysis of randomized controlled trials proved that taking vitamin D supplements from 300 to 2000 IU can reduce overall mortality by 7% which was in part due to the lower in cardiovascular mortality. Apart from that, people think being dependent on supplements for the rest of their lives is a waste of money as supplements can be expensive. Some experts say that the best way to get all vitamins and minerals possible is by eating a healthy diet. A healthy diet consists of essential nutrients for our bodies to function in which it can prevent various forms of malnutrition and chronic diseases. (Zimmerman & Snow, 2012, p.25). While it is true that healthy food riches with nutrients, we cannot justifiably assume that all individuals acknowledge whether their bodies can absorb all the nutrients well. In fact, there are some medical conditions whereby the body cannot absorb a specific nutrient. For example, a pernicious anemia patient's body cannot absorb ample vitamin B12 from food (National Heart, Lung, and Blood Institute, n.d.). Thus, supplements are not as bad as most people would believe. They can be effective and vital when they are used at the right time and in a correct way.

It has been clarified; the positive impacts of vitamin D on the human body outweigh the negative impacts. Vitamin D plays a significant role to ensure the human body functions optimally. It helps boost the immune system and consequently strengthen the human body's defense system against various diseases. Mental health is not any less important than physical

health. A lot of research about the association between the role of vitamin D and brain functions can be found in which increasing levels of vitamin D is effective in improving mood. Human's bones do not only depend on calcium alone. Instead, it depends on others, like vitamin D which controls calcium in the human body. Positive results have been successfully shown through myriads of investigations and findings about links between vitamin D and the functions in the human body. Prevention is better than cure. You may think vitamin D is only a tiny part of the nutrients, yet it gives a huge impact. Nevertheless, what makes you neglect your own wellness?

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Appendix

Editing Checklist

Details	Ticks (✓)
1. Does the introduction paragraph provide a clear indication of the purpose of the text and a broad outline of the content? In other words, are your stance and thesis statement clear?	✓
2. Does every part of the text contribute to the key idea in order to form a meaningful whole?	✓
3. Does the stance remain clear throughout the text?	✓
4. Is every sentence relevant to the purpose of the text?	✓
5. Is there a sentence (preferably the first) in each paragraph that summarizes the key point of that paragraph?	✓
6. Are the paragraphs unified, i.e. do they contain only one single idea each?	✓
7. Has every idea been given sufficient weighting?	✓

8. Does the text flow logically from one paragraph to the next?	✓
9. Have transitional words or phrases (such as, for example, ‘however’, ‘thus’, ‘therefore’, ‘as a result’, ‘in this way’, ‘furthermore’, ‘above all’ and ‘moreover’) been used, but not overused, to help the reader to make connections between the ideas?	✓
10. Are the sentence structure and vocabulary varied, without too much repetition?	✓
11. Has avoided irrelevant and unnecessary ‘filler’ words such as ‘actually’ or ‘basically’?	✓
12. Has evidence been given to back up statements?	✓
13. Is a positive and professional tone maintained throughout?	✓
14. Is the tone appropriate for the reader?	✓
15. Does the text meet the readers’ needs?	✓
16. Does the last paragraph neatly and concisely summarize and conclude?	✓

Proofreading Checklist

Details	Ticks (✓)
1. Suitable title with argumentative tone	✓
2. Include citations and references according to APA style	✓
3. All citations are accounted for in the references list	✓
4. Correct fonts/font sizes	✓
5. Suitable tenses	✓
6. Correct use of numbers and symbols	✓
7. Consistent use of abbreviations	✓
8. Correct use of punctuation	✓
9. Correct spelling	✓

10. Correct grammar	✓
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